



Key findings from 2020 papers

MRDRC released eight working papers in 2020 on topics such as health and mortality inequalities and cognitive ability's relationship to debt accumulation.

Trends in disability & survey issues

The Changing Nature of Work

Italo Lopez Garcia, Nicole Maestas, Kathleen J. Mullen,
[WP 2020-415](#), UM20-03

- ▶ The decline in physically demanding work and increase in cognitively demanding work is unevenly distributed across workers by education. Over the 2003 to 2018 period, workers with a high school education or less faced increasing job demands across all four dimensions — cognitive, physical, sensory and psychomotor — but college-educated workers faced decreasing job demands for all dimensions except sensory requirements, which nevertheless increased less for more educated workers than for lower educated workers.
- ▶ Second, we find that most of these changes over time are due to changes in occupational requirements within occupation rather than due to changes in the national economy's composition of occupations. For example, the required proficiency level for written skills increased more than fourfold for construction laborers between 2003 and 2018, while construction workers' share of jobs in the national economy increased from 0.89% to 1.44% over the same period.

- ▶ Finally, when work capacity is defined as the fraction of jobs in the national economy that an individual possesses the functional abilities to perform, we find that differential changes in occupational requirements translate into differential changes in individuals' work capacity by educational group. Specifically, we find that the fraction of jobs available to individuals based on their current abilities grew between 2003 and 2018 for those individuals with at least some college, and that this increase in the size of the potential job set increases with education. Notably, we find that work capacity did not grow, and potentially shrank, for workers with a high school degree or less.

Informing long-term projections

The Impact of Growing Health and Mortality Inequalities on Lifetime Social Security Payouts

Péter Hudomiet, Michael Hurd, Susann Rohwedder,
[WP 2020-412](#), UM20-04

- ▶ Changes in health conditions and subsequent mortality have a direct impact on Social Security payouts. The

Continued from Page 1

relationship with socioeconomic status (SES) is more nuanced. Increased life expectancy for high SES individuals can cause higher total payouts even if overall mortality is unchanged.

- ▶ We assessed how changes in health conditions and mortality may affect Social Security payouts for cohorts born between 1934 and 1959. Our preferred model suggests lifetime payments will increase 28%. Models with different assumptions yield increases in payouts ranging from 11% to 38%. Forecasts taking into account differences in mortality across SES groups indicate greatest payout increases for women and for those in the highest SES quintiles.
- ▶ Tracking health and mortality trends by SES groups is important to improve predictions of future Social Security payouts.

Effects of totalization agreements

Estimating the Macroeconomic Effects of Each Totalization Agreement

Ananth Seshadri and Junjie Guo, [WP 2020-408](#), UM20-07

- ▶ The impact of the totalization agreements on bilateral trade is quite heterogeneous, not only across agreements/countries but also across sectors within an agreement/country.
- ▶ Agreements that entered into force more recently tend to increase total imports and decrease total exports more than earlier agreements.
- ▶ We find no significant relationship between totalization agreements' estimated impacts and economic indicators such as the trade complementarity index between the U.S. and the agreement countries.
- ▶ Within an agreement and regardless of the implementation date, sectors where the U.S. has a larger revealed comparative advantage relative to the agreement country tend to experience a larger increase

in exports following the totalization agreement. However, there is no significant relationship between revealed comparative advantage and the estimated impact on imports across sectors.

A Framework for Cost-Benefit Analysis of Totalization Agreements

Erik Meijer, Francisco Perez-Arce, María Prados, [WP 2020-410](#), UM20-08

- ▶ A cost-benefit framework can be a useful tool to prospectively or retrospectively analyze totalization agreements. It lists the stakeholders groups and the types of potential effects of the agreement on them, and attempts to quantify each effect type for each stakeholder.
- ▶ The key stakeholders are U.S. workers who potentially could be sent on a temporary or longer-term assignment to a partner country; employers of these workers; the Social Security Administration and U.S. government more broadly; competitor firms, suppliers, and clients of the directly affected firm; and the economy as a whole, as well as the counterparts of these in the partner country.
- ▶ The direct effects are reduced social security taxes paid by employers and employees, increased eligibility of some workers for Social Security benefits, and the resulting effects on the benefit amounts.
- ▶ Other effects take place through the reduction in the costs associated with multinational production. By making it less costly for firms to relocate their resources abroad, these agreements increase international flows of workers; Foreign Direct Investment and capital flows; facilitate more efficient production and international trade; and may affect the Gross Domestic Product and Gross National Product.
- ▶ We provide relatively simple and straightforward example calculations for some of these effects, as well as calculations using a stylized microeconomic model for workers and a stylized macroeconomic model for firm investment and production allocation. In a few cases, we

have both simple calculations of direct effects and model calculations that take more channels into account (under strong assumptions), and they agree well, implying that the simple calculations capture most of the total effect.

- ▶ We have identified important gaps in data availability and knowledge of parameters and firm and worker behavior. Less data availability implies that stronger assumptions need to be made or more scenarios need to be evaluated.

Risks and resources in older age

The Risk of High Out-of-Pocket Health Spending among Older Americans

Helen Levy, [WP 2020-409](#), UM20-09

- ▶ Supplemental health insurance for Medicare beneficiaries 65 and older changed substantially between 2002 and 2016. Fewer beneficiaries have employer-sponsored coverage or Medigap, and more have Medicare Advantage. More also have no source of supplemental coverage for doctors' and hospital bills, although many of these do have Medicare Part D, which covers prescription drugs.
- ▶ Median out-of-pocket medical care spending depends on what type of supplemental coverage beneficiaries have. Median spending is lowest for beneficiaries with Medicaid coverage and highest for those with Medigap or Part D only. Those with no supplemental coverage, employer-sponsored coverage, or Medicare Advantage are somewhere in between. These gradients by type of coverage have been largely stable over time.
- ▶ The dispersion of out-of-pocket medical spending is highest for those with no supplemental coverage. This research measures dispersion in two different ways: (1) the ratio of the 90th percentile to the 50th percentile of the distribution of observed spending, and (2) the distribution's standard deviation. Both measures support the same conclusion.

- ▶ Beneficiaries with supplemental coverage face less risk but pay more in premiums. Beneficiaries with any type of supplemental coverage are less likely than those with no supplemental coverage to spend more than 10% of their household income on out-of-pocket medical care spending. On the other hand, any type of coverage except for Medicaid increases the share who spend more than 10% of their income on medical care plus health insurance premiums.

Cognitive Ability, Cognitive Aging, and Debt Accumulation

Marco Angrisani, Jeremy Burke, Arie Kapteyn, [WP 2020-411](#), UM20-11

- ▶ We find that cognitive ability is an important predictor of debt burdens in older age.
- ▶ In more complex financial environments, individuals with higher cognitive ability have taken on more debt relative to individuals with lower cognitive ability.
- ▶ This debt increase is coupled with reduced economic security — after the increase in financial complexity, individuals with higher cognitive ability hold less total wealth, less liquid wealth, and are more likely to have debt levels that exceed half their assets than their higher cognitive ability counterparts prior to the expansion in complexity.
- ▶ Individuals with higher cognitive ability disproportionately increased their debt burdens during the period in which the complexity of financial products increased, and subsequently they were more financially fragile than similar individuals in previous cohorts.

Saving Regret: Self-assessed Life-cycle Saving Behavior in the U.S. and Singapore

Axel Börsch-Supan, Michael Hurd, Susann Rohwedder, [WP 2020-413](#), UM20-17

- ▶ Saving regret, the hindsight desire to have saved more earlier in life, is more prevalent in the United States than in Singapore.

Continued on Page 4

Continued from Page 3

- ▶ We find little evidence that procrastination leads to saving regret.
- ▶ Shocks, including job loss and family events such as marital disruption, lead to saving regret.
- ▶ A better understanding of shocks and expectations of them may help in designing policies to improve saving outcomes.

Nursing Homes in Equilibrium: Implications for Long-term Care Policies

Tatyana Koreshkova, Minjoon Lee, [WP 2020-414](#), UM20-13

- ▶ Our model successfully generates the observed

allocation of individuals with long-term care needs across nursing homes and home-and-community-based care by household demographic and financial characteristics.

- ▶ Our policy experiments show that the reactions from both sides of the market are important for accurately assessing the aggregate and distributional impact of each policy and even more so for evaluating policy efficiency.
- ▶ A home-and-community-based care (HCBC) subsidy for individuals with no family support turns out to be particularly efficient. This policy benefits both households and nursing homes while reducing the public program expenditures. ❖

Michigan Retirement and Disability Research Center

Institute for Social Research
426 Thompson Street, Room 3026
Ann Arbor, MI 48104-2321

Phone: (734) 615-0422 **Fax:** (734) 615-2180
mrdrumich@umich.edu www.mrdrc.isr.umich.edu

Sponsor information: The research reported herein was performed pursuant to grant RRC08098401-10 from the U.S. Social Security Administration (SSA) through the Michigan Retirement and Disability Research Center (MRDRC). The findings and conclusions expressed are

solely those of the author(s) and do not represent the views of SSA, any agency of the federal government, or the MRDRC.

Regents of the University of Michigan: Jordan B. Acker; Huntington Woods; Michael J. Behm, Grand Blanc; Mark J. Bernstein, Ann Arbor; Paul W. Brown, Ann Arbor; Shauna Ryder Diggs, Grosse Pointe; Denise Ilitch, Bingham Farms; Ron Weiser, Ann Arbor; Katherine E. White, Ann Arbor; Mark S. Schlissel, *ex officio*