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Self-Employment Trends and Patterns Among Older U.S. Workers

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RAND LABOR AND POPULATION

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ABSTRACT

Although self-employment is an important labor force phenomenon at older ages, there is a paucity of studies that examine the patterns of self-employment among older U.S. workers. With the leading edge of the baby boom cohort reaching retirement years, the rising rates of self-employment with age suggest that it is important to have a solid understanding of who is self-employed at older ages and how patterns of self-employment may be changing over time. Using cross-sectional time-series data from the annual Current Population Survey from 1968 to 2002 and cross-sectional data from the Health and Retirement Study from 1998, we examine the trend in rates of self-employment among workers age 50 and above. We describe the characteristics of older self-employed workers, in total and for subgroups, and compare them with their wage and salary counterparts.

1. INTRODUCTION

According to published and unpublished data from the U. S. Bureau of Labor Statistics (BLS), 14.4 million U. S. workers, or 10.5 percent of the workforce, were self-employed in incorporated or unincorporated businesses in 2002. Since rates of self-employment rise with age, middle aged or older workers constitute a disproportionate share of the self-employed. For example, in 2002, while workers age 45 and above represented just over one third (38 percent) of the workforce in total, they comprised slightly more than half (54 percent) of the self-employed (in unincorporated businesses only). Some of these older workers have been self-employed for much or all of their working careers while others have made the transition to self-employment later in their careers, often as part of the transition to retirement.

Although self-employment is an important labor force phenomenon at older ages, there is a paucity of studies that examine the patterns of self-employment among older U.S. workers. Instead, our knowledge of self-employment is largely confined to younger workers or analyses of the self-employed workforce as a whole, with only a few efforts that focus on how patterns may differ at older ages. With the leading edge of the baby boom cohort reaching retirement years, the rising rates of self-employment with age suggest that it is important to have a solid understanding of who is self-employed at older ages and how patterns of self-employment may be changing over time.

This paper is designed to fill an important gap in our knowledge base about self-employed workers age 50 and above. In particular, we aim to describe the overall trend in rates of self-employment among the population as a whole and for those age 50 and above and to examine the characteristics of the self-employed, particularly those in middle-age and older, and compare them with their wage and salary counterparts. To accomplish these goals, we rely on two primary sources of complementary data: cross-sectional time-series data from the annual Current Population Survey (CPS) from 1968 to 2002 and cross-sectional data from the Health and Retirement Study (HRS) from 1998.

The CPS is a nationally representative survey of the U.S. noninstitutionalized civilian population and serves as the source of official statistics on self-employment. The CPS is used to provide information on trends in self-employment rates in general and for the population age 50 and above. The CPS is also used to examine the demographic and employment characteristics of

the self-employed over time. Beginning in 1992, the HRS has conducted biennial interviews with a nationally representative cohort of individuals born between 1931 and 1941 and their spouses (Juster and Suzman, 1995). Additional cohorts have been added over time so that starting with the 1998 survey wave (HRS98), the sample is representative of all cohorts born prior to 1947 and their spouses. The HRS98 data—with their more detailed information on economic and health status—provide an even richer portrait of self-employed workers age 51 and above than what is available using the CPS.

Before we undertake our analysis of the CPS and HRS data, we begin by reviewing trends in self-employment rates evident in published and unpublished data series. We also review prior studies of the characteristics of the self-employed, with a particular focus on analyses of older workers. Next we analyze the trends in self-employment rates based on the CPS for workers age 50 and above. We examine trends using alternative definitions, as well as changes in the characteristics of older self-employed workers over time. We then continue our descriptive analysis using cross-sectional data from HRS98 on workers age 51 and above, examining detailed characteristics of the self-employed in total and for subgroups of the self-employed defined by sex and by whether they became self-employed before or after age 50. A final section concludes the paper.

2. BLS DATA ON SELF-EMPLOYMENT

Employment data collected by the BLS through the monthly CPS are the official source of data on self-employment in the United States. Each month, the CPS records the employment status and class of employment for the civilian noninstitutional population age 16 and above. Individuals who report they are employed during the reference week are asked about their employment class for their main job: “Were you employed by a government, by a private company, a nonprofit organization, or were you self-employed (or working in a family business)?”¹ If the answer is self-employed, respondents are further asked “Is this business incorporated?” Those who respond they are self-employed in an incorporated business, along with those who work for the government, a private company or a nonprofit organization are all classified as wage and salary workers. The self-employed in incorporated businesses are

¹ The parenthetical phrase is asked only of households that responded to an earlier question that they run a family business as a way of identifying unpaid family workers.

considered to be wage and salary workers because legally they are employees of their own business.² The self-employed are therefore defined only as those who report they work for themselves in an unincorporated business for their main job.

Figure 1 plots the trend in annual average self-employment rates in total and separately for the self-employed in the agricultural and nonagricultural sectors as tabulated by the BLS for all workers age 16 and above. The figure shows the official series from 1970 onwards which includes only the self-employed in unincorporated business, as well as the series, available since 1989, that can be constructed from published and unpublished data for the incorporated and unincorporated self-employed.

In 2002, 14.4 million workers or 10.5 percent of the workforce were self-employed in incorporated and unincorporated businesses. Of the total, 1.5 million were employed in the agricultural sector, while the remaining 12.9 million worked in nonagricultural industries. Nearly one in three, or 4.6 million, workers were in incorporated businesses in contrast to unincorporated businesses. This is the segment of the self-employed workforce that is considered to be “wage and salary” workers in the official tabulations of self-employment by the BLS.

The figure illustrates that there has been a slight downward trend in self-employment rates since the 1994 peak of 14.9 million self-employed incorporated and unincorporated workers (or 12.1 percent of the workforce).³ This pattern is evident for both the agricultural and nonagricultural sectors, and for the broad and narrow definitions of self-employment. This recent decline reverses the prior slight upward trend in self-employment in the nonagricultural sector since the mid-1970s (the subject of a 1987 study by Blau). In contrast to the 1980s when self-employment was an important source of net job creation, during the 1990s self-employment did not contribute to net employment growth (Manser and Picot, 1999). At the same time, there has

² This approach differs from that followed in many other countries (e.g., Canada) where owners of incorporated businesses are also classified as self-employed. This latter approach is consistent with the 1993 International Classification of Status in Employment (ICSE-93) standards set by the International Labour Organization. The United States is one of only a handful of countries that deviates from the standard in the treatment of the self-employed (Elias, 2000).

³ The upward jump in self-employment rates between 1993 and 1994 evident in Figure 1 across all the series (and especially the ones that include the incorporated self-employed) is due, in part, to changes in the CPS implemented in 1994 (Manser and Picot, 1999). This change is discussed further below.

been an increase in the share of self-employment that is in incorporated business. In 1989, 25.6 percent of self-employed workers were incorporated compared with 32.0 percent in 2002.

Self-employment rates are considerably higher in the agricultural sector compared with the nonagricultural sector.⁴ The share of the agricultural workforce that was self-employed in unincorporated businesses, which stood at 52 percent in 1970, has steadily declined to 39 percent in 2001. The share of the nonagricultural workforce that is self-employed in unincorporated business also decreased from 7.5 percent in 1991 to 6.5 percent in 2001. Within-sector self-employment rates are higher when those in incorporated business are included (about a third of self-employed workers) but the downward trend is evident for the broader measure of self-employment as well.

Table 1 shows self-employment rates by age and sex in 2002 based on the official measure of self-employment (which excludes the self-employed in incorporated businesses).⁵ Among all workers, self-employment rates are higher for men than for women (8.3 percent versus 5.8 percent in total), and increase with age (a finding verified in a number of studies such as Devine, 1994; Manser and Picot, 1999; Georgellis and Wall, 2000; Haider and Loughran, 2001). At ages 45 to 54, 8.7 percent of all workers are self-employed compared with 11.1 percent for those ages 55 to 64 and 19.3 percent for those age 65 and above. These age patterns hold for both men and women, and are evident for both agricultural and nonagricultural employment. As a result, middle-aged and older workers are overrepresented among the self-employed.

3. PRIOR RESEARCH ON SELF-EMPLOYMENT PATTERNS

Prior research has relied on data from the CPS and other sources to examine the characteristics of the self-employed workforce.⁶ In addition to self-employment being more prevalent for men than women and increasing with age (as noted above), prior studies document

⁴ The discussion that follows is based on tabulations using data from the sources cited in Table 1.

⁵ Our analysis of CPS microdata below allows us to look at self-employment rates for the older workforce using a definition that includes the self-employed in incorporated businesses.

⁶ Another strand of the self-employment literature considers the factors that lead individuals to choose self-employment over wage and salary work, as well as the determinants of transitions to self-employment. For a review of that literature, see Zissimopoulos and Karoly (2003).

that rates of self-employment typically increase with schooling levels (although rates can be relatively high for those with the least education), and that they are highest among currently married persons and lowest for the never married (Devine, 1994; Bregger, 1996; Fairlee, 1996; Manser and Picot, 1999; Georgellis and Wall, 2000). On average self-employed men work more hours and weeks per year than their wage and salary counterparts. Blacks and Hispanics tend to be underrepresented among the self-employed, although there is tremendous variability among detailed race and ethnic groups in their rates of self-employment (Fairlee, 1996; Fairlee and Meyer, 1994, 1996).

As noted above, self-employment rates are higher in the agricultural sector, but they are also relatively high in construction as well. Rates are especially low in mining, manufacturing, transportation and public utilities. The self-employed have lower rates of health insurance coverage through their own job, and higher rates of coverage through a spouse (Hamilton, 2000). The self-employed also make up to three-quarters of those who work at home for pay, a combination that is more prevalent among women (Deming, 1994; Edwards and Field-Hendrey, 2002).

Overall, the self-employed tend to have higher rates of job satisfaction than their wage and salary counterparts (Blanchflower and Oswald, 1998; Blanchflower, Oswald and Stulzer, 2001; Hundley, 2001a). A comparison of various earnings measures shows, however, that the typical self-employed male has lower initial earnings and lower earnings growth, implying a 35 percent gap with his wage and salary counterpart after 10 years (Hamilton, 2000). After considering alternative explanations, Hamilton (2000) concludes that the self-employed derive non-pecuniary benefits from self-employment, such as the opportunity to “be your own boss.”

A number of studies also document changes in patterns of self-employment in the United States over the past several decades (Devine, 1994; Fairlee and Meyer, 1994; Fairlee, 1996; Manser and Picot, 1999; Georgellis and Wall, 2000). For example, Devine (1994) documents that the share of women in self-employment increased during the late 1970s and 1980s, from 23.7 percent in 1975 to 32.3 percent in 1990. The increase in female self-employment rates is evident for most detailed race and ethnic groups identified in the decennial Census (Fairlee and Meyer, 1994). According to Georgellis and Wall (2000), the broad industrial and occupation distribution of self-employed workers did not change much for men between 1987 and 1997, while the distribution for women changed more, with a tendency toward convergence with the

patterns of male self-employment. At the same time, female self-employed workers on average earn less than their male counterparts, which is explained by several factors including their distribution across occupations and industries, smaller capital stocks, fewer hours of work, and lower levels of self-employment experience (Hundley, 2001b).

Cross-national comparisons of self-employment rates show that the incidence of self-employment is higher in Canada than in the United States and lower in many other developed countries compare to the United States. The gap in rates of self-employment in Canada and the United States has increased over the 1990s (Manser and Picot, 1999). In Canada, between 1989 and 1997, the overall self-employment rate increased from 14 to 18 percent, while the U.S. rate remained fairly constant at about 10 percent through 1996.⁷ Outside of Canada, rates of self-employment in most industrialized countries have been trending downward (Blanchflower, 2000; Genda and Kambayashi, 2002). For example, among the OECD countries, only Portugal, New Zealand, and the United Kingdom show increases in self-employment rates in recent decades. A recent study of new entrepreneurial activity, defined as efforts at new business creation or expansion of an existing business, ranked the United States and Canada along with Israel as having the highest rates of entrepreneurship compared with France, Japan, and Finland, which ranked the lowest (Bednarzik, 2000).

Although the phenomenon of self-employment in general has received attention, relatively little research has been devoted to studying self-employment among those in middle and late life. As noted above, analyses of self-employment rates by age indicate higher rates of self-employment among mature and older workers compared with younger workers, even for those working past age 65 (Haider and Loughran, 2001; Duchesne, 2002). As documented by Fuchs (1982) using data from the Retirement History Survey (RHS), the increased prevalence of self-employment among men at older ages was due to shifts from wage and salary work into self-employment as well as differential propensity to retire by class of worker in the late 1960s and early 1970s. Quinn (1980) notes that self-employment at older ages may be a form of partial retirement, with self-employment offering greater flexibility in hours and wages to accommodate tastes for leisure and the Social Security earnings test. Although informative, these two studies rely upon the RHS, which provides a perspective on the cohort of workers reaching retirement in

⁷ Data presented earlier in Figure 1 show that after 1996, the last year in the Manser and Picot (1999) analysis, there was a decline in self-employment rates for the United States.

the late 1960s and 1970s. These studies were also primarily interested in self-employment among older men.

4. THE CURRENT POPULATION SURVEY AND DEFINITIONS OF SELF-EMPLOYMENT

In order to analyze current rates of self-employment, detailed characteristics and trends in self-employment of older workers, we rely on annual data from the March Annual Demographic File (ADF) of the CPS from 1968 to 2002. The March CPS provides detailed demographic and labor market information for individuals in about 60,000 households.⁸ The CPS is the source of household data on employment and unemployment, as well as the primary source of data for the trends in self-employment rates presented in the prior section.⁹ Thus, it provides a baseline for identifying trends and describing the characteristics of middle-aged and older self-employed workers. Basic demographic information in the CPS includes age, sex, race, education, and marital status. For those who are employed in the reference week, there is information for the main job on class of worker (wage and salary versus self-employed), industry, occupation, and usual weekly hours.¹⁰ Similar information on job characteristics is available for the longest job worked in the last calendar year. Wage and salary income, self-employment income, and income from other sources for the prior year are also available.

We discuss the comparability of data from the CPS over time because of changes in data collection methods. Most importantly, the CPS questionnaire first introduced the distinction between the self-employed in incorporated versus unincorporated business in 1967. In the published statistics from 1967 onward, the self-employed in incorporated business are counted as wage and salary workers, not as self-employed. Starting with the micro data files in either 1976 (for employment in the prior year) or 1989 (for current employment), we can separately identify the self-employed in incorporated business, and we can identify the broader group of self-

⁸ The sample size for the ADF increased beginning with the March 2001 survey (see http://www.bls.census.gov/cps/ads/data_dissem_letterng.htm for detail) although the public use file we use for March 2001 is based on the old sampling scheme. The sample for the March 2002 file is about 50 percent larger than the prior year.

⁹ Our estimates will not exactly replicate the published figures presented in Section 2 because the official data are based on annual averages from the monthly CPS surveys. Since these surveys do not include the supplemental information available in the March interview (e.g., on employment in the prior year, and income and income sources in the prior year), we rely on the March data for our analysis.

¹⁰ The CPS does not provide detailed information on a secondary job, if any, held during the reference week.

employed (incorporated plus unincorporated) not identified in the published statistics after 1967. For the public use files between 1968 and 1975 or between 1968 and 1988, the code for self-employed in the reference week or in the prior year only includes those in unincorporated businesses.

The CPS also underwent a major redesign beginning in January 1994. Estimates from Manser and Picot (1999) suggest that this revision increased the number of self-employed in total and their share of total employment due to the changes in questionnaire wording. This affected the incidence of self-employment based on the reference week questions, and also likely affected the incidence of self-employment based on the longest job last year. We discuss the implications of this change for our time series analysis below.

Other changes in the CPS over time may affect trends in self-employment rates. The CPS public use data files include two versions for the March 1988 file, one that used the same processing system as in 1987 and earlier years, and the other that used the new processing system implemented in 1989 and beyond. In the time series analyses below, we have generated results using both files and plotted one trend line from 1968 to 1988 and another from 1988 to 2002. In most cases, the impact on self-employment levels and rates is small. This suggests that our comparisons of the characteristics of the self-employment before and after this change in the processing system are not likely to be significantly affected.

Given the potential differences in definitions of self-employment based on the CPS, we analyze several alternatives and examine the comparability across definitions. In particular, as shown in Table 2, our first definition, C1, replicates the official definition by defining self-employment as those who are self-employed in unincorporated businesses in the reference week (i.e., current employment) in the main job. This definition can be calculated from 1968 to 2002. C2 adds the self-employed in the reference week in incorporated businesses to C1 so it is a more inclusive definition. The difference between C2 and C1 is the number of incorporated self-employed. As seen in Table 2, C2 is only available starting in 1989, the first year the CPS public use file separately codes those who are self-employed during the reference week in an incorporated business.

The next two definitions, C3 and C4, parallel those for C1 and C2 for the longest job in the prior calendar year with C3 available for the longer time series (i.e., for the March surveys from 1968 to 2002), and C4 available for the March surveys from 1976 onwards. Finally,

definition C5 augments the group identified in C4 by adding in those who also report any self-employment income in the prior year. This would potentially identify workers who were self-employed at some time in the prior year but not necessarily on the longest job (e.g., on a secondary job or a job held for a shorter part of the year).¹¹ For C3 to C5, since the reference period is for the prior calendar year, we note in Table 2 that the reference year for employment is the year prior to the March survey year.

Table 3 shows the number of self-employed and rates of self-employment among workers age 50 and above in 2001 based on these alternative definitions.¹² For comparison, counts and rates are also calculated for all workers age 16 and above, and the share of the self-employed work force age 50 and above is shown in the last column. Regardless of the definition, rates of self-employment are higher among older workers compared with the workforce as a whole and older workers make up approximately 38 to 42 percent of the self-employed workforce. For example, in 2001, 5.5 million workers age 50 and above were self-employed in an unincorporated or incorporated business in their main job during the reference week (definition C2). This represents 17.2 percent of the over age 50 workforce compared with a self-employment rate based on the same definition of 10.3 percent for the workforce as a whole. Consequently, although those age 50 and above made up 24 percent of the workforce in 2001, they comprised 40 percent of the self-employed in the same year.

For those age 50 and above in 2001, 12.0 percent are self-employed based on definition C1 which replicates the official BLS definition. Including those self-employed in incorporated businesses adds another 1.7 million older self-employed workers and increases the rate of self-employment by 5.2 percentage points (definition C2). When self-employment is defined based on the longest job in the prior calendar year, the rate is always lower than it is for the current job (compared C3 versus C1 or C4 versus C2). For example, in 2001, definition C3, which is most comparable to C1, shows a smaller number of unincorporated self-employed age 50 and above in the longest job for the calendar year compared with the estimate based on the main job for the survey week (3.8 million versus 3.9 million), and the rate is lower as well (9.9 versus 12.0 percent). This is consistent with the expectation that a snapshot (or reference week) for the year

¹¹ As noted earlier, the CPS does not collect detailed information on any secondary jobs held during the reference week. Hence, it is not possible to identify secondary self-employment for those working during the reference week (i.e., a definition parallel to C5 for the same sample as C1 and C2).

¹² 2001 is the last year of data available for all five series.

will show a higher fraction in self-employment than would be the case when considering the longest job for the calendar year since the former group includes those who will be self-employed for a short spell.

Definition C5 potentially captures those with short spells of self-employment since it includes those who report any self-employment income even through their longest job for the year was in the wage and salary class. This definition results in the highest absolute size of the self-employed workforce age 50 and above although the rate in 2001 is slightly below that based on definition C2. A comparison of C4 versus C5 indicates that in 2001, 775,000 workers age 50 and above or 12 percent of those defined as self-employed using definition C5 were self-employed workers in a secondary job or in a part-year job of shorter duration than their longest wage and salary job.

5. TIME TREND IN SELF-EMPLOYMENT RATES FOR WORKERS AGE 50 AND ABOVE BASED ON THE CPS

Given the relatively long time-series of micro data available in the CPS, it is particularly well suited for examining trends in self-employment for the subset of middle-aged and older workers. We begin by calculating the number and percent self-employed for all civilian workers age 50 and above from 1968 to 2002 using definitions C1 to C5.¹³ Table 4 reports the weighted number of self-employed and the corresponding self-employment rate for the five definitions. The self-employment rates for the five definitions are also plotted in Figure 2.¹⁴ A comparison over time for unincorporated self-employed workers on the main job (C1) and unincorporated plus incorporated workers on the main job (C2) shows the absolute size of the self-employed workforce age 50 and above peaked in 2001 and 2002 at 3.9 and 5.6 million workers, respectively although the rate of self-employment peaked for both measures in 1994 at 14.7 percent and 20.7 percent, respectively.¹⁵ Consistent with the published data discussed in Section

¹³ In the case of definitions C1 and C2, those who report they are with a job but not at work (e.g., they may be absent for reasons of illness or vacation) in the reference week are also counted as employed. These individuals do not report their weekly hours so this information is missing for this part of the sample.

¹⁴ As discussed above, only definitions C1 and C3 (the self-employed in unincorporated businesses) are available for the full time series, whereas the other definitions can be calculated starting in 1975 (C4 and C5) or 1989 (C2) given the way class of worker is coded in the CPS public use files. In addition, series C3 to C5 end in 2001 since they are based on data for the prior calendar year.

¹⁵ As discussed below, this peak in 1994 may be an artifact of the change in the survey questionnaire in that year.

2, the share of self-employed older workers in incorporated businesses increased steadily over time from just over 1 in 4 workers (26.7 percent) in 1988 to about 1 in 3 workers (33.1 percent) in 2002 (based on C1 and C2).

As seen in Figure 2, the longer time series for the unincorporated self-employed (C1) shows a fluctuating self-employment rate within a broader downward trend. From 1968 to about 1976 there was a decline (from 16.0 to 13.7 percent), followed by an increase to 1983 (reaching 14.4 percent). From 1983 to 1993, there was a slight downward trend again (from 14.4 to 13.7 percent), and then a sharper decline thereafter to the lowest level ever in 2002 at 11.0 percent. The more inclusive self-employment series (definition C2) mirrors this general pattern for the years it is available which indicates that the rate of self-employment in incorporated businesses remained fairly steady over this period, ranging from 5.2 percent in 1988 to 5.4 percent in 2002.

For C1 and C2 (and the difference between C2 and C1), there is evidence of a discrete increase in 1994 consistent with the impact of the CPS revisions to the monthly labor force questions implemented in that year (Manser and Picot, 1999). Manser and Picot (1999) cite a BLS study that compared CPS self-employment rates for the workforce as a whole using both old and new methods, which found that that the net effect of the changes was to raise self-employment rates by about 6 percent. For C1, assuming the 6 percent adjustment factor can be applied to the workforce age 50 and above, the level of self-employment in 1994 that would be consistent with prior years would be 3.4 million unincorporated self-employed workers (13.8 percent) versus the estimated level of 3.6 million workers (14.7 percent) shown in Table 3.2.¹⁶ By 2002, instead of 3.7 million workers (11.0 percent), the consistent series would be adjusted downward to 3.5 million workers (10.3 percent). Similar adjustments could be applied to C2. Thus, the decline over time would be even larger than what is shown in Figure 2. To the extent that the revised procedures implemented in 1994 and later surveys do a better job at capturing the number of self-employed, the absolute and percent figures in Table 4 prior to 1994 need to be adjusted upwards. Regardless, the basic point remains that a consistent self-employment series would show a steeper decline over time than the one evident in Figure 2.

Table 4 and Figure 2 also report the trends in the rate of self-employment based on employment in the entire calendar year. In all years where a comparison can be made, the rate of

¹⁶ Note that this adjustment means the change from 1993 to 1994 is from 13.7 to 13.8 percent versus 13.7 to 14.7 percent.

self-employment among older workers is always lower based on C3 than C1. The same is true for the comparison of C4 and C2 for the broader definition of self-employment. In all years that C5 is available, this definition results in the highest absolute size of the self-employed workforce age 50 and above although the self-employment rate is close to the broad definition based on reference week employment (C2), especially after 1994.

These three series based on employment in the calendar year (C3 to C5) do not show the discrete jump in 1994 associated with C1 and C2. Manser and Picott (1999) note that it is not known what the approximate adjustment factor should be for the self-employment series based on questions specific to the March ADF about employment last year. At the same time, there is a noticeable dip in C3 in 1995 and 1996 (based on March survey years 1996 and 1997), but it is not evident in C4 and C5. This suggests there was some questionnaire or coding change for those two survey years that resulted in more self-employed workers being classified as incorporated self-employed than in the surrounding years. We have yet to ascertain the source of this discrepancy.

The longer time series available for the self-employed in the longest job for the calendar year (C3 and C4) provides an even more dramatic picture of the increase in the share of self-employment among older workers that is in incorporated versus unincorporated businesses. As seen in Figure 2, the gap between the C3 and C4 series (solid versus open triangles) widens at a faster rate between 1975 (when the C4 series begins) and 1984. Overall, between 1975 and 2001, the share of incorporated self-employed more than doubled, increasing from 14.3 percent to 33.3 percent. The increasing trend in incorporated self-employment means that the broader definition of self-employment in the calendar year (C4), which extend farther back in time than the counterpart for current employment (C2), shows a modest upward trend in self-employment rates from the mid-1970s to the mid-1990s, in contrast to the flatter trend line for the narrow definitions (C1 and C3) during this same period. Since the mid-1990s, when self-employment rates were falling for both definitions C2 and C4, the rates of self-employment in incorporated businesses remained fairly steady so the decline resulted from falling rates of unincorporated self-employment.

Thus, using the broader definition of self-employment, C4, reveals (1) an upward trend in self-employment rates from the mid-1970s to the mid-1990s for workers age 50 and above due to growth in the rate of self-employment in incorporated businesses; and (2) a downward trend in

self-employment rates among older workers since the mid-1990s due to a declining rate of self-employment in unincorporated businesses.¹⁷ Over the entire period, the share of self-employment in incorporated business increased steadily, albeit at a slower rate during the 1990s. The similarity in trends for C2 and C4 (when they are available) suggests that definition C2 captures the trends in a broad definition of self-employment that includes both those self-employed in incorporated and unincorporated businesses. As we proceed, this will be our preferred definition although we continue to make some comparisons with C1 since this corresponds to the official definition of self-employment (and it is available for a longer time series).

We also limit our subsequent analysis of CPS data to workers age 50 and above in the nonagricultural sector. As noted in Section 2, rates of self-employment are considerably higher in the agricultural sector compared with the nonagricultural sector. Self-employed workers in the agriculture sector consist primarily of farmers or farm managers, as well as gardeners or those in forestry or fishery occupations. A small fraction represent other occupations providing services to farm businesses such as bookkeepers, truck drivers, or even pilots. Given the potential differences between the agricultural and nonagricultural sectors, Figure 3 plots the trends in the rates of self-employment using definitions C1 and C2 only for workers age 50 and above in the agricultural and nonagricultural sectors (on the right and left axes, respectively). As expected, rates of self-employment are higher by a factor of 5 to 6 in the agricultural sector compared with the nonagricultural sector. For example, in 2002, 14.8 percent of all nonagricultural workers age 50 and above were self-employed in unincorporated or incorporated businesses (definition C2) compared with a 72.4 percent rate of self-employment among agricultural workers in the same age group.

Self-employment rates in agriculture for workers age 50 and above evident in Figure 3 show a long-term downward trend (one that would be even sharper with a correction for the discontinuity in the series in 1994), punctuated by cyclical swings. The pattern for C2 in the

¹⁷ Although self-employment rates are lower on average for the workforce as a whole compared with workers age 50 and above, a similar time series analysis for all workers age 16 and above shows the same general patterns for the entire workforce as what is observed for workers age 50 and above. For all workers, the pattern since the mid-1990s is one of decreasing rates of self-employment, due largely to a declining rate of self-employment in unincorporated businesses. From the mid-1970s to the mid-1990s, self-employment rates in unincorporated and incorporated businesses increased due to a growth in the latter form of business organization.

agriculture sector mirrors that for C1 when both series are available, indicating the time trends are largely due to changing rates of self-employment in unincorporated businesses.

The downward trend in self-employment in the nonagricultural sector, notable since the early- to mid-1990s, is less dramatic in part because the rate is lower. Again, the recent trends is due to falling rates of unincorporated self-employment accompanied by steady rates of incorporated self-employment (compare C1 and C2 in Figure 3). Note that while agricultural unincorporated self-employment rates fell even during the 1970s and 1980s (definition C1 in Figure 3), this was a period when rates were steady or increasing somewhat in the nonagricultural sector. Given the unusual patterns evident for the agricultural sector, and its small share in the economy overall, in the next section, we focus on nonagricultural employment for those age 50 and above.

6. TIME TREND IN CHARACTERISTICS OF THE SELF-EMPLOYED AGES 50 AND ABOVE BASED ON THE CPS

The CPS data also provide an opportunity to determine how the characteristics of the self-employed age 50 and above have changed over time. We tabulate the basic characteristics of the self-employed (sex, age distribution, race and ethnicity, marital status, education, weekly hours, full- versus part-time status, occupation, industry, and incorporation status) for four points in time dated by the March survey year: 1969, 1979, 1990, and 2001. These years correspond to equivalent points in the business cycle (all peak years) and therefore provide a similar basis for comparison that controls to some extent for the state of the economy.

Our analysis is based on our two preferred definitions of self-employment, specifically C2 and C1. Since the C2 time series is only available for our peak years for 1990 and 2001, we begin by considering the more narrow definition of self-employment, which can be examined for all four peak years. For the two points in time when both series are available, we can examine the sensitivity of the characteristics of the self-employed age 50 and above to the composition by incorporated versus unincorporated status. In addition to tabulating the distribution of the characteristics of older self-employed workers, we also generate the equivalent distribution for wage and salary workers in the same age group so the two groups of workers can be compared.¹⁸

¹⁸ In addition to the self-employed and wage and salary workers, our sample of workers during the reference week includes those who report they work without pay in a family business. These workers are treated as a residual class of workers in official employment statistics and represent less than 1 percent of the workforce.

Tables 5 and 6 present our results, showing the characteristics of self-employed workers age 50 and above using definition C1 (Table 5) or C2 (Table 6). The characteristics for the wage and salary group corresponding to C1, labeled W1, is reported in Table 5 while the characteristics for the wage and salary group W2, the counterpart to C2, is reported in Table 6. Most characteristics are reported as percent distribution with the exception of hours, which is an average. The percent change for each characteristic from the available starting year to the ending year is also shown.

Several patterns emerge from the characteristics tabulated in the two tables. In terms of the sex composition of the self-employed, it is the case that as of 2001, males are overrepresented among self-employed older workers (61 percent based on C1 and 65 percent based on C2) to an even greater extent than for wage and salary workers (52 and 51 percent for W1 and W2, respectively). The fact that the share of male workers is even higher using C2 than C1 indicates that males are even more dominant among the self-employed in incorporated businesses compared with those in unincorporated businesses. Even so, there has been a substantial shift away from male dominance in the self-employed ranks. For example, Table 5 shows that 73 percent of the self-employed age 50 and above were male in 1969 compared with 61 percent in 2001 (based on C1). This shift was especially pronounced between 1979 and 1990 when about half of the percentage point drop over the three decades covered by our data occurred. This pattern is also evident for the shorter time series available for definition C2 (from 1990 to 2001, see Table 6), although it is less dramatic than what occurred in the prior decade. This pattern is consistent with trends reported elsewhere in the literature as summarized in Section 3.

As already noted, the self-employed on average are older than their wage and salary counterparts and this is evident in the age distributions reported in Tables 5 and 6. Table 5 shows that the self-employed age 50 and above became younger, with an increased share between 1969 and 2001 in the 50 to 54 year-old age group (based on C1). The same pattern is evident for wage and salary workers (based on W1) and for the short time series available for C2 and W2 (see Table 6). Thus, the shifting age composition among the self-employed mirrors the overall demographic shifts in the labor force over this period.

Information on the combination of race and ethnicity is only available starting in the March 1976 CPS so the series begins with 1979 in Tables 5 and 6. Using definitions C1 and C2

we find evidence, consistent with studies of the self-employed as a whole, that blacks and Hispanics are underrepresented among older self-employed workers compared with wage and salary workers while whites and those in the residual “other” category are overrepresented. As with gender, whites have an even greater share using C2 than C1 indicating they are even more likely to be among the incorporated self-employed (see Tables 5 and 6). Over time, the share of minorities in the ranks of the self-employed has increased for workers age 50 and above, mirroring a pattern for the wage and salary workforce. The percent change in the minority group shares is somewhat more pronounced for the self-employed, in part because the rates started so low.

As discussed in the literature, the self-employed as a whole are more likely to be married compared with their wage and salary counterparts, and this pattern is evident for those age 50 and above as well. For example, in 2001, 76 percent of the self-employed in unincorporated businesses age 50 and above were married, a rate that increases to 79 percent for those in incorporated and unincorporated businesses (again indicating that those in incorporated businesses are more likely to be married compared to their unincorporated counterparts). Over time, there has been a decrease in the likelihood that the self-employed are married particularly based on C1 with the longer time series. This change is more pronounced among all self-employed workers compared with their wage and salary counterparts based on definition C1 but the reverse is true based on definition C2.

In 2001, the self-employed age 50 and above—using either definition C1 or C2—had a higher proportion of college educated workers compared with their wage and salary counterparts. The share was higher for C2 than C1 demonstrating that the incorporated self-employed are even more educated than those who are unincorporated. Over time the workforce has become more educated, a trend reflected in the pattern for both the self-employed and wage and salary workers age 50 and above. It is interesting to note that by 2001, the self-employed in unincorporated businesses had a higher share of high school dropouts than the comparable wage and salary group (11.6 versus 9.6 percent), whereas the reverse was true in 1969 (45.5 versus 49.9 percent). This pattern does not hold after accounting for workers in incorporated businesses.

Another stylized fact in the literature is that the self-employed tend to work more hours than wage and salary workers. Although this was true in 1969, using definition C1, when older self-employed workers worked an average of 4.7 more hours per week (44.0 versus 39.3 hours),

by 2001 older self-employed workers reported on average one hour less per week than their wage and salary counterparts (38.3 versus 39.2 hours). This is a dramatic convergence in hours, all due to a steady decline in work hours for the self-employed compared with almost no change for wage and salary workers. On average, older workers in incorporated businesses work more hours than those in unincorporated businesses so the average hours using definition C2 exceeds that based on C1. The shorter time series for C2 shows some convergence in hours between the self-employed and wage and salary workers but the self-employed still work slightly more in 2001 (about 1 hour more per week).

Even though average hours for the self-employed tended to be higher, at least in the past, the fraction working full-time—defined as 35 or more hours per week—is lower, indicating a more bipolar distribution of workers reporting both low and high hours. In 2001, 59 percent of older self-employed workers in unincorporated businesses worked 35 or more hours per week compared to 74 percent of wage and salary workers in the same age group. Self-employed workers in incorporated businesses report a higher propensity for full-time work. Overall the rates of full-time employment, like average hours, have been declining over time for older workers, more sharply for the self-employed.

The occupational and industrial composition of the self-employed workforce age 50 and above differs from those in wage and salary employment in ways that are consistent with patterns reported elsewhere in the literature. In 2001, older self-employed workers were overrepresented in managerial and professional specialties, sales, other service occupations, and precision production, craft and repair occupations (which includes the construction trades). Industries underrepresented among the self-employed age 50 and above include mining, manufacturing, transportation and public utilities, and public administration. They are overrepresented in construction, trade, and other services. A comparison of the occupation distribution using definition C2 versus C1 shows an even higher fraction in the former group in executive and managerial positions indicating the overrepresentation of this occupational group among the incorporated self-employed. The industrial composition is more similar for C1 and C2 than is the case for the occupational distribution. Over time, the occupational distribution shifted somewhat differently for the self-employed compared to wage and salary workers. For example, the share in executive and managerial occupations declined for the self-employed

(based on definition C1) at the same time that it increased among the wage and salary workforce. The reverse pattern holds for precision production, craft and repair occupations.

The measure of incorporation status is only relevant for definition C2 (see Table 6) and shows, consistent with the time trends discussed above, that the share of total self-employment among older workers that is individuals in incorporated businesses increased from 30 to 33 percent.

7. THE HRS AS ANOTHER SOURCE OF DATA ON SELF-EMPLOYMENT AMONG OLDER WORKERS

Although the CPS has the advantage of a relatively long time series for examining patterns and trends in self-employment among older workers, the HRS provides extremely rich data on the cohort of older workers age 51 and above in 1998. These data can be used to supplement the portrait of older self-employed workers that we glean from the CPS, providing more detail on their health and economic status and job characteristics.

The HRS, when appropriately weighted, is a nationally representative, longitudinal survey of middle-aged and older Americans. The HRS is a biennial survey that began in 1992 with a sample of the non-institutional population born between January 1, 1931 and December 31, 1941 and their spouses or partners, with oversamples of blacks, Hispanics, and Floridians. Several other cohorts have been added to the HRS over time. In 1998, interviews that began in 1993 with the cohort born prior to January 1, 1924, known as the “AHEAD” (Assets and Health Dynamics of the Oldest Old) sample, were merged with the HRS. Two additional cohorts were added in 1998: the cohort born between January 1, 1924 and December 31, 1930 (known as the “Children of the Depression Era” or “CODA” sample), and the cohort born between January 1, 1942 and December 31, 1947 (known as the “War Babies” sample). For the analysis in this section, we use the 1998 wave of the HRS (HRS98) as a cross-sectional survey, focusing on the sample of those age 51 and above in 1998 (i.e., all cohorts born up through 1947).

Key demographic variables are similar to those available in the CPS. In terms of employment outcomes, workers are asked whether they are currently self-employed in their main job, how long they have been self-employed (i.e., tenure on the current job) and the employment status of a previous job lasting 5 or more years. Retired workers are asked about the employment status of previous jobs. As we discuss further below, the respondents' answers are

used to determine who is self-employed, and who transitioned into self-employment before and after age 50. HRS respondents are also asked about jobs other than their main job and if the second job is in self-employment. Unlike in the CPS, in the HRS the distinction between incorporated and unincorporated self-employment is not made, although interviewers in the HRS are instructed to classify individuals who work in a business they own as self-employed.

The HRS is extremely rich in terms of a number of other characteristics available for the study population. This includes information about job characteristics, income and its sources, wealth from various sources (e.g., pensions, Social Security, housing, and other financial assets),¹⁹ health status, access to health insurance coverage, retirement expectations, and a similar array of characteristics for the respondent's spouse. As we discuss below, this information allows for a detailed analysis of the characteristics of the self-employed. Comparable data are also available for the wage and salary workforce as well.

As with the CPS, there are several alternative definitions of self-employment that can be analyzed in the HRS. Appendix A provides a comparison between the five definitions used for the CPS and four alternative definitions based on the HRS. This analysis shows that a definition of self-employment in the HRS based on reported current self-employment in the primary job (defined as H1 in Appendix A) is comparable to the CPS definition that captures current self-employment in unincorporated and incorporated businesses (definition C2). Thus, using this definition, we find that 22.7 percent of workers age 51 and above in 1998 were self-employed in their primary job, equal to 6.4 million workers.

8. DETAILED CHARACTERISTICS OF THE SELF-EMPLOYED AGE 51 AND ABOVE BASED ON THE HRS

The extremely rich data in the HRS allow us to go beyond the descriptive analysis that is possible using the characteristics available in the CPS. Using the HRS98 sample of workers age 51 and above and our preferred definition of self-employment in the HRS (those workers who state they are self-employed in their primary job in the reference week), we compare the characteristics of self-employed workers to wage and salary workers, and for the self-employed, we compare the characteristics of male and female workers. We also compare the characteristics

¹⁹ Computation of Social Security wealth and pension wealth is available only for researchers with restricted data permission. These data are currently available for the original HRS cohort only rather than the full 1998 cross-section examined here.

of self-employed workers age 51 and above by whether they became self-employed before versus at or after age 50 based on retrospective employment information.²⁰ This allows us to contrast the characteristics of those who are more likely to be considered career self-employed versus those who made the transition to self-employment in later life. As noted in Table A1, 23 percent of workers age 51 and above are self-employed in their primary job. Among the self-employed age 51 and above, 35 percent are women and 32 percent became self-employed at age 50 or older.

Table 7 shows the demographic, income and wealth, health, employment, and spouse characteristics for the six groups mentioned above: wage and salary workers, self-employed workers, male self-employed, female self-employed, self-employed before age 50, and self-employed at or after age 50. Consistent with what was observed in Tables 5 and 6 for the CPS, the demographic characteristics reveal that, compared with wage and salary workers, self-employed workers age 51 and above are older, more likely to be white, male, married, and to have at least a college education. Among the demographic characteristics, the most striking differences between older female and male self-employed workers are their education levels and marital status. Self-employed women age 51 and above are 8 percentage points less likely to have some college education or more, and 3 percentage points more likely to be a high-school drop-out than self-employed men. They are also approximately 16 percentage points less likely to be married. Notably, nearly 16 percent of older female self-employed workers are widowed compared with fewer than 4 percent for their self-employed male counterparts. Female self-employed are also younger, and more racially diverse. Workers who became self-employed at age 50 or older are much older than workers self-employed before age 50, and are more likely to be female.

Self-employed workers age 51 and above have higher household income and wealth than wage and salary workers. Mean household income for older self-employed workers is \$101,183 compared to \$66,191 for wage and salary workers although at the medians, household income is more similar between the two groups: \$56,103 and \$50,200 respectively. The average capital

²⁰ In particular, we rely on several sources of retrospective information. Individuals currently not working are asked about his or her last job and whether they were self-employed. These individuals are also asked about jobs lasting 5 years or more in a job history segment and self-employment is identified for those prior “long” jobs. HRS respondents working at the time of the interview are also asked about employment status on previous jobs lasting 5 years or more. In addition, for the HRS 1931-1941 birth cohort, we look prospectively over the panel from 1992 to 1998 to determine if there was other self-employment prior to when they are observed in 1998.

income for the self-employed (income primarily from self-employment, other businesses, and assets) is more than six times that for wage and salary workers, while their financial wealth is more than three times the wealth of wage and salary workers. The gap in the wealth stock or income flow from the wealth stock is as large or larger at the median. Similar patterns exist when considering subcomponents of wealth, such as housing wealth or assets in IRA or Keogh accounts, or wealth less business assets. In each case, older self-employed workers have higher asset levels although the gap is smaller when medians are considered compared with means. Some of the difference in the wealth measure reported in Table 7 may be reduced after accounting for differences in pension wealth which is likely to be larger for wage and salary workers.

Older self-employed men have higher household income and wealth than self-employed women regardless of the income and wealth measure. Likewise, with one exception, workers who become self-employed at age 50 or older have consistently lower household income and wealth than workers who become self-employed before age 50. The one exception is assets in IRA or Keogh accounts which are higher at the mean and median for those who become self-employed at or after age 50. Such accounts are often the result of rolling over defined contribution pension plan balances on prior jobs which may be more prevalent among those who become self-employed later in their career. The overall higher financial asset levels for the long-term self-employed may reflect greater wealth accumulation for career self-employed workers compared with wage and salary workers who transition to self-employment later in their labor market careers. Alternatively, wealth may be lower for more recently self-employed workers because part of their accumulated wealth was invested in their business. We are not able to differentiate between these two explanations. Similar to wage and salary workers, workers who become self-employed at or after age 50 may also have higher pension wealth than those who were self-employed before age 50 so that the overall wealth levels available at retirement may be closer to that of workers who became self-employed before age 50.

As seen in Table 7, the self-employed age 51 and above are drawn from both the very healthy and those who have a work-limiting disability. Approximately 57 percent of self-employed workers report being in excellent or very good health compared to 53 percent of wage and salary workers. The fraction reporting fair or poor health is also slightly higher for the self-employed. In addition, the self-employed are approximately 7 percentage points more likely to

say that their health limits their work compared to their wage and salary counterparts. The two groups have similar numbers of limitations with eating, bathing, dressing, getting out of bed, or walking across a room (measures of activities of daily living or ADLs). Comparing self-employed women and men, more self-employed women report being in fair or poor health (a difference of 4 percentage points) and more report having a health condition that limits their work (a difference of 5 percentage points). The frequency of reporting ADLs is also slightly higher for female self-employed workers. Although the overall health status of self-employed workers before and after age 50 is similar, workers who become self-employed at age 50 or older are slightly more likely to have a health condition that limits their work.

Table 7 also compares the employment characteristics across older wage and salary workers and the various groups of older self-employed workers. In terms of employee benefits, health insurance and pension access is considerably different between the self-employed and wage and salary workers: 34 percent versus 67 percent have health insurance coverage, respectively, while 12 percent versus 61 percent have pension coverage on the current job. At the same time, pension coverage on the prior job is almost identical for the two groups. Among those with pension coverage on the current job, the self-employed are more likely to participate in a defined contribution (DC) plan than a defined benefit (DB) plan. Among the self-employed, women have lower health insurance coverage and lower pension coverage on both the current and prior job. Among those with pension coverage, DC plans or both DB and DC are considerably more common for women than men (92 versus 66 percent). Although the more recently self-employed have lower health and pension coverage on the current job, they have higher pension coverage on the prior job. This suggests that pension coverage on a prior wage and salary job may facilitate the transition to self-employment later in life.

In terms of work effort, self-employed workers age 51 and above are only slightly more likely than wage and salary workers of the same age to have a job that requires a lot of physical effort all or most of the time. Among the self-employed, physical effort associated with the job is lower for women than men, and for those who became self-employed after age 50. It is striking to note that the self-employed are much more likely to report working part-time (less than 35 hours per week) on their main job, particularly self-employed women and workers who become self-employed at age 50 or older. At the same time, the self-employed are equally likely as wage and salary workers to hold a second job, although second jobs are somewhat more likely

to be in the same class of employment for the self-employed (i.e., a second wage and salary job for wage and salary workers, and a second self-employment job for the self-employed). Men and those self-employed before age 50 are somewhat more likely to have a second job but, among the self-employed with second jobs, the rates of self-employment are higher for men and those self-employed at or after age 50 than before age 50.

It may be the case that self-employed workers age 51 and above reduce hours rather than retire from the labor force or wage and salary workers become self-employed in order to work part-time. Indeed, compared with wage and salary workers, self-employed workers report a higher expected probability of working full-time at age 62 and age 65—a measure of retirement expectations—particularly self-employed men and the longer-term self-employed. This suggests that transitions to self-employment later in the career may be part of the retirement process.

With regards to occupation and industry, consistent with our earlier analysis of the CPS, older self-employed workers are more likely to have an occupation of farming and to be in the agricultural sector than wage and salary workers, particularly male workers who became self-employed before age 50. The occupation and industry distribution of male and female self-employed workers show a number of differences with women more likely to be self-employed in clerical and other services occupations, and in the trade and personal services sectors. Those who become self-employed later in their career are more concentrated in segments of the services sector rather than in agriculture or mining/construction.

As part of the employment history, HRS respondents age 51 and above are asked about the reason for departure from the prior job. The responses to this question tabulated in Table 7 reveal that, compared with their wage and salary counterparts, self-employed workers are less likely to have left a prior job involuntarily (e.g., to have been laid off, been left go, or left due to a business closure) and more likely to have experienced a voluntary departure (e.g., to have quit or retired). Notably, 16 percent of self-employed workers retired from their previous job compared with 9 percent of wage and salary workers. Among self-employed workers after age 50, the percentage rises to 33 percent. This group is also more likely than wage and salary workers to have been laid off. Self-employed men are more likely to report leaving a prior job for a better job or having had retired compared with self-employed women.

Finally, Table 7 reports the characteristics of the spouses of the wage and salary and self-employed workers age 51 and above in terms of age, education, health and health insurance, and

some employment characteristics. Spouses of the self-employed, like self-employed workers themselves, are more likely to be college educated and are healthier than spouses of wage and salary workers. Overall the spouses of self-employed workers are only slightly less likely to be working. Some self-employment is likely to be family-owned businesses: 27 percent of self-employed workers have spouses that are also self-employed, a rate that exceeds that for the spouses of wage and salary workers. Despite the differential class of employment, spouses of the self-employed and of wage and salary workers are about equally likely to be covered by employer health insurance. At the same time, consistent with this differential, the spouse of a self-employed worker is less likely to have a pension than the spouse of a wage and salary worker.

Among older self-employed workers, the spouses of female workers are more polarized in their education distribution, with a higher fraction in both the lowest and highest education levels, but spousal health is quite similar. The husbands of self-employed women are more likely to be working, to be self-employed, and to be covered by employer health insurance than the wives of self-employed men. Rates of pension coverage are almost identical. The contrasts in the characteristics of the spouses of workers who become self-employed before and after age 50 are not as sharp. There is some indication that, compared to those who become self-employed before age 50, those who become self-employed at or after age 50 have older spouses (expected given that the self-employed after age 50 are more likely to be women and are older themselves), have worse health, and are less likely to be working or to be self-employed.

9. CONCLUSIONS

Given the importance of self-employment at older ages—both relative to the ranks of the self-employed as a whole and relative to the wage and salary workforce at older ages—it is important to have a solid understanding of the characteristics of this segment of the workforce and how those characteristics may be changing over time. The aging of the workforce as the baby boom cohort approaches retirement will almost certainly influence the size and characteristics of the self-employed workforce. Although the overall trend in self-employment rates has been downward in the past decade, the fact that self-employment rates rise at older ages and that the population is aging suggests that demographics alone may halt or reverse that trend. At the same time, we also know that a growing share of those who are self-employed do so

through an incorporated business. The fact that this form of business organization is not officially tracked as a form of self-employment in U.S. labor force statistics may conceal changes in underlying rates of self-employment, particularly among older workers where up to one third are in incorporated businesses. Future research can help deepen our understanding of this important labor force phenomenon.

Our two data sources—cross-sectional time-series data from the CPS and cross-sectional data from the HRS—reveal that older self-employed workers exhibit many of the same characteristics found for the self-employed more generally. Among workers age 51 and above, self-employed workers, compared to their wage and salary counterparts, are older; are more likely to be male, white, married, and college educated; and more likely to be healthier but to have a health condition that limits work. Self-employed workers are also more likely to be working part-time and to have a family-business or a spouse who is also self-employed. The differences in the age distribution, health status, and work effort among older self-employed workers versus their wage and salary counterparts suggest the self-employed at older ages are able to work longer even despite poorer health, and to work with more flexibility in hours. Thus, self-employed workers may be better able to accommodate their changing preferences for work versus leisure as they make the transition to retirement.

At the same time, older self-employed workers are financially better off than workers in the wage and salary class as measured by household income and wealth, but are less likely to have a pension and health insurance on their current job. Those who become self-employed after age 50—about one third of older self-employed workers—also have lower levels of income and wealth and lower rates of pension and health coverage compared with those who became self-employed earlier in their career and self-employed. Women, whose share of self-employment among older workers has been growing over time, also exhibit lower income, asset, and employee benefit levels than their male counterparts who are self-employed. Future research can help identify the implications of self-employment for the retirement income security of older workers, especially self-employed women and older workers who make the transition to self-employment later in their careers.

APPENDIX A

This appendix provides a comparison of self-employment levels and rates based on alternative definitions of self-employment in the CPS and HRS. For the CPS, we use the same five measures of self-employment defined in Table 2. As with the CPS, we consider definitions in the HRS based on both employment in the reference week and in the prior year.

Table A1 provides a summary of the four measures of self-employment we consider based on the HRS. Since the HRS distinguishes self-employment status for current employment for both a primary and secondary job, we define H1 as current self-employment in the primary job only and H2 as self-employment in the primary or secondary job. H1 is closest to C1 or possibly C2 depending on how the self-employed in incorporated businesses are classified in the HRS. The difference between H1 and H2 captures “moonlighters,” those who work in self-employment only as a secondary job, in addition to a main job in the wage and salary class. To account for the possibility that some HRS respondents who are self-employed in an incorporated business would classify themselves as wage and salary workers, we also use information in the HRS about business ownership to potentially identify these individuals. Thus, definition H3 expands the group classified as self-employed in H2 by adding in those who report they own a business. H3 is therefore potentially equivalent to C2, the more expansive CPS definition of the self-employed. It is also possible, however, that H3 would overestimate the number of self-employed to the extent that individuals own businesses that they do not work in. Finally, H4 is based on reported self-employment income in the prior year, a definition that parallels C5 for the CPS. Again, however, if the self-employed in incorporated businesses report their labor income as wage and salary income, these definitions may not be equivalent.

Table A2 shows the weighted estimates for the number of self-employed workers and the self-employment rate for the HRS 1998 cross-section of civilian noninstitutionalized workers age 51 and above for each of the four definitions. As expected, H1 provides the most narrow definition, with an estimated 22.7 percent of older workers classified as self-employed in their primary job in 1998, equal to 6.4 million workers. H2 includes the self-employed in H1 plus those workers who moonlight in self-employment through a secondary job and brings the self-employment rate to 26.4 percent. Thus, about 4.3 percent of the older workforce or 1.1 million workers are estimated to moonlight in self-employment. Including those who report owning one

or more businesses in definition H3 brings the self-employment rate up to 31.2 percent, over 8 percentage points higher than the narrow definition H1. As noted above, this definition is likely to include some individuals who do not contribute labor to the business they own and might therefore not be considered self-employed according to traditional definitions of employment status. Finally, H4 provides an estimated self-employment rate of 24.8 percent, a result close to, but slightly below that provided by H2.

Table A2 also provides weighted estimates of the number of self-employed and the self-employment rates for the CPS using a cohort of workers equivalent to that for the HRS. Specifically, the CPS sample consists of civilian noninstitutionalized workers age 51 and above in March 1998, with data on self-employment status in the March 1998 reference week for definitions C1 and C2 and for calendar year 1997 for definitions C3 to C5. Definitions C1 and C3 which include only unincorporated workers are considerably below those for the HRS, which suggests that the HRS base definition, H1, does include both self-employed in unincorporated and incorporated businesses. C2, which is the definition in the CPS for the reference week that is conceptually the most equivalent to H1, comes closest to matching the base HRS definition H1, but it is still lower by about 3.5 percentage points. The absolute size of the self-employed workforce according to C2 is also lower than H1 by almost 1.5 million workers. Definitions H2 to H4 in the HRS are clearly more expansive in defining older workers as self-employed than any of the CPS definitions. Although we might expect H4 and C5 to be comparable based on their definitions, C5 falls short of H4 by almost 6 percentage points and 1.1 million workers. Thus, the most comparable definitions between the two data sources are H1 for the HRS and C2 for the CPS. Both refer to self-employment for the survey reference week in the main or primary job, and capture individuals in both incorporated and unincorporated businesses.¹ Thus, in the analyses provided in the text, we rely on H1 as our preferred definition of self-employment in the HRS.

¹ For the characteristics that are common across the HRS and CPS, we have compared the distributions for the various measures of self-employment in the two surveys. A comparison across Tables 6 and 7 shows similar distributions based on definitions C2 and H1. There is some indication that the CPS definition C2 generates a higher proportion of males, younger workers within the age range, workers in the residual “other” race/ethnicity category, married workers, more educated workers, and individuals working full time. However, these differences are probably due in part to sampling errors. The occupational and industrial distributions may differ to some extent as well because of different coding schemes.

Table A1

Self-Employment Definitions Based on the HRS

Self-employment definition	HRS survey and reference years
H1. Current employment: self-employed in primary job	1992, 1994, 1996, 1998, 2000
H2. Current employment: self-employed in primary or secondary job	1992, 1994, 1996, 1998, 2000
H3. Current employment: self-employed in primary or secondary job; or Current assets: own business(es)	1992, 1994, 1996, 1998, 2000
H4. Employment last year: any self-employment income	1992, 1994, 1996, 1998, 2000

Table A2

Self-Employment Rates in 1998 for Workers Age 51 and Above Based on Alternative Definitions in the HRS and CPS

Survey and definition of self-employment		Self-employed		Sample size
		N (1,000s)	Percent	
Health and Retirement Study:				
H1	Currently self-employed in primary job	6,378	22.7	7,473
H2	Currently self-employed in primary or secondary job	7,484	26.4	7,535
H3	Currently self-employed in primary or secondary job or currently own business(es)	8,844	31.2	7,535
H4	Any self-employment income in last year	6,898	24.8	7,433
Current Population Survey:				
C1	Currently self-employed in main job, unincorporated	3,330	13.0	12,735
C2	Currently self-employed in main job, unincorporated or incorporated	4,908	19.1	12,735
C3	Self-employed in longest job during calendar year, unincorporated	3,533	12.2	14,383
C4	Self-employed in longest job during calendar year, unincorporated or incorporated	5,164	17.8	14,383
C5	Self-employed in longest job during calendar year, unincorporated or incorporated, or any self-employment income during calendar year	5,864	20.3	14,383

NOTES: Sample is all civilian noninstitutionalized workers age 51 and above. Numbers (N) and percentages have been calculated using HRS and CPS sampling weights.

SOURCE: Authors' calculations using HRS98 (H1-H4), March 1998 CPS (C1-C5).

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Table 1**Self-Employment Rates in 2002 by Sex and Age**

	Total employment			Agricultural employment			Nonagricultural employment		
	Total (1,000s)	Self- employed (1,000s)	Self- employed (%)	Total (1,000s)	Self- employed (1,000s)	Self- employed (%)	Total (1,000s)	Self- employed (1,000s)	Self- employed (%)
All workers	136,485	9,756	7.1	3,340	1,266	37.9	133,145	8,490	6.4
Workers age 45 and above									
45-54	31,281	2,728	8.7	631	306	48.5	30,650	2,422	7.9
55-64	15,674	1,736	11.1	426	265	62.2	15,248	1,471	9.6
65+	4,306	830	19.3	304	223	73.4	4,002	607	15.2
All men	72,904	6,068	8.3	2,474	944	38.2	70,430	5,124	7.3
Men age 45 and above									
45-54	16,418	1,727	10.5	443	221	49.9	15,975	1,506	9.4
55-64	8,378	1,100	13.1	310	188	60.6	8,068	912	11.3
65+	2,455	569	23.2	227	169	74.4	2,228	400	18.0
All women	63,583	3,689	5.8	867	323	37.3	62,716	3,366	5.4
Women age 45 and above									
45-54	14,864	1,001	6.7	189	85	45.0	14,675	916	6.2
55-64	7,296	637	8.7	115	77	67.0	7,181	560	7.8
65+	1,850	261	14.1	77	54	70.1	1,773	207	11.7

NOTE: Self-employed are those in unincorporated businesses only.

SOURCE: Household data from the CPS reported by Bureau of Labor Statistics in Table 15 at <http://www.bls.gov/cps/home.htm#empstat>.

Table 2

Self-Employment Definitions Based on the CPS

Self-employment definition	March CPS survey years	Reference years
C1. Current employment in main job: self-employed in unincorporated business	1968–2002	1968–2002
C2. Current employment in main job: self-employed in incorporated or unincorporated business	1989–2002	1989–2002
C3. Longest job in calendar (last) year: self-employed in unincorporated business	1968–2002	1967–2001
C4. Longest job calendar (last) year: self-employed in incorporated or unincorporated business	1976–2002	1975–2001
C5. Employment calendar (last) year: self-employed in incorporated or unincorporated business in longest job last year or had any reported self-employment income in the last year	1976–2002	1975–2001

Table 3

Self-Employment Rates in 2001 for All Workers and Workers Age 50 and Above Based on Alternative Definitions in the CPS

Self-employment definition	Self-employed age 50 and above		Self-employed age 16 and above		Percent of self-employed age 50 and above	
	N (1,000s)	Percent	N (1,000s)	Percent		
C1	Currently self-employed in main job, unincorporated	3,866	12.0	9,759	7.2	39.6
C2	Currently self-employed in main job, unincorporated or incorporated	5,536	17.2	13,884	10.3	39.9
C3	Self-employed in longest job during calendar year, unincorporated	3,766	9.9	9,316	6.2	40.4
C4	Self-employed in longest job during calendar year, unincorporated or incorporated	5,642	14.9	13,362	9.1	42.2
C5	Self-employed in longest job during calendar year, unincorporated or incorporated, or any self-employment income during calendar year	6,417	16.9	16,815	11.2	38.2

NOTES: Sample is civilian noninstitutionalized workers age 16 and above and civilian noninstitutionalized workers age 50 and above. See Table 2 for definitions of self-employment. N's and percentages have been calculated using CPS sampling weights.

SOURCE: Authors' calculations using March CPS from 2001 (C1-C2) and 2002 (C3-C5).

Table 4**Trend in Self-Employment for Workers Age 50 and Above Based on the CPS Using Five Definitions: 1968–2002**

Year	Self-employment status in reference week				Self-employment status for calendar year					
	C1: Unincorporated		C2: C1 + incorporated		C3: Unincorporated		C4: C3 + incorporated		C5: C4 + any SE income	
	N (1,000s)	%	N (1,000s)	%	N (1,000s)	%	N (1,000s)	%	N (1,000s)	%
1968	3,389	16.0	–	–	3,998	15.8	–	–	–	–
1969	3,401	15.6	–	–	3,747	14.7	–	–	–	–
1970	3,329	15.2	–	–	3,851	15.0	–	–	–	–
1971	3,304	15.2	–	–	3,708	14.3	–	–	–	–
1972	3,232	14.7	–	–	3,814	14.8	–	–	–	–
1973	3,211	14.7	–	–	3,678	14.1	–	–	–	–
1974	3,178	14.4	–	–	3,502	13.6	–	–	–	–
1975	3,079	14.4	–	–	3,198	12.8	3,730	14.9	4,495	17.9
1976	2,933	13.7	–	–	3,244	12.9	3,845	15.3	4,682	18.6
1977	2,983	13.9	–	–	3,341	13.0	4,024	15.7	4,932	19.3
1978	3,112	14.1	–	–	3,379	13.1	4,214	16.3	5,046	19.5
1979	3,148	14.0	–	–	3,382	13.1	4,269	16.5	4,851	18.7
1980	3,165	14.1	–	–	3,298	12.6	4,224	16.1	4,739	18.1
1981	3,173	14.0	–	–	3,345	12.9	4,310	16.6	4,869	18.8
1982	3,096	14.0	–	–	3,343	13.1	4,454	17.4	5,074	19.8
1983	3,119	14.4	–	–	3,232	12.7	4,268	16.7	4,834	19.0
1984	2,949	13.4	–	–	3,207	12.5	4,380	17.0	4,972	19.3
1985	3,015	13.6	–	–	3,276	12.7	4,422	17.2	5,041	19.6
1986	2,974	13.6	–	–	3,242	12.5	4,366	16.9	5,035	19.5
1987	2,978	13.4	–	–	3,510	13.4	4,719	18.1	5,274	20.2
1988	3,200	14.2	–	–	3,585	13.7	4,779	18.2	5,487	20.9

Table 4, Continued

Year	Self-employment status in reference week				Self-employment status for calendar year					
	C1: Unincorporated		C2: C1 + incorporated		C3: Unincorporated		C4: C3 + incorporated		C5: C4 + any SE income	
	N (1,000s)	%	N (1,000s)	%	N (1,000s)	%	N (1,000s)	%	N (1,000s)	%
1988 rev	3,201	14.1	4,367	19.3	3,581	13.3	4,887	18.2	5,698	21.2
1989	3,219	13.8	4,448	19.1	3,638	13.5	4,887	18.1	5,719	21.2
1990	3,331	14.2	4,539	19.4	3,742	13.7	4,901	17.9	5,710	20.9
1991	3,330	14.3	4,474	19.2	3,599	13.1	4,928	17.9	5,692	20.7
1992	3,300	13.9	4,641	19.6	3,704	13.2	5,138	18.3	5,885	21.0
1993	3,315	13.7	4,677	19.4	3,810	13.5	5,262	18.7	5,837	20.7
1994	3,581	14.7	5,054	20.7	3,660	12.7	5,082	17.7	5,778	20.1
1995	3,531	14.0	5,086	20.1	2,892	9.9	5,046	17.3	5,747	19.7
1996	3,669	14.3	4,986	19.4	2,833	9.2	5,591	18.1	6,383	20.6
1997	3,831	13.9	5,408	19.6	3,813	11.9	5,582	17.4	6,360	19.8
1998	3,619	12.7	5,323	18.6	3,914	11.8	5,491	16.5	6,203	18.7
1999	3,640	12.2	5,232	17.6	3,874	11.1	5,589	16.1	6,243	17.9
2000	3,827	12.2	5,550	17.8	3,968	11.1	5,561	15.6	6,489	18.2
2001	3,866	12.0	5,536	17.2	3,766	9.9	5,642	14.9	6,417	16.9
2002	3,722	11.0	5,567	16.4	–	–	–	–	–	–

NOTES: Sample is civilian noninstitutionalized workers age 50 and above. See Table 2 for definitions of self-employment. Numbers (N) and percentages have been calculated using CPS sampling weights.

SOURCE: Authors' calculations using March CPS from 1968 to 2002.

Table 5

**Characteristics of Unincorporated Self-Employed Workers and Wage and Salary Workers Age 50 and Above in the CPS:
1969, 1979, 1990, 2001**

Characteristic	Self-employed workers age 50 and above (C1)					Wage and salary workers age 50 and above (W1)				
	1969	1979	1990	2001	% Δ	1969	1979	1990	2001	% Δ
Male (%)	73.1	72.3	66.1	61.3	-16.1	60.8	57.8	54.0	51.8	-14.7
Age group (%)										
50 to 54	27.5	32.6	31.6	35.9	30.7	37.4	37.5	37.9	44.4	18.7
55 to 59	27.0	25.4	26.9	25.6	-5.0	30.7	32.3	29.3	28.4	-7.6
60 to 64	21.5	19.6	20.3	16.1	-25.0	19.9	19.3	19.4	15.4	-22.7
65 to 69	12.8	11.1	11.7	10.6	-17.1	7.5	6.9	8.5	6.5	-13.6
70 and above	11.2	11.3	9.5	11.7	4.3	4.4	4.0	5.0	5.3	20.0
Race/ethnicity (%)										
White non-Hispanic	-	93.0	88.4	84.0	-9.7	-	86.8	83.0	79.7	-8.2
Black non-Hispanic	-	4.0	4.2	6.8	70.5	-	8.7	9.3	9.5	9.3
Hispanic	-	1.8	4.4	5.1	182.4	-	3.0	5.0	7.1	137.8
Other	-	1.2	2.9	4.1	252.1	-	1.6	2.8	3.8	140.8
Marital status (%)										
Married	80.7	80.2	77.0	75.5	-6.4	74.5	75.2	72.9	70.7	-5.1
Widowed	0.9	1.5	1.9	1.3	37.8	2.1	2.2	2.2	2.0	-5.6
Divorced	10.5	8.6	7.5	4.8	-54.4	12.0	10.5	9.0	6.1	-48.9
Separated	3.0	5.7	9.9	12.8	328.0	4.8	6.4	11.2	15.3	221.2
Never married	4.9	4.0	3.6	5.6	14.2	6.6	5.7	4.7	5.9	-11.3
Education level (%)										
Less than high school	45.5	32.1	20.6	11.6	-74.5	49.9	33.0	20.7	9.6	-80.8
High school	26.3	29.9	33.2	26.3	-0.2	29.4	37.0	38.1	33.0	12.3
Some college	12.6	16.2	19.0	27.2	115.9	10.3	14.9	18.3	26.0	152.8
College graduate and above	15.6	21.8	27.2	34.9	124.3	10.4	15.0	22.9	31.4	201.7

Table 5, Continued

Characteristic	Self-employed workers age 50 and above (C1)					Wage and salary workers age 50 and above (W1)				
	1969	1979	1990	2001	% Δ	1969	1979	1990	2001	% Δ
Weekly hours	44.0	40.9	39.2	38.3	-12.9	39.3	38.4	38.3	39.2	-0.4
Full-time (%)	66.9	64.4	59.4	59.1	-11.8	77.1	73.9	72.3	74.4	-3.6
Occupation (%)										
Exec., admin., managerial	45.9	32.3	17.4	20.6	-55.2	12.5	14.8	14.9	18.0	44.7
Professional specialty	15.3	16.2	16.1	18.1	18.6	9.6	11.8	14.3	17.5	82.8
Technicians and support	0.4	0.3	1.3	0.8	104.0	1.7	1.3	2.3	3.0	75.8
Sales	6.7	14.5	26.0	23.3	246.5	7.7	8.2	11.2	10.9	41.3
Administrative support	1.3	2.7	3.6	4.8	279.7	14.5	17.0	17.6	15.7	8.5
Private household	0.8	0.9	0.1	0.0	-100.0	4.2	2.3	1.5	0.9	-79.6
Protective service	0.0	0.2	0.1	0.4	—	1.6	1.8	1.9	1.8	13.6
Other service	9.7	9.2	12.3	11.3	17.2	10.2	11.5	11.0	9.4	-7.7
Farming, forestry, fisheries	0.7	0.3	0.6	0.4	-37.3	0.7	0.6	0.4	0.4	-41.9
Precision production, craft, repair	14.3	17.1	16.4	14.2	-0.6	14.0	12.2	10.8	9.7	-30.8
Machine oper., assemblers, repairers	1.9	2.8	1.8	1.9	0.2	14.6	11.5	6.9	5.5	-62.4
Transportation and material moving	2.7	3.3	3.4	4.1	49.1	5.1	4.2	4.5	4.7	-7.1
Handlers, equip. cleaners, helpers, laborers	0.4	0.2	0.9	0.2	-63.8	3.7	2.8	2.7	2.5	-31.4
Industry (%)										
Mining	0.3	0.4	0.3	0.3	-0.7	0.9	0.8	0.5	0.4	-50.3
Construction	10.8	13.4	12.0	11.2	3.5	5.2	5.2	5.1	4.9	-5.0
Manufacturing	4.9	4.3	5.4	3.7	-24.9	29.4	26.8	20.6	16.8	-42.8
Transportation, public utilities	3.2	3.5	3.6	4.5	42.9	7.0	6.7	6.9	7.8	12.0
Trade	33.6	30.7	24.9	19.6	-41.6	17.7	17.0	17.2	16.1	-8.7
Finance, insurance, real estate	6.0	9.8	10.4	11.8	95.4	4.6	6.1	7.3	6.8	46.4
Other services	41.2	37.9	43.4	49.0	18.7	27.9	30.1	36.1	40.5	45.1
Public administration	0.0	0.0	0.0	0.0	—	7.4	7.3	6.3	6.6	-10.4
Incorporated self-employed (%)	0.0	0.0	0.0	0.0	—	—	—	—	—	—
Sample size	1,657	1,571	1,620	1,407		12,929	12,255	11,925	12,588	

NOTES: Sample is civilian noninstitutionalized workers age 50 and above who are either self-employed in an unincorporated business in their main job during the reference week (definition C1) or are wage and salary workers in their main job during the reference week (definition W1 which includes the self-employed in incorporated businesses).
SOURCE: Authors' calculations using March CPS from 1969, 1979, 1990, and 2001.

Table 6

Characteristics of Unincorporated and Incorporated Self-Employed Workers and Wage and Salary Workers Age 50 and Above in the CPS: 1990, 2001

Characteristic	Self-employed workers in unincorp. and incorp. businesses age 50 and above (C2)			Wage and salary workers age 50 and above (W2)		
	1990	2001	% Δ	1990	2001	% Δ
Male (%)	69.4	65.4	-5.9	52.6	50.5	-3.9
Age group (%)						
50 to 54	32.2	36.1	12.0	38.1	44.8	17.6
55 to 59	25.7	26.1	1.8	29.7	28.5	-4.1
60 to 64	20.9	16.0	-23.7	19.2	15.4	-19.8
65 to 69	11.8	10.3	-13.0	8.2	6.3	-23.2
70 and above	9.4	11.5	23.2	4.7	5.0	5.1
Race/ethnicity (%)						
White non-Hispanic	89.5	86.1	-3.8	82.4	79.0	-4.1
Black non-Hispanic	3.6	5.5	52.2	9.7	9.9	2.1
Hispanic	3.8	4.1	5.7	5.1	7.4	43.0
Other	3.0	4.3	42.0	2.7	3.7	35.3
Marital status (%)						
Married	79.3	79.2	-0.1	72.2	69.7	-3.4
Widowed	1.7	1.3	-25.4	2.3	2.0	-10.8
Divorced	6.8	4.2	-37.9	9.2	6.3	-31.5
Separated	8.7	10.9	24.6	11.6	15.8	36.5
Never married	3.4	4.4	28.7	4.8	6.1	28.2
Education level (%)						
Less than high school	16.8	9.0	-46.0	21.5	9.9	-53.8
High school	32.7	25.9	-20.9	38.5	33.4	-13.1
Some college	19.8	25.8	30.3	18.1	26.2	44.8
College graduate and above	30.8	39.3	27.8	21.9	30.4	38.6

Table 6, Continued

Characteristic	Self-employed workers in unincorp. and incorp. businesses age 50 and above (C2)			Wage and salary workers age 50 and above (W2)		
	1990	2001	% Δ	1990	2001	% Δ
Weekly hours	40.6	40.0	-1.5	38.0	38.9	2.5
Full-time (%)	64.1	64.4	0.5	72.1	74.3	3.0
Occupation (%)						
Exec., admin., managerial	23.6	27.7	17.3	13.5	16.6	23.0
Professional specialty	15.5	16.8	8.1	14.3	17.7	23.4
Technicians and support	1.2	0.6	-53.1	2.4	3.1	32.0
Sales	26.3	23.2	-11.8	10.2	10.2	-0.4
Administrative support	4.7	5.4	15.1	18.2	16.3	-10.7
Private household	0.1	0.0	-100.0	1.5	0.9	-40.9
Protective service	0.1	0.3	171.3	2.0	1.9	-3.8
Other service	9.4	8.2	-12.3	11.5	9.9	-13.8
Farming, forestry, fisheries	0.4	0.4	-15.0	0.4	0.4	-4.9
Precision production, craft, repair	13.7	12.3	-9.6	11.0	9.8	-11.3
Machine oper., assemblers, repairers	1.4	1.5	7.7	7.3	5.8	-21.4
Transportation and material moving	2.9	3.3	12.5	4.7	4.9	3.6
Handlrs, eqp. cleanrs, helprs, laborrs	0.7	0.3	-50.3	2.9	2.6	-9.1
Industry (%)						
Mining	0.4	0.3	-17.1	0.5	0.4	-14.8
Construction	11.6	11.4	-1.9	4.7	4.5	-4.1
Manufacturing	6.8	5.9	-13.0	21.2	17.2	-19.1
Transportation, public utilities	3.6	5.0	38.4	7.1	7.9	11.2
Trade	27.5	21.3	-22.4	16.2	15.6	-3.4
Finance, insurance, real estate	10.3	11.3	9.3	7.1	6.6	-7.6
Other services	39.8	44.7	12.5	36.4	40.8	11.9
Public administration	0.0	0.0	n.a.	6.7	7.0	3.8
Incorporated self-employed (%)	29.8	32.9	10.2	n.a.	n.a.	n.a.
Sample size	2,312	2,103		11,233	11,892	

NOTES: Sample is civilian noninstitutionalized workers age 50 and above who are either self-employed in an unincorporated or incorporated business in their main job during the reference week (definition C2) or are wage and salary workers in their main job during the reference week. Means and percentage distributions have been calculated using CPS sampling weights.

SOURCE: Authors' calculations using March CPS from 1990 and 2001.

Table 7

Characteristics of Self-Employed in Primary Job in 1998 for Workers Age 51 and Above in the HRS

	Class of worker		Self-employed		Self-employed	
	Wage	Self-employed	Males	Females	Before 50	At or after 50
Demographics						
Male (%)	50.3	65.1	100.0	0.0	68.3	58.6
Age group (%)						
51 to 53	27.3	19.4	17.5	22.8	22.7	12.0
54 to 56	24.8	19.3	17.6	22.5	20.7	16.5
57 to 59	16.4	13.6	13.7	13.3	14.7	11.2
60 to 62	11.9	11.5	12.1	10.4	11.5	11.7
63 to 65	7.1	8.6	9.2	7.4	8.2	9.7
66 to 68	4.6	7.7	8.2	6.8	5.9	11.6
69 and above	7.9	20.0	21.6	16.9	16.4	27.3
Race (%)						
White non-Hispanic	81.8	88.9	89.8	87.3	89.7	87.8
Black non-Hispanic	9.2	5.2	4.8	5.8	4.7	6.3
Hispanic	6.6	3.8	3.3	4.7	3.7	3.2
Other	2.3	2.2	2.2	2.2	1.9	2.7
Marital status (%)						
Married	72.5	76.6	82.2	66.3	76.9	76.6
Widowed	7.9	7.6	3.4	15.5	9.1	6.9
Separated/divorced	16.0	12.6	11.0	15.5	12.0	13.0
Never married	3.6	3.1	3.3	2.8	2.1	3.6
Education (%)						
High-school dropout	14.4	14.6	13.6	16.6	14.2	14.8
GED	4.4	3.1	3.1	3.3	3.3	2.9
High-school graduate	32.6	27.1	25.5	30.2	28.1	24.5
Some college	23.7	23.6	21.8	26.8	23.0	25.6
College graduate and above	24.9	31.5	36.1	23.1	31.4	32.1

Table 7, Continued

	Class of worker		Self-employed		Self-employed	
	Wage	Self-employed	Males	Females	Before 50	At or after 50
Income and wealth (\$)						
Total household income (mean)	66,191	101,183	108,123	88,246	114,736	70,759
Total household income (median)	50,200	56,103	60,532	46,732	60,532	48,022
Wage earnings (mean)	33,783	14,236	18,478	6,327	15,408	11,834
Wage earnings (median)	26,000	0	0	0	0	0
Household capital income (mean)	9,996	61,782	68,734	48,822	75,198	31,595
Household capital income (median)	500	27,221	32,144	17,000	33,997	12,112
Total financial wealth (mean)	238,857	740,765	786,403	655,686	888,370	409,990
Total financial wealth (median)	119,000	312,000	345,000	249,000	366,660	213,500
Housing wealth (mean)	80,006	148,360	163,438	120,251	164,586	112,652
Housing wealth (median)	60,000	86,000	90,000	80,000	90,000	75,000
IRA/Keogh account wealth (mean)	37,667	70,381	74,756	62,227	15,408	64,386
IRA/Keogh account wealth (median)	0	0	5,000	0	0	3,500
Total wealth less business assets (mean)	224,348	554,344	595,847	476,972	635,361	369,560
Total wealth less business assets (median)	116,000	248,200	267,000	205,000	267,800	194,000
Health						
Health status (%)						
Excellent	19.2	25.4	24.6	26.9	25.5	25.2
Very good	34.0	31.2	32.2	29.3	30.8	32.8
Good	32.4	27.4	28.5	25.4	27.7	26.5
Fair	12.3	13.2	11.7	15.9	13.3	12.3
Poor	2.1	2.9	3.0	2.6	2.7	3.3
Health condition limits work (%)	8.4	15.0	13.1	18.4	14.1	16.5
ADLs (%)						
0	95.2	95.0	95.5	94.0	95.2	94.6
1	3.4	3.9	3.7	4.4	3.5	4.9
2 or more	1.4	1.1	0.8	1.6	1.3	0.5

Table 7, Continued

	Class of worker		Self-employed		Self-employed	
	Wage	Self-employed	Males	Females	Before 50	At or after 50
Job Characteristics						
Covered by employer health insurance (%)	67.4	34.3	37.2	27.9	40.6	17.6
Has pension on current job (%)	60.6	12.4	15.4	8.3	14.7	7.5
Pension type on current job (%)						
Defined benefit (DB) pension only	34.7	19.0	21.5	7.1	16.6	29.5
Defined contribution (DC) pension only	37.8	63.3	54.9	80.8	65.9	52.2
Both DB and DC pension	24.9	11.7	11.4	10.7	12.4	8.5
Doesn't know pension type	2.5	6.0	12.2	1.4	5.1	9.8
Had pension on previous job (%)	49.1	48.4	54.9	35.9	44.4	55.7
Job Requires a lot of physical effort (%)						
All/almost all the time	17.8	18.3	18.8	17.4	19.0	17.0
Most of the time	14.8	16.1	17.5	13.5	16.1	16.0
Some of the time	30.3	27.6	27.6	27.6	29.1	23.8
None/almost none of time	37.1	38.1	36.2	41.5	35.8	43.2
Full-time on main job (%)	74.3	53.5	59.5	42.2	59.0	41.2
Hold second job (%)	10.8	10.8	11.7	9.2	11.7	9.2
Second job in same class (%)	52.8	61.8	64.9	54.5	60.2	66.3
Retirement Expectations (mean %)						
Prob. of working full-time after age 62	47.0	56.0	63.0	47.0	57.0	54.0
Prob. of working full-time after age 65	26.0	42.0	48.0	32.0	43.0	38.0

Table 7, Continued

	Class of worker		Self-employed		Self-employed	
	Wage	Self-employed	Males	Females	Before 50	At or after 50
Occupation (%)						
Executive, administrative, managerial	15.8	16.4	19.5	10.7	16.8	16.0
Professional specialty	18.0	19.4	19.9	18.4	19.5	19.2
Sales	9.1	20.3	19.0	22.8	20.0	21.4
Administrative support	18.2	5.1	1.6	11.6	5.5	4.1
Private household	0.9	2.9	0.2	8.1	2.2	4.6
Protective service	2.2	0.1	0.1	0.0	0.0	0.2
Other service	11.2	8.0	2.4	18.5	5.9	12.5
Farming, forestry, fisheries	1.4	9.1	13.0	1.9	11.1	4.5
Precision production, craft, repair	9.8	11.6	15.3	4.9	12.7	9.4
Operators, assemblers, repairers, laborers	13.4	7.0	9.1	3.1	6.5	8.3
Industry (%)						
Agricultural	1.4	9.6	12.7	3.9	11.5	5.2
Mining and construction	4.3	9.8	14.1	1.8	11.1	6.9
Manufacturing	18.3	7.5	7.9	6.7	8.3	5.8
Transportation	7.7	3.3	3.9	2.3	3.3	3.5
Wholesale and retail trade	15.7	16.8	14.6	20.7	16.0	18.2
Finance, insurance, real estate	6.2	11.7	11.5	12.0	12.2	10.4
Business/repair services	6.1	12.8	14.6	9.3	11.1	16.9
Personal services	3.3	9.3	2.3	22.4	7.3	13.4
Entertainment	2.0	2.3	2.0	2.9	2.6	1.6
Professional services	29.3	16.5	15.9	17.7	16.2	17.4
Public administration	5.8	0.5	0.6	0.3	0.3	0.9

Table 7, Continued

	Class of worker		Self-employed		Self-employed	
	Wage	Self-employed	Males	Females	Before 50	At or after 50
Why left previous job (%)						
No previous job	35.9	33.0	32.1	34.6	40.7	14.5
Business closed	10.9	7.2	7.7	6.3	7.5	6.7
Laid off/let go	9.2	7.9	8.1	7.6	5.5	13.4
Poor health/disabled	2.3	3.2	3.2	3.3	3.2	3.4
Family care	3.4	2.8	0.6	7.0	2.9	2.6
Better job	13.9	14.2	16.3	10.2	16.2	10.1
Quit	10.1	11.5	10.5	13.3	11.3	12.1
Retired	9.4	16.1	18.4	11.8	8.8	32.9
Respondent's family moved	3.5	3.0	2.3	4.3	2.7	3.6
Sold business (own)	0.4	0.4	0.3	0.6	0.5	0.0
Other	1.0	0.8	0.6	1.1	0.8	0.8
Spouse Characteristics						
Spouse age (mean)	57.0	58.0	57.0	60.0	57.0	60.0
Education (%)						
High-school dropout	15.2	12.8	10.9	17.4	12.3	12.9
GED	4.8	2.7	2.6	2.9	2.1	4.2
High-school graduate	33.0	30.9	33.9	24.1	30.1	33.3
Some college	23.0	26.0	28.4	20.7	27.2	24.0
College graduate and above	24.1	27.5	24.3	35.0	28.3	25.6
Health status (%)						
Excellent	16.9	22.0	22.1	22.0	24.1	17.6
Very good	32.7	33.1	33.9	31.3	32.5	35.1
Good	31.2	27.8	27.3	29.0	27.1	29.8
Fair	13.9	12.9	13.4	11.9	12.8	12.4
Poor	5.3	4.2	3.4	5.9	3.6	5.1
Working for pay (%)	66.2	64.2	59.7	74.7	66.3	60.1
Self-employed (%)	9.5	26.9	20.5	41.6	29.4	21.5
Covered by employer health insurance (%)	45.6	44.8	40.0	56.4	47.0	40.6
Has pension (%)	58.0	43.4	43.5	43.1	43.0	43.3
Sample size	5,779	1,694	1,092	602	1,129	547

NOTES: Sample is self-employed workers age 51 and above using definition H1 (see Table A1). Means and percentages have been calculated using HRS sampling weights.
SOURCE: Authors' calculations using HRS98.

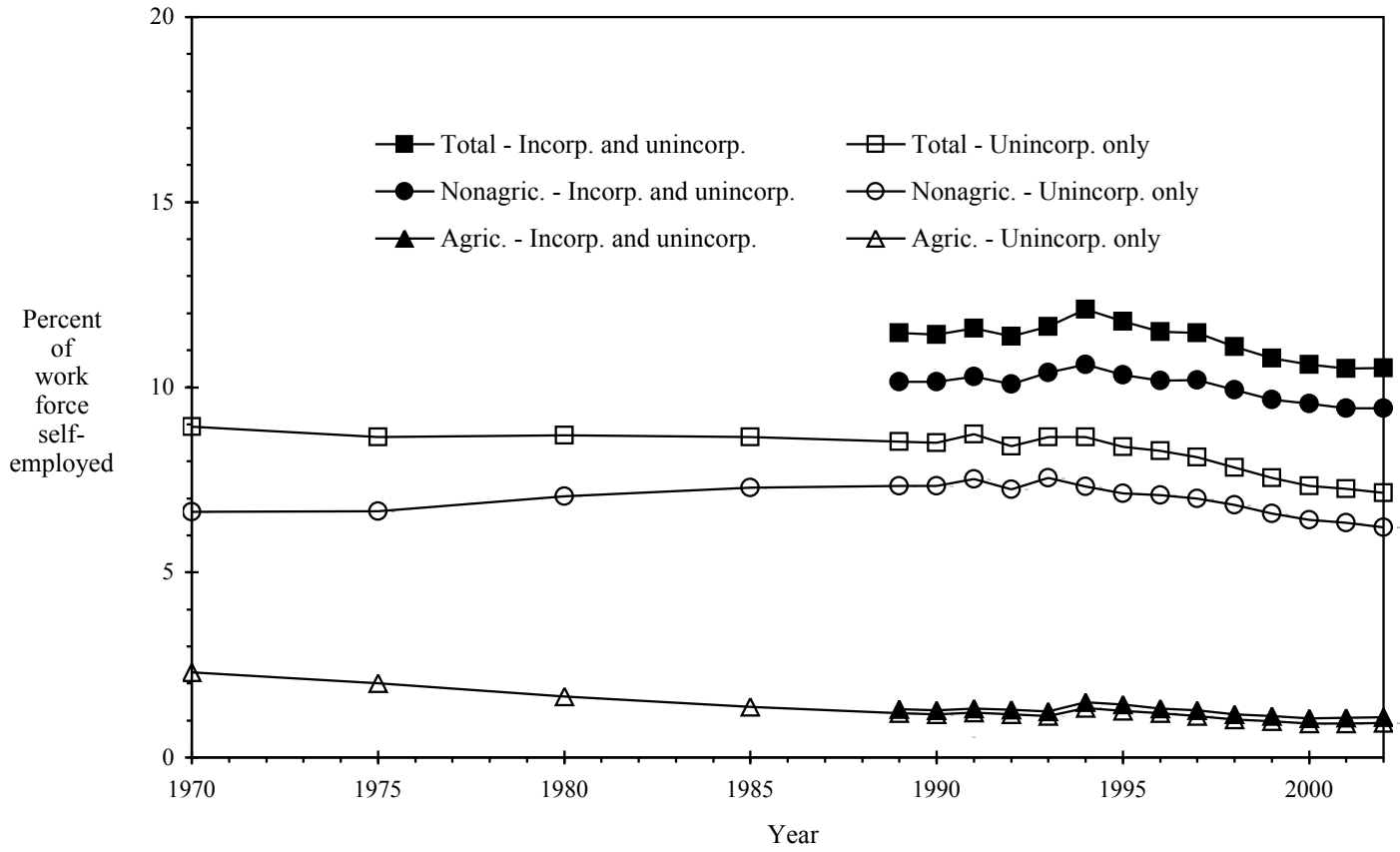


Figure 1—Trends in Self-Employment Rate: 1970-2002

SOURCE: Published and unpublished household data from the CPS reported by BLS in Table 580 of the 2001 edition of the *Statistical Abstract of the United States*, in Table 12 at <http://www.bls.gov/cps/home.htm#empstat>, and in an unpublished tabulation provided by BLS staff.

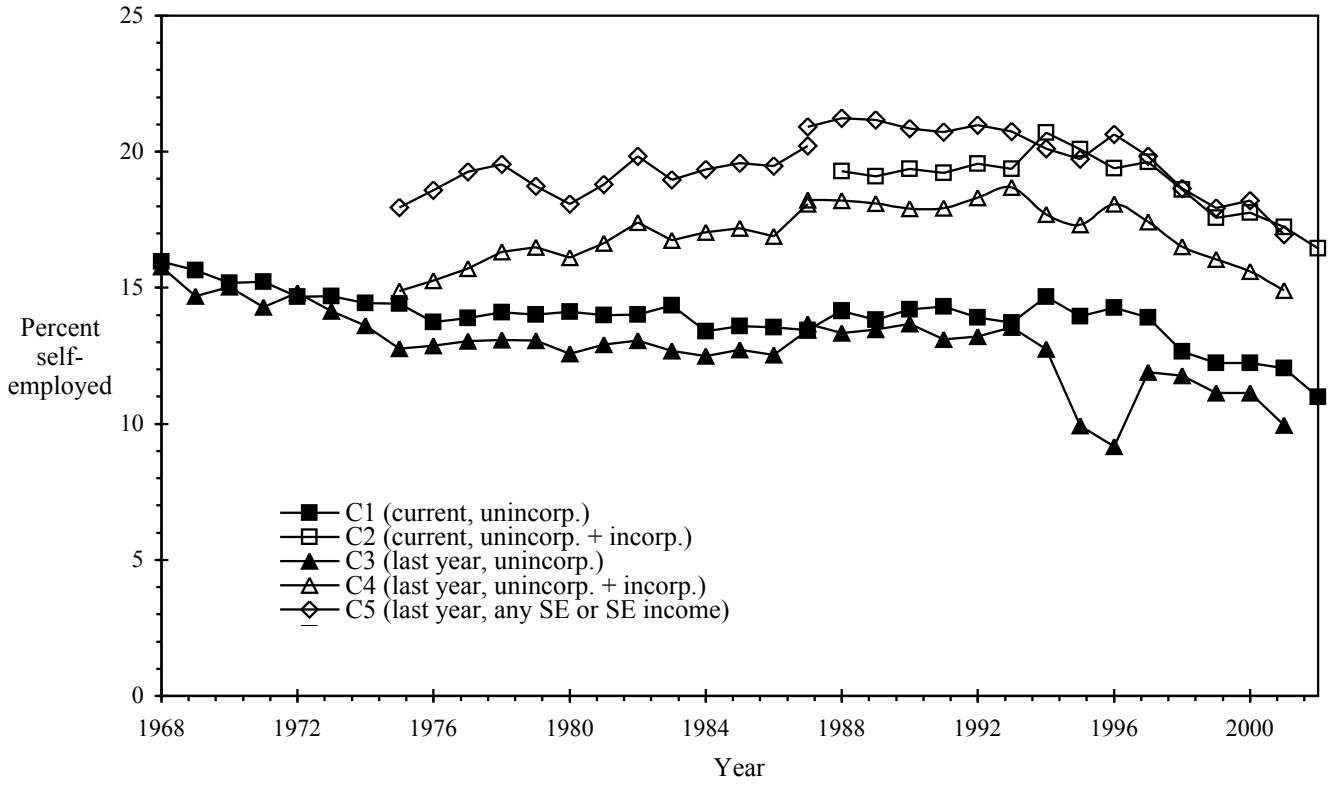


Figure 2—Trend in Self-Employment for Workers Age 50 and Above based on the CPS using Five Definitions: 1968-2002

NOTE: Sample is civilian noninstitutionalized workers age 50 and above. See Table 2 for definitions of self-employment. Percentages have been calculated using CPS sampling weights.
SOURCE: Authors' calculations using March CPS from 1968 to 2002.

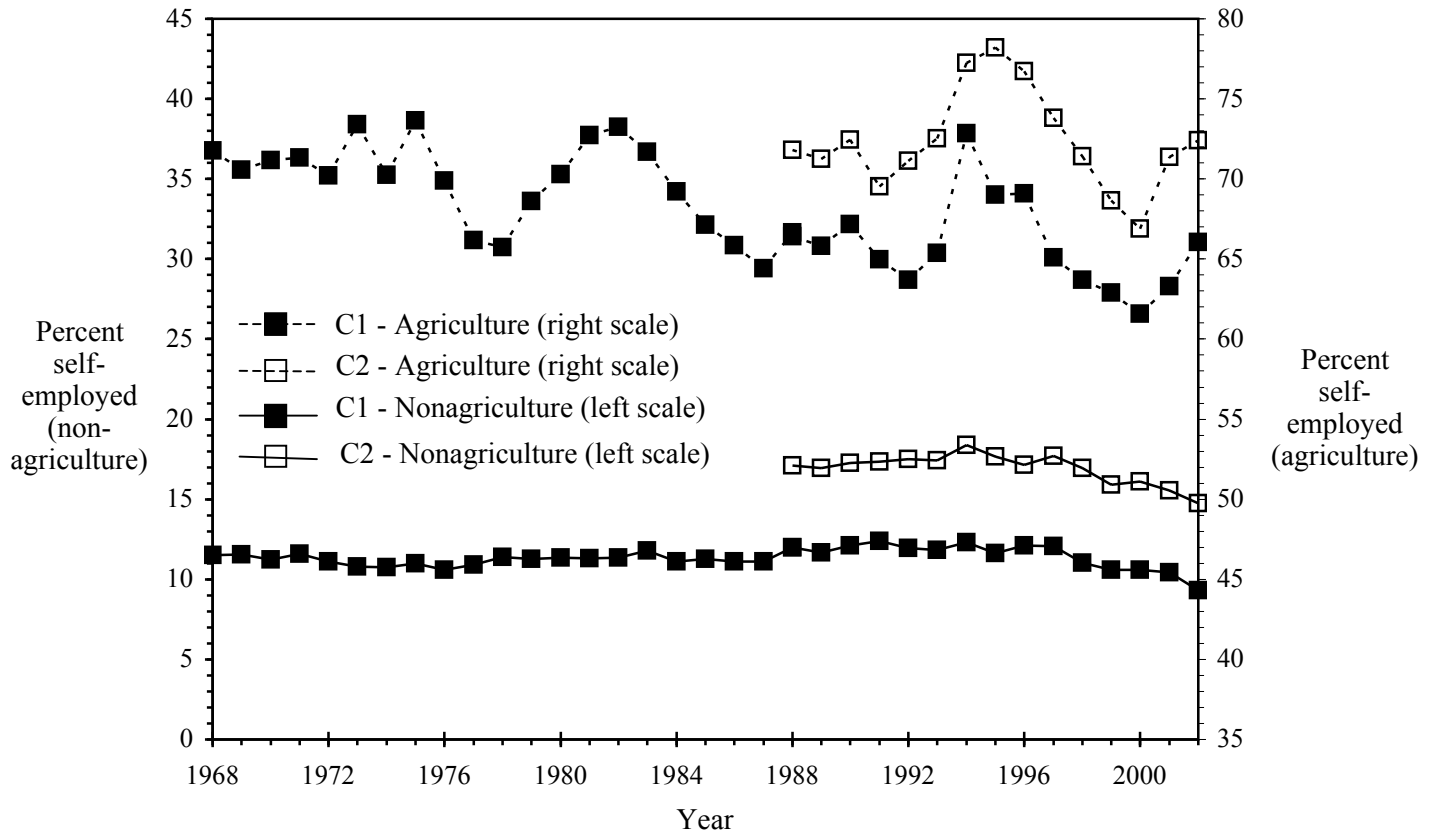


Figure 3—Trend in Self-Employment for Workers Age 50 and Above based on the CPS by Sector: 1968-2002

NOTE: Sample is civilian noninstitutionalized workers age 50 and above. See Table 2 for definitions of self-employment. Percentages have been calculated using CPS sampling weights.
 SOURCE: Authors' calculations using March CPS from 1968 to 2002.