

# WORKING PAPER

## *Executive Summary*

DECEMBER 2008, WP# 2008-17

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## WHAT EFFECT DO TIME CONSTRAINTS HAVE ON THE AGE OF RETIREMENT?

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One potential solution to inadequate retirement saving, and a likely consequence of increasing lifespans, is for workers to delay retirement. But time constraints may affect individuals' ability and willingness to delay retirement.

Using data from the American Time Use Survey (ATUS) and the Health and Retirement Study (HRS), we estimate the impact of time use constraints on retirement transitions. The ATUS contains highly detailed time use diaries for a large panel of individuals, but lacking a substantive panel, is not well suited for analyzing the timing of retirement. In contrast, the HRS is a lengthy panel ideally suited to studying the timing of retirement transitions, but lacks detailed time use data.

Using the methodology of Hamermesh and Donald (2007), we first analyze the ATUS data to measure the distortion to daily time use resulting from labor market participation distinguished by industry and occupation. We then include the measures of these distortions to daily activities as controls when we estimate multinomial logits to explain job transitions for aging workers in the HRS.

When analyzing the ATUS data, we group non-work activities into three categories: leisure (L), home production (H), and tertiary activities (T). Home production includes housework and care of children and others. Tertiary activities include sleeping, eating and drinking, and personal care activities, such as bathing and grooming; these are activities that must be done for oneself and not by others, and thus cannot be purchased.

We run regressions explaining the propensity to engage in these activities throughout the day (at quarter hour intervals) as a function of whether the individual works and average minutes of work, conditional on working. The goal is to see how the incidence and intensity of work alter the scheduling of other activities throughout the day.

We find that the distortions to home production are a little greater in magnitude than the distortions to leisure and tertiary activities. But we find that there are substantial differences between occupations, even controlling for hours worked. For married men working in construction, agriculture, and mining, the sum of the absolute values of the percentage changes in probabilities of devoting time to leisure, home produc-

tion, and tertiary activities amounts to 21.24 over the 70 time intervals, or an average of 30.3 percent for any one of the 70 time intervals. But the corresponding value for married men working in semiskilled non-professional occupations is only 13.10. The time constraints vary with gender and marital status. They are somewhat higher on weekdays, and on weekdays they differ both during typical work hours and at other times.

We then turn to the HRS data to analyze the effect of time use constraints on retirement transitions. The HRS is a detailed longitudinal survey of over 7,600 households with a member born between 1931 and 1941, and surveys people every two years. We use data from the first seven waves through 2004, identifying work status transitions during this period from one birthday to the next. Our sample consists of 33,655 person year observations of people who were employed at the start of the year, including 13,301 married male person-years, 12,346 married females, 1,799 single males, and 6,209 single females.

We estimate a multinomial logit model that seeks to explain the probabilities of retiring or changing job, relative to a base case of staying in the existing job. In some cases, we control for the three activity-specific values for leisure, home production, and tertiary activities, and in others for their sum. We also control to the extent possible for job type, so as to pick up other factors related to particular jobs or the types of people who work in particular jobs. The limitation is that we must drop not one but two of our 10 job type categories, as our constraints do not vary within job type and so are linear combinations of job type. In accommodating this source of collinearity, we can identify the time-related constraints of job type, as long as these are not perfectly correlated with other unmeasured traits that vary by job type.

We include a rich set of demographic and compensation-related variables that are available in the HRS, including controls for observable job characteristics such as whether a job requires “lots of physical effort.” We find that more total distortions in daily non-work activities, compared to non-workers – raises the likelihood of switching jobs but not of retiring. The effects can be substantial – a 10 percentage point average distortion of time use is associated with a 143 percent increase in the likelihood of leaving one’s job.

When we distinguish the impact of the separate measures of work-related constraints on different types of non-work activities, we find that distortions to leisure time lead to moves into both new jobs and retirement (though the latter is not statistically significant). Distortions to home production reduce the likelihood of leaving one’s job. Distortions to tertiary activities lead to more new jobs but less retirement.

Our research demonstrates that individuals’ retirement hazard is responsive to the severity of their time use constraints. We propose extending the above analysis to consider the impact that plausible relaxations of time constraints – for example, through flexible working hours – might have on the average age of retirement.

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