Director’s corner

John Laitner

The Michigan Retirement Research Center held its annual researcher workshop March 31 and April 1, 2017. As we have done in recent years, we used space in the Ross School of Business, on the University of Michigan Campus. We had 29 short talks, each followed with equal time for open discussion.

Audience participation is vital in this format. The goal of the workshop is the interchange of ideas — and constructive criticism.

This newsletter highlights presentations on the roles of long-term care in the well-being of households at older ages and the challenges associated with old-age cognitive declines, including dementia. These issues must be a part of planning at both public and private levels: when long-term care is needed, the costs can be very high relative to expenses of living while in good health. Our lunchtime speaker, Carlos Mendes de Leon from the University of Michigan’s School of Public Health, touched on the same subjects from an epidemiologist’s point of view.

The MRRC was delighted to welcome to the 2017 workshop Associate Commissioner John Phillips and Economist Lynn Fisher from the Social Security Administration’s Office of Research, Evaluation, and Statistics. Phillips addressed the group on Friday afternoon on the significance and importance of research on special topics outlined each year in a memo from SSA.

Workshop previews upcoming research

MRRC’s annual workshop allows researchers to share work in progress with an audience of fellow investigators. Presented in 10 minute segments, with 10 minutes of listener feedback and questions, the workshop can improve current projects and shape future research questions. All the talks touch on retirement or data collection/analysis topics. (See Page 6 for a complete list of presentations.) Most of the work is preliminary, and analysis and findings may change before working papers are made public.

This newsletter features work on two topics of general interest: long-term care (LTC) and cognition’s role in retiree well-being.

Pinpointing cognitive decline’s onset

Johns Hopkins School of Public Health and School of Medicine researcher Lauren Hersch Nicholas presented “Detecting Cognitive Impairment in Financial Data,” National Institute on Aging-funded work done with the Federal Reserve Board of Governors’ Joanne Hsu. Their project hopes to identify the early moments of cognitive impairment before it has been diagnosed and managed.

To do this, Nicholas and Hsu use FRB Consumer Credit Panel data (credit scores, balances, past due

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accounts, opening of new accounts, etc.) and Medicare indicators of dementia and other chronic/acute conditions, as well as Health and Retirement Study (HRS) Telephone Interview for Cognitive Status (TICS) scores. The study, which is in its early stages, will probabilistically match age, geography, and household consumption to that data.

“Some of what we know, partly clinically and partly anecdotally, is that one of the earliest signs of cognitive decline and dementia is difficulty managing money and paying bills,” said Nicholas. “You may be suddenly making uncharacteristically risky financial decisions: calling your broker and saying your entire portfolio should go into one stock or to be cashed out,” for example, which may leave people open to credit shocks, home foreclosure, and fraud.

“There may be a trail of financial transactions that would let us catch some of these signs of cognitive impairment,” Nicholas said. To be able to pinpoint the onset of decline might help policymakers build safe guards into financial systems and enable caregiver intervention.

“What we would eventually want to be able to do is assess the feasibility of using this type of data to do population monitoring,” to determine whether credit events might be predictive of future dementia diagnoses. Nicholas said, “This would be similar to ways your credit card company is always trying to look at whether someone else is making fraudulent purchases.”

With that goal in mind, the researchers will eventually be working with a machine learning group (a method that automatically builds iterative, analytical data models) to fine tune the predictions.

HRS principal investigator David Weir had thoughts about the study’s machine learning aspect. “Nobody who’s really good at machine learning, algorithms, and data science works in academia,” said Weir. “They all work in the private sector making lots of money…”

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Cognition fast facts

- 84 percent of financial advisors report at least one cognitively impaired client. (Fidelity survey/Lauren Hersch Nicholas)
- 41 percent experience dementia for more than six months. This is higher for women, blacks, and those with less education. (HRS data/Péter Hudomiet)
- Only 10 percent of those 65 and older carry long-term care insurance. (HRS data/Toni Braun)

— Drawn from 2017 Workshop presentations

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You’re probably not going to be able to do better than they do at crunching credit data, but you might be able to find out what they do and make use of some of that.”

**Determining individual-level dementia costs**

How much a dementia diagnosis costs an individual may be tough to determine, but it’s important information for a family making financial decisions. “Think about, for example, the problem of whether you want to buy a long-term care insurance product,” said Péter Hudomiet. “Obviously, the benefit for you depends on the chance that you will ever need it, and if needed, how much money you would be able to save.”

Hudomiet presented “Dementia and the Distribution of Lifetime Out-of-pocket Medical Expenditures,” a joint project with fellow RAND researchers Michael Hurd and Susann Rohwedder, that looks at dementia-related, out-of-pocket (OOP) costs, which have relevance for families. The trio asked three questions to help quantify such expenses:

1. “What fraction of 65+ year old Americans live with dementia for at least six months before death?
2. “What is the distribution of lifetime out-of-pocket medical expenditures from age 65 to death?
3. “How much of the lifetime costs can be attributed to dementia?”

Using the Aging, Demographics, and Memory Study (ADAMS) supplement of the HRS, the researchers modeled dementia probabilities for the entire survey, which aside from ADAMS does not directly observe dementias. “Forty-one percent of the population in the HRS lives with dementia for at least six months before death. This number is actually larger than what we saw in the [previous research] literature,” said Hudomiet. Demographics play a role in risk, with women, the less-educated, and blacks having a higher incidence.

The mean (average) lifetime OOP spending is $61,000 in 2014 dollars, with a skewed distribution: The median (half spend more, half spend less) is $36,000, but the 95th percentile is $206,000. Hudomiet said, “We are still checking the numbers because they’re higher than we expected.”

Most OOP spending goes toward drugs, which almost everyone buys. The second biggest cost is nursing homes, although only a third of people spend anything on them. The researchers found that dementia increases lifetime spending by $35,000 (2014 dollars) on average, almost exclusively due to nursing home costs.

The trio hopes to turn in future research to informal costs on caregivers, public program spending (Medicaid), and implications for LTC insurance. “The difference between out-of-pocket costs and social costs are enormous,” co-author Hurd pointed out during the comments.

**Uncovering LTC insurance’s structural issues**

In spite of an aging society with a significant risk of dementia-related nursing home stays, the LTC insurance market isn’t working well. According to Atlanta FRB researcher R. Toni Braun, rejections are high (approximately 36 percent), are not actuarially fair, coverage is incomplete, and it is treated as a toxic asset in the industry, partly because of high administrative costs. This has lead to atrophying numbers of LTC insurance providers. “In 2013, about 60 percent of new policies were written by one of three insurers,” Braun said.

He and co-authors Karen A. Kopecky (FRB Atlanta) and Tatjana Koreshkova (Concordia University–Montreal) built a model and included supply-side frictions (adverse selection, insurer’s market power, fixed and variable overhead costs) and demand-side frictions (Medicaid, means-testing, secondary payers) to try and account for the LTC insurance market’s troubles. The group spent a year calibrating

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Lunchtime talk adds interdisciplinary flavor to workshop

This year, the workshop featured a lunchtime talk by University of Michigan School of Public Health epidemiology professor Carlos F. Mendes de Leon. His work looks at the intersectionality between work, retirement, and health — topics familiar to the audience — but through gerontological and epidemiological lenses. In addition to sharing others’ medically focused research, Mendes de Leon presented two studies of his own, “Occupational cognitive requirements and late-life cognitive aging” and “Functional health decline before and after retirement: A longitudinal analysis of the Health and Retirement Study.”

“We as epidemiologists are interested in understanding the biological aspects of all this,” Mendes de Leon said. In the case of his first study, he and his co-authors examined how the Alzheimer’s genotype might impact cognitive decline. “There was no significant interaction, but there was the interesting finding that the effect of the [predictive risk factor for cognitive decline]… was somewhat greater in those in the 10th percentile, the lower level percentile of occupational cognitive requirements, than it was for those at the 90th percentile. [That risk factor] seems to suggestively have a more damaging effect among those who have these much lower levels of cognitive requirements at work.”

The second study Mendes de Leon shared examined pre- and post-retirement functional health changes (mobility and large muscle limitations) and how socioeconomic position might interact with them. Not surprising for those familiar with the aging process, the years before retirement bring significant changes to functional health that continue to increase more slowly after retirement. Mendes de Leon had a little good news: People who retire later show slower declines in mobility and large muscle abilities. Alas, later retirees don’t keep those benefits. “Whatever gains you made before retirement by working longer and not declining as much as people who retired at [full-retirement age] or even early, unfortunately, afterword it starts going back up again—you compensate for that.”

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the model to HRS data. It breaks an individual’s life into two periods, young and older than 55, and uses a monopolistic single insurer. The individual has private information on nursing home entry risk.

The model’s results account for high premiums, partial coverage, and low profits. The researchers find that these can be attributed to adverse selection, insurer’s overhead costs, and Medicaid. Even though the model has a single source of private information, that information produces a small or negative correlation between LTC insurance ownership and nursing home entry.

According to the study, the current market helps no one. “The supply-side frictions lead to the insurer,
when he sees risks groups with high frailty, he’s going
to reject them. The whole pool will not receive an
offer of insurance,” said Braun. This produces low
take-up rates by the wealthy.

“Medicaid is of first-order importance for the poor
because Medicaid is free, and it’s a secondary payer,”
Braun said. “If you take Medicaid away, [the insurer]
is going to make all his money on the poor and the
frail because their demand is biggest. You bring
Medicaid in, and they’re gone, so the set of insurable
risks becomes a small group in the middle.”

For the middle class, these factors interact in complex
ways. “If you take away any of [the frictions], take-
up rates go way, way up,” said Braun. For example,
even though I’m in the middle class and there may
only be a couple states of nature where I would enjoy
Medicaid benefits, that still affects my demand and the
outside options of the insurer.”

The authors released this project’s working paper,
“Old, Frail, and Uninsured: Accounting for Puzzles
in the U.S. Long-Term Care Insurance Market,” in
March. It is available on the Atlanta FRB’s website.

Nursing home quality and LTC insurance

In past research, RAND investigators Michael
Hurd, Italo López, and Susann Rohwedder found
that respondents in the RAND American Life Panel
(ALP) were willing to pay at least 43 percent more in
monthly premiums for policies to avoid a low-quality
nursing home. In this iteration, “Willingness to Pay
[WTP] for Long-term Care Insurance: How Much do
Individuals Value High Quality Nursing Homes,” the
group fielded a new ALP survey to look at whether
those additional, willingly paid premiums would equal
the lifetime costs of such care.

“The main objective of the project is to learn whether
preferences for the quality of nursing homes might
help explain the low level of long-term care insurance
take up, and whether the data can help us to learn how
insurance products could be better designed to meet
the needs of respondents,” said López, who presented
the latest work. Note that the investigators used
subjective, consumer-based quality measures (food,
private/shared room) rather than medical ones defined
by the Centers for Medicare & Medicaid Services (bed
sores, restraints, etc.).

For this survey, the researchers added questions about
subjective probabilities of purchase for each policy, as
well as randomly assigned variations. One variation
described reality-based descriptions of Medicaid and
non-Medicaid nursing home services and restrictions.
The other offered actual features (daily benefits
and length of payout) from currently available LTC
insurance policies. They used responses to these
variables to determine a respondent’s willingness to
purchase a policy.

So far in preliminary work, the team has found that
respondents are willing to pay $20 to $40 more in
monthly premiums for policies that increase the per
diem benefit from $200 to $300 and benefit duration
from three years to five. “Then we look at what would
be the actual change in the policy premium when
you go to [insurance company] websites and take an
average, how much would it take to move…to $300 a
day,” said López.

For a daily benefit increase of $100, the average
premium for a 60-year-old would increase $127.90
a month. By contrast, the respondents’ WTP
averages $37.60 between the study’s two methods of
measurement.

In future work, the researchers will compare WTP to
actual lifetime costs using actuarial values. “We hope
to update these numbers from [estimated] monthly
premiums to this more accurate data,” said Lopez.

Stay tuned

While much of the research presented at the workshop
is not yet available to the public, many of the projects
will have working papers out this fall. MRRC will
announce its publications via email, newsletter, and
social media. ❖
2017 MRRC Workshop presenters and projects

This year, 29 researchers shared their recent projects at the annual spring workshop. In addition, David Grant, director of the RAND American Life Panel, gave a talk on some of the possible ways the panel can be used by investigators. The presenters, listed in alphabetical order, were:

- Marco Angrisani, University of Southern California: *Work-Life Balance and Labor Force Attachment at Older Ages*
- Vickie Bajtelsmit, Colorado State University: *Household Strategies for Managing Longevity Risk*
- R. Toni Braun, Federal Reserve Board–Atlanta: *Old, Frail and Uninsured: Accounting for Puzzles in the U.S. Long-term Care Insurance Market*
- Jeremy Burke, University of Southern California: *Empowering Investors with Social Annotation When Saving for Retirement*
- Katie Carman, RAND: *Alternative Pathways to Retirement in a Household Context*
- Kathryn Anne Edwards, RAND: *An Examination of Parents with an Unemployed Adult Child*
- Chichun Fang, University of Michigan: *ACA Medicaid Expansion and Post-Displacement Labor Supply among the Near-Elderly*
- Italo Gutierrez, RAND: *Veteran Reintegration: Identifying the Long-term Effects of Recessions on Earnings, Wealth, and Retirement Decisions*
- Alice Henriques, Federal Reserve Board: *Retirement Adequacy and Wealth Distribution Among Early Savers*
- Sean Huang, Georgetown University: *The Growth and Geographical Variation of Nursing Home Self-pay Prices*
- Péter Hudomiet, RAND: *Dementia and the Distribution of Lifetime Out-of-pocket Medical Expenditures*
- Michael Hurd, RAND: *Using a Probability Numeracy Score to Measure Heterogeneity in Survey Responses about Subjective Probabilities*
- David Knapp, RAND: *A Dynamic Behavioral Model of Korean Savings, Work, and Retirement Decisions*

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RAND ALP Director
David Grant discussed the survey’s possibilities.
MRRC researchers in publication & the media


Sudipto Banerjee and David Blau’s “Employment Trends by Age in the United States Why Are Older Workers Different?” was published in the winter 2016 issue of Journal of Human Resources. The article is based on the pair’s 2013 working paper of the same name, MRRC WP 2013-285.

NPR Morning Edition correspondent Ina Jaffe interviewed David Neumark on March 24 about his correspondence study on age discrimination in hiring older workers. The radio program quoted Neumark: “The call-back rate — the rate by which employers contact us and say we’d like to interview you — drops from young applicants to middle-aged applicants and drops further from middle-aged applicants to older applicants.” The feature drew from the Neumark, Ian Burn, Patrick Button, and Nanneh Chehras’ 2016 project, “Do State Laws Protecting Older Workers from Discrimination Laws Reduce Age Discrimination in Hiring? Experimental (and Nonexperimental) Evidence,” MRRC WP 2016-349. That working paper was also the basis of a February Federal Reserve Board–San Francisco Economic Letter written by Neumark, Burn, and Button.

In an interview in The Wall Street Journal, Boston College Center for Retirement Research’s Geoffrey T. Sanzenbacher gave a hat tip to Annamaria Lusardi and Olivia Mitchell’s working paper, “Older Adult Debt and Financial Frailty,” MRRC WP 2013-291. Sanzbacher said, “One recent study by the University of Michigan’s Retirement Research Center found older Americans have more debt mostly because they purchased more expensive homes with smaller down payments, and baby boomers were particularly likely to engage in these sorts of risky borrowing practices.”

Annamaria Lusardi and Olivia S. Mitchell’s 2014 Journal of Economic Literature article, “The Economic Importance of Financial Literacy: Theory and Evidence,” was cited in the 115th Congress’ First Session House Resolution 247, “Supporting the goals and ideals of Financial Literacy Month.” In the Economic Literature article, the pair credits Social Security and MRRC funding. Lusardi and Mitchell have had numerous MRRC projects examining financial literacy over the years, including “Baby Boomer Retirement Security: The Roles of Planning, Financial Literacy, and Housing Wealth,” MRRC WP 2006-114.

In April Next Avenue reporter Kerry Hannon shared findings on Brooke Helppie-McFall and Amanda Sonnega’s MRRC WP 2016-352, “Occupational Transitions at Older Ages: What Moves are People Making?” Hannon wrote, “I wasn’t terribly surprised by the researchers’ pay cut finding. The truth is, based on the workers I’ve studied and interviewed…most workers who change careers take a step down in salary when they start over. But here’s the interesting part: The researchers said the earnings decline ‘may reflect strategic decisions on the part of workers who may be willing to trade earnings for work hours flexibility or part-time work.’”

Minjoon Lee, Carleton University: Forced Retirement Risk and Portfolio Choice

Italo López, RAND: Willingness to Pay for Long-term Care Insurance: How Much do Individuals Value High Quality Nursing Homes?

Lauren Nicholas, Johns Hopkins University: Detecting Cognitive Impairment in Financial Data

Kathleen Mullen, RAND: The Value of Working Conditions in the United States

Oded Nov, New York University: Interactive “Nutrition Labels” for Financial Products Improve Retirement Saving Performance

Gwen Pauley, University of Southern California: Lifetime Individual and Population Consequences of Early-life Access to Health Insurance

David Powell, RAND: Understanding Preferences for Job Characteristics Based on Future Work Plans

Victoria Prowse, Purdue University: The Added Worker Effect with Household Employment Risk

Susann Rohwedder, RAND: Saving Regret: Do People Wish They Had Saved More?

Ananth Seshadri, University of Wisconsin: A Lifecycle Model with Human Capital, Labor Supply and Retirement

Stefan Staubli, University of Calgary: How to delay pension claiming and labor force exit? A structural analysis of financial incentives with defaults

Dmitriy Stolyarov, University of Michigan: Long-run Interest Rate and Productivity Growth

John Jones, Federal Reserve Board–Richmond: The Effects of Collecting Income Taxes on Social Security Benefits

Fang Yang, Louisiana State University: The Aggregate Implications of Gender and Marriage

Gema Zamarro, University of Arkansas: Alternative Measures of Character Skills and Their Effect on Retirement Preparation and Financial Capability

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Michigan Retirement Research Center
Institute for Social Research
University of Michigan
426 Thompson Street, Room 3026
Ann Arbor, MI 48104-2321

Director: John P. Laitner
Associate Director: Dmitriy Stolyarov
External Relations: Susan Barnes
Administrative Manager: Cheri Brooks
Phone: (734) 615-0422
Fax: (734) 615-2180
E-mail: mrrcumich@umich.edu
Web: www.mrrc.isr.umich.edu

Regents of the University of Michigan
Michael J. Behm, Grand Blanc
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