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Abstract

In 1998, the Social Security Administration established the Retirement Research Consortium to encourage research on topics related to Social Security and the well-being of older Americans, and to foster communication between the academic and policy communities. The Michigan Retirement Research Center (MRRC) participated in the Consortium from its inception until 2019, when the MRRC expanded and became the Michigan Retirement and Disability Research Center. This article surveys a selection of the MRRC's output over its second 10 years (2008–2017), summarizes its innovative use of new data sources, and highlights several key themes in the center's research contributions.

Keywords

Social Security, Retirement, Pensions

Disciplines

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Comments

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SOCIAL SECURITY RESEARCH AT THE UNIVERSITY OF MICHIGAN RETIREMENT AND DISABILITY RESEARCH CENTER

by John Laitner, Eric French, Alan L. Gustman, Michael D. Hurd, Olivia S. Mitchell, Kathleen J. Mullen, and Susan C. Barnes*

Preface

The Michigan Retirement Research Center (MRRC) expanded to include research on issues related to disability in late 2019. The center is now named the Michigan Retirement and Disability Research Center (MRDRC). This article discusses the work of the MRRC prior to its transition to the MRDRC and its inclusion of disability-related research activities.

Introduction

The Social Security Administration sponsors the MRRC to study topics of concern for Social Security and retirement policy, build a community of scholars with experience and expertise in analyzing these issues, disseminate research findings, and attract new generations of scholars to the field. The MRRC is one of three such centers, along with the Center for Retirement Research at Boston College and the National Bureau of Economic Research's Retirement Research Center. The MRRC is proud to have participated in the retirement research program and this article highlights some of its recent projects.

The MRRC seeks to deliver a balance of theoretical and empirical work. MRRC research often takes the lifecycle model developed by Modigliani (1986) and others as its conceptual foundation. The model analyzes household planning for lifetime needs. It emphasizes household incentives to save during peak earning years in preparation for retirement and it lays out the tradeoffs between leisure and earnings that households must confront in determining the age at which to retire. MRRC researchers extend the original lifecycle framework to include uncertainties about longevity, health, and asset returns; to highlight the role of family composition changes and differences; and to incorporate public policies and study their effects. Above all, they have attempted to use varied data sources with their models both to estimate key parameters and to test the models' real-world implications.

New data sources have been central to MRRC efforts. The MRRC is based at the University of Michigan's Institute for Social Research, which also houses the Health and Retirement Study (HRS). A number of MRRC executive committee members are, or have been, coprincipal investigators on the HRS, including Michael D. Hurd, Olivia S. Mitchell, David Weir, and Kathleen McGarry. They are intimately familiar with the data set's many features. Likewise, a

Selected Abbreviations

ACA	Patient Protection and Affordable Care Act
ALP	American Life Panel
DB	defined benefit
DC	defined contribution
HRS	Health and Retirement Study
IRA	individual retirement account

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number of MRRC projects employ Internet panel data collected in the American Life Panel (ALP) at RAND and the Understanding America Study (UAS) at the University of Southern California's Dornsife Center for Economic and Social Research. The baseline respondent information in these surveys is patterned after that of the HRS. Although they are less extensive in time and scope, the ALP and UAS allow rapid, precisely targeted data collection; specialized subsample panels; and questions using sophisticated graphics. International data—designed for comparison with the HRS—are now available for Europe and emerging-market economies, and MRRC researchers are on the forefront of their use. MRRC scholars also make extensive use of data from the Medical Expenditure Panel Survey, the Panel Study of Income Dynamics, the Survey of Income and Program Participation, the Current Population Survey, the American Community Survey, the Survey of Consumer Finances, and the Consumer Expenditure Survey. They also use shared private-sector data (for example, the Vanguard Research Initiative, briefly discussed below) and independent, researcher-collected data (such as audit and correspondence surveys, also discussed below).

The subjects of MRRC study include Social Security and retirement, macroeconomic analysis of Social Security, wealth and retirement income, program interactions, demography, and international research. For the sake of brevity, however, the present summary focuses on MRRC research on two broad topic areas: (1) preparation for and well-being during retirement and (2) public policy, health, and other determinants of retirement timing and labor force participation at older ages.

Preparation for and Well-Being During Retirement

In an era of longer lifespans and a changeover from defined benefit (DB) to defined contribution (DC) pensions, household wealth accumulation in preparation for retirement is of rising concern. Fortunately, for research purposes, the HRS provides evidence on how households are coping.

The HRS assembles household balance sheets that account for all major components of net worth. For most respondent households, the HRS can provide, on a restricted-use basis, lifetime Social Security earnings records for both the head of household and the spouse. Primary respondents are aged 51 to 61 when introduced to the survey, and panel data are collected every 2 years thereafter. The HRS began in 1992; the first respondents were in the 1931–1941 birth cohort. Additional cohorts were added in subsequent survey waves.[1]

Fang, Brown, and Weir (2016) use wealth and income data from the HRS to assess the household finances of adults reaching ages 51 to 56 in 1992, 1998, 2004, and 2010. Each wave of the HRS fields an extensive battery of questions about private wealth, with categories such as housing equity, financial assets, and pensions measured separately. Survey questions also collect measures of debt, which are netted out of the wealth measures. Notably, the HRS makes a substantial effort to measure pension wealth accurately, which includes estimating the capitalized value of future DB pension income.[2]

Fang, Brown, and Weir compute the average ratio of net worth to lifetime earnings for individuals in the different cohorts. They find that average real earnings per cohort rose steadily, increasing by one-third from 1992 to 2010. By contrast, wealth, including the capitalized value of DB pensions, DC pensions, individual retirement accounts (IRAs), and Social Security benefits, declined slightly. Mean real wealth (in 2010 dollars) rose from about $428,000 in 1992 to $464,000 in 2004, but then declined to $414,000 in 2010. The ratio of wealth to lifetime earnings declined from about 0.45 for the 1992 near-retirement cohort to about 0.33 for the 2010 cohort.

Caveats apply. Nonpension wealth, which made up more than 40 percent of household net worth in 1992, actually rose faster than lifetime earnings from 1992 to 2004. However, housing and financial asset prices fell sharply during the Great Recession, reducing 2010 nonpension wealth in the study's data to 1992 levels. The asset declines in many cases proved temporary. Moreover, the growth in lifetime earnings during the study period is not necessarily straightforward to interpret, as this was a time of structural economic change. Although men's lifetime earnings gains from 1992 to 2010 were small, women's earnings doubled. However, this study, like most others, omits the value of home production—that is, the housekeeping and related tasks forgone to enter the labor force. House, Laitner, and Stolyarov (2008) estimate that

that omission may cause an overstatement of gains in household income by about one-third.

Nonetheless, Fang, Brown, and Weir's results appear to bolster public concern that declines in the prevalence of DB pensions are not being fully offset by greater use of DC and IRA alternatives. The authors conclude that "retirement preparation among the American nonelderly (at least when measured in financial wealth) seems to have weakened since the turn of this century."

As a rule of thumb, conventional assessments of retirement preparation recommend income replacement rates—postretirement income as a percentage of earnings in the period just before retirement—that will preserve preretirement living standards. Traditional postretirement income calculations sum Social Security benefits and DB annuity income, but DB pensions are increasingly less common—and many of the DC plans and IRAs that replace them do not provide annuitized retirement income. Further, retiree households may have sizable nonpension net worth—including, for instance, their house.

Hurd and Rohwedder (2015) reexamine retirement readiness using variants of the income replacement-rate model. Their study sample includes HRS respondents (both singles and couples) aged 66–69 at any point from 2000 to 2008 with any preretirement earnings at ages 59–61. The authors begin with a conventional benchmark replacement-rate target of 70 percent[3] and examine whether a respondent's household income meets that target under a traditional income concept (Social Security benefits plus DB pension annuity income) and an alternative definition that augments the traditional concept with asset drawdowns from household net worth (including DC plans, IRAs, and home equity). They find that 35 percent of single-person households meet the target replacement rate under the first definition and 46 percent do so under the second. For couples, the corresponding percentages are 34 percent and 46 percent.

Acknowledging differences in household tastes and demographic composition, Hurd and Rohwedder also analyze consumption data in their 2015 study. Using panel data from the HRS Consumption and Activities Mail Survey (CAMS), they compute rates at which consumption changes with age, health condition, and demographic composition for singles and couples. Then, given a particular household's consumption level early in retirement, they simulate its future consumption under random health and mortality shocks and corresponding CAMS-based average growth rates. If the household's initial resources are sufficient to finance a lifetime path in at least 95 percent of its simulations, the household is deemed adequately prepared for retirement. With this consumption-based approach, the authors find that 59 percent of single households and 81 percent of couples are prepared for retirement. These shares are substantially higher than those estimated using either of the study's income measures—especially in the case of couples.[4]

Knowledge and Planning

The MRRC has longstanding interest in the roles that knowledge and understanding of Social Security benefits, private investment options, probable longevity, and other aspects play in retirement preparation (Armour 2017; Lusardi, Michaud, and Mitchell 2017; Hurd and McGarry 1995). Recent work examines the way people think about retirement issues, as well as the information they have on hand (Gottlieb and Mitchell 2015).

Armour (2017) uses the ALP Internet survey to study the effect and the value of mailing paper *Social Security Statements* to individuals once every 5 years, as the agency has done since 2014. The ALP has a nationally representative sample. It provides an extensive set of baseline covariates, longitudinal information on respondents' knowledge of their Social Security entitlements, and subsamples of those who do or do not have an online *my* Social Security account (with which an individual can view his or her current-year *Statement* online) and who have or have not received a paper *Statement* since 2014.

Sixty-one percent of paper *Statement* recipients find it useful for retirement planning or Social Security claiming, and report that receiving the *Statement* makes them more optimistic that benefits will in fact be available when they reach retirement. Seventy-four percent of *my* Social Security accountholders find them especially helpful.

This project illustrates how useful an Internet panel survey can be for policy evaluation. Researchers can quickly derive and field such a survey instrument to measure respondent awareness of and reactions to newly instituted policies. They can also easily link new data to existing records; and, if policy implementation is staggered, researchers may be able to measure results for different groups separately, as each is affected in turn.

In the United States, nursing home care is both expensive and prevalent: 50–70 percent of adults may need such services at some point in their lives. Nevertheless, few have long-term care insurance (LTCI).

Gottlieb and Mitchell (2015) use data from an experimental 2012 module of the HRS to examine the question: Why do so few Americans buy LTCI? The authors specifically consider the effect of a behavioral tendency called narrow framing, in which a respondent chooses inconsistently between two equal risk-versus-reward scenarios depending on whether a scenario is framed as a potential gain (such as insurance benefits) or a potential loss (such as premium costs).

The researchers designed the HRS module with questions in which a restricted focus on losses yielded answers that differed from those that would be expected of respondents seeking rationally to get the most from their money (that is, expected utility maximization, which takes into account gains as well as losses in all circumstances). Among a study sample of roughly 1,700, less than 12 percent had LTCI. About one-quarter of the respondents manifested narrow concentration on insurance costs rather than also considering possible benefits during health emergencies. The authors find that this group was significantly less likely to own LTCI. Other covariates, such as sensitivity to risk, were either insignificant or only marginally important.

Neoclassical economic models might explain low LTCI take-up based on insurance transaction costs, adverse selection, or the availability of Medicaid nursing home coverage (Friedman and Warshawsky 1990; Mitchell and others 1999). However, Gottlieb and Mitchell's experimental HRS module tests a behavioral-theory hypothesis and finds that narrow framing affects at least one-quarter of the sample.

Well-Being During Retirement

Well-being during retirement is likely to depend heavily on health status, which may involve factors such as out-of-pocket medical spending and the need for assistance with activities of daily living. Several MRRC projects have focused on these factors, including long-term care expenses (De Nardi, French, and Jones 2015) and the costs of Alzheimer's disease (Hurd and others 2013). Yet another determinant of retirement security could be age-related vulnerability to careless mistakes and fraud.

DeLiema and others (2017) examine the prevalence of fraud and financial exploitation of older Americans, along with the factors associated with their victimization. The authors designed an experimental HRS module, fielded in 2016, that used incident-based questions; that is, each respondent was asked if he or she had been exposed to any of six specific types of fraud and three specific types of scam. Each type was identified with a one- to three-sentence description. To assess overall prevalence, the authors tallied a respondent's reported exposure across all nine categories. The module included a financial literacy test and a self-rating of financial knowledge.[5]

DeLiema and others find that about 8 percent of respondents reported some form of investment fraud. Noninvestment scams were more common still. In particular, about 30 percent of respondents said someone had attempted to access their credit cards or bank accounts. Questions about experiences with a list of specific frauds and scams yielded higher prevalence rates than those merely asking each respondent for the number of instances they had experienced. (Notably, the authors took particular care to avoid embarrassing respondents with questions about victimization.) On the other hand, few of the covariates turn out to be significant predictors of fraud or scam prevalence.

Kariv and Silverman (2015) examine the economic rationality of Dutch Internet panel respondents. Participants were given 25 hypothetical budgeting problems. The authors look for violations of the properties of preferences that are commonly associated with logical thinking. They devise metrics for summarizing the number of violations per participant. The study finds that, after correcting for education and sex, age has a significant negative effect on rationality—18 percent to 30 percent of a standard deviation, depending on the measure. Belonging to a precomputer- or postcomputer-era birth cohort does not affect rationality, nor does one's cognitive score or health status.

Factors of Retirement Timing and Labor Force Participation at Older Ages

Many MRRC studies examine public policy, health, labor market, and other determinants of the decision to retire or to continue working at older ages. This section summarizes a selection of those studies.

The Patient Protection and Affordable Care Act (ACA)

The ACA provides a current example of a government policy that targets one issue but may have collateral effects in other spheres. In particular, economic theory suggests that the ACA might lead to decreased labor force participation.

The ACA took effect in January 2014. One of its primary intents was to make health insurance less expensive for adults who have not reached the age of Medicare eligibility and who lack employer-sponsored

alternatives. Health insurance exchanges, with means-tested subsidies, opened in every state. Medicaid expanded coverage to low-income adults in the states that accepted the provision (Levy, Buchmueller, and Nikpay 2016).

French, von Gaudecker, and Jones (2016) construct a structural lifecycle model to examine whether the ACA will encourage early retirement (that is, before age 65). Low labor force participation among individuals aged 55–64 has recently concerned policymakers (Furman 2015). French, von Gaudecker, and Jones calibrate their model using the Medical Expenditure Panel Survey and the HRS and its simulations generate quantitative results. The model predicts lower employment for older workers as they gain access to the ACA exchanges or Medicaid. Interestingly, the model also suggests that middle-income workers are the most likely to leave employment, perhaps because high-income households are ineligible for the ACA subsidies and low-income individuals may be willing to take their chances without insurance and rely on emergency-room assistance as a backup.

Levy, Buchmueller, and Nikpay (2015) use Current Population Survey data for January 2005–June 2015 to study ACA effects on retirement and part-time work. They discern little change since the advent of the ACA, even when they compare states with and without Medicaid expansion. Although the study is an early assessment, the topic's importance means that even early data-driven results are of great interest.

In contrast with the reduced-form approach of Levy, Buchmueller, and Nikpay (2015), Gustman, Steinmeier, and Tabatabai (2016) use a structural model with estimated parameters. They split an HRS sample of employed individuals into three groups: those with employer-sponsored health insurance while working, but not after retirement; those with employer-sponsored health insurance while working and in retirement; and those with no employer-sponsored health insurance at all. The authors find that even simulations of the law's long-run consequences indicate no more than very small employment effects. One possible explanation is that the ACA is likely to affect only a fraction of employees strongly. A second is that health insurance is only one of many determinants of retirement timing.

Deng and Benitez-Silva (2015) explore the relationship between health insurance and retirement from a different perspective. The authors use Medicare Current Beneficiary Survey data for 1999–2010 to study Medicare program savings resulting from labor force participation past age 65. For an individual who works at age 65 or older in a job with employer-sponsored health insurance, or for a partner receiving spousal coverage, Medicare is the secondary payer. The authors calculate savings to Medicare from employer-sponsored health insurance of $3.22 billion a year in 2009 dollars. Future year-to-year savings to Medicare may be even greater: The age for full retirement benefits is 65 for those born in 1937 or earlier, but it rises in increments for those born in subsequent years, until reaching 67 for those born in 1960 or later. That, as well as increases in longevity, may encourage more people to work past age 65, thereby keeping them in employer-sponsored health insurance coverage.

Human Capital and Retirement

Average life spans increased throughout the last century.[6] At first, declines in infant mortality were a major factor. More recently, declines in mortality at older ages have been important. An open question is whether longer life spans will lead to proportionate increases in career lengths and retirement ages or almost exclusively to longer retirement periods instead. The outcome will have major implications for the labor supply, household resources during retirement, and Social Security solvency.

Fan, Seshadri, and Taber (2017) examine the lifecycle profile of household earnings and assess how its shape may adjust as lifespans lengthen. In the lifecycle model, a household derives utility from both consumption and leisure, and work ceases when the incremental increase in leisure from retirement fully counterbalances the lost earnings. In the standard paradigm, wages rise with experience but decline with age (reflecting, for example, deteriorating health). In practice, wages tend to rise from about age 22 to a peak at ages 50 to 55, and then decline. When wages decline enough, a worker retires. If hours of work are roughly constant, the pattern of a household's earnings, with respect to age, tends to form an inverted U.

Ben-Porath (1967) proposes an alternative formulation in which a household purposefully allocates its work hours between on-the-job skill enhancement—that is, human capital investment—and work. A larger fraction of the workday devoted to the latter raises current earnings; a larger fraction devoted to the former raises future wages but diminishes current earnings. Early in one's career, a worker has incentive to invest heavily, as there are many years of future work over which to reap the benefits. Late in one's career, on the other hand, a worker will want to devote most employment hours to (currently) remunerative production.

In a conventional lifecycle model, as longevity increases, extending one's career may involve accepting lower and lower wages. Continuing employment can quickly become unattractive. In the Ben-Porath model, by contrast, as lifespans increase, workers can invest more, and longer, in human capital, delaying the age at which their wages begin to decline. Thus, they can benefit more from a later retirement age.

Fan, Seshadri, and Taber develop a lifecycle model of the Ben-Porath type, calibrate some of its parameters, and estimate the remainder from Survey of Income and Program Participation data. The authors use their model to simulate the effects of various potential Social Security policy changes. They find, for instance, that less generous benefits result in higher labor force participation later in the lifecycle, as workers adjust their human capital investments over time.

Laitner and Silverman (2017) present a lifecycle model with which they simulate saving-versus-consumption decisions for couples at all ages, as well as choice of retirement age.[7] The model uses Consumer Expenditure Survey data to estimate lifecycle consumption profiles and HRS panel data to estimate retirement ages and household net worth. It also uses linked Social Security lifetime earning histories, available to researchers on a restricted-access basis, to estimate each adult's lifetime wage-and-salary income. Laitner and Silverman use their model to study a potential policy change that has been suggested in the past: They simulate the effect of a Social Security "vesting age" after which a worker would be exempt from the payroll tax. The policy would also raise the prevesting-age payroll tax to maintain revenue neutrality for the Social Security system. With a vesting age of 54, for example, the simulations show that men's careers would lengthen by 1.27 years on average.

Health as a Determinant of Retirement

Declining health is an important determinant of retirement timing. MRRC researchers have used international and restricted data, as well as novel survey methods, to explore the complex relationship between aging workers' health shocks (and those of their family members) and employment declines.

Blundell and others (2016; 2017) use data from the HRS and its sister survey in the United Kingdom (UK), the English Longitudinal Study of Ageing (ELSA), to study the effect of health shocks on employment. One of their goals is to derive a convenient, one-dimensional summary of an individual's health at

a given age. This can facilitate policy studies, international comparisons, and other analyses. Modern data sets often include numerous health measures—the HRS and the ELSA, for example, have three subjective measures of health and many objective measures. Blundell and others consolidate the available information into a single index. Among a number of candidate indices, they recommend what statisticians call the first principal component of the subjective measures.[8]

Another goal is to show that regressions analyzing the relationship between, for example, retirement age and health condition should include lagged values of health (and lagged labor supply variables) as well as current health. Health problems can be either transitory or chronic, and the latter tend to have the strongest effect on labor supply. Lagged explanatory variables can help to capture the effect of chronic conditions; omitting lagged values, the authors show, leads to biased coefficients on current health.

A third goal of these studies is to compare UK and U.S. results. From a policymaker's standpoint, there are intriguing early results. For example, UK labor force participation tails off rapidly among women in their late 50s, but U.S. women do not show a similar decrease. The state pension age for women is 60 in the UK, but the U.S. Social Security full retirement age for retirement-eligible women (and men) during the 1996–2012 study period was 65 to 66, depending on year of birth. On the other hand, declining health affects male retirement more strongly in U.S. regressions than in UK results. The authors note that the relative generosity of DI benefits (including access to public health insurance) and unemployment insurance in the United States is greater than that of the UK's corresponding programs. Thus, in both countries, policies may provide part of the explanation for the differences in outcomes.

Giustinelli and Shapiro (2018) examine the potential value of using survey questions that allow respondents to choose among hypothetical alternatives. The authors use such questions to obtain more extensive information on linkages between health and retirement than conventional data sets provide. The project uses data from the Vanguard Research Initiative, a survey of individuals aged 55 or older who have at least $10,000 in financial assets in Vanguard Group accounts, augmented with additional surveys providing background covariates and fielding specialized questions about investor preferences. Vanguard provided the data and facilitated the surveys. The

authors' analysis focuses on responses to three sets of hypothetical questions:

- What is the probability that you will be in good (bad) health 2(4) years from now?

- What is the probability that you will be retired 2(4) years from now?

- What is the probability that you will retire 2(4) years from now if you are in good (bad) health at that time?

By contrast, a conventional (panel) survey would ask about employment and health status at different ages, enabling analysts to observe the survey participant's health at retirement, but not revealing whether the respondent would have retired at that time were his or her health status different.

Among workers aged 58 or older, a change from high (good) to low (poor) health reduces the self-reported odds of working by 28.5 percentage points. The responses to detailed hypothetical questions offer analysts the chance to estimate causal relationships that would be difficult to identify with conventional data.

Fahle and McGarry (2017) study a different link between health and labor force participation. The authors examine the characteristics of adult children who are the most likely to provide care to elderly parents, and how care for parents affects children's labor market participation. The analysis uses the HRS panel and linked (and restricted-access) Social Security earnings histories. It focuses on women aged 51 or older who were interviewed during 1992–2010 and who were not providing care in 1992 but had at least one living parent or parent-in-law. About half of those women provided elder care at some subsequent point. The study asks: Is the selection of those providing care positively or negatively related to previous work experience? Somewhat surprisingly, the selection is positive. More schooling, more past work experience, and higher earnings raise the likelihood of providing care for parents by 5 percent to 10 percent.

Age Discrimination and Demand for Labor

Many retirement studies focus on labor supply issues; for instance, on how long employees want to continue to work before retiring. However, demand factors may be important as well. If employers are reluctant to hire and keep older individuals, policies designed to encourage those individuals to extend their careers may not be effective.

Neumark and others (2016) extend a study of potential age discrimination in employment (Neumark,

Song, and Button 2015) by responding to retail job postings with résumés that include subtle age identifiers and measuring whether callback rates differ based on state age- and disability-discrimination laws. In each of the 50 states, the authors submit four résumés per job posting, indicating an older man (age 64 to 66), a younger man (age 29 to 31), an older woman, and a younger woman. They find that callback rates for older applicants of both sexes are about 30 percent lower than are those for younger applicants. For both sexes, tests reject the hypothesis that callback rates are independent of age. In a part of the project funded by MRRC, Neumark and others add information on state age-discrimination laws and test whether callback rates are less age-dependent in states with stronger laws. The results are not decisive: Coefficients are often not statistically significant, or are of variable sign. It is possible that laws designed to protect older workers sometimes backfire. For example, stronger laws may lead prospective employers to worry that they could have difficulty firing older hires who turn out to be poor matches.

Job Attributes and Retirement

As Americans live longer, working at older ages may become increasingly financially desirable, from both private and public standpoints. MRRC researchers have studied the relationship between job characteristics and workers' willingness to stay on the job at older ages. Much of their analysis relies on the HRS and a new resource from the Department of Labor's Employment and Training Administration, the Occupational Information Network (O*NET). For other studies, researchers collect their own specialized data.

Although the HRS is rich in covariates on work history and retirement expectations, it collects only subjective information on job attributes. Such measures may reflect respondent biases and personality traits. The O*NET database can provide objective information by combining job-analyst and worker surveys and then compiling matrices of cognitive, interpersonal, and physical requirements for different occupations.

Helppie-McFall and others (2015) and Sonnega and others (2017) study the potential effects of job attributes, as measured both subjectively and objectively, on expected retirement ages. To obtain objective measures, both studies merge the list of respondent jobs in the HRS with the occupational categories in the O*NET.[9] The authors find that the subjective HRS covariates are statistically significant in explaining retirement timing,

whereas only a subset of the O*NET regressors are comparably useful. In fact, adding the O*NET regressors to the subjective covariates seems to contribute only marginal associations with retirement outcomes.

In related research, Angrisani, Kapteyn, and Meijer (2015) analyze HRS and O*NET job-attribute measures separately, then link occupational codes from each data source to compare results.[10] The authors also attempt to account for unobservable characteristics by including information from an HRS Leave-Behind Questionnaire, which is administered, on a rotating basis, to 50 percent of the HRS sample at each wave. (In other words, each HRS respondent is covered every 4 years.) The questionnaire asks respondents about their life circumstances, subjective well-being, and lifestyle, and specifically asks them to rate themselves on their "Big Five" personality traits: openness to experience, conscientiousness, neuroticism, extraversion, and agreeableness. From the HRS core surveys, the authors draw data on individual demographics, labor force participation, pensions, finances, health, risk aversion, length of financial-planning horizon, and retirement expectations. They find that subjective job perceptions may tend to be related to individuals' decisions to move from full- to part-time work, while objective measures may tend to determine retirement decisions.

Maestas and others (2016; 2019) take a different approach. They collect a new data set, the American Working Conditions Survey (AWCS), using an ALP subsample. The data include details on location and pace of work and on worker's control over hours. Respondents also state their preferences among different working conditions (such as autonomy and availability of employer-sponsored health insurance). First conducted in 2015, the AWCS has fielded follow-up surveys at 6- and 12-month intervals.[11] The Sloan Foundation and the Social Security Administration jointly fund the AWCS.

The studies find that, except for on-the-job training and career advancement, older workers generally report better working conditions than younger workers do. Older workers are less likely to report mismatches between actual and desired working conditions. They also rate formal benefits as less important than autonomy, the physical demands of the job, and control over their own pace. Interestingly, 4 in 10 workers aged 65–71 report that they had retired but have since returned to the labor force. Further, more than half of those aged 50 or older and not currently working would consider reemployment if the right job were available.

Conclusion

The MRRC has developed dynamic models of household behavior, estimated their coefficients, and simulated the effects of proposed policy changes. The HRS, with its extensive array of covariates and its panel structure, is a premier resource for conducting this type of research. MRRC researchers have played key roles in developing HRS data and have pioneered its use. Indeed, data development and theoretical modeling often stimulate one another, and the MRRC enthusiastically participates in that process. The ultimate goal of the MRRC is to strengthen the scientific basis for economic policy by developing more sophisticated models and better data sources.

Notes

[1] The HRS longitudinal birth-cohort groupings include 1923 and earlier; 1924–1930; 1931–1941; 1942–1947; 1948–1953; 1954–1959; and 1960–1965.

[2] Beginning in 2010, the Department of Labor required annual electronic submission of pension benefit information using its Form 5500 series. These recently available data greatly augment HRS analysis of DB pensions.

[3] Scholz and Seshadri (2008) consider alternative target replacement rates.

[4] Other MRRC studies that examine retirement preparation generally or replacement rates in particular include Hurd and Rohwedder (2006; 2009; 2012) and Scholz, Seshadri, and Khitatrakun (2006).

[5] A study by two of DeLiema's coauthors (Lusardi and Mitchell 2017) is one example of those authors' longstanding expertise in the measurement of financial literacy. Other examples include Hastings and Mitchell (2010) and Lusardi (2010).

[6] However, that trend may not be ongoing, at least for some population groups. For a discussion of possible recent setbacks, see Bound and others (2014) and Geronimus and others (forthcoming).

[7] The authors examined similar topics in earlier studies (Laitner and Silverman 2006; 2012).

[8] To be precise, think of the data set as a matrix X. The rows correspond to separate (person, age) observations. The columns present different health measures. We construct a new matrix X* with the same rows, but a single column. The latter is the linear combination of the columns of X that best "fits" all of the columns of X. (In other words, we choose X* to minimize the sum of squared residuals from regressions of each column of X on X*.)

[9] The researchers' HRS-O*NET crosswalks are publicly available at https://sites.google.com/site/phudomiet/research.

[10] Related studies include Angrisani and others (2013) and Hurd and McGarry (1993).

[11] The AWCS data are publicly available and can be linked to other ALP surveys (https://www.rand.org/pubs/tools/TL269.html).

References

Angrisani, Marco, Michael D. Hurd, Erik Meijer, Andrew M. Parker, and Susann Rohwedder. 2013. "Labor Force Transitions at Older Ages: The Roles of Work Environment and Personality." MRRC Working Paper No. 2013-295. Ann Arbor, MI: University of Michigan Retirement Research Center.

Angrisani, Marco, Arie Kapteyn, and Erik Meijer. 2015. "Nonmonetary Job Characteristics and Employment Transitions at Older Ages." MRRC Working Paper No. 2015-326. Ann Arbor, MI: University of Michigan Retirement Research Center.

Armour, Philip. 2017. "The Reintroduction of the Social Security Statement and Its Effect on Social Security Expectations, Retirement Savings, and Labor Supply Across the Age Distribution." MRRC Working Paper No. 2017-373. Ann Arbor, MI: University of Michigan Retirement Research Center.

Ben-Porath, Yoram. 1967. "The Production of Human Capital and the Life Cycle of Earnings." *Journal of Political Economy* 75(4): 352–365.

Blundell, Richard, Jack Britton, Monica Costa Dias, and Eric French. 2016. "The Dynamic Effects of Health on the Employment of Older Workers." MRRC Working Paper No. 2016-348. Ann Arbor, MI: University of Michigan Retirement Research Center.

———. 2017. "The Impact of Health on Labor Supply near Retirement." MRRC Working Paper No. 2017-364. Ann Arbor, MI: University of Michigan Retirement Research Center.

Bound, John, Arline Geronimus, Javier Rodriguez, and Timothy Waidmann. 2014. "The Implications of Differential Trends in Mortality for Social Security Policy." MRRC Working Paper No. 2014-314. Ann Arbor, MI: University of Michigan Retirement Research Center.

DeLiema, Marguerite, Martha Deevy, Annamaria Lusardi, and Olivia S. Mitchell. 2017. "Exploring the Risks and Consequences of Elder Fraud Victimization: Evidence from the Health and Retirement Study." MRRC Working Paper No. 2017-374. Ann Arbor, MI: University of Michigan Retirement Research Center.

De Nardi, Mariacristina, Eric French, and John Bailey Jones. 2015. "Savings After Retirement: A Survey." NBER Working Paper No. 21268. Cambridge, MA: National Bureau of Economic Research.

Deng, Yuanyuan, and Hugo A. Benitez-Silva. 2015. "Medicare Expenditures, Social Security Reform, and the Labor Force Participation of Older Americans." MRRC Working Paper No. 2015-330. Ann Arbor, MI: University of Michigan Retirement Research Center.

Fahle, Sean, and Kathleen McGarry. 2017. "Caregiving and Work: The Relationship Between Labor Market Attachment and Parental Caregiving." MRRC Working Paper No. 2017-356. Ann Arbor, MI: University of Michigan Retirement Research Center.

Fan, Xiaodong, Ananth Seshadri, and Christopher Taber. 2017. "Understanding Earnings, Labor Supply, and Retirement Decisions." MRRC Working Paper No. 2017-367. Ann Arbor, MI: University of Michigan Retirement Research Center.

Fang, Chichun, Charles Brown, and David Weir. 2016. "Cohort Changes in Social Security Benefits and Pension Wealth." MRRC Working Paper No. 2016-350. Ann Arbor, MI: University of Michigan Retirement Research Center.

French, Eric, Hans-Martin von Gaudecker, and John Bailey Jones. 2016. "The Effect of the Affordable Care Act on the Labor Supply, Savings, and Social Security of Older Americans." MRRC Working Paper No. 2016-354. Ann Arbor, MI: University of Michigan Retirement Research Center.

Friedman, Benjamin M., and Mark J. Warshawsky. 1990. "The Cost of Annuities: Implications for Saving Behavior and Bequests." *Quarterly Journal of Economics* 105(1): 135–154.

Furman, Jason. 2015. Untitled remarks delivered at the 17th Annual Meeting of the Retirement Research Consortium, Washington, DC (August 6–7).

Geronimus, Arline, John Bound, Timothy Waidmann, Javier Rodriguez, and Brenden Timpe. Forthcoming. "Causes of Differential Trends in Life Expectancy in the United States." MRRC Working Paper. Ann Arbor, MI: University of Michigan Retirement Research Center.

Giustinelli, Pamela, and Matthew Shapiro. 2018. "SeaTE: Subjective *ex ante* Treatment Effect of Health on Retirement." MRRC Working Paper No. 2018-382. Ann Arbor, MI: University of Michigan Retirement Research Center.

Gottlieb, Daniel, and Olivia S. Mitchell. 2015. "Narrow Framing and Long-Term Care Insurance." MRRC Working Paper No. 2015-321. Ann Arbor, MI: University of Michigan Retirement Research Center.

Gustman, Alan L., Thomas L. Steinmeier, and Nahid Tabatabai. 2016. "The Affordable Care Act as Retiree Health Insurance: Implications for Retirement and Social Security Claiming." MRRC Working Paper No. 2016-343. Ann Arbor, MI: University of Michigan Retirement Research Center.

Hastings, Justine S., and Olivia S. Mitchell. 2010. "How Financial Literacy and Impatience Shape Retirement Wealth and Investment Behaviors." MRRC Working

Paper No. 2010-233. Ann Arbor, MI: University of Michigan Retirement Research Center.

Helppie-McFall, Brooke, Amanda Sonnega, Robert J. Willis, and Peter Hudomiet. 2015. "Occupations and Work Characteristics: Effects on Retirement Expectations and Timing." MRRC Working Paper No. 2015-331. Ann Arbor, MI: University of Michigan Retirement Research Center.

House, Christopher L., John Laitner, and Dmitriy Stolyarov. 2008. "Valuing Lost Home Production of Dual Earner Households." *International Economic Review* 49(2): 701–736.

Hurd, Michael D., Paco Martorell, Adeline Delavande, Kathleen J. Mullen, and Kenneth M. Langa. 2013. "Monetary Costs of Dementia in the United States." *New England Journal of Medicine* 368(14): 1326–1334.

Hurd, Michael D., and Kathleen McGarry. 1993. "The Relationship Between Job Characteristics and Retirement." NBER Working Paper No. 4558. Cambridge, MA: National Bureau of Economic Research.

———. 1995. "Evaluation of the Subjective Probabilities of Survival in the Health and Retirement Study." *Journal of Human Resources* 30(Supplement): S268–S292.

Hurd, Michael D., and Susann Rohwedder. 2006. "Alternative Measures of Replacement Rates." MRRC Working Paper No. 2006-132. Ann Arbor, MI: University of Michigan Retirement Research Center.

———. 2009. "The Level and Risk of Out-of-Pocket Health Care Spending." MRRC Working Paper No. 2009-218. Ann Arbor, MI: University of Michigan Retirement Research Center.

———. 2012. "Economic Preparation for Retirement." In *Investigations in the Economics of Aging,* edited by David A. Wise (77–113). Chicago, IL: The University of Chicago Press.

———. 2015. "Measuring Economic Preparation for Retirement: Income Versus Consumption." MRRC Working Paper No. 2015-32. Ann Arbor, MI: University of Michigan Retirement Research Center.

Kariv, Shachar, and Daniel Silverman. 2015. "Sources of Lower Financial Decision-Making Ability at Older Ages." MRRC Working Paper No. 2015-335. Ann Arbor, MI: University of Michigan Retirement Research Center.

Laitner, John, and Dan Silverman. 2006. "Consumption, Retirement, and Social Security: Evaluating the Efficiency of Reform with a Life-Cycle Model." MRRC Working Paper No. 2006-142. Ann Arbor, MI: University of Michigan Retirement Research Center.

———. 2012. "Consumption, Retirement and Social Security: Evaluating the Efficiency of Reform That Encourages Longer Careers." *Journal of Public Economics* 96(7–8): 615–634.

———. 2017. "Adjusting the Payroll Tax to Promote Longer Careers." MRRC Working Paper No. 2017-363. Ann Arbor, MI: University of Michigan Retirement Research Center.

Levy, Helen, Thomas Buchmueller, and Sayeh Nikpay. 2015. "The Effect of Health Reform on Retirement." MRRC Working Paper No. 2015-329. Ann Arbor, MI: University of Michigan Retirement Research Center.

———. 2016. "Health Reform and Health Insurance Coverage of Early Retirees." MRRC Working Paper No. 2016-345. Ann Arbor, MI: University of Michigan Retirement Research Center.

Lusardi, Annamaria. 2010. "Financial Capability in the United States: Consumer Decision-Making and the Role of Social Security." MRRC Working Paper No. 2010-226. Ann Arbor, MI: University of Michigan Retirement Research Center.

Lusardi, Annamaria, Pierre-Carl Michaud, and Olivia S. Mitchell. 2017. "Optimal Financial Knowledge and Wealth Inequality." *Journal of Political Economy* 125(2): 431–477.

Lusardi, Annamaria, and Olivia S. Mitchell. 2017. "How Ordinary Consumers Make Complex Economic Decisions: Financial Literacy and Retirement Readiness." *Quarterly Journal of Finance* 7(3).

Maestas, Nicole, Kathleen J. Mullen, David Powell, Till von Wachter, and Jeffrey B. Wenger. 2019. "Understanding Job Transitions and Retirement Expectations Using Stated Preferences for Job Characteristics." MRRC Working Paper No. 2019-396. Ann Arbor, MI: University of Michigan Retirement Research Center.

Maestas, Nicole, Kathleen J. Mullen, David Powell, Jeffrey B. Wenger, and Till von Wachter. 2016. "2015 American Working Conditions Survey: Focus on Older Versus Younger Workers." MRRC Working Paper No. 2016-362. Ann Arbor, MI: University of Michigan Retirement Research Center.

Mitchell, Olivia S., James M. Poterba, Mark J. Warshawsky, and Jeffrey R. Brown. 1999. "New Evidence on the Money's Worth of Individual Annuities." *American Economic Review* 89(5): 1299–1318.

Modigliani, Franco. 1986. "Life Cycle, Individual Thrift, and the Wealth of Nations." *American Economic Review* 76(3): 297–313.

Neumark, David, Ian Burn, Patrick Button, and Nanneh Chehras. 2016. "Do State Laws Protecting Older Workers from Discrimination Laws Reduce Age Discrimination in Hiring? Experimental (and Nonexperimental) Evidence." MRRC Working Paper No. 2016-349. Ann Arbor, MI University of Michigan Retirement Research Center.

Neumark, David, Joanne Song, and Patrick Button. 2015. "Does Protecting Older Workers from Discrimination Make It Harder to Get Hired? Evidence from

Disability Discrimination Laws." NBER Working Paper No. 21379. Cambridge, MA: National Bureau of Economic Research.

Scholz, John Karl, and Ananth Seshadri. 2008. "Are All Americans Saving 'Optimally' for Retirement?" MRRC Working Paper No. 2008-189. Ann Arbor, MI: University of Michigan Retirement Research Center.

Scholz, John Karl, Ananth Seshadri, and Surachai Khi-tatrakun. 2006. "Are Americans Saving 'Optimally' for Retirement?" *Journal of Political Economy* 114(4): 607–643.

Sonnega, Amanda, Brooke Helppie-McFall, Peter Hudo-miet, Robert J. Willis, and Gwenith G. Fisher. 2017. "A Comparison of Subjective and Objective Job Demands and Fit with Personal Resources as Predictors of Retirement Timing in a National U.S. Sample." *Work, Aging and Retirement* 4(1): 37–51.