A MICRO-LEVEL ANALYSIS OF RECENT INCREASES IN LABOR FORCE PARTICIPATION AMONG OLDER WORKERS

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Abstract

Aggregate data reveal a sizable increase in labor force participation rates since 2000 among American workers on the cusp of retirement, reverting back to levels for older men not seen since the 1970s. While these aggregate numbers are useful in that they document overall trends, they do not elucidate the reasons behind workers' decisions. The Health and Retirement Study (HRS), a nationally-representative, longitudinal survey of older Americans that spans 1992 to 2004, provides micro-level data regarding these retirement trends. Moreover, the HRS contains detailed information about the types of jobs older Americans are taking (e.g., full-time versus part-time, self-employed versus wage-and-salary, low-paying versus high-paying, blue collar versus white collar). This study capitalizes on the richness of the HRS data and explores labor force determinants and outcomes of older Americans, with an emphasis on retirees' choices in recent years. We present a cross-sectional and longitudinal description of the financial, health, and employment situation of older Americans. We then explore retirement determinants using multinomial logistic regression to model gradual retirement and logistic and OLS regression to model the work-leisure (whether to work) and hours intensity (how much to work) decisions of older workers. Evidence suggests that the majority of older Americans retire gradually, in stages, and that younger retirees continue to respond to financial incentives just as their predecessors did. In addition, the retirement decisions of younger and middle-aged retirees appear similar in the face of macro-level changes in the early part of this decade.

I. Introduction

The 2001 recession in the United States was unique in that older workers experienced increases in labor force participation rates while other workers' rates followed the typical pattern during a recession and declined.[1] Older workers' choices during this recessionary period were even more notable because their decisions reversed a broader trend of ever-earlier retirements that bottomed out in the mid-80s.[2] In addition, today's retirees are changing the way older workers exit the labor force. Traditional one-time, permanent retirements appear to be the exception rather than the rule, as older workers increasingly change jobs later in life or reenter the labor force after "retiring."[3] Why are so many of today's older Americans breaking from the traditional retirement pattern?

The answer to the pro-work mindset of many of today's older Americans is likely a reflection of many factors, for both labor supply and demand. People are living longer, are healthier, and have higher levels of formal education compared to earlier generations. Jobs are also less physically demanding than in the past, as the economy shifts away from manufacturing occupations towards service ones. At the same time, a strong labor market, like that of the 1990s and mid-2000s, provides older workers with many job opportunities. These changes have allowed older workers to remain productive well beyond their late 50s and early 60s.

Many of the financial incentives surrounding retirement have changed as well. Defined-benefit pension plans that offer a set annuity payment upon retirement are less common in today's private sector and many existing defined-benefit plans are being converted to cash balance plans or replaced with defined-contribution plans managed by the worker.[4] Social Security, the bedrock of financial security late in life, is facing financial strain and will likely provide lower replacement rates than in the past.[5] Finally, private saving, the third pillar of retirement income, is currently near record low rates.[6] As a result, today's retirees have experienced a general shift towards a "do-it-yourself"

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[1] Eschtruth and Gemus (2002).
[2] Quinn (1999), Purcell (2006).
[3] Cahill, Giandrea, and Quinn (2006).
[4] Cahill and Soto (2003).
[5] Munnell (2003).
[6] National Income and Product Accounts.

approach to retirement, and are now in charge of their retirement finances more than at any time in the post-war era.

While these changes will undoubtedly impact retirement patterns in the long run, they do not, in and of themselves, explain why labor force participation rates among older workers jumped so abruptly in the early part of this decade. For insight regarding this question, we examine how long-term changes have made retirees vulnerable to short-run market forces. Perhaps it took a shock in the financial markets, such as the 2001 recession, to uncover the impact of the "do-it-yourself" approach. Seen this way, the key to understanding workers' retirement decisions in recent years is to understand the interaction between long-run incentives and short-term market fluctuations. This interaction may explain why the early retirement trend subsided in the mid-80s and 90s. This interaction may also explain why increases in labor force participation among older workers subsided most recently as the economy improved.

Under this hypothesis, we might expect the timing of retirement to be cyclical, as workers' expectations and plans are continuously updated in response to the changing state of their financial position. This is a fundamental shift from the past. Previously, the timing of retirement was largely immune to changes in market conditions, as investment risk was borne by the federal government and an individual's employer. With the advent of 401(k)s and with the extension of Social Security's Normal Retirement Age (NRA) from 65 to 66, and eventually to 67, a worker's retirement benefit now depends on the current state of the market as cyclical effects help determine the stock of retirement assets. One possible implication, going forward, is that more older workers can be expected to postpone retirement or reenter the labor market during a recession, and then retreat from the labor force during a boom.

Aggregate data on work force participation are consistent with this explanation; however, micro-level data are required to examine this hypothesis. We analyze data from the Health and Retirement Study (HRS), a nationally-representative dataset of two cohorts of older Americans.[7] Detailed information on demographics, health status, work history, income, wealth, and more are available for each respondent, making the HRS an ideal data set for this study.

[7] Juster and Suzman (1995).

This paper is structured as follows. Section II provides some background on retirement trends and exit patterns, with a focus on recent developments. Sections III and IV outline the estimation strategy for how we plan to identify the key determinants of retirement outcomes, especially in recent years, and the data we use for our analyses. We present our results in Section V and comment on the implications of our research in Section VI. We conclude that future retirees are likely to be much more flexible with respect to their eventual labor force exit compared to retirees in the past.

II. Background

Labor force participation rates among older workers have risen in recent years, both among men, whose rates were relatively constant from the mid-1980s through much of the 1990s, and among women, whose rates have increased steadily since the mid-1980s. Men aged 60 to 64 years experienced an increase in labor force participation from 53 percent in 1995 to 57 percent in 2004, a 7 percent increase over the decade. Men aged 65 to 69 exhibited an even larger increase over the same time period, from 27 percent to 33 percent. The story is similar for women, but begins at a younger age. Women aged 55 to 59 had an increase in labor force participation from 60 percent to 65 percent, while those aged 60 to 64 and aged 65 to 69 experienced increases of 18 percent and 29 percent, respectively.[8]

Several recent studies have noted this trend, as well as the diverse patterns by which older workers exit the labor force. Cahill et al. (2006), for example, examined transitions from career jobs and found that more than one-half of older workers with full-time career jobs worked on another job (a "bridge job") prior to complete labor force withdrawal. Moreover, not only were bridge jobs common among older cohorts of workers, but diverse patterns were even seen among the youngest of retirees (i.e., those age 57-62 in 2004). Maestas (2004), Quinn (1999), and Ruhm (1990) have also examined the transition that workers take when exiting the labor force. They have described an increasingly "blurred" retirement process where employees gradually

[8] U.S. Bureau of Labor Statistics, 2005.

transition from career jobs to a retirement that sometimes includes reentry into the labor market before a permanent exit.[9]

Research and anecdotal evidence provide insight into the key determinants of these trends. The retirement literature has shown that financial incentives and demographic and socio-economic characteristics matter.[10] The importance of other factors has also been examined. For example, the long-term shift from defined-benefit pension plans that provide a regular benefit amount in retirement to employee-controlled defined-contribution plans has been shown to influence the timing of retirement.[11]

Cyclical economy-wide factors, such as stock market performance, have recently been proposed as an important determinant of labor force participation. Eschtruth and Gemus (2002) outlined the way older workers increased participation in the labor force during the most recent recession. Gardner and Orszag (2003) took a micro-level approach based on a survey of almost 4,500 individuals aged 50-64 in the U.K. and found that one-quarter planned to delay their expected retirement date because of the stock market decline of 2000.

Using a micro-level approach, Coile and Levine (2006) investigated the relationship between changes in stock market valuations and retirement activity using the HRS, the Current Population Survey (CPS), and the Survey of Consumer Finances (SCF). They estimated reduced form equations to determine whether the growth of stock market values in the late 1990s and the subsequent decrease in the early 2000s impacted retirement and labor force re-entry behavior of older workers. The authors found that rates of retirement and re-entry were not significantly different between older workers with larger stock portfolios and those without. Coronado and Perozek (2003) used HRS data to investigate the effects of wealth on leisure decisions later in life. Somewhat contrary to Coile and Levine, they found that the unexpected stock market gains of the late 1990s led workers who held stocks to retire, on average, about seven months earlier than non-stockholders.

[9] Mutchler, Burr, Pienta, and Massagli (1997).
[10] For example, see Gruber and Madrian (1995), Mutchler et al. (1997), Quinn (1999), and Coile (2004).
[11] Munnell, Cahill, Jivan (2003); Friedberg and Webb (2005).

This paper builds upon the micro-level research and concentrates on the determinants of the labor market participation decisions of older workers using two cohorts of retirees spanning 1992 to 2004.

III. Methodology

The purpose of this analysis is to assess how the shift towards a do-it-yourself approach to retirement has altered decisions regarding the timing of labor force withdrawal, bridge job behavior, and labor force reentry. In particular, we examine the influence of specific components of the do-it-yourself approach, such as the role of private pensions, health insurance, and savings. We hypothesize that workers are now more sensitive to short-term market conditions as the size of potential retirees' non-annuitized retirement nest eggs rises and falls with financial markets. To evaluate this hypothesis, we first make a distinction between two underlying causes for differences in outcomes – changes in determinants and changes in impacts. As retirement inputs change, such as the switch from defined-benefit to defined-contribution plans over the past two decades, retirement outcomes change. The underlying cause of the change (i.e., inputs) does not necessarily imply a change in retirement decision making. A more subtle change, one that is addressed in part here by examining cohort differences, is whether behavioral changes have taken place, and if known determinants of retirement now influence retirement decisions differently than in the past.

Our sample consists of the HRS Core, born between 1931 and 1941, and the HRS War Babies, born between 1942 and 1947, with multiple data points over time within each cohort. We model the retirement decision in three ways, each making use of the longitudinal nature of the HRS and each providing a different insight into the choice between work and retirement.

One way to model workforce decisions is to make use of the fact that each respondent contributes multiple observations, one from each survey. This approach allows us to control for individual-specific factors and time effects. Using person-year observations, we model retirement as a series of decisions. The respondent first decides whether to stay working and, if so, whether to remain on a FTC job or to transition to a bridge job. He or she then decides how many hours to work. For the purposes of our

analysis, we examine hours worked conditional on being on a FTC job or a bridge job at the time of the interview. That is, we do not model job type and hours worked as being jointly determined.[12]

We begin by pooling the data for each cohort and transforming the dataset into one with person-year observations. We then model the work-leisure decision later in life among those with work experience since age 49 as follows:

$$R_{it}^{*} = \alpha + \beta_1 X_i + \beta_2 X_{it} + \beta_3 RET_{it} + \beta_4 WarBaby_i + \beta_5 Y_t + \beta_6 (WarBaby_i * Y_t) + \nu_i + \varepsilon_{it}. \quad (1)$$

where *i* stands for individual and *t* stands for time. The latent variable, R_{it}^{*}, determines the observed choice. R_{it} indicates the actual outcome and is equal to 1 if individual *i* is working at time *t*, and is equal to zero otherwise. X_i and X_{it} represent, respectively, time invariant and time-varying vectors of characteristics believed to be significant determinants of the retirement process, such as age, health status, marriage status, and other demographic characteristics. RET_{it} is a set of retirement incentive variables associated with private pensions and health insurance plans. $WarBaby_i$ is a binary variable equal to one if the individual respondent is among the War Babies cohort. Y_t is a series of year indicator variables (or, alternatively, macro-economic measures, such as the unemployment rate) that are intended to account for economy-wide factors. The error term consists of two parts, an individual-specific component, v_i, assumed to be uncorrelated with the set of explanatory variables, and a white noise error component, ε_{it}.

The interaction terms between the War Baby indicator and the time dummies are a key interest for this study. These interactions capture the extent to which the work decisions of the War Babies differed systematically by year from those of the Core. We hypothesize that the Core sample, those on the cusp of retirement, might have been more vulnerable to the macro events, such as the stock market decline (i.e., $\beta_6 \neq 0$ implies cross-cohort differences). We estimate equation (1) three ways, using a linear probability model with and without fixed effects and using a logistic model.

[12] See Hay, Leu, and Rohrer (1987) for a discussion of ordinary least squares and sample selection models; also, Manning, Duan, and Rogers (1987).

The next model is based on the multinomial regression model presented in Cahill, et al. (2006) in which gradual retirement is examined among a set of respondents who were on a FTC job at the time of the first interview. Gradual retirement from full-time career employment is measured using a three-way indicator of labor force withdrawal, equal to zero (still on a full-time career job), one (transitioned to a bridge job), or two (direct exit from the labor force). The model is structured as follows:

$$R3_{it}^{*} = \alpha + \beta_1 X_i + \beta_2 X_{it-1} + \beta_3 RET_{it-1} + \varepsilon_{it} \qquad (2)$$

$R3_{it}^{*}$ is the latent variable that determines the observed choice; $R3_{it}$ indicates the actual outcome, equal to zero, one, or two, as noted above. X_i, X_{it}, and RET_{it} are as defined above for equation (1).

The model differs from the one presented in Cahill et al. (2006) mainly because of the time at which the independent variables are measured. Instead of using a wave-one baseline measure, time-varying determinants are defined as of the time period just prior to the transition. For example, if a respondent in the HRS Core sample moves from a FTC job to a bridge job in the fourth wave (1998), the independent variables are measured as of the third wave (1996). This prior-to-transition designation is an improvement over the previous model specification because changes in status since the first interview are incorporated into the model, which are particularly important for the Core sample given the potential for a 12-year gap between the initial interview and first transition. We estimate equation (2) separately for the Core and War Babies samples. This allows us to examine the extent to which differences exist by cohort.

Given the decision to remain working, we then examine hours worked on the full-time career job (i.e., prior to transition) and hours worked on the bridge job (i.e., post transition) among those who have had a FTC job since age 49. The hours equation is as follows:

$$\begin{aligned} H_{it} = {} & \alpha + \beta_1 X_i + \beta_2 X_{it} + \beta_3 RET_{it} + \beta_4 WarBaby_i + \beta_5 Y_t \\ & + \beta_6 (WarBaby_i * Y_t) + v_i + \varepsilon_{it}. \end{aligned} \qquad (3)$$

The dependent variable, H_{it}, represents annual hours worked, conditional on either working on an FTC job or a bridge job. Other variables are as defined above. Separate equations are estimated for FTC hours and for bridge job hours, with time indicators

measured as of the current wave of HRS data; a respondent's hours decision in any given wave is based on the incentives that exist at that time and the respondent's choices made up to that point. The interaction terms, as in equation (1) above, allow us to test whether cohort and time differences exist with respect to the work and work-intensity decision, respectively.

IV. Data

The Health and Retirement Study (HRS) is a nationally-representative, longitudinal survey of older Americans that began in 1992. The survey now spans a dozen years from 1992 to 2004 and includes those born between 1931 and 1947, among others, and provides micro-level information regarding labor force decisions. Moreover, the HRS provides detailed information on the demographic and economic characteristics of older Americans and the types of jobs they hold (full-time versus part-time, self-employed versus wage-and-salary, low-paying versus high-paying, blue collar versus white collar, etc.).

The original HRS Core set of respondents consisted of about 12,600 persons from approximately 7,600 households with respondents 51 to 61 years old in 1992 (born between 1931 and 1941), and their spouses. Respondents were first interviewed in 1992 and follow-up interviews have been conducted every two years. Attrition across waves ranged from 3 to 10 percent, so that after six years, about 85 percent of the Core sample remained, and after twelve years about 75 percent remained. The HRS was expanded dramatically in 1998 (Wave 4) with the addition of the War Babies cohort. The War Babies were born between 1942 and 1947 (age 51 to 56 in 1998) and like the Core, they are interviewed every two years.

This paper focuses on labor force exit and retirement patterns, and we therefore exclude respondents with no work experience after age 49. The large majority of both HRS men and women, however, have work experience later in life, as shown in Table 1. Just over 90 percent of men in both the Core and War Babies samples have worked since age 49. Work experience is somewhat lower among women with 77 and 87 percent of the Core and War Babies, respectively, having work experience after age 49.

For the analysis of gradual retirement, we make an additional restriction based on whether these HRS respondents had a FTC job since age 49. The longitudinal nature of the HRS allows us to do this, since the questionnaire from the initial interview asked about a respondent's current job and all previous jobs that had lasted five years or more. If a respondent was not working at the time of the Wave 1 interview, he or she was asked about the most recent job held, if any. Information on short-term jobs in the past lasting less than five years was not available, unless the respondent was not working at the time of the first interview and tenure on the last job held was shorter than five years. For the purposes of this paper, we define a full-time career (FTC) job as one that requires at least 1,600 hours per year ("full time") and that lasts ten or more years ("career"). Therefore, a bridge job is employment following a FTC job that does not meet both of these requirements.

We find that over 70 percent of men in both samples had a FTC job since age 49, while 45 and 51 percent of women in the Core and War Babies samples, respectively, had a FTC job since age 49. Some of our analyses require the samples to be restricted to those on FTC jobs at the time of the first interview. Among the Core sample, 52 percent of men and 37 percent of women were on a FTC job in 1992. A substantially larger percentage of War Babies were on a FTC job in 1998, with 70 percent of men and 50 percent of women reporting that they were employed in a FTC job at the time of their first interview.

V. Results

Retirement Outcomes

Two key outcomes of interest are work status and the prevalence of bridge jobs. Each of these outcomes is examined over time, from 1992 through 2004. Work status in each survey year among the HRS Core and War Babies is shown in Figure 1. Not surprisingly, older retirees were less likely to be working in each year. The relevant comparison, however, is how each of the cohorts compare over time. The work status of the younger Core group of men resembled that of the War Babies in 1998, with a participation rate of nearly 90 percent at ages 51 to 56. Six years later, about three

quarters of each group was still working. Among men, it did not appear as though there were substantial cohort differences with respect to work status.

The story is different among women, although not dramatically so. More women in the War Babies cohort were working at the time of the first interview compared to the younger Core cohort. The difference continued six years later, and had grown slightly. Perhaps more interestingly, the older Core women had a rapid decline in work status in the first six years of the survey, which then leveled off and remained fairly stable between 2002 and 2004. These descriptive statistics for the older Core women provide some evidence that cohort differences and year effects may be important when examining work status in the pooled sample.

The second outcome of interest focuses on the way older workers exit the labor force. We measure gradual exits from the labor force using the bridge job concept mentioned earlier. Table 2 describes bridge job prevalence as of 2004, stratified by work status and gender. By 2004, about 50 percent of Core men were either currently working on a bridge job or were currently not working, but had worked on a bridge job prior to exiting the labor force. A similar percentage is observed among the women. A non-trivial portion of both men and women were still working on a FTC job (13 and 17 percent, respectively), so the eventual incidence of bridge job behavior will be even higher. If we assume those still on FTC jobs will leave their jobs in a way resembling those who have already left, then about 60 percent of men and women with FTC jobs in their work history will have taken on bridge jobs prior to retiring.

Retirement Determinants

The retirement literature has identified key demographic, socio-economic, and financial retirement incentives that influence the retirement decision. In this section, we explore how the two outcome variables of interest, work status and bridge job behavior, compare with respect to these predictors, again, by cohort and by gender. We examine work status and hours worked among all respondents, and bridge job status among those who were on a full-time career job as of the first interview.

Tables 3a shows that 38 percent of the Core men and 76 percent of the male War Babies were still working in 2004. Among those with FTC jobs in Wave 1, about 16

percent of HRS Core men were still on that FTC job in 2004 and, among those who left, about 55 percent had taken a bridge job. More than one half of the HRS War Babies with FTC jobs at the time of the first interview were still on the FTC job, and about two-thirds of those who left took a bridge job.

Not surprisingly, men were more likely to be working in 2004 if they were younger, reported being in better health, or had dependent children. Bridge job status was more common among younger retirees who moved off of a FTC job for both the Core and War Babies samples. Bridge jobs were also more common among those who reported better health status and among those who had a college degree. These determinants appear to have influenced the HRS Core and War Babies in similar ways.

The general story is similar for women, albeit at different levels, and with cross-cohort differences more pronounced than among men. For example, as shown in Table 3b, Core women with dependent children were 16 percentage points more likely to be working than the overall average (55 percent vs. 39 percent). Among the War Babies, women with dependent children were six percentage points less likely than others to be working in 2004 (65 percent vs. 71 percent). Core women with dependent children were also much more likely to take on a bridge job relative to the overall average than were those women with children in the War Babies cohort.

Differences by cohort and gender also exist with respect to economic characteristics, such as health insurance status, pension status, wage, and occupation. We discuss a few of these variables here and refer the reader to Table 3c (men) and Table 3d (women) for complete details. The impact of a defined-benefit pension plan was substantial among Core men, as those with defined-benefit plans were less likely to be working and less likely to be on an FTC job in 2004 compared to the overall average. These pension plans often have specific incentives incorporated into their benefit structures that induce individuals to leave their jobs at specific early retirement ages, so the result is plausible. Interestingly, these effects were not seen among the War Babies, perhaps because this group has not yet reached the pivotal ages for early retirement within these plans.

A second point that we highlight is a “u-shaped” relationship between both wage and bridge job status and between occupational status and bridge job status. One

explanation for this pattern is that those who were fairly well off (high wage or white collar, highly skilled) may have taken a bridge job to "try something new" or for "a change" – not out of necessity, while those who were struggling financially may have taken a bridge job because they had no other choice. Those in the middle of the distribution might not have been as influenced by these factors. The occupational variables appear to support this relationship as well, as those in white-collar, highly-skilled occupations and those in blue-collar, not-highly-skilled occupations were the most likely to take on bridge jobs. The result holds for both cohorts, although the relationship was stronger among the Core sample.

The relationships discussed above hold for HRS Core women as well, although as before, cross-cohort differences exist. Core women with defined-benefit pension plans were less likely to be working in 2004 compared to other workers, and the "u-shaped" relationship for occupational status held as well. In contrast, female War Babies with defined-benefit plans were more likely than others to be working and the "u-shaped" occupational status relationship looks instead like the left-hand side of a "u-shaped" curve. Bridge job status was highest among those in white-collar, highly-skilled occupations and lowest among those in blue-collar, not-highly-skilled positions.

Multivariate Analysis

We now examine how the retirement determinants described above (e.g., health status, financial incentives) affect the outcome variables of interest in a multivariate setting. We begin with the work-leisure decision (i.e., whether to work) using logistic regression and then examine retirement as a three-way process (i.e., whether to remain working full-time, take on a bridge job, or exit the labor force) using a multinomial logistic regression model based on respondents who were on a full-time career job at the time of the first survey. We then examine the work intensity decision (i.e., how much to work).

Specification #1: Logistic Regression Model of the Work-Leisure Decision

We analyze the work-leisure decision and the work intensity decision separately. The separate analyses provide the flexibility necessary to utilize the longitudinal nature of

the HRS, by constructing a dataset of person-year observations. We restrict our sample to those who have had work experience since age 49 to ensure that the work-leisure decisions are for those who have had work experience later in life.

Tables 4a and 4b (men and women, respectively) present marginal effects from a logistic regression of work status in each Wave.[13] As expected, men were more likely to be working if they were younger and in excellent or very good health, if they had higher levels of formal education or dependent children, or if they were self-employed or earned more per hour. Men were less likely to be working if they reported being in fair or poor health. Men were also less likely to be working if their spouse was in excellent or very good health and more likely to be working if their spouse was in fair or poor health.

Older workers responded to key retirement incentives as well, as expected. If health insurance was portable in retirement, that is, if a worker did not lose his health insurance if he stopped working at that job, then he was more likely to stop working, all else equal. Men with defined benefit pension plans on their jobs were also less likely to be working, a result that is consistent with the age-specific early retirement incentives incorporated in such plans. Having a defined contribution plan had a negative influence on work relative to not having a pension plan, although the impact of defined contribution plans was much weaker than that of defined benefit plans.

A focus of our analysis is the interaction between the War Babies indicator and macroeconomic factors. Overall, the War Babies were more likely than the Core respondents to be working at every age and their probability of remaining in the labor force declined consistently over the survey years. When these two variables are interacted, however, we find that the differences between the Core sample and the War Babies were insignificant in 2002 and in 2004. Perhaps the stock market collapse in 2000 influenced Core respondents' decisions to return to the labor force and, therefore, their work decisions started to resemble those of the War Babies.

The results of the analysis for the HRS female respondents are similar to those of the male sample. We keep them separate here, though, because of potential differences in work intensity on FTC jobs or bridge jobs, as discussed below. We also highlight that

[13] We also perform this estimation two additional ways, using a linear probability model and a linear probability model with fixed effects. We obtain similar results using all three methods.

the same time effects are seen among the women as with the men. The work decisions of the Core females no longer differed from those of the War Babies after 2000, while they did differ before. Again, like their male counterparts, the work-leisure decisions of the female Core respondents relative to the War Babies appear to have been influenced by macroeconomic factors.

Specification #2: Multinomial Regression Model of Gradual Retirement

We next consider a multinomial logistic regression specification where workers in FTC jobs are faced with the choice of remaining on their FTC job (no transition), leaving their FTC job for another job (bridge job transition), and leaving their FTC job for no job (retirement transition). Separate models are estimated for men and for women, and for the Core and War Babies respondents.

We find that Core men were more likely to remain on their FTC job rather than leave the labor force if they were younger at the time of the first interview, had a dependent child, had health insurance, had a higher wage on the FTC job, were white collar, were self-employed, or owned a home (Table 5a). Men were less likely to remain on a FTC job if they had a defined-benefit pension plan. Health status was not a significant determinant of remaining on a FTC job per se, but was a significant determinant of how an individual made a transition, via a bridge job or a direct exit. Those in excellent or very good health were much more likely than those in good health to take a bridge job while those in fair or poor health were much less likely to do so. Bridge job transitions were also more prevalent among those who were younger, college educated, married and without health insurance, and was less prevalent among those with a defined-benefit pension plans or with lower wages on the full-time career job. Men whose spouses were working were also more likely to take a bridge job, suggesting that, transitions may be jointly determined among spouses.

The experience among the male War Babies was, overall, similar to their Core counterparts (Table 5b). Health status, health insurance, pensions, self-employment and wages were all significant determinants of retirement transitions. Some differences across these cohorts were found. Health insurance portability, for example, was a significant predictor of leaving a FTC job among the male War Babies, which is intuitive.

If a respondent was able to maintain his health insurance after leaving his FTC job, he may be more likely to make a transition. Spouse's health status was also a significant determinant of transitions among the male War Babies, perhaps additional evidence that transitions may be jointly determined among spouses. The direction is interesting. Those with a spouse in excellent or very good health were more likely than others to leave a FTC job and take a bridge job.

The factors that influenced FTC and bridge job behavior among men were also significant determinants of retirement transitions among the Core women (Table 5c). Among other factors such as the influence of health insurance and pensions, spouse's work status had a significant influence on the retirement transitions of Core women, both in terms of transitions away from FTC employment and transitions onto bridge jobs. Another interesting finding is that, while wage was a significant driver of retirement transitions among men, wealth appeared to be a more significant determinant for the Core women. Some differences across cohorts existed among the female samples (Table 5d). For example, female War Babies were more likely to remain on a FTC job and less likely to take a bridge job if they had a dependent child, a finding that is not significant among the Core women. Factors such as health insurance and pensions, in contrast, were only marginally significant among the female War Babies. It is not clear why this was the case, although we suspect the marginal significance associated with economic characteristics among the female War Babies may be a function of the sample size of the cohort.

Specification #3: OLS Model of Work Intensity

Given the decision to work, respondents then decide how many hours to work. This work intensity decision can be quite complicated, with decisions about job type and hours worked being jointly determined. For the purposes of our analysis, however, we simplify the decision and explore hours worked conditional on whether employment was in a FTC job or a bridge job. Table 6a reports estimated coefficients from an OLS regression of hours worked per year conditional on being on a FTC job among the sample of men who have had a FTC job since age 49. Like the work-leisure regressions, observations are person-year with time-dependent variables measured as of the survey

year. Table 6b then examines hours worked conditional on being on a bridge job. Therefore, the results presented in Table 6a represent hours worked pre-transition and the results presented in Table 6b represent hours worked post-transition. Tables 6c and 6d present pre- and post-transition hours, respectively, among female respondents.

Hours worked on the FTC job were higher among younger men and those in excellent or very good health, as expected, since full time employment is a requirement for a full-time career job. The order of magnitude is nontrivial as well, as men over age 65 worked 133 fewer hours per year than those under age 58. Men who were in excellent or very good health worked about 25 hours more per year than those in good health, and those in fair or poor health worked about 18 hours less. Hours worked were also positively associated with pension plans and white collar occupations. Men with defined-contribution plans worked about 72 hours more per year prior to making a transition compared to those with no pension plan, and those with defined-benefit plans worked about 14 hours more. College graduates and those with portable health insurance worked fewer hours, all else equal. And, finally, while self-employment status was consistently a strong predictor of working later in life, being self-employed had no statically significant impact on the number of hours worked prior to transition.

Work intensity after a transition exhibited a similar pattern as that prior to transition, albeit with higher magnitudes and some notable exceptions. Spouse's health status influenced hours worked post transition. Men with a spouse in fair or poor health worked on average about 60 more hours per year on their bridge jobs than otherwise similar males. Those with less than a high school degree also worked more post transition, by about 85 hours per year. The largest sway in hours worked per year post transition, of 150 hours or more, was associated with health insurance status, pension status, and self-employment status. Men with portable health insurance or no health insurance worked much fewer hours than those with non-portable health insurance, while those with pensions worked much more. Interestingly, while self-employment status had no significant impact on hours worked prior to transition, those in self-employed bridge jobs worked more than 200 hours less than wage-and-salary men in their post-transition job. This finding may be indicative of men using self-employment as a method of reducing the number of hours worked as they transition to full retirement.

The War Baby indicator variable was not significantly different than zero either before or after transition. As before, we also interacted the War Baby indicator variable with the year dummies to determine whether any macroeconomic effects affected the War Babies differently than the Core respondents. The result was similar to that found in the work-leisure analysis – differences between the Core and War Babies vanished after the stock market decline. This blurring of the coefficients is consistent with the story that macro-economic factors brought some Core workers back into the labor force and that their work intensity decisions resembled those of the War Babies.

Many of the main determinants of hours worked prior to transition among the male sample did not hold for the female sample. Most notably, perhaps, was that age and health status did not have a statistically significant impact on hours worked prior to transition. Several retirement incentives did, however, such as health insurance status and pension status, with patterns that resembled those among men. One finding of note was that while being married and having dependent children had a positive influence on hours worked among men, albeit with the latter effect not being statistically significant, these two factors had a negative impact on hours worked among women.

The determinants of post-transition hours worked among women closely resembled those among the men, almost surprisingly so, especially with respect to age, college degree, health insurance and pension status, and self-employment. A similar pattern with respect to HRS Core and HRS War Baby differences also held for women. Some differences, however, warrant mention. Statistical significance was not found for own health status and spouse health status or with not being a high school graduate. And, while being married was associated with more post-transition hours worked among men, the opposite was true for women.

VI. Conclusion

The advent of 401(k)s in the 1980s, and their explosive growth since then, combined with an increase in Social Security's Normal Retirement Age and low savings rates, means that today's retirees are more vulnerable to short-run market forces than at any point in the post-war era. This shift means that the retirement income security of many individuals is dependent upon the existing state of financial markets, housing prices

(for those who own homes), and the economy as a whole. Older workers may therefore need to re-think their long-term retirement plans in light of short-run market conditions. Going forward, the timing of retirement may be influenced by macroeconomic factors to the extent that these affect pensions and other financial variables.

In this paper we examine retirement patterns from full-time career employment using a three-way outcome measure and we examine the work-leisure decision and work intensity later in life using data on two cohorts from the Health and Retirement Study. We find that work status across cohorts was consistent over time among men while some differences exist for women, with the younger cohorts more likely to have worked longer. We also find that bridge job status continued to be common among younger retirees, as with older ones, with about two thirds of those making a transition from a full-time career job to a bridge job. While the descriptive findings suggest little that would imply stark time or cohort differences, the multivariate analyses shed some additional light on how the two cohorts compare.

Overall, cohort differences were more pronounced among women than men, although key determinants of retirement, such as age, health status, and health insurance and pension status, influenced work decisions across all groups. We also find that cross-cohort differences in terms of work-leisure decisions and hours worked per year seem to have vanished after 2000, all else equal. One possible explanation, consistent with aggregate findings, is that the older HRS Core respondents altered their work decisions after the stock market collapse to the point where they eventually resembled their younger counterparts. It will be interesting to see how this plays out in the years to come. Another finding of note is that self-employment may be used as a mechanism by which retirees gain work flexibility later in life. Those who were self-employed were much more likely to be working in general, yet their number of hours worked on the FTC job resembled those in wage-and-salary employment. That changes on the bridge job, as those who were self-employed worked significantly fewer hours.

Placing these results in the context of the overarching theme of this study, we view the shift towards “do-it-yourself” retirement as a mixed bag. On the one hand, workers have more control of their retirement assets and, as shown in this paper and others, they respond to many of the financial incentives associated with retirement by

working longer and by taking on bridge jobs after FTC employment. This result implies that if retirement assets are less than expected upon retirement many older workers may remain active members of the labor force well into their late 60s and 70s. On the other hand, if work later in life is not an option, because of factors such as health or inflexible work options, some retirees' long-run well being will be vulnerable to short-term fluctuations in market conditions.

What is clear is that retirement incentives have changed and these changes will likely influence the retirement decisions of older workers for years to come. With pre-emptive action by today's middle-aged and younger workers, in the form of increased savings or more realistic work expectations, the timing of retirement may be less susceptible to short term macro-level influences.

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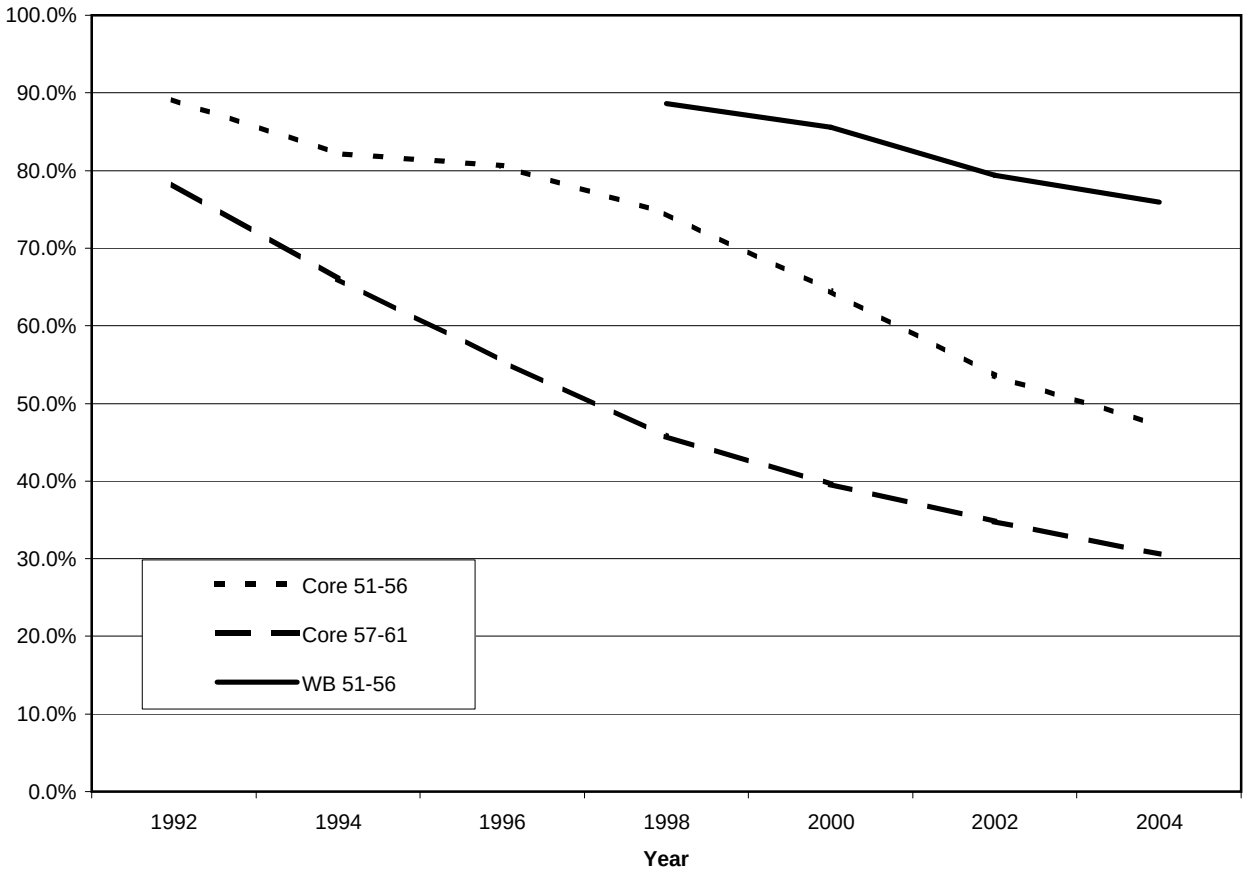
Figure 1a

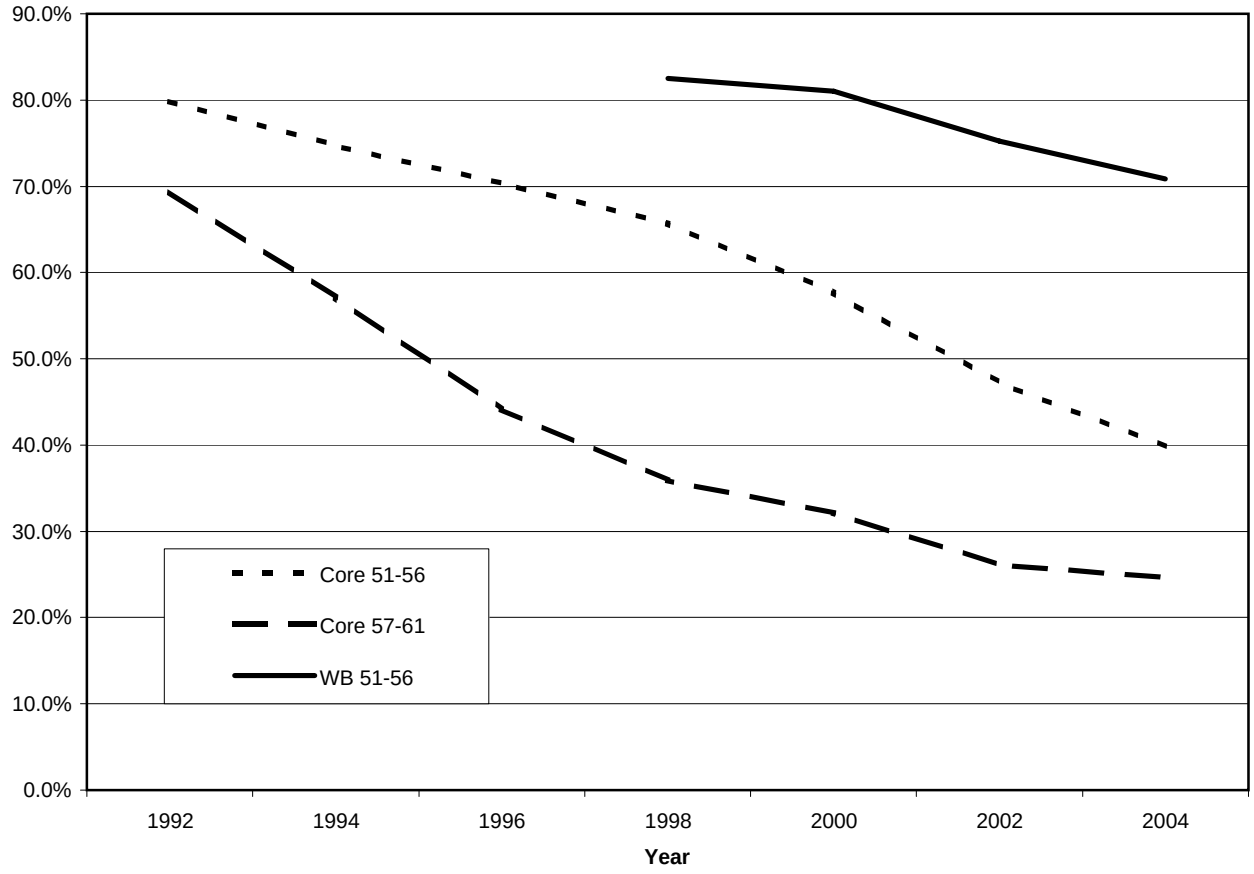
Labor Force Participation Rates, by Wave and Cohort
Men
1992 - 2004



Source: Authors' calculations based on the Health and Retirement Study.

Figure 1b

Labor Force Participation Rates, by Wave and Cohort
Women
1992 - 2004



Source: Authors' calculations based on the Health and Retirement Study.

Table 1

Sample Size
by Gender, Survey Participation, and Work Status

HRS Core: Respondents Aged 51-61 in 1992

	Men	Women	Total
Particpated in wave 1			
n	5,869	6,783	12,652
Worked since age 49			
n	5,344	5,196	10,540
% of HRS Core	91%	77%	83%
Had FTC job after age 49			
n	4,280	3,082	7,362
% of HRS Core	73%	45%	58%
On FTC in 1992			
n	3,057	2,513	5,570
% of HRS Core	52%	37%	44%

HRS War Babies: Respondents Aged 51-56 in 1998

	Men	Women	Total
Particpated in wave 4			
n	1,200	1,329	2,529
Worked since age 49			
n	1,122	1,159	2,281
% of HRS WB	94%	87%	90%
Had FTC job after age 49			
n	890	675	1,565
% of HRS WB	74%	51%	62%
On FTC in 1998			
n	843	664	1,507
% of HRS WB	70%	50%	60%

Source: Authors' calculations based on the Health and Retirement Study.

Table 2

Current Employment Status in 2004, by Gender

Individuals with a Full-Time Career Job in their Work History
and a FTC Job Since Age 50

HRS Core: Respondents Aged 51-61 in 1992

	n	Full Time Career Job	Bridge Job	Don't Know	% with Bridge[1]
Men, Working	1,210	14%	24%	2%	
Men, Nonworking, Last job was	1,736	30%	22%	6%	
Total	2,946	45%	46%	9%	60%
Women, Working	1,105	20%	24%	2%	
Women, Nonworking, Last job was	1,288	29%	20%	5%	
Total	2,393	50%	44%	7%	60%

HRS War Babies: Respondents Aged 51-56 in 1998

	n	Full Time Career Job	Bridge Job	Don't Know	% with Bridge[1]
Men, Working	699	44%	29%	3%	
Men, Nonworking, Last job was	212	13%	7%	3%	
Total	911	57%	36%	6%	74%
Women, Working	653	36%	33%	2%	
Women, Nonworking, Last job was	269	10%	16%	3%	
Total	922	45%	49%	6%	83%

1: calculated as the ratio of those who moved to a bridge job among those who have made a transition.

Source: Authors' calculations based on the Health and Retirement Study.

Table 3a

Employment Status of Men in 2004, by Demographic Characteristics

	Core Men			War Babies Men		
Determinants	Percentage Working[1]	Percentage Still on Full-Time Career Job[2]	Percentage Who Moved to a Bridge Job in First Transition[3]	Percentage Working[1]	Percentage Still on Full-Time Career Job[2]	Percentage Who Moved to a Bridge Job in First Transition[3]
Overall	38%	16%	55%	76%	54%	67%
Age in 2004[4]						
< 62	70%	32%	67%	81%	59%	70%
62 - 64	54%	25%	63%	72%	48%	64%
65 - 69	40%	14%	52%	59%	34%	57%
70 +	25%	6%	52%			
Subjective Health Status						
excellent or very good	45%	18%	58%	84%	48%	72%
good	33%	13%	54%	74%	46%	58%
fair or poor	22%	12%	44%	50%	39%	53%
College Degree	48%	19%	61%	82%	44%	79%
Less than College Degree	35%	15%	53%	75%	47%	63%
Married	39%	16%	56%	77%	47%	65%
Not Married	33%	15%	50%	72%	43%	67%
Dependent Children	49%	23%	58%	77%	47%	65%
No Dependent Children	36%	14%	55%	75%	46%	66%
Spouse Employed	42%	17%	57%	79%	48%	70%
Spouse Not Employed	33%	15%	53%	72%	43%	56%

1: among those who have worked since age 49
2: among those on a FTC job in the first wave of data
3: among those on a FTC job in the first wave and who have moved off of that FTC job
4. Age categories for the War Babies cohort are <60, 61-62, and > 62.

Source: Authors' calculations based on the Health and Retirement Study.

Table 3b

Employment Status of Women in 2004, by Demographic Characteristics

	Core Women			War Babies Women		
Determinants	Percentage Working[1]	Percentage Still on Full-Time Career Job[2]	Percentage Who Moved to a Bridge Job in First Transition[3]	Percentage Working[1]	Percentage Still on Full-Time Career Job[2]	Percentage Who Moved to a Bridge Job in First Transition[3]
Overall	39%	21%	57%	71%	55%	68%
Age in 2004[4]						
< 62	67%	39%	70%	73%	58%	68%
62 - 64	47%	22%	62%	64%	39%	70%
65 - 69	34%	11%	52%	67%	53%	50%
70 +	20%	4%	41%			
Subjective Health Status						
excellent or very good	45%	24%	61%	78%	50%	77%
good	37%	17%	52%	71%	48%	58%
fair or poor	22%	12%	43%	46%	36%	44%
College Degree	47%	24%	63%	74%	47%	78%
Less than College Degree	38%	20%	55%	70%	48%	64%
Married	41%	23%	58%	72%	50%	63%
Not Married	35%	14%	55%	69%	41%	72%
Dependent Children	55%	35%	71%	65%	39%	57%
No Dependent Children	37%	18%	55%	72%	50%	70%
Spouse Employed	44%	23%	59%	71%	53%	65%
Spouse Not Employed	34%	17%	54%	71%	44%	57%

1: among those who have worked since age 49
2: among those on a FTC job in the first wave of data
3: among those on a FTC job in the first wave and who have moved off of that FTC job
4. Age categories for the War Babies cohort are <60, 61-62, and > 62.

Source: Authors' calculations based on the Health and Retirement Study.

Table 3c

Employment Status of Men in 2004, by FTC Job Characteristics

Determinants	Core Men			War Babies Men		
	Percentage Working[1]	Percentage Still on Full-Time Career Job[2]	Percentage Who Moved to a Bridge Job in First Transition[3]	Percentage Working[1]	Percentage Still on Full-Time Career Job[2]	Percentage Who Moved to a Bridge Job in First Transition[3]
Health Insurance Status						
Not covered on career job	39%	21%	73%	65%	45%	79%
"Covered and would maintain " coverage	35%	14%	53%	73%	51%	65%
"Covered and would lose" coverage	50%	23%	52%	82%	60%	61%
Pension Status						
No Pension	42%	22%	66%	71%	51%	83%
Defined - Contribution only	44%	19%	59%	83%	57%	60%
Defined - Benefit only	31%	11%	46%	75%	52%	53%
Defined - Contribution and Defined - Benefit	49%	16%	63%	75%	55%	47%
Self-Employed	58%	28%	77%	86%	63%	88%
Wage and Salary	34%	13%	51%	80%	52%	63%
Wage Rate						
< $6/hour	46%	20%	72%	90%	64%	90%
$6 - $10/hour	39%	17%	57%	83%	51%	83%
$10 - $20/hour	41%	14%	49%	82%	53%	63%
$20 - $50/hour	45%	14%	57%	81%	57%	62%
> $50/hour	55%	30%	69%	90%	39%	86%
Occupation Status						
White collar, highly skilled	49%	18%	61%	80%	52%	72%
White collar, other	49%	17%	58%	74%	53%	62%
Blue collar, highly skilled	38%	13%	49%	74%	57%	61%
Blue collar, other	39%	21%	55%	69%	54%	62%

1: among those who have worked since age 49
2: among those on a FTC job in the first wave of data
3: among those on a FTC job in the first wave and who have moved off of that FTC job

Source: Authors' calculations based on the Health and Retirement Study.

Table 3d

Employment Status of Women in 2004, by FTC Job Characteristics

	Core Women			War Babies Women		
Determinants	Percentage Working[1]	Percentage Still on Full-Time Career Job[2]	Percentage Who Moved to a Bridge Job in First Transition[3]	Percentage Working[1]	Percentage Still on Full-Time Career Job[2]	Percentage Who Moved to a Bridge Job in First Transition[3]
Health Insurance Status						
Not covered on career job	39%	23%	76%	70%	41%	82%
"Covered and would maintain " coverage	38%	19%	55%	65%	50%	66%
"Covered and would lose" coverage	46%	25%	54%	83%	62%	68%
Pension Status						
No Pension	37%	20%	67%	62%	46%	70%
Defined - Contribution only	44%	24%	53%	82%	59%	63%
Defined - Benefit only	39%	18%	50%	79%	56%	68%
Defined - Contribution and Defined - Benefit	57%	39%	75%	75%	50%	64%
Self-Employed	49%	21%	75%	79%	51%	87%
Wage and Salary	38%	21%	55%	77%	55%	66%
Wage Rate						
< $6/hour	42%	25%	66%	64%	41%	50%
$6 - $10/hour	43%	21%	56%	76%	56%	61%
$10 - $20/hour	46%	18%	55%	81%	53%	69%
$20 - $50/hour	44%	25%	54%	83%	64%	76%
> $50/hour	39%	0%	63%	83%	100%	------
Occupation Status						
White collar, highly skilled	50%	23%	59%	79%	59%	77%
White collar, other	46%	22%	57%	68%	52%	68%
Blue collar, highly skilled	35%	14%	47%	72%	59%	55%
Blue collar, other	41%	19%	59%	58%	47%	50%

1: among those who have worked since age 49
2: among those on a FTC job in the first wave of data
3: among those on a FTC job in the first wave and who have moved off of that FTC job

Source: Authors' calculations based on the Health and Retirement Study.

Table 4a

Marginal Effects from Logistic Regression

Dependent Variable: Working at time *t* (working = 1)

Men Who Have Worked Since Age 49

	marg. effects	p-value
Age in 2004		
57 or younger	------	------
58-61	-0.0792	0.000
62-64	-0.2659	0.000
65-69	-0.3229	0.000
70 or older	-0.3257	0.000
Respondent Health		
Excellent/very good	0.0472	0.000
Good	------	------
Fair/poor	-0.2082	0.000
Spouse Health		
Excellent/very good	-0.0506	0.000
Good	------	------
Fair/poor	0.0464	0.004
Education		
Less than high school	0.0037	0.780
High school graduate	------	------
College graduate	0.0506	0.000
Married	-0.0050	0.876
Dependent Child	0.0427	0.001
Health Insurance Status		
Portable	-0.5163	0.000
Non-portable	------	------
None	-0.5297	0.000
Pension Status		
Defined-benefit	-0.3078	0.000
Defined-contribution	-0.0661	0.000
Both	0.0910	0.001
None	------	------
Occupational Status		
White collar - high skilled	0.1038	0.000
White collar - other	0.1478	0.000
Blue collar - high skilled	0.0952	0.000
Blue collar - other	------	------
Self Employed	0.2096	0.000
Wage	0.0049	0.000
Wage Squared	0.0000	0.000
Wealth	-0.0010	0.000
Wealth Squared	0.0000	0.000
Own Home	-0.0079	0.606
Constant	0.6275	0.000

Regressors (continued)	coef	p-value
War Baby Indicator	0.1589	0.000
Year Indicators		
1992	1.1682	0.000
1994	0.4175	0.000
1996	0.2484	0.000
1998	0.1955	0.000
2000	0.1195	0.000
2002	0.0661	0.000
2004	------	------
War Baby Interaction Terms		
War Baby * 1998	0.8244	0.000
War Baby * 2000	0.1682	0.002
War Baby * 2002	0.0017	0.970
War Baby * 2004	------	------

Source: Authors' calculations based on the Health and Retirement Study.

Table 4b

Marginal Effects from Logistic Regression

Dependent Variable: Working at time *t* (working = 1)

Women Who Have Worked Since Age 49

	marg. effects	p-value
Age in 2004		
57 or younger	------	------
58-61	-0.1021	0.000
62-64	-0.2422	0.000
65-69	-0.3106	0.000
70 or older	-0.3958	0.000
Respondent Health		
Excellent/very good	0.0353	0.004
Good	------	------
Fair/poor	-0.2202	0.000
Spouse Health		
Excellent/very good	-0.0474	0.002
Good	------	------
Fair/poor	0.0384	0.032
Education		
Less than high school	-0.0093	0.541
High school graduate	------	------
College graduate	-0.0305	0.062
Married	-0.0526	0.170
Dependent Child	0.0485	0.000
Health Insurance Status		
Portable	-0.4896	0.000
Non-portable	------	------
None	-0.4643	0.000
Pension Status		
Defined-benefit	-0.2532	0.000
Defined-contribution	-0.1423	0.000
None	------	------
Both	0.2051	0.000
Occupational Status		
White collar - high skilled	0.0909	0.000
White collar - other	0.1467	0.000
Blue collar - high skilled	0.1116	0.000
Blue collar - other	------	------
Self Employed	0.1809	0.000
Wage	0.0107	0.000
Wage Squared	0.0000	0.000
Wealth	-0.0010	0.000
Wealth Squared	0.0000	0.000
Own Home	-0.0024	0.876
Constant	0.5910	0.000

Regressors (continued)	coef	p-value
War Baby Indicator	0.1354	0.001
Year Indicators		
1992	0.9709	0.000
1994	0.4776	0.000
1996	0.2637	0.000
1998	0.2514	0.000
2000	0.1780	0.000
2002	0.1126	0.000
2004	------	------
War Baby Interaction Terms		
War Baby * 1998	0.6714	0.000
War Baby * 2000	0.1490	0.013
War Baby * 2002	-0.0119	0.814
War Baby * 2004	------	------

Source: Authors' calculations based on the Health and Retirement Study.

Table 5a

Marginal Effects from Multinomial Logistic Regression

Dependent Variable: First Transition from Full-Time Career Job

Core Men on a Full-Time Career Job in 1992

	Full-Time Career Job		Bridge Job	
	coef	p-value	coef	p-value
Age in 1992				
less than 57	------	------	------	------
57 to 61	-0.1202	0.000	-0.0785	0.001
62 to 64	-0.1642	0.000	-0.0634	0.171
65 and greater	-0.1549	0.004	-0.0828	0.316
Education				
Less than high school	0.0193	0.220	-0.0298	0.279
High school graduate	------	------	------	------
College graduate	0.0052	0.735	0.0815	0.005
Respondent Health				
Excellent/very good	0.0002	0.989	0.0978	0.000
Good	------	------	------	------
Fair/poor	-0.0198	0.304	-0.0944	0.008
Spouse Health				
Excellent/very good	-0.0196	0.164	0.0181	0.504
Good	------	------	------	------
Fair/poor	-0.0049	0.800	-0.0342	0.363
Married	0.0072	0.740	0.0921	0.020
Dependent Child	0.0287	0.050	0.0001	0.998
Occupational Status				
White collar - high skilled	0.0260	0.172	-0.0642	0.058
White collar - other	0.0453	0.028	-0.0474	0.213
Blue collar - high skilled	0.0091	0.608	-0.1012	0.001
Blue collar - other	------	------	------	------
Health Insurance Status				
Portable	-0.0096	0.490	-0.0167	0.523
Non-portable	------	------	------	------
None	-0.0634	0.018	0.1154	0.021
Pension Status				
Defined-benefit	-0.0793	0.000	-0.2294	0.000
Defined-contribution	0.0152	0.279	-0.0540	0.056
None	------	------	------	------
Both	-0.0300	0.424	0.1004	0.098
Self-Employed	0.0893	0.000	0.0443	0.219
Spouse Employed	-0.0132	0.321	0.0542	0.027
Wage	0.0019	0.009	-0.0057	0.000
Wage Squared	-0.0001	0.318	0.0001	0.007
Wealth	0.0001	0.848	-0.0003	0.691
Wealth Squared	0.0000	0.789	0.0000	0.721
Own Home	0.0694	0.001	0.0035	0.913
Constant	-0.1801	0.000	0.1058	0.001

Source: Authors' calculations based on the Health and Retirement Study.

Table 5b

Marginal Effects from Multinomial Logistic Regression

Dependent Variable: First Transition from Full-Time Career Job

War Baby Men on a Full-Time Career Job in 1998

	Full-Time Career Job		Bridge Job	
	coef	p-value	coef	p-value
Age in 1998				
less than 57	------	------	------	------
57 and greater	-0.0359	0.666	0.0197	0.776
Education				
Less than high school	0.1113	0.119	-0.0804	0.234
High school graduate	------	------	------	------
College graduate	-0.1188	0.025	0.1711	0.000
Respondent Health				
Excellent/very good	-0.0512	0.249	0.0966	0.021
Good	------	------	------	------
Fair/poor	-0.1076	0.132	0.1106	0.083
Spouse Health				
Excellent/very good	-0.1070	0.034	0.1480	0.002
Good	------	------	------	------
Fair/poor	0.0458	0.539	-0.0300	0.686
Married	0.0500	0.497	-0.0786	0.249
Dependent Child	0.0135	0.746	-0.0051	0.897
Occupational Status				
White collar - high skilled	0.0634	0.323	-0.0960	0.107
White collar - other	0.0173	0.796	-0.0623	0.321
Blue collar - high skilled	0.0694	0.235	-0.0923	0.088
Blue collar - other	------	------	------	------
Health Insurance Status				
Portable	-0.1078	0.009	0.0192	0.626
Non-portable	------	------	------	------
None	-0.1881	0.046	0.0834	0.301
Pension Status				
Defined-benefit	0.1033	0.038	-0.1566	0.001
Defined-contribution	0.1122	0.020	-0.0628	0.170
None	------	------	------	------
Both	-0.1157	0.191	0.0579	0.517
Self-Employed	0.2235	0.001	-0.0577	0.343
Spouse Employed	0.0283	0.568	-0.0010	0.984
Wage	0.0064	0.013	-0.0063	0.005
Wage Squared	0.0000	0.212	0.0000	0.042
Wealth	-0.0001	0.964	-0.0017	0.152
Wealth Squared	0.0000	0.361	0.0000	0.289
Own Home	-0.0008	0.990	-0.0380	0.481
Constant	0.1069	0.196	0.0720	0.328

Source: Authors' calculations based on the Health and Retirement Study.

Table 5c

Marginal Effects from Multinomial Logistic Regression

Dependent Variable: First Transition from Full-Time Career Job

Core Women on a Full-Time Career Job in 1992

	Full-Time Career Job		Bridge Job	
	coef	p-value	coef	p-value
Age in 1992				
less than 57	------	------	------	------
57 and greater	-0.2170	0.000	-0.0024	0.932
Education				
Less than high school	-0.0185	0.450	-0.0959	0.004
High school graduate	------	------	------	------
College graduate	-0.0026	0.904	0.0867	0.009
Respondent Health				
Excellent/very good	0.0139	0.425	0.0833	0.001
Good	------	------	------	------
Fair/poor	-0.0441	0.127	-0.0246	0.516
Spouse Health				
Excellent/very good	-0.0346	0.094	0.0154	0.627
Good	------	------	------	------
Fair/poor	0.0260	0.296	-0.0507	0.214
Married	0.0158	0.519	0.0027	0.941
Dependent Child	-0.0173	0.293	0.0302	0.220
Occupational Status				
White collar - high skilled	0.0580	0.034	-0.1003	0.007
White collar - other	0.0999	0.000	-0.0883	0.007
Blue collar - high skilled	0.1172	0.000	-0.0474	0.321
Blue collar - other	------	------	------	------
Health Insurance Status				
Portable	-0.0459	0.004	0.0777	0.003
Non-portable	------	------	------	------
None	-0.0744	0.045	0.2349	0.000
Pension Status				
Defined-benefit	-0.0499	0.010	-0.2452	0.000
Defined-contribution	0.0250	0.165	-0.1866	0.000
None	------	------	------	------
Both	0.0354	0.367	0.1974	0.004
Self-Employed	0.0420	0.141	-0.0875	0.052
Spouse Employed	-0.0399	0.040	0.0620	0.040
Wage	0.0058	0.000	-0.0024	0.340
Wage Squared	0.0000	0.258	0.0001	0.321
Wealth	0.0006	0.206	-0.0020	0.011
Wealth Squared	0.0000	0.167	0.0000	0.012
Own Home	0.0285	0.245	0.0401	0.213
Constant	-0.1749	0.000	0.1662	0.000

Source: Authors' calculations based on the Health and Retirement Study.

Table 5d

Marginal Effects from Multinomial Logistic Regression

Dependent Variable: First Transition from Full-Time Career Job

War Baby Women on a Full-Time Career Job in 1998

	Full-Time Career Job		Bridge Job	
	coef	p-value	coef	p-value
Age in 1998				
less than 57	------	------	------	------
57 and greater	-0.0857	0.369	0.0938	0.242
Education				
Less than high school	0.2367	0.033	-0.2397	0.024
High school graduate	------	------	------	------
College graduate	-0.0556	0.363	0.1024	0.063
Respondent Health				
Excellent/very good	-0.0296	0.576	0.0766	0.126
Good	------	------	------	------
Fair/poor	-0.0739	0.369	-0.0612	0.418
Spouse Health				
Excellent/very good	0.0157	0.794	0.0394	0.490
Good	------	------	------	------
Fair/poor	0.0804	0.373	0.0116	0.892
Married	0.0176	0.845	-0.1419	0.098
Dependent Child	0.1079	0.027	-0.0993	0.030
Occupational Status				
White collar - high skilled	0.1879	0.012	-0.1098	0.101
White collar - other	0.1975	0.003	-0.1381	0.024
Blue collar - high skilled	0.2894	0.002	-0.1318	0.128
Blue collar - other	------	------	------	------
Health Insurance Status				
Portable	-0.0681	0.157	0.0687	0.129
Non-portable	------	------	------	------
None	-0.2067	0.090	0.1832	0.069
Pension Status				
Defined-benefit	-0.0153	0.783	-0.0440	0.412
Defined-contribution	0.0609	0.246	-0.0965	0.054
None	------	------	------	------
Both	0.0384	0.720	-0.0084	0.938
Self-Employed	0.1856	0.052	-0.0215	0.794
Spouse Employed	-0.0383	0.611	0.0665	0.366
Wage	0.0079	0.206	-0.0026	0.644
Wage Squared	0.0001	0.683	-0.0001	0.301
Wealth	0.0000	0.996	-0.0004	0.759
Wealth Squared	0.0000	0.895	0.0000	0.834
Own Home	0.0305	0.721	-0.1205	0.093
Constant	-0.0532	0.647	0.2312	0.022

Source: Authors' calculations based on the Health and Retirement Study.

Table 6a

Coefficients from OLS Regression

Dependent Variable: Hours Worked per Year
Men with a FTC Job Since Age 49
Prior to Transition from FTC Job

	coef.	p-value
Age in 2004		
57 or younger	------	------
58 - 61	27.1	0.002
62 - 64	-72.3	0.000
65 - 69	-133.2	0.000
70 or older	-207.3	0.000
Respondent Health		
Excellent/very good	24.7	0.002
Good	------	------
Fair/poor	-17.7	0.143
Spouse Health		
Excellent/very good	12.1	0.172
Good	------	------
Fair/poor	0.6	0.961
Education		
Less than high school	-8.7	0.386
High school graduate	------	------
College graduate	-31.0	0.004
Race		
White	------	------
Black	-33.4	0.003
Other	-29.6	0.145
Married	47.1	0.049
Dependent Children	11.6	0.258
Health Insurance Status		
Portable	-24.6	0.003
Non-portable	------	------
None	1.8	0.927
Pension Status		
Defined-benefit	14.1	0.094
Defined-contribution	72.3	0.000
None	------	------
Both	-24.2	0.100
Occupational Status		
White collar - high skilled	57.0	0.000
White collar - other	54.8	0.000
Blue collar - high skilled	-2.7	0.778
Blue collar - other	------	------
Self-employed	1.9	0.896
Wage	-1.7	0.000
Wage Squared	0.0	0.000
Wealth ($1,000)	0.1	0.169
Wealth Squared ($1,000)	0.0	0.290
Own Home	18.9	0.082
Constant	2230.8	0.000

Regressors (continued)	coef	p-value
War Baby Indicator	-36.4	0.179
Year Indicators		
1992	-110.3	0.000
1994	-72.2	0.002
1996	-147.2	0.000
1998	-75.5	0.002
2000	-76.3	0.002
2002	-113.2	0.000
2004	------	------
War Baby Interaction Terms		
War Baby * 1998	18.1	0.574
War Baby * 2000	4.6	0.892
War Baby * 2002	75.7	0.034
War Baby * 2004	------	------

Source: Authors' calculations based on the Health and Retirement Study.

Table 6b

Coefficients from OLS Regression

Dependent Variable: Hours Worked per Year
Men with a FTC Job Since Age 49
After Transition from FTC Job

	coef.	p-value
Age in 2004		
57 or younger	------	------
58 - 61	-4.7	0.862
62 - 64	-253.6	0.000
65 - 69	-397.2	0.000
70 or older	-602.1	0.000
Respondent Health		
Excellent/very good	24.5	0.227
Good	------	------
Fair/poor	-77.1	0.006
Spouse Health		
Excellent/very good	-14.6	0.511
Good	------	------
Fair/poor	60.2	0.034
Education		
Less than high school	85.0	0.001
High school graduate	------	------
College graduate	-107.5	0.000
Race		
White	------	------
Black	-73.5	0.010
Other	56.0	0.312
Married	109.4	0.056
Dependent Children	90.0	0.000
Health Insurance Status		
Portable	-234.6	0.000
Non-portable	------	------
None	-171.9	0.000
Pension Status		
Defined-benefit	175.7	0.000
Defined-contribution	301.7	0.000
None	------	------
Both	-174.0	0.006
Occupational Status		
White collar - high skilled	61.3	0.037
White collar - other	68.6	0.018
Blue collar - high skilled	38.1	0.120
Blue collar - other	------	------
Self-employed	-207.3	0.000
Wage	-2.5	0.000
Wage Squared	0.0	0.040
Wealth ($1,000)	-0.5	0.007
Wealth Squared ($1,000)	0.0	0.000
Own Home	-124.8	0.000
Constant	1695.8	0.000

Regressors (continued)	coef	p-value
War Baby Indicator	8.1	0.905
Year Indicators		
1992	91.2	0.056
1994	129.1	0.005
1996	95.8	0.025
1998	103.7	0.010
2000	123.8	0.002
2002	175.6	0.000
2004	------	------
War Baby Interaction Terms		
War Baby * 1998	274.7	0.001
War Baby * 2000	181.7	0.045
War Baby * 2002	1.2	0.989
War Baby * 2004	------	------

Source: Authors' calculations based on the Health and Retirement Study.

Table 6c

Coefficients from OLS Regression

Dependent Variable: Hours Worked per Year
Women with a FTC Job Since Age 49
Prior to Transition from FTC Job

	coef.	p-value
Age in 2004		
57 or younger	------	------
58 - 61	-18.2	0.039
62 - 64	-15.7	0.318
65 - 69	-0.4	0.989
70 or older	-59.2	0.365
Respondent Health		
Excellent/very good	10.1	0.204
Good	------	------
Fair/poor	-17.0	0.136
Spouse Health		
Excellent/very good	-4.3	0.666
Good	------	------
Fair/poor	18.8	0.124
Education		
Less than high school	9.6	0.441
High school graduate	------	------
College graduate	25.4	0.027
Race		
White	------	------
Black	-40.3	0.000
Other	4.7	0.789
Married	-77.7	0.007
Dependent Children	-22.9	0.002
Health Insurance Status		
Portable	-12.8	0.095
Non-portable	------	------
None	-47.9	0.026
Pension Status		
Defined-benefit	38.9	0.000
Defined-contribution	79.3	0.000
None	------	------
Both	-33.5	0.055
Occupational Status		
White collar - high skilled	50.2	0.000
White collar - other	-4.0	0.721
Blue collar - high skilled	15.2	0.265
Blue collar - other	------	------
Self-employed	26.5	0.196
Wage	-4.1	0.000
Wage Squared	0.0	0.029
Wealth ($1,000)	0.4	0.003
Wealth Squared ($1,000)	0.0	0.028
Own Home	8.2	0.457
Constant	2124.9	0.000

Regressors (continued)	coef	p-value
War Baby Indicator	62.6	0.010
Year Indicators		
1992	-53.5	0.004
1994	-1.7	0.924
1996	-80.7	0.000
1998	-1.6	0.933
2000	2.9	0.881
2002	-18.6	0.390
2004	------	------
War Baby Interaction Terms		
War Baby * 1998	-53.6	0.078
War Baby * 2000	-53.1	0.086
War Baby * 2002	-28.1	0.406
War Baby * 2004	------	------

Source: Authors' calculations based on the Health and Retirement Study.

Table 6d

Coefficients from OLS Regression

Dependent Variable: Hours Worked per Year
Women with a FTC Job Since Age 49
After Transition from FTC Job

	coef.	p-value
Age in 2004		
57 or younger	------	------
58 - 61	-22.8	0.316
62 - 64	-223.2	0.000
65 - 69	-360.2	0.000
70 or older	-532.7	0.000
Respondent Health		
Excellent/very good	-6.2	0.762
Good	------	------
Fair/poor	-26.9	0.391
Spouse Health		
Excellent/very good	-32.4	0.219
Good	------	------
Fair/poor	-4.0	0.903
Education		
Less than high school	16.5	0.567
High school graduate	------	------
College graduate	-130.5	0.000
Race		
White	------	------
Black	-148.1	0.000
Other	-48.9	0.291
Married	-113.4	0.059
Dependent Children	-9.6	0.636
Health Insurance Status		
Portable	-249.7	0.000
Non-portable	------	------
None	-190.1	0.000
Pension Status		
Defined-benefit	164.2	0.000
Defined-contribution	271.4	0.000
None	------	------
Both	-140.4	0.017
Occupational Status		
White collar - high skilled	19.6	0.541
White collar - other	-26.0	0.309
Blue collar - high skilled	12.5	0.759
Blue collar - other	------	------
Self-employed	-55.9	0.082
Wage	-4.5	0.000
Wage Squared	0.0	0.008
Wealth ($1,000)	-1.7	0.000
Wealth Squared ($1,000)	0.0	0.000
Own Home	-39.4	0.141
Constant	1842.5	0.000

Regressors (continued)	coef	p-value
War Baby Indicator	50.0	0.536
Year Indicators		
1992	35.4	0.489
1994	100.4	0.034
1996	227.4	0.000
1998	165.4	0.000
2000	144.7	0.001
2002	169.6	0.000
2004	------	------
War Baby Interaction Terms		
War Baby * 1998	240.2	0.014
War Baby * 2000	106.4	0.286
War Baby * 2002	-41.7	0.664
War Baby * 2004	------	------

Source: Authors' calculations based on the Health and Retirement Study.

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