Published in final edited form as:

Res Aging. 2009 January ; 31(1): 89–111. doi:10.1177/0164027508324642.

Labor-Force Dynamics at Older Ages:

Movements Into Self-Employment for Workers and Nonworkers

Julie M. Zissimopoulos, Lynn A. Karoly, and RAND Corporation

Abstract

Labor-market transitions toward the latter parts of workers' careers can be complex, with movement between jobs and classes of work and in and out of retirement. The authors analyzed factors associated with the labor-market transitions of older workers to self-employment from unemployment or disability, retirement, or wage and salary work using rich panel data from seven waves of the Health and Retirement Study (HRS). They found evidence that (prior) job characteristics and liquidity constraints are important predictors of movements to self-employment for workers and nonworkers, while risk aversion is a significant predictor only for workers.

Keywords

self-employment; unemployment; liquidity constraints; risk aversion

According to 2007 data from the U.S. Bureau of Labor Statistics, 10.4 million workers, or about 7.6% of the workforce, were self-employed in unincorporated businesses. This includes over 3 million workers aged 55 years and older. Older self-employed workers in the United States differ from wage and salary workers in the same age range. They have higher socioeconomic status as measured by education, household income, and wealth and are more likely to be male (Zissimopoulos and Karoly 2007b). Self-employment among older workers is itself diverse and covers a wide array of industries and occupations. Some older self-employed workers work alone or with spouses, while some work with employees. Moreover, some of these individuals have been self-employed much or all of their working lives, while many older workers transition to self-employment after age 50 and, for some, as part of a transition to retirement (Fuchs 1982; Zissimopoulos and Karoly 2007a).

The retirement literature has recognized that labor-market transitions toward the latter parts of workers' careers can be complex, with movement between jobs, between full- and part-time status, and in and out of retirement (Doeringer 1995; Maestas 2005; Peracchi and Welch 1994; Quinn 1980; Ruhm 1990, 1995). Less studied are movements between wage and salary work and self-employment at older ages. Understanding transitions to and from self-employment at older ages is likely to become increasingly important as work lives are extended into older ages as a result of policy changes or changing expectations about retirement age. In addition, there is some indication that early baby boomers are more likely to become self-employed at older ages than earlier cohorts, thereby providing further impetus for understanding self-employment transitions at a time when this cohort is on the cusp of retirement in large numbers (Brown 2003).

We examined the factors associated with the labor-market transitions of older workers and nonworkers to self-employment. We used rich panel data from seven waves of the Health and Retirement Study (HRS) to examine labor-market transitions of older workers, focusing

on the role of movements to self-employment from not working (unemployed, disabled, or retired) and from wage and salary work. The extent and diversity of self-employment at older ages suggest that analyzing the factors associated with movements into this class of work is important for understanding the labor-force behavior of older workers.

The richness of the HRS data allowed us to extend the existing literature in several ways. First, we focused on characteristics of the job a worker exits from (or prior jobs in the case of nonworkers), factors that have not previously been explored in understanding the labor-force transitions of older workers between classes of work. Second, because the HRS provides a measure of a worker's tolerance for risk, we were also able to measure the impact of risk aversion on movements into self-employment. Finally, we add to our understanding of how liquidity constraints, as captured in measures of wealth, pension cash-out, and inheritance, affect transitions to self-employment. The article proceeds as follows: first, we provide background for the study; then we introduce the methodology and describe our main results; and finally, we discuss our findings and conclusions.

Background

To the extent that retirement ages are increasing, workers may spend more time than in the past in bridge jobs, and for many workers, such jobs will entail periods of self-employment. Others may “unretire” to self-employment. However, our understanding of the factors associated with movements to self-employment at older ages is rather limited. Indeed, research on the determinants of self-employment and transitions into and out of self-employment has focused largely on the workforce as a whole or on younger workers in particular.

In this literature, the choice of self-employment is sometimes viewed as driven by the positive benefits of being self-employed, while at other times, the argument is made that people are pushed into self-employment by poor job prospects in the wage and salary sector (Blanchflower and Oswald 1998; Manser and Picot 1999). In regression-based estimates, Fairlie and Meyer (1996) found that self-employment rates across detailed race and ethnic groups were positively related to the potential rates of return in the sector, suggesting that those who would gain the most were pulled into self-employment. A similar finding was reported by Lombard (2001) for women. Job autonomy, hours flexibility, and the ability to work a nonstandard workweek are also factors cited as favoring the decision to be self-employed, especially for women (Devine 2001; Hundley 2001; Lombard 2001) and workers nearing retirement (Fuchs 1982). At the same time, Evans and Leighton (1989) estimated that disadvantaged workers—especially the unemployed, lower wage workers, and those with histories of job instability—are more likely to become self-employed, a result consistent with the notion that “misfits” are pushed into self-employment. Self-employment rates have also been found to rise with increases in local or national unemployment rates, at least for some groups, such as women (Simpson and Sproule 1998; Schuetze 2000), but this finding is not universal (see, e.g., Blanchflower 2000 and the studies cited therein).

Other factors that may affect the assessment of returns to self-employment include an individual's taste for (or aversion to) risk, given the greater uncertainty associated with earnings in self-employment (van Praag and Cramer 2001). The self-employment literature also suggests that access to capital such as an inheritance is another determinant of self-employment for younger workers (Blanchflower and Oswald 1998; Dunn and Holtz-Eakin 1995, 2000; Evans and Jovanovic 1989; Evans and Leighton 1989; Fairlie and Krashinsky 2007; Holtz-Eakin, Joulfaian, and Rosen 1994), although this long-standing belief was more recently challenged by Hurst and Lusardi (2004). Experience with self-employment by other family members, such as a spouse, represents another form of “capital” that increases the

propensity for self-employment (Bruce 1999). Health insurance access has been shown to be another factor affecting self-employment rates in the United States, although the research evidence is mixed (Holtz-Eakin, Penrod, and Rosen 1996; Lombard 2001; Madrian and Lefgren 1998; Wellington 2001). In addition to these factors, studies have attributed movements into self-employment and changes in self-employment rates over time to other factors, such as changes in technology and industrial mix, tax rates, and the generosity of Social Security benefits (Blau 1987; Bruce 2000, 2002; Gentry and Hubbard 2000; Schuetz 2000).

Despite the importance of self-employment at older ages, the factors associated with self-employment transitions among middle-aged and older workers have not been a major focus of study.¹ Studies by Bruce, Holtz-Eakin, and Quinn (2000) and Zissimopoulos and Karoly (2007a, 2007b) are recent exceptions that relied on the HRS to examine self-employment behavior. Bruce et al. were interested primarily in the role of health insurance in determining transitions to self-employment and found little evidence that having more portable health insurance affects such transitions. They also found that transitions to self-employment among older workers are positively associated with the level of wealth. This is consistent with the hypothesis that liquidity constraints affect self-employment transitions for older workers as well as younger workers. Zissimopoulos and Karoly (2007a), on the basis of an analysis of transitions to self-employment in five HRS waves (from 1992 to 2000), replicated the finding that such transitions are more likely for workers with higher wealth and those who ever received an inheritance (men only). Although Fuchs (1982) found no relationship between health status and self-employment, Zissimopoulos and Karoly (2007a) estimated that workers with work-limiting health conditions are more likely to move to self-employment after age 51.

Although the literature on older workers has begun to uncover some of the associations between socioeconomic status, health and health insurance, and movements into self-employment, we know far less about the potential role of other factors, such as the characteristics of the job from which a worker exits, the level of wealth or wealth shocks, and a worker's tolerance for risk. Moreover, far less studied are transitions back to work from not working and whether the work is in self-employment or the wage and salary sector. Given these limitations, in this study, we focused on three issues that have not been explored as fully or been fully resolved in the existing literature and investigated these issues through regression analysis using rich biennial panel data available from the HRS from 1992 to 2004.

First, among older workers who are not working—either unemployed, disabled, or retired—but who return to work, do the characteristics of their prior jobs affect whether they return to self-employment or wage and salary work? Among current wage and salary workers, do the features of their current jobs affect whether a transition is made to self-employment? On the basis of the prior literature, we would expect nonworkers with prior experience in self-employment, a form of human capital, to be more likely to return to working for themselves. Among wage and salary workers, we would expect those in occupations that require skills that are easily transferable to self-employment to be more likely to make the transition (Fuchs 1982). Such jobs could include managerial, professional, or sales positions that require skills such as autonomy, organization, and marketing.

Second, what is the role of wealth or wealth windfalls in affecting the choice of the class of employment, either among nonworkers who return to work or among wage and salary

¹ Studies by Quinn (1980) and Fuchs (1982) are two exceptions using data from the Retirement History Study, which provides a perspective on the cohort of U.S. workers reaching retirement in the late 1960s and 1970s.

workers who remain employed? Unlike most younger persons, many older individuals have accumulated savings in the form of financial assets, housing wealth, or retirement wealth. Many are also likely to experience unexpected shocks to wealth in the form of lump-sum pension distributions, insurance payouts, or inheritances. If liquidity constraints are a barrier to becoming self-employed, we would expect older non-workers or older workers with greater access to wealth or who experience wealth windfalls to be more likely to make a transition to self-employment.

Third, what role does an individual's aversion to risk play in who becomes self-employed at older ages, either as part of a return to work or for those who remain at work? Among the self-employed, a general pattern noted above is higher variance in earnings compared with wage and salary workers. Although there is the possibility of business success and the accompanying high earnings and wealth accumulation, a business failure is also a reality. Income shocks or income variability, or the loss of assets invested in a business, may be particularly difficult for older workers to absorb compared with younger workers, because they have fewer healthy working years remaining over which to spread this type of risk. Thus, we would expect the least risk averse to be more likely to become self-employed compared with older persons with little risk tolerance.

Methods

The HRS, when appropriately weighted, is a nationally representative, longitudinal survey of middle-aged and older Americans. It is a biennial survey that began in 1992 with a sample of the noninstitutional population born between January 1, 1931, and December 31, 1941, and their spouses or partners.² 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 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 sample), and the cohort born between January 1, 1942, and December 31, 1947 (known as the War Babies sample). In 2004, the Early Baby Boomers cohort, born from 1948 to 1953, was added. In each case, spouses have been interviewed along with the main age-eligible respondents. We used data from the 1992 through 2004 waves for the HRS birth cohort and data from the 1998, 2000, 2002, and 2004 waves for all other cohorts. We could not analyze the transitions of the Early Baby Boomers cohort, because they first entered the sample in 2004.

The HRS provides good information on the labor-force status of its respondents. In terms of employment outcomes, workers are asked whether they are currently self-employed in their main jobs, with interviewers instructed to classify respondents who work in businesses they own as self-employed. Self-employed respondents are also asked about self-employment in second jobs. For the purposes of this analysis, we defined self-employment by employment status in the main job.³ Respondents not in the labor force are asked about the employment status of previous jobs, and this information was used in models of labor-force transitions from not working to self-employment from one survey wave to the next.

Table 1 shows the proportion of workers in the HRS, pooled across the six waves from 1992 to 2002, who reported they were self-employed in their main jobs.⁴ The overall rate of self-

²The HRS collects information on married spouses and on unmarried partners. For simplification, we use the term *spouse* throughout this article to refer to both married and unmarried partners.

³Although the HRS does not distinguish between incorporated and unincorporated self-employment, using this definition, the percentage of workers who were self-employed in 1998 in the HRS compares closely with the percentage of workers who were self-employed in unincorporated or incorporated businesses in the Current Population Survey for the same year. The distribution of the characteristics of the workers is also very similar. See Karoly and Zissimopoulos (2004a, 2004b) for the details of this comparison.

employment among HRS workers aged 51 years is about 20%, a rate that is substantially higher than the rate of self-employment across workers of all ages. The latter reached a peak of 12.1% in 1994 (Karoly and Zissimopoulos 2004b).

Our analysis examined the labor-force transitions of all HRS respondents from one wave to the next (approximately every two years) for seven waves (i.e., six transitions).⁵ At each wave, all HRS respondents are categorized as being in one of four labor-force statuses: working, unemployed or disabled, retired, or not working for other reasons (e.g., on leave). Respondents who state that they are working for pay are categorized as self-employed or wage and salary workers. To determine whether an individual was unemployed, disabled, retired, or not in the labor force, we used responses from several questions. If respondents reported “not working for pay” and in the self-reports mentioned retirement, they were classified as “retired.” If respondents reported “not working for pay” and were looking for either a part-time or a full-time job, the respondents were classified as “unemployed.” If respondents were “not working for pay” and did not fall under our definition of retired or unemployed, and they reported that they were disabled, the respondents were classified as “disabled.” Otherwise, if respondents were not working and not looking for work, and no mention was made of retirement or disability, the respondents were classified as “not working—out of the labor force.”

Table 2 shows the labor-market transitions for all respondents on the basis of their initial status at time t into one of five statuses at time $t + 2$: (1) self-employed, (2) wage and salary employment, (3) unemployed or disabled, (4) retired, or (5) out of the labor force.⁶ The row totals sum to 100% and show the percentage of those in a given status at time $t + 2$ for a given status at time t . Compared with wage and salary workers, the self-employed were somewhat less likely to remain in the same employment class two years later (75% vs. 80%) and nearly equally likely to retire (14%). The self-employed were more likely to move into wage work than wage and salary workers were likely to move into self-employment (8% vs. 2%). Although the rate at which wage and salary workers move into self-employment was just over 2% over two years, given the large base of workers in this class of employment (more than 31,000), the absolute number who moved into self-employment over a two-year period exceeds the absolute number of self-employed who moved into wage and salary work over the same period (where the base is smaller but the transition rate is higher).

Table 2 also shows that approximately 5% of retirees unretired over a two-year time period; that is, they were retired at time t and were working for pay at time $t + 2$. About one third of these unretired into self-employment. Of the workers who were unemployed or disabled at time t , approximately 17% of those who were working two years later were self-employed at time $t + 2$. In sum, there were substantial changes in labor-force status over two years among older workers that, in the remainder of this article, we seek to understand using a multivariate framework.

In particular, for workers and nonworkers, we were interested in how job characteristics (or prior job characteristics in the case of nonworkers), wealth, and risk aversion affected the likelihood of making a transition to self-employment. In the models, we also included other factors likely to influence labor-force transitions, such as health and demographic characteristics. Specifically, we modeled labor-force transitions in the general form

⁴We included only waves from 1992 to 2002 in Table 1 because these are the same waves that formed the baseline sample, at time t , for analyses of transitions to self-employment at time $t + 2$ (one survey wave later), as discussed further below.

⁵Because we observed employment status and class of workers only every two years, we were not able to capture labor-market transitions that occurred between the waves.

⁶Those classified as unemployed or disabled were combined into one category under “not working” because the sample sizes were too small to examine either group separately.

$$Y_i^* = \beta_0 + \beta_1 J_i + \beta_2 W_i + \beta_3 R_i + \beta_4 D_i + \beta_5 H_i + \beta_6 T_i + u_i, \quad (1)$$

where Y_i^* is the “propensity” for person i to transition from a given status at time t —either wage and salary work or unemployment/disabled or retired—to self-employment at time $t + 2$ (one survey wave later or approximately two years later); J is a vector of job characteristics, W is a vector measuring wealth, R is a vector measuring risk aversion, D is a vector of demographic characteristics, H is a vector of work-related health status and measures of health insurance coverage, T is a time trend, and u_i is the model error term. We did not observe Y_i^* ; instead, we observed

$$Y_i = 1 \text{ if } Y_i^* > 0$$

and

$$Y_i = 0 \text{ otherwise.}$$

We estimated this model using a probit model, and errors were assumed to follow a normal distribution. We examined transitions for up to seven waves (six transitions). Standard errors of the model estimates were adjusted for repeated observations on the same individuals. Statistical tests of significance were performed for continuous variables or single dummy variables (against an omitted group) using a t test, while a χ^2 statistic was used to test the joint significance of categorical variables (i.e., a variable with two or more dummies and an omitted group). The pseudo- R^2 value is reported for each regression model as a measure of the goodness of fit.

Of interest in the regression analysis was the vector of job characteristics. The vector J includes the number of employees in a firm for wage and salary workers (with categories of 1 to 5, 6 to 25, and 26 and over, where the first group serves as the omitted category or reference group), tenure in the job (measured in years), the wage rate on the job for wage workers (calculated from the amount of earnings, hours per week, and weeks per year that the respondent works), 6 occupational groups, 11 industry groups, and an indicator for pension participation. For nonworkers, we included additional characteristics of the prior job, including if the prior job was in self-employment, if the prior job was full-time, and the hours worked per week and weeks per year.

The vector W contains a measure of total property and financial wealth: the sum of the net (of liabilities) value of an owner-occupied home; real estate and business assets; vehicles; and assets held in the form of checking accounts, savings accounts, stocks, bonds, and other financial assets. Total property and financial wealth entered the model nonlinearly in quartiles, with the first wealth quartile serving as the reference group. Quartiles were defined with respect to the sample being modeled as of time t . Also in the vector W is an indicator for whether the respondent ever received a lump sum payment from any of four sources: pension, inheritance, insurance, or another source. In the case of modeling transitions to self-employment among wage and salary workers, we were able to estimate separate effects for the first three sources.

The measure of risk aversion (R) is an indicator for being rated at the least and second least risk averse levels on a four-point scale of risk aversion. In other words, it represents the group that was more tolerable of risk. The categorization of the level of risk aversion was on the basis of a series of questions asking respondents to choose between pairs of jobs, with

one job guaranteeing current family income and the other offering the chance to increase income (but carrying the risk for the loss of income).

Several demographic variables are included in the vector D , measured as of time t : an indicator for male gender; an indicator for whether a respondent is married; HRS birth cohort (numbered 1 to 4, where 1 is the oldest birth cohort and 4 is the youngest); and age categories of 51 to 55 (reference group), 56 to 60, 61 to 65, and 66 and older. Indicators for the highest educational degree achieved include none; high school or General Educational Development (the reference group); bachelor's degree; master's degree; and PhD, JD, and MD.

Finally, as part of the vector H , we included a measure of disability, which is an indicator for whether an individual's health status limits the work that he or she can perform. We also included a series of indicator variables for the source of health insurance coverage, including coverage in a respondent's own name, his or her spouse, or some other source, including public insurance. For those with their own coverage, we differentiated between those with and without retiree benefits.

As part of T , we also include indicators for the base year in each transition period, t , to control for any time effects due to changes in the aggregate economy (1992 is the reference year). A number of other indicator variables were also developed for missing values. We do not report the results for these missing indicators, because they each affected less than 1% of the sample.

Results

The results of estimating transitions from nonwork to self-employment among those who returned to work are reported in Table 3, while the results for transitions from wage and salary employment to self-employment among those who remained working are reported in Table 4. Both tables report marginal effects from the probit models, along with the mean for each covariate. We discuss the results of each model in turn.

Transitions From not Working to Self-Employment

Table 3 shows the results of the models of movements from not working to working in self-employment relative to movements from not working to working in the wage and salary sector. That is, all workers in the samples were not working at time t and were working at time $t + 2$. Thus, we modeled the effect of covariates on the class of worker (self-employed vs. wage and salary), conditional on returning to work. We followed the general model described by equation 1, but instead of current job characteristics, we included the characteristics of the prior job (i.e., the worker's last job before entering the status of not working). The first model of the table reports results for the sample that was unemployed or disabled at time t , and the second model reports results for the sample that was retired at time t .

By far the most important predictor of movements from unemployment or disability or retirement into self-employment was prior experience in self-employment. Among those returning to work, prior self-employment increased the probability of transitions from unemployment or disability to self-employment by about 32 percentage points and increased it by close to 38 percentage points among retirees. These are very large effects given baseline probabilities of about 27% and 38%. No particular occupation or industry group was predictive of movements from unemployment or disability into self-employment. Retirees who previously worked in sales were 15 percentage points less likely to unretire into self-employment than professionals or managers. Prior industry experience in

transportation or professional services relative to agriculture was negatively related to movements from retirement to self-employment (about 26 percentage points in each case).

Consistent with the hypothesis that limited access to financial resources may impede the propensity to start a business or become self-employed (generally referred to as liquidity constraints in the literature on entrepreneurship), we found that wealth was positively associated with returns to work as self-employed workers. Among retirees, the effect was highest for the fourth wealth quartile (an increase of 24 percentage points relative to those with wealth in the first quartile), but the effect was also found in the third quartile of the distribution (an increase of nearly 10 percentage points). Among those who returned to work from being unemployed or disabled, having wealth in the fourth quartile of the wealth distribution relative to the first quartile increased movements into self-employment by 15 percentage points. The effects were about half as large for the second and third quartiles but only statistically significant for the former. In addition, unemployed or disabled workers who ever received lump-sum payments from either pensions, insurance, inheritances, or other sources were more likely to return to the labor force as self-employed workers than as wage and salary workers (an increase of 7 percentage points compared with those with no windfalls).

Counter to our hypothesis, risk aversion had no effect on these transitions. Taken together, the other covariates in Table 3 suggest that it was the most advantaged who returned to work in self-employment rather than wage and salary work. For the unemployed or disabled, older, married individuals with bachelor's degrees and government health insurance (likely Medicare) were the most likely to return to work in self-employment. For the retired, younger (age 51 to 55), more highly educated (bachelor's to master's degrees) men were the most likely to unretire to self-employment. Those with health insurance in their own names but no retiree benefits were less likely to return to work as self-employed.

Finally, examining the time trend, we found that for transitions that occurred between 1998 and 2002, individuals were less likely to return to the labor force as self-employed workers compared with wage and salary workers relative to the transitions that took place between 1992 and 1994. There was no indication that transitions back to work among either unemployed or disabled individuals or retired individuals that took place between 2000 and 2002, when the economy experienced a downturn, were more likely to result in movements to self-employment instead of wage and salary work compared with prior periods when the economy was stronger. In fact, the significant negative coefficients on the year 2000 dummy variable point to the opposite result.

Transitions From Wage Work to Self-Employment

Table 4 reports results from a model of movements from wage and salary work to self-employment relative to staying employed in the wage and salary sector. Again, we followed the general model described by equation 1. We were particularly interested in understanding the job characteristics that drive older wage and salary workers into self-employment, as well as the effects of wealth and workers' risk tolerance. In this analysis, we were also interested in examining the effect of pension cash-outs on transitions to self-employment. Not only does this provide a source of cash for self-employment startup, it also places assets "earmarked" for retirement at risk should the business fail. We also examined other sources of "unexpected" (in timing or otherwise) wealth, including lump-sum income transfers from inheritances and insurance.

As seen in Table 4, high-wage workers from small firms with no pension benefits were the most likely to move to self-employment. For example, workers in firms with 6 to 25 (26 or more) employees were about 1 percentage point (3 percentage points) less likely to move to

self-employment than workers from small firms of fewer than 6 employees. High wages increased the probability of becoming self-employed by just over 1 percentage point, whereas pension benefits decreased the probability of becoming self-employed by just over 2 percentage points. Leaving a wage job that has pension benefits may imply a loss of these benefits, and thus, not surprisingly, this job characteristic was correlated with a reduced probability of moving to self-employment. On the other hand, it may be indicative of a high-quality wage and salary job more generally. The magnitudes of all these effects were large given a baseline probability for this transition of 3%.

Occupation was a significant predictor of transitions from wage and salary work to self-employment. Workers in sales were just over 1 percentage point more likely to transition to self-employment than workers in professional or managerial occupations, while being a clerical worker or a mechanic or in construction or an operator was associated with a modest reduction in the probability of moving to self-employment relative to those in professional or managerial occupations.

We examined both total wealth and the receipt of lump-sum income and found results consistent with the liquidity-constraint hypothesis. Wealth may be used to start a business, and indeed, workers in the third quartile of the wealth distribution were nearly 1 percentage point, and workers in the fourth quartile almost 2 percentage points, more likely to move to self-employment compared with those in the first quartile. Wealth, however, is a result of accumulation, and it may be that workers who save more are also more likely to be self-employed for reasons other than the level of wealth. We also examined the receipt of a lump sum from a pension cash-out, an insurance payment, or an inheritance because this may be unexpected, or at least the timing of the receipt may be somewhat unexpected for the latter two. Ever receiving an inheritance increased the probability of becoming self-employed by 0.5 percentage points compared with those with no inheritance. The effect was about three times as large for a pension cash-out: having ever received a pension cash-out increased the probability of transitions to self-employment by 1.6 percentage points.

Workers who become self-employed take on additional earnings risk and also place any assets invested in the business at risk. Thus, we expected this group to be less risk averse than wage and salary workers. Indeed, we found that workers who were the least risk averse (indicator for the first two points on our four-point scale) were 0.7 percentage points more likely to become self-employed.

Taken together, the other demographic and other covariates show some relationships to movements into self-employment. The probability is higher for men compared with women, for those aged 61 to 65 years compared with those aged 51 to 55 years, and for those with work-limiting health conditions compared with those without such conditions, with effects that fell just below and above 1 percentage point. The latter result may indicate that it is easier to accommodate disability in the work environment when self-employed compared with being an employee.

Finally, there was a modest time trend in transitions to self-employment. For the intervals between 1996 and 1998, 1998 and 2000, and 2000 and 2002, workers were less likely to move to self-employment relative to the period from 1992 to 1994, although only the period 1998 to 2000 was statistically significant. Again, there was no indication that the likelihood of a transition from wage and salary employment to self-employment was different in the period from 2000 to 2002, when the economy experienced a downturn, relative to the earlier time periods when the economy was stronger.

Discussion and Conclusions

Self-employment is an important phenomenon among workers nearing retirement. Among workers aged 51 years and older, just over 20% were self-employed during the interval from 1992 to 2002. Some of these individuals had been self-employed much or all of their working lives, whereas many older workers transition to self-employment after age 50 and, for some, as part of a transition to retirement. Indeed, using longitudinal data from the HRS, we document substantial changes in labor-force status and class of employment for older workers over a two-year time period. Approximately 2% of wage and salary workers became self-employed between the HRS waves. Among retired workers who returned to the labor force, about one third unretired into self-employment. Most unemployed or disabled workers who returned to the labor force did so to wage and salary work, although about one in five was self-employed. The multivariate analysis provides insight into the factors that affect these transitions and contributes to our understanding of the three issues highlighted above.

First, some prior job characteristics for nonworkers and current job characteristics for wage and salary workers are important predictors of who becomes self-employed. Among noworkers who return to work, whether unemployed, disabled, or retired, by far the most important predictor of movements into self-employment is prior experience in self-employment. This form of capital increases the likelihood by over 100%. There is also some evidence that the industry or occupation of the prior or current job is associated with transitions to self-employment, although not always in expected and consistent patterns. For example, compared with those in professional or managerial jobs, being in sales in a prior job lowers the likelihood that a retiree who returns to work will be self-employed, but it raises the likelihood that a current wage worker will move into self-employment. Wage and salary workers currently in very small firms, with fewer than six employees, are also more likely to become self-employed, which may indicate experience in a small business provides the motivation or experience to start one's own business. Having a pension on the job, a characteristic of high-quality wage and salary jobs and a benefit that may tie a worker to his or her wage and salary job, lowers the probability of movements into self-employment. How pension eligibility and wealth affect these transitions is not well understood and will be a focus of future research.

Second, wealth or windfalls in wealth are associated with shifts into self-employment, a finding consistent with the liquidity constraints hypothesis. High-wealth individuals who move from not working to working are more likely to be in self-employment than low-wealth individuals. Wealth is an equally important determinant for transitions to self-employment among wage workers. The effect of wealth appears to be larger as one moves up the wealth scale, but the effects are significant at least for individuals in the upper half of the wealth distribution and in several models for the second wealth quartile as well. Moreover, and consistent with a liquidity-constraint hypothesis, unemployed or disabled workers who ever received lump-sum payments from either pensions, insurance, inheritances, or other sources are more likely to return to the labor force as self-employed workers than as wage and salary workers. Likewise, such lump-sum wealth gains, especially in the form of pension cash-outs, are associated with a greater likelihood that wage workers will become self-employed. These results are more consistent with the results of Fairlie and Krashinsky (2007), who found increases in self-employment across the wealth distribution for both young and old workers who entered self-employment after a job loss. Our results do not accord with those of Hurst and Lusardi (2004), who found only increases in self-employment among young and older individuals for the top 95th percentile of the wealth distribution.

Third, as expected, we find that the least risk averse wage and salary workers are more likely to choose self-employment than wage workers with a high aversion to risk. Income volatility or the loss of wealth from business failure may be particularly difficult for older workers to recover from compared with younger workers, because they have fewer years when they can potentially recoup the loss through continued work. The degree of risk aversion, however, does not appear to affect movement into self-employment among nonworkers who return to work, either those who are unemployed or disabled or those who are already retired.

Although not the main focus of our analysis, our models include other covariates that demonstrate that demographics and other factors are also associated with whether nonworkers who return to work or current wage and salary workers become self-employed. These factors include sex, age, education level, health status, and the source of health insurance coverage, although not all these factors were associated with the three types of transitions we examined. For example, having a work-limiting health condition increases the likelihood that current wage workers become self-employed but does not affect the class of employment for any of the groups of nonworkers who return to work. We also found some evidence of variation through time in the likelihood of transition to self-employment for nonworkers and workers. However, the pattern of the coefficients does not show that movements into self-employment were more likely after 2000, when the economy experienced a downturn, compared with earlier time periods. Thus, among older workers in the HRS, there is no evidence to suggest the economic downturn had a marked effect on pushing them into self-employment.

With policies promoting longer working lives and increasing expectations of work at older ages, deepening our understanding of labor-force transitions at older ages, including transitions to and from self-employment, is undoubtedly warranted. This article provides evidence to suggest that an array of factors determine which individuals move into self-employment near the ends of their working lives. Although we do not interpret our estimates as confirmation of a causal relationship among the factors we examined and movements to self-employment, they are consistent with existing hypotheses, such as the importance of liquidity constraints. The evidence that current or former job characteristics play a role suggests that certain skills acquired in prior jobs may be transferable to self-employment, while other features of current jobs may hold workers back from moving to self-employment. Our results also suggest that self-employment will be less attractive among individuals more averse to taking chances regarding uncertain income streams or whether their wealth will remain intact. To the extent that there is policy interest in increasing entrepreneurship among older workers as a way to keep them in the labor market longer, it would be important to consider ways to not only address liquidity constraints but also to address issues associated with a lack of relevant skills transferable to self-employment, disincentives associated with current job benefits, and concerns over the financial risks inherent with self-employment.

Acknowledgments

We gratefully acknowledge funding provided by the National Institute on Aging under grant AG-025552 and by AARP.

Biography

Julie M. Zissimopoulos (PhD, economics, University of California, Los Angeles, 2000) is an economist at the RAND Corporation and director of the RAND Postdoctoral Training Program in the Study of Aging. Her research agenda focuses on topics in the economics of

aging, including labor-force behavior, savings behavior, familial support networks, and the relationship between socioeconomic status and health. She has published several papers on the labor-force participation and savings behavior of older self-employed workers and is more recently studying the retirement behavior of self-employed workers across several countries.

Lynn A. Karoly (PhD, economics, Yale University, 1988) is a senior economist at the RAND Corporation who has conducted national and international research on labor-market behavior, child and family well-being, human capital investments, and social welfare policy. Current research uses data from the HRS, the English Longitudinal Study of Aging, and the Survey of Health, Assets and Retirement in Europe to examine self-employment and retirement patterns among older workers and the implications for retirement income security.

References

- Blanchflower, David G. Self-Employment in OECD Countries. *Labour Economics*. 2000; 7(5):471–506.
- Blanchflower, David G.; Oswald, Andrew J. What Makes an Entrepreneur? *Journal of Labor Economics*. 1998; 16(1):26–60.
- Blau, David M. A Time-Series Analysis of Self-Employment in the United States. *Journal of Political Economy*. 1987; 95(3):445–67.
- Brown, Kathi. *Staying Ahead of the Curve 2003: The AARP Working in Retirement Study*. AARP; Washington, DC: 2003.
- Bruce, Donald. Do Husbands Matter? Married Women Entering Self-Employment. *Small Business Economics*. 1999; 13(4):317–29.
- — — . Effects of the United States Tax System on Transitions Into Self-Employment. *Labour Economics*. 2000; 7(5):545–74.
- — — . Taxes and Entrepreneurial Endurance: Evidence From the Self-Employed. *National Tax Journal*. 2002; 55(1):5–24.
- Bruce, Donald; Holtz-Eakin, Douglas; Quinn, Joseph. *Self-Employment and Labor Market Transitions at Older Ages*. Center for Retirement Research Boston College; Chestnut Hill, MA: 2000. Working Paper 2000-13
- Devine, Theresa J. Self-Employment and Schedule Flexibility for Married Females: Evidence for the United States From the SIPP. In: Houseman, Susan; Nakamura, Alice, editors. *Working Time in Comparative Perspective: Life-Cycle Working Time and Nonstandard Work*. Vol. Volume II. W.E. Upjohn Institute for Employment Research; Kalamazoo, MI: 2001.
- Doeringer, Peter. *Bridges to Retirement: Older Workers in a Changing Labor Market*. ILR Press; Ithaca, NY: 1995.
- Dunn, Thomas; Holtz-Eakin, Douglas. *Capital Market Constraints, Parental Wealth and the Transition to Self-Employment Among Men and Women*. Bureau of Labor Statistics; Washington, DC: 1995.
- — — . Financial Capital, Human Capital, and the Transition to Self-Employment: Evidence From Intergenerational Links. *Journal of Labor Economics*. 2000; 18(2):282–305.
- Evans, David S.; Jovanovic, Boyan. An Estimated Model of Entrepreneurial Choice Under Liquidity Constraints. *Journal of Political Economy*. 1989; 97(4):808–27.
- Evans, David S.; Leighton, Linda S. Some Empirical Aspects of Entrepreneurship. *American Economic Review*. 1989; 79(3):519–35.
- Fairlie, Robert W.; Krashinsky, Harry A. *Liquidity Constraints, Household Wealth and Entrepreneurship Revisited*. 2007. Unpublished manuscript
- Fairlie, Robert W.; Meyer, Bruce D. Ethnic and Racial Self-Employment Differences and Possible Explanations. *Journal of Human Resources*. 1996; 31(4):757–93.
- Fuchs, Victor R. Self-Employment and Labor Force Participation of Older Males. *Journal of Human Resources*. 1982; 17(3):339–57.

- Gentry, William M.; Hubbard, R. Glenn Tax Policy and Entrepreneurial Entry. *American Economic Review*. 2000; 90(2):283–87.
- Holtz-Eakin, Douglas; Joulfaian, David; Rosen, Harvey S. Entrepreneurial Decisions and Liquidity Constraints. *RAND Journal of Economics*. 1994; 25:334–47.
- Holtz-Eakin, Douglas; Penrod, John R.; Rosen, Harvey S. Health Insurance and the Supply of Entrepreneurs. *Journal of Public Economics*. 1996; 62(1-2):209–35.
- Hundley, Greg. Why Women Earn Less Than Men in Self-Employment. *Journal of Labor Research*. 2001; 22(4):817–29.
- Hurst, Erik; Lusardi, Annamaria. Liquidity Constraints, Household Wealth and Entrepreneurship. *Journal of Political Economy*. 2004; 112(2):319–47.
- Karoly, Lynn A.; Zissimopoulos, Julie. Self-Employment and the 50+ Population. AARP; Washington, DC: 2004a.
- — — . Self-Employment Trends and Patterns Among Older U.S. Workers. *Monthly Labor Review*. 2004b; 127(7):24–47.
- Lombard, Karen V. Female Self-Employment and Demand for Flexible, Nonstandard Work Schedules. *Economic Inquiry*. 2001; 29(2):214–17.
- Madrian, Brigitte C.; Lefgren, Lars J. The Effect of Health Insurance on Transitions to Self-Employment. University of Chicago; 1998. Unpublished manuscript
- Maestas, Nicole. Back to Work: Expectations and Realizations of Work After Retirement. RAND Corporation; Santa Monica, CA: 2005. RAND Working Paper WR-196
- Manser, Marilyn E.; Picot, Garnett. The Role of Self-Employment in U.S. and Canadian Job Growth. *Monthly Labor Review*. 1999; 122:10–25.
- Peracchi, Franco; Welch, Finis. Trends in Labor Force Transitions of Older Men and Women. *Journal of Labor Economics*. 1994; 12(2):210–42.
- Quinn, Joseph. Labor Force Participation Patterns of Older Self-Employed Workers. *Social Security Bulletin*. 1980; 43(4):17–28. [PubMed: 6968457]
- Ruhm, Christopher. Bridge Jobs and Partial Retirement. *Journal of Labor Economics*. 1990; 8:482–501.
- — — . Secular Changes in the Work and Retirement Patterns of Older Men. *Journal of Human Resources*. 1995; 30(2):362–85.
- Schuetze, Herb J. Taxes, Economic Conditions and Recent Trends in Self-Employment: A Canada-U.S. Comparison. *Labour Economics*. 2000; 7(5):507–44.
- Simpson, W.; Sproule, R. Econometric Analysis of Canadian Self-Employment Using SLID. Statistics Canada; Ottawa: 1998. Income and Labour Dynamics Working Paper 98-16
- van Praag CM, Cramer JS. The Roots of Entrepreneurship and Labour Demand: Individual Ability and Low Risk Aversion. *Economica*. 2001; 68(269):45–62.
- Wellington, Alison, J. Health Insurance Coverage and Entrepreneurship. *Contemporary Economic Policy*. 2001; 19(4):465–78.
- Zissimopoulos, Julie; Karoly, Lynn A. Transitions to Self-Employment at Older Ages: The Role of Wealth, Health, Health Insurance, and Other Factors. *Labour Economics*. 2007a; 14:269–95.
- — — . Work and Well-Being Among the Self-Employed at Older Ages. AARP; Washington, DC: 2007b.

Table 1

Distribution of Workers by Class of Employment

Class of Worker	All Workers
Self-employed	20.5%
Wage and salary	79.5%
Total	100.0%
Sample size (<i>n</i>)	38,182

Source: Authors' calculations on the basis of the Health and Retirement Study, 1992 to 2002.

Note: The sample was composed of individuals who reported that they were employed in any given wave, pooled across all waves. Columns may not add to totals because of rounding. A total of 120 workers had missing information on whether the type of work was self-employment.

Table 2

Changes in Labor-Force Status and Employment Class

Labor-Force Status at Time <i>t</i>	Labor-Force Status at Time <i>t</i> + 2				
	Working		Not Working		
	Self- Employed	Wage and Salary	Unemployed or Disabled	Retired	Out of the Labor Force
Working					
Self-employed (<i>n</i> = 7,368)	74.5%	7.9%	1.2%	13.6%	2.8%
Wage and salary (<i>n</i> = 31,516)	2.2%	79.6%	2.3%	14.2%	1.7%
Not working					
Retired (<i>n</i> = 30,479)	1.7%	3.7%	3.6%	84.5%	6.5%
Unemployed or disabled (<i>n</i> = 4,022)	2.5%	12.6%	37.7%	36.9%	10.3%
Out of the labor force (<i>n</i> = 9,383)	2.2%	5.3%	4.6%	24.3%	63.4%

Source: Authors' calculations on the basis of the Health and Retirement Study, 1992 to 2004.

Note: The sample was composed of respondents aged 51 years and older.

Table 3

Determinants of Labor-Force Transitions From Not Working or Retired to Working in Self-Employment Versus Wage and Salary Employment

Covariate	Probability of Transitioning to Self-Employment at Time $t + 2$ From State at Time t			
	Model 1: Unemployed or Disabled		Model 2: Retired	
	Marginal Effect	<i>M</i>	Marginal Effect	<i>M</i>
Job characteristics				
Prior job				
Self-employed	0.322 **	0.142	0.375 **	0.156
Full-time	0.059	1.065	-0.058	1.111
Pension coverage	-0.048	0.168	-0.026	0.322
Hours/week	0.001	30.623	-0.001	31.434
Weeks/year	0.001	37.303	0.002	38.922
Tenure	-0.001	6.845	0.001	12.889
Occupation (professional/managerial)				
Sales	-0.073	0.106	-0.151 **	0.097
Clerical/administrative support	-0.038	0.162	-0.009	0.127
Services	0.007	0.169	-0.033	0.118
Farming/forestry/fisheries	-0.050	0.020	-0.217	0.026
Mechanic, construction, operator	0.086	0.192	0.003	0.223
Armed forces			-0.135	0.002
Industry (agriculture)				
			$\ddagger$	
Mining and construction	-0.063	0.058	-0.074	0.063
Manufacturing	0.001	0.142	-0.201	0.148
Transportation	0.021	0.039	-0.255 *	0.084
Wholesale and retail trade	0.070	0.188	-0.175	0.135
Finance, insurance, and real estate	0.032	0.062	-0.158	0.048
Business and repair services	-0.004	0.058	-0.096	0.048
Personal services	-0.010	0.075	-0.087	0.043
Entertainment and recreation	0.087	0.015	-0.232	0.010
Professional and related services	0.032	0.173	-0.259 *	0.190
Public administration	-0.132	0.012	-0.166	0.052
Wealth and risk aversion				
Wealth quartile (quartile 1)				
			$\ddagger\ddagger$	
Quartile 2	0.079 *	0.251	0.022	0.251
Quartile 3	0.075	0.250	0.099 *	0.250
Quartile 4	0.151 **	0.249	0.237 **	0.249
Ever received lump sum from various sources	0.072 *	0.270	0.002	0.369
Least risk averse	-0.018	0.151	0.071	0.092

Covariate	Probability of Transitioning to Self-Employment at Time $t + 2$ From State at Time t			
	Model 1: Unemployed or Disabled		Model 2: Retired	
	Marginal Effect	M	Marginal Effect	M
Demographics and other covariates				
Male	-0.015	0.253	0.067 *	0.553
Married	0.075 *	0.814	0.050	0.790
Cohort	0.139 **	3.102	-0.058	2.829
Age group (51 to 55 years)				
56 to 60 years	0.066 *	0.299	-0.022	0.201
61 to 65 years	0.093 *	0.112	-0.097 *	0.331
66 years and older	0.191 *	0.041	-0.064	0.346
Education level (high school degree)				
No degree	0.046	0.275	0.065	0.203
Bachelor's degree	0.107 *	0.120	0.091 *	0.143
Master's degree	-0.086	0.035	0.155 **	0.076
JD/MD/PhD	0.222	0.010	0.126	0.022
Health limits work	0.015	0.245	0.029	0.267
Household income quartile (quartile 1)				
Quartile 2	-0.062	0.254	-0.025	0.250
Quartile 3	-0.039	0.246	-0.012	0.250
Quartile 4	0.074	0.249	-0.042	0.250
Own health insurance no retiree benefits	-0.116	0.023	-0.121 *	0.065
Spousal health insurance	-0.013	0.029	-0.060	0.033
Own health insurance with retiree			0.215	0.013
Other and government health insurance	0.079 **	0.251	0.025	0.542
Survey wave at t (wave 1 [1992])				
Wave 2 (1994)	-0.037	0.182	-0.080	0.121
Wave 3 (1996)	-0.059	0.148	-0.122 *	0.137
Wave 4 (1998)	-0.120 **	0.170	-0.169 **	0.193
Wave 5 (2000)	-0.107 *	0.120	-0.122 *	0.217
Wave 6 (2002)	-0.035	0.129	-0.070	0.224
Sample size (n)	1,362		1,806	
Pseudo- R^2	.135		.163	
Baseline probability	.267		.378	

Source: Authors' calculations on the basis of the Health and Retirement Study, 1992 to 2004.

Note: The sample for model 1 was workers who were unemployed or disabled at time t and working at time $t + 2$. The sample for model 2 was workers who were retired at time t and working at $t + 2$. Huber standard errors were used.

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

[†] Jointly significant at the 5% level.

^{††} Jointly significant at the 1% level.

Table 4

Determinants of Labor Force Transitions From Wage and Salary Work to Self-Employment

Covariate	Probability of Transitioning From Wage and Salary Work at Time t to Self-Employed at Time $t + 2$	
	Marginal Effect	M
Job characteristics		
Number of employees (fewer than 6)	$\ddagger\ddagger$	
6 to 25	−0.011 **	0.099
26 and above	−0.029 **	0.848
Tenure (years)	0.000	12.547
Hourly wage rate quartile (quartile 1)	$\ddagger\ddagger$	
Quartile 2	−0.001	0.251
Quartile 3	0.002	0.258
Quartile 4	0.013 **	0.254
Occupation (professional and managerial)	$\ddagger\ddagger$	
Sales	0.012 **	0.078
Clerical/administrative support	−0.007 *	0.188
Services	−0.001	0.156
Farming/forestry/fisheries	−0.002	0.015
Mechanic, construction, operator	−0.007 **	0.228
Industry (agriculture)	$\ddagger$	
Mining	0.038 **	0.040
Manufacturing	0.009	0.172
Transportation	0.011	0.066
Wholesale and retail trade	0.007	0.145
Finance, insurance, and real estate	0.015	0.061
Business and repair services	0.017	0.050
Personal services	0.027	0.032
Entertainment and recreation	0.005	0.017
Professional and related services	0.005	0.323
Public administration	0.002	0.057
Has pension on current job	−0.023 **	0.625
Wealth and risk aversion		
Wealth quartile (quartile 1)	$\ddagger\ddagger$	
Quartile 2	0.002	0.258
Quartile 3	0.008 *	0.254
Quartile 4	0.018 **	0.237
Ever received pension cash-out	0.016 *	0.020
Ever received inheritance	0.005 **	0.188
Ever received insurance settlement	0.003	0.053

	Probability of Transitioning From Wage and Salary Work at Time t to Self-Employed at Time $t + 2$	
Least risk averse	0.007 *	0.133
Demographics and other covariates		
Male	0.011 **	0.445
Married	0.000	0.799
Cohort	-0.002	3.102
Age group (51 to 55 years)	$\ddagger$	
56 to 60 years	0.000	0.340
61 to 65 years	0.007 *	0.153
66 years and older	-0.002	0.079
Education level (high school degree)		
No degree	0.000	0.168
Bachelor's degree	0.003	0.175
Master's degree/MBA	0.007	0.077
PhD/JD/MD	0.005	0.028
Health limits work	0.011 **	0.078
Own health insurance no retiree benefits	-0.005	0.070
Spousal health insurance	-0.001	0.021
Own health insurance with retiree benefits	-0.007	0.017
Other and government health insurance	0.000	0.165
Survey wave at t (wave 1 [1992])	$\ddagger$	
Wave 2 (1994)	0.003	0.169
Wave 3 (1996)	-0.004	0.146
Wave 4 (1998)	-0.008 *	0.192
Wave 5 (2000)	-0.001	0.156
Wave 6 (2002)	0.008	0.133
Sample size (n)	25,879	
Pseudo- R^2	.082	
Baseline probability	.030	

Source: Authors' calculations on the basis of the Health and Retirement Study, 1992-2004.

Note: The sample was composed of workers who were wage and salary workers at time t and working at time $t + 2$. Huber standard errors were used.

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

$\ddagger$ Jointly significant at the 5% level.

$\ddagger\ddagger$ Jointly significant at the 1% level.