

Economic Conditions, the COVID-19 Pandemic Recession, and Implications for Disability Insurance in the United States

Nicole Maestas and Kathleen J. Mullen

July 2022

PRC WP2022-14

Pension Research Council Working Paper

Pension Research Council

The Wharton School, University of Pennsylvania

3620 Locust Walk, 3302 SH-DH

Philadelphia, PA 19104-6302

Tel.: 215.573.3414 Fax: 215.573.3418

Email: prc@wharton.upenn.edu

<http://www.pensionresearchcouncil.org>

All findings, interpretations, and conclusions of this paper represent the views of the authors and not those of the Wharton School or the Pension Research Council. © 2022 Pension Research Council of the Wharton School of the University of Pennsylvania. All rights reserved.

Economic Conditions, the COVID-19 Pandemic Recession, and Implications for Disability Insurance in the United States

Abstract

Previous economic downturns have led to increases in applications for and, eventually, receipt of Social Security Disability Insurance (SSDI) benefits. In the pandemic-induced recession of 2020 and its aftermath, however, SSDI applications did not increase. One important factor may have been the prolonged closure of SSA field offices, since previous research finds that field office closures lead to persistent declines in SSDI beneficiaries in the surrounding communities. In this case, there may be pent-up demand for SSDI benefits as normal operations resume in areas where the economy has not fully recovered. Nevertheless, unemployment insurance expansions and other government support programs were materially different than in past recessions, which appears to have enabled people to weather the downturn and avoid applying for SSDI benefits. In this paper, we draw on prior research and recent federal statistics to discuss the unfolding effects of the COVID-19 pandemic on the SSDI program and its beneficiaries.

JEL codes: D12, D18, G2, G5, G18

Keywords: disability insurance, unemployment insurance, pandemic

Nicole Maestas

Harvard University and NBER
Associate Professor of Health Care Policy
Harvard Medical School
180 Longwood Avenue
Boston, MA 02115
Maestas@hcp.med.harvard.edu

Kathleen J. Mullen

University of Southern California, IZA and NBER
Senior Economist
Center for Economic and Social Research
635 Downey Way
Los Angeles, CA 90089-3332
kjmullen@usc.edu

The US Social Security Disability Insurance (SSDI) program is designed to insure American workers against earnings losses from severe, permanent disabilities. In 2019, on the eve of the COVID-19 pandemic, nearly 8.4 million disabled workers were receiving SSDI benefits (SSA 2021)—equivalent to 5 percent of the civilian labor force (BLS 2022). Including the additional 2.8 million nondisabled dependents and adult children of retired, deceased, and disabled workers, the SSDI program paid benefits to nearly 11.2 million beneficiaries in 2019 (SSA 2021). SSDI benefits are paid out of payroll tax revenue supplemented with reserves from the Disability Insurance (DI) Trust Fund, which is overseen by a Board of Trustees.

Each year the Trustees are required to provide a report to Congress on the outlook of the DI Trust Fund (as well as the Old-Age and Survivors Insurance Trust Fund). In April 2020, the Trustees' report projected that the DI Trust Fund would be depleted in 2065, without incorporating into their projections the effects of the COVID-19 pandemic, which had been declared a global pandemic by the World Health Organization only a month earlier, in March 2020. The 2021 report updated the projected depletion date of the DI Trust Fund to 2057. In 2022, however, the Trustees projected that the DI Trust Fund would no longer be depleted within the 75-year projection period. DI Trust Fund projections rely on assumptions about several factors that affect both the size and composition of the population receiving benefits as well as the number and characteristics of the people paying into the system. These include demographic assumptions about fertility, mortality, and immigration; economics assumptions about employment, real wage growth, real interest rates, and inflation; and programmatic assumptions about DI prevalence, average benefits, and household composition of DI beneficiaries.

The pandemic affected all of these factors, at least in the short run, but likely at least some factors in the long run as well. In this paper, we focus primarily on the potential ways the pandemic may have affected the DI Trust Fund through the pathway of changing DI incidence.

The SSDI Program on the Eve of the COVID-19 Pandemic

After decades of increasing numbers (since the early 1980s), the SSDI caseload peaked in 2014 and has been declining ever since. Figure 1 shows the numbers of SSDI beneficiaries, new awards, and exits from 2001 to 2019. From the figure we can see that the recent decline in the SSDI caseload was driven both by fewer new awards (declining since 2010) and more exits from the program. The annual number of exits has nearly doubled—mostly due to population aging—and, beginning in 2014, has exceeded the number of new awards. The number of new awards has also dropped because of population aging: as the large Baby Boomer cohort moves out of age-eligibility for the program, the next-in-line cohorts are smaller. In addition, the number of new awards may have fallen because of improving economic conditions after the Great Recession and policy changes that effectively tightened standards at the appellate level (Ray and Lubbers 2014).

Figure 1 here

Exits from SSDI may be due to one of several reasons, including death of the beneficiary (28% of disabled workers in 2019), conversion to Social Security benefits upon reaching full retirement age (60%), cessation of SSDI benefits due to medical improvement (4%), and cessation of benefits because the beneficiary has consistently earned more than the threshold for substantial gainful activity (6%) (SSA 2020). Figure 2 focuses specifically on exits due to successful return-to-work (SSA, 2002-2020). Although the vast majority of exits are due to people aging out of the program at the full retirement age, there has been a surprising increase in voluntary exits from the SSDI program due to work. While work exits are rare, they nearly doubled between 2001 and 2019 (from 29,000 to 55,850).

Figure 2 here

It is possible that the strong labor market during the recent expansion (until 2020) drove the trend in work exits. Indeed, Figure 3 shows that employment gains among workers with disabilities were not limited to SSDI beneficiaries alone; after decades of steady decline, the employment rate among workers

with disabilities started increasing in 2014 and seemed to stabilize at a rate of approximately one in five workers with disabilities by the late 2010s. By comparison, the employment rate for workers without disabilities remained roughly steady around 70 percent from the late 1980s to 2019, except for dips during recessions (denoted by the shaded areas). Although speculative, this may point to structural changes in employers' willingness to hire individuals with disabilities, perhaps in response to growing labor demand pressures associated with population aging (Maestas et al., forthcoming).

Figure 3 here

Enter COVID

Although the SSDI program is not intended to be an alternative to labor force participation when economic conditions are weak, a robust literature has shown a negative relationship between economic conditions and SSDI applications and awards (see e.g., Stapleton et al. 1988; Black et al. 2002; Cutler et al. 2012; Maestas et al. 2015; Charles et al. 2018; Maestas et al. 2021). For example, Maestas et al. (2021) estimated that the steep increase in unemployment levels during the Great Recession induced nearly one million SSDI applications that otherwise would not have been filed, of which 41.8 percent were awarded benefits, resulting in over 400,000 new beneficiaries who made up 8.9 percent of all SSDI entrants between 2008-2012. They also showed that recession-induced SSDI applicants had less severe impairments (and thus greater work capacity) than the average SSDI applicant during this period. Furthermore, using administrative Medicare data from 1991-2015, Carey et al. (2022) found that recession-induced SSDI beneficiaries had lower Medicare spending than average (an indication of better average health), and they argued that the cyclical pattern in healthcare spending of beneficiaries was driven by differences in the composition of new entrants rather than by poor economic conditions leading to worsening health.

Figure 4 shows the seasonally adjusted unemployment rate in the US between May 2002 and May 2022. Two stark differences between the Great Recession and the COVID-19 recession are immediately apparent. First, the spike in the unemployment rate at the start of the COVID recession was more than twice as large as the increase in unemployment triggered by the Great Recession. The average unemployment rate in 2007, before the Great Recession, was 4.6 percent, and the peak unemployment rate, in October 2009, was 10 percent—a difference of 5.4 percentage points, or just slightly larger than a twofold increase. By contrast, the average unemployment rate in 2019 was 3.7 percent and the peak unemployment rate of the COVID recession, in April 2020, was 14.7 percent—a difference of 11 percentage points, and nearly a fourfold increase.

Figure 4 here

Second, the COVID recession was much shorter (March 2020-April 2020) than the Great Recession (December 2007-June 2009), and the unemployment rate took much less time to return to pre-recession levels. By March 2022, two years after the start of the pandemic, the unemployment rate was 3.6 percent, below the 2019 average unemployment rate of 3.7 percent. By contrast, the recovery from the Great Recession took much longer; it took nearly eight years for the unemployment rate to return to within 8 percent of its pre-recession level (5%, in September 2015).

Despite these differences, certain fundamentals of the COVID-19 recession appear to be similar to prior recessions. For example, like other recessions, the COVID recession impacted the less educated the most. This is notable because disability determinations based on the medical-vocational grid take education into account. Given two applicants having the same functional impairments but one lacks a high school degree, the less educated applicant is more likely to qualify for SSDI benefits because they have fewer transferable skills than the more educated applicant. If the effects of unemployment on SSDI applications and awards are approximately linear and stable over time, then, taken together, these factors

suggest the effect of the COVID-19 recession could have been about a quarter the size of the effect of the Great Recession.¹

This has certainly not been the case. The most recent data on the number of SSDI applications and beneficiaries through May 2022, presented in Figure 5, show no signs of rebounding to their pre-COVID levels (SSA 2022). This is consistent with analyses of SSA's State Agency Monthly Workload Data, which show that at least one year into the pandemic (and adjusting for state and month fixed effects), there was no discernible increase in the application rate for DI benefits and, in fact, DI application rates per 100,000 people ages 20-64 *fell* in March 2020 and have remained at a lower level through at least February 2022 (Goda et al. 2021, 2022).

Figure 5 here

There are several potential explanations for the surprising lack of an application response to the COVID recession. Unprecedented unemployment insurance expansions and stimulus payments may have helped mitigate the impact of the COVID recession. In addition, unlike prior recessions, the COVID recession was the result of a global pandemic which led to massive changes in US mortality and morbidity. Whereas the effect of the mortality increase on SSDI program costs is offsetting (people die earlier than they would have absent COVID), the increase in morbidity from Long COVID could further increase SSDI applications, but likely over a longer time horizon. Finally, one very important factor unique to the COVID-19 pandemic was the widespread closure of SSA field offices from March 17, 2020 through April 7, 2022. Deshpande and Li (2019) found that, prior to the pandemic, closing an SSA field office led to a persistent 16 percent decline in the number of SSDI beneficiaries in the surrounding areas. The corresponding decrease in disability applications was only 10 percent, suggesting field office closures disproportionately affected those with more severe impairments. If there is pent-up demand for SSDI benefits, applications could rise as normal operations resume in 2022.

Potential Long-Run Effects

Two years after the start of the COVID-19 pandemic, the unemployment rate has recovered to 2019 levels, and there is excess demand for labor. Under these conditions, workers initially displaced by the COVID recession have likely found new employment, and therefore any pent-up demand for SSDI benefits may have dissipated by now.

An open question, however, is whether the disabling effects of Long COVID could cause a wave of disability applications in the future. As many as 30 percent of COVID-19 cases result in Long COVID—defined as experiencing at least one persistent symptom six months later (Logue et al. 2021). Current estimates imply that more than 25 million Americans may have Long COVID, although this includes mild symptoms (e.g., loss of taste or smell) as well as more severe symptoms (e.g., fatigue). It remains to be understood how many Long COVID translate to cases of disability. Figure 6 shows that there has been a steady increase since mid-2020 in the percent of Americans ages 18-64 who report at least one of six disabling conditions (hearing difficulty, visual difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty) in the Current Population Survey. Whether this uptick will lead to an increase in SSDI applications and awards will depend on whether people can establish eligibility under SSDI’s strict disability determination criteria.

Figure 6 here

In addition to affecting disability insurance applications and beneficiaries in the short run through its effects on the economy, the COVID-19 pandemic may also impose lasting effects on the nature of work that could affect the ability of people with disabilities to remain in the labor force. One way the COVID-19 pandemic could *enable* work is through the widespread expansion of telework, defined as the ability to work remotely from home or another location that is not the premises of one’s employer. Telework is a much-needed accommodation for some people with disabilities. The US Equal Employment Opportunity Commission was urged to issue guidance that telework is a reasonable accommodation under the

Americans with Disabilities Act if an employer allowed it during a pandemic (Wagstall and Quasius 2020). At the same time, telework is only possible for certain workers in certain industries, and people with disabilities tend to be concentrated in industries that require in-person work. For example, Schur et al. (2020) estimated that telework is possible for only 34 percent of people with disabilities, compared to 40 percent of people without disabilities. At the same time, they found that 13.5 percent of people with disabilities lived in homes without internet access, compared to 6 percent of people without disabilities.

At the same time, it is possible that the COVID-19 pandemic could accelerate employer automation of tasks or robotization, disproportionately affecting workers in more easily routinized jobs. Additionally, the expansions of telework and automation could both have downstream effects on job demands that intensify long-term shifts toward increasingly sedentary and cognitively demanding jobs (Lopez Garcia et al. 2020). Future research will be needed to assess long-term changes in the nature of work as a result of the pandemic.

Conclusion

COVID-19 is a novel disease that has had dramatic effects on morbidity and mortality in the US population, while launching a global economic recession. In prior recessions, there was a positive relationship between the unemployment rate and DI applications and awards. This relationship, however, did not emerge in the wake of the COVID recession. Although the COVID recession disproportionately affected less educated workers as in prior recessions, there were also unique features that may have altered the relationship between unemployment and DI incidence. These include the prolonged closure of the SSA field offices, the unprecedented expansion of unemployment insurance benefits and economic stimulus payments, and the exceptionally quick economic recovery. Although it is unlikely that there is a substantial amount of pent-up demand for SSDI benefits among workers who were displaced during the

COVID recession, there could yet be a steady inflow of applications in the future from people experiencing disabling effects from Long COVID.

References

- Black, D., K. Daniel, and S. Sanders (2002). ‘The Impact of Economic Conditions on Participation in Disability Programs: Evidence from the Coal Boom and Bust.’ *American Economic Review* 92(1): 27–50.
- Carey, C., N. H. Miller, and D. Molitor (2022). ‘Why Does Disability Increase During Recessions? Evidence from Medicare.’ NBER Working Paper No. 29988. Cambridge, MA: National Bureau of Economic Research.
- Charles, K., Y. Li, and M. Stephens (2018). ‘Disability Benefit Take-Up and Local Labor Market Conditions.’ *Review of Economics and Statistics*, 100(3): 416–423.
- Cutler, D., E. Meara, and S. Richards-Shubik (2012). ‘Unemployment and Disability: Evidence from the Great Recession.’ NBER Retirement Research Center Paper No. NB 12-12. Cambridge, MA: National Bureau of Economic Research.
- Deshpande, M., & Y. Li (2019). ‘Who is Screened Out? Application Costs and the Targeting of Disability Programs.’ *American Economic Journal: Economic Policy*, 11(4): 213-48.
- Flood, S., M. King, R. Rodgers, S. Ruggles, J. R. Warren, and M. Westberry (2021). *Integrated Public Use Microdata Series, Current Population Survey: Version 9.0 [dataset]*. Minneapolis, MN: IPUMS. <https://doi.org/10.18128/D030.V9.0>
- Goda, G. S., E. Jackson, L. H. Nicholas, and S. S. Stith (2021). ‘The Impact of Covid-19 on Older Workers’ Employment and Social Security Spillovers.’ NBER Working Paper No. 29083. Cambridge, MA: National Bureau of Economic Research.
- Goda, G. S., E. Jackson, L. H. Nicholas, and S. S. Stith (2022). ‘The Impact of Covid-19 on Older Workers’ Employment and Social Security Spillovers: Evidence from Year 2.’ Slides presented at NBER Conference ‘The Labor Market for Older Workers, Spring 2022.’
- Logue, J. K., N. M. Franko, D. J. McCulloch, D. McDonald, A. Magedson, C. R. Wolf, and H. Y. Chu

- (2021). ‘Sequelae in Adults at 6 Months After COVID-19 Infection.’ *JAMA Netw Open*. 2021;4(2):e210830. doi:10.1001/jamanetworkopen.2021.0830
- Lopez Garcia, I., N. Maestas, and K. J. Mullen (2020). ‘The Changing Nature of Work and Work Capacity.’ MRDRC Working Paper 2020-415. Ann Arbor, MI: Michigan Retirement and Disability Research Center.
- Maestas, N., K. J. Mullen, and D. Powell (Forthcoming). ‘The Effect of Population Aging on Economic Growth.’ *American Economic Journal: Macroeconomics*.
- Maestas, N., K. J. Mullen, and A. Strand (2015). ‘Disability Insurance and the Great Recession.’ *American Economic Review Papers & Proceedings*, 105(5): 177-182.
- Maestas, N., K. J. Mullen, and A. Strand (2021). ‘The Effect of Economic Conditions on the Disability Insurance Program: Evidence from the Great Recession.’ *Journal of Public Economics*, 199, 104410.
- Ray, G. K. and J. S. Lubbers (2014). ‘A Government Success Story: How Data Analysis by the Social Security Appeals Council (with a Push from the Administrative Conference of the United States) Is Transforming Social Security Disability Adjudication.’ *George Washington Law Review*, 83(4/5): 1575-1608.
- Schur, L. A., M. Ameri, and D. Kruse (2020). ‘Telework After COVID: A “Silver Lining” for Workers with Disabilities?’ *Journal of Occupational Rehabilitation*, 30(4): 521-536.
- Stapleton, D., K. Coleman, K. Dietrich, and G. Livermore (1988). ‘Empirical Analyses of DI and SSI Application and Award Growth.’ In K. Rupp and D. Stapleton, eds., *Growth in Disability Benefits: Explanations and Policy Implications*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, pp. 31–92.
- US Bureau of Labor Statistics (BLS) (2022). Civilian Labor Force Level [CLF16OV], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/CLF16OV>, February 15, 2022

US Social Security Administration (SSA) (2001-2021). *Annual Statistical Report on the Social Security Disability Insurance System*. Washington, DC: US Government Printing Office.

US Social Security Administration (SSA) (2022). *Selected Data from Social Security's Disability Program*. Washington, DC: US Government Printing Office.
<https://www.ssa.gov/oact/STATS/dibStat.html>, retrieved June 15, 2022.

Endnotes

¹ The average difference in unemployment rate from 2007, over the eight years between 2008 and 2015, was 2.9. The average difference in unemployment rate from February 2020, over the two years between March 2020 and 2022, was 2.9.

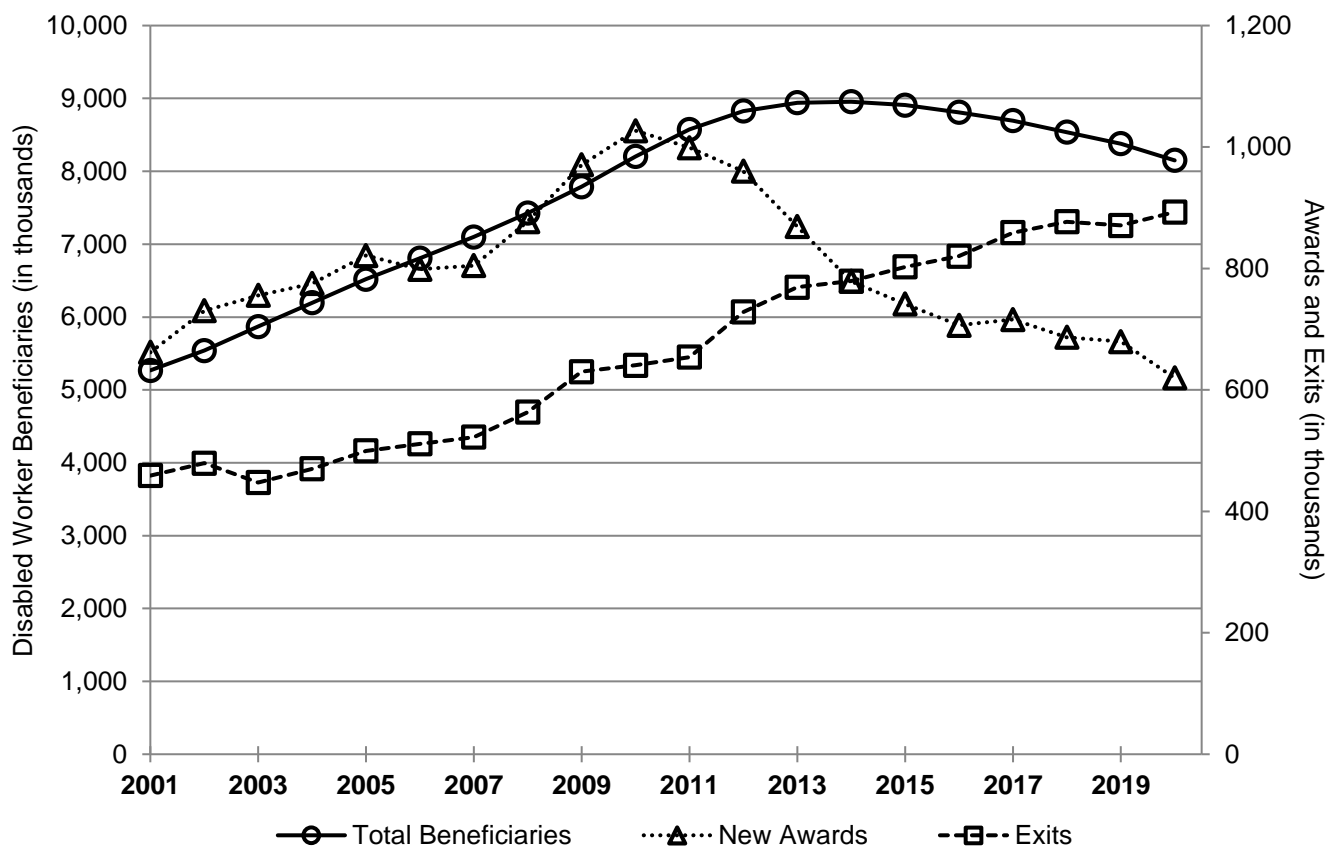


Figure 1. Awards into and exits from the DI program

Source: *Beneficiaries in Current-Payment Status* (Table 1) and *Benefits Awarded, Withheld, and Terminated* (Tables 35 and 49). Annual Statistical Report on the Social Security Disability Insurance Program, 2020, www.ssa.gov/policy/docs/statcomps/di_asr/2020.

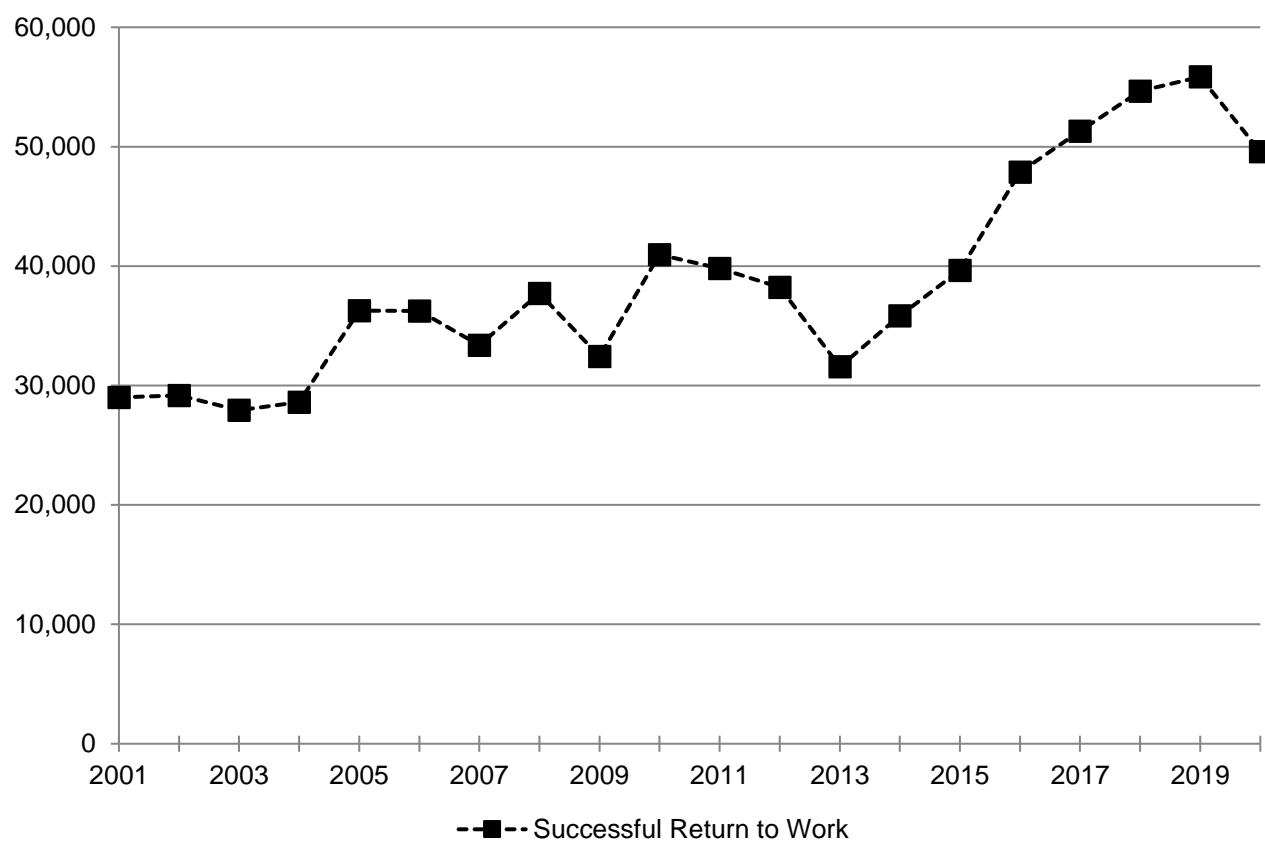


Figure 2. Number of DI beneficiaries with successful return to work

Source: Reason for Termination (2001: Table 39; 2002: Table 45; 2003-2004: Table 46; 2005-2020: Table 50), Annual Statistical Reports on the Social Security Disability Insurance Program

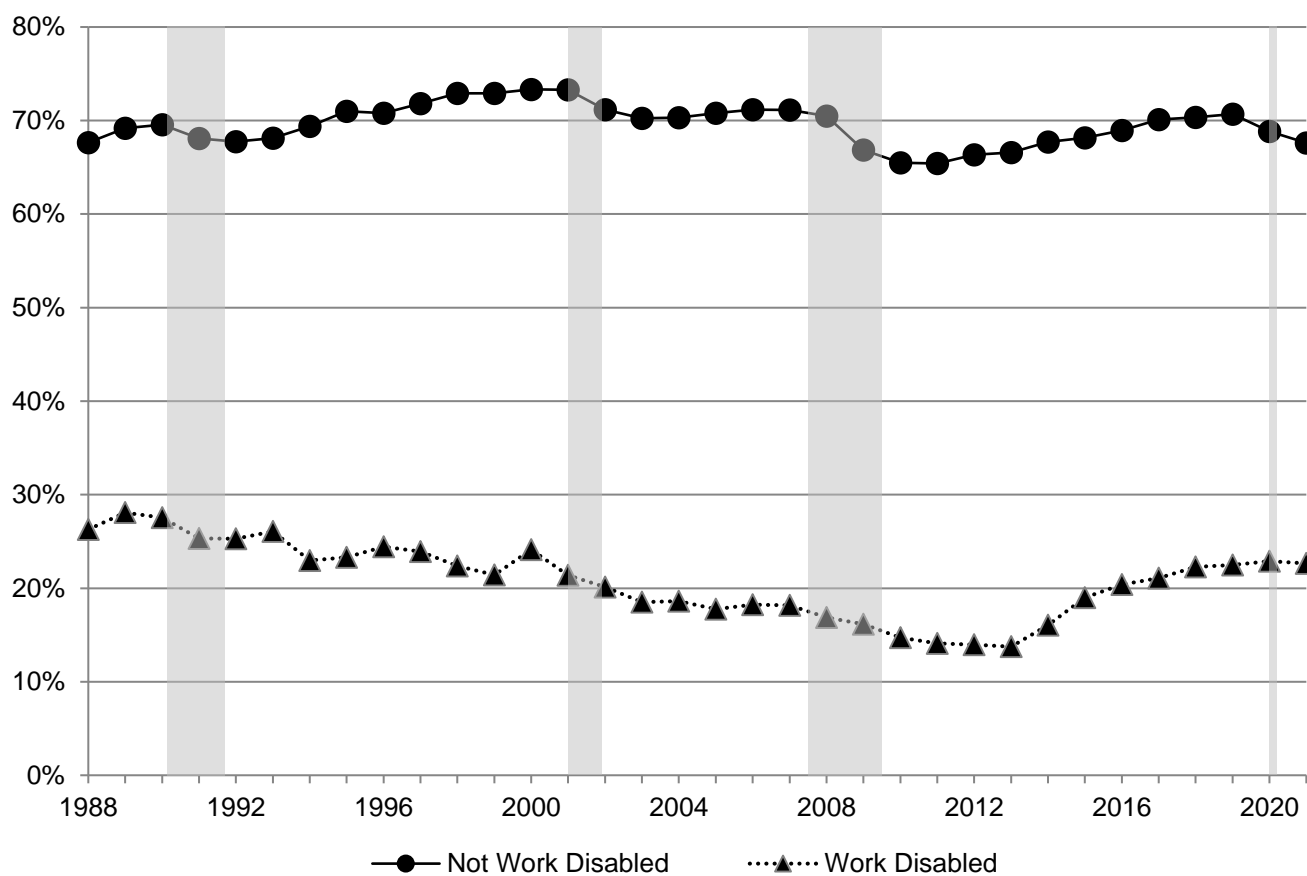


Figure 3. Employment rate by disability status

Source: Variables "empstat" and "disabwork" from Flood et al., IPUMS-CPS, University of Minnesota, www.ipums.org.

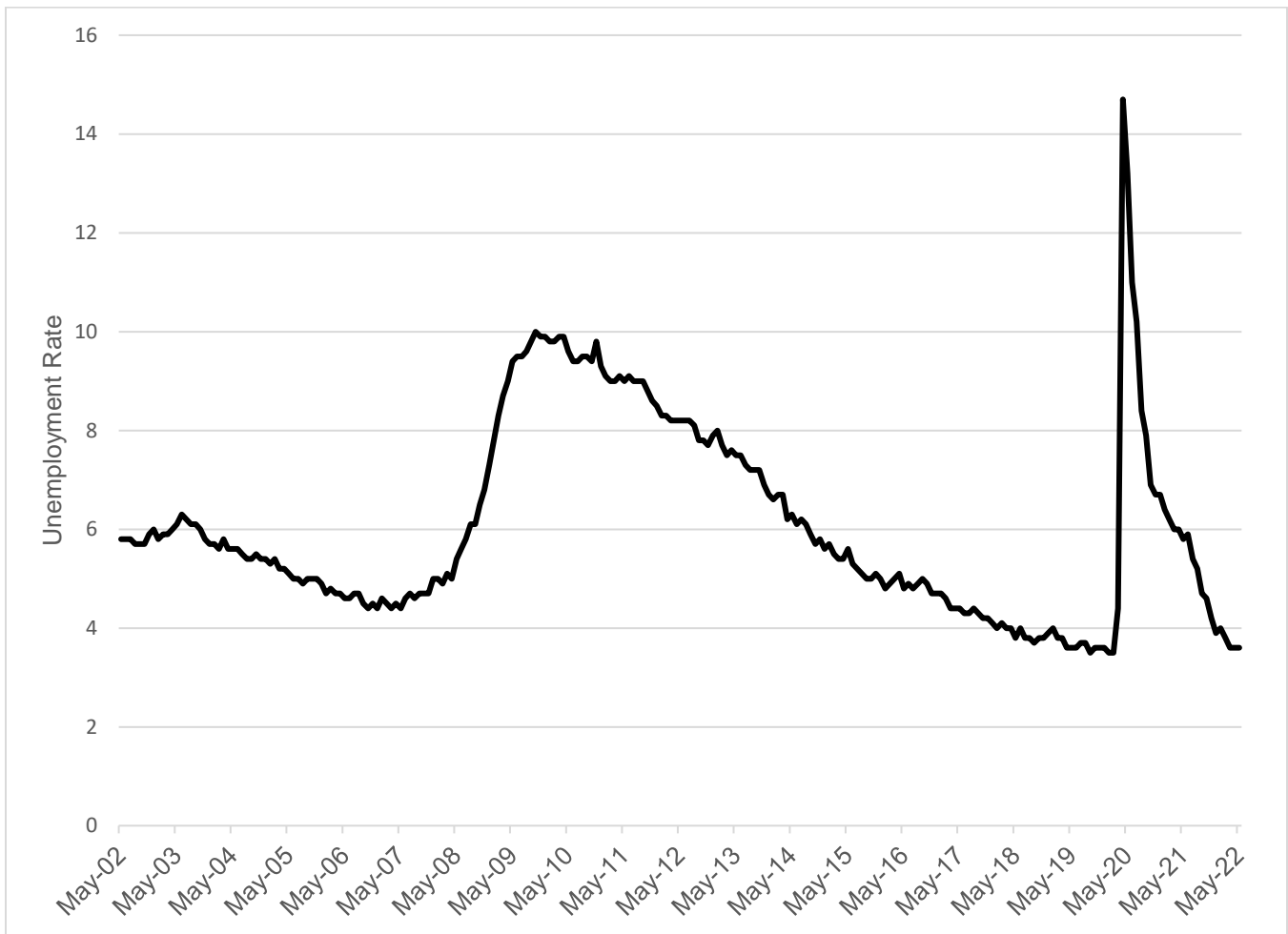


Figure 4. Rise in unemployment rate during COVID more pronounced than Great Recession

Source: BLS 2022 <https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm>

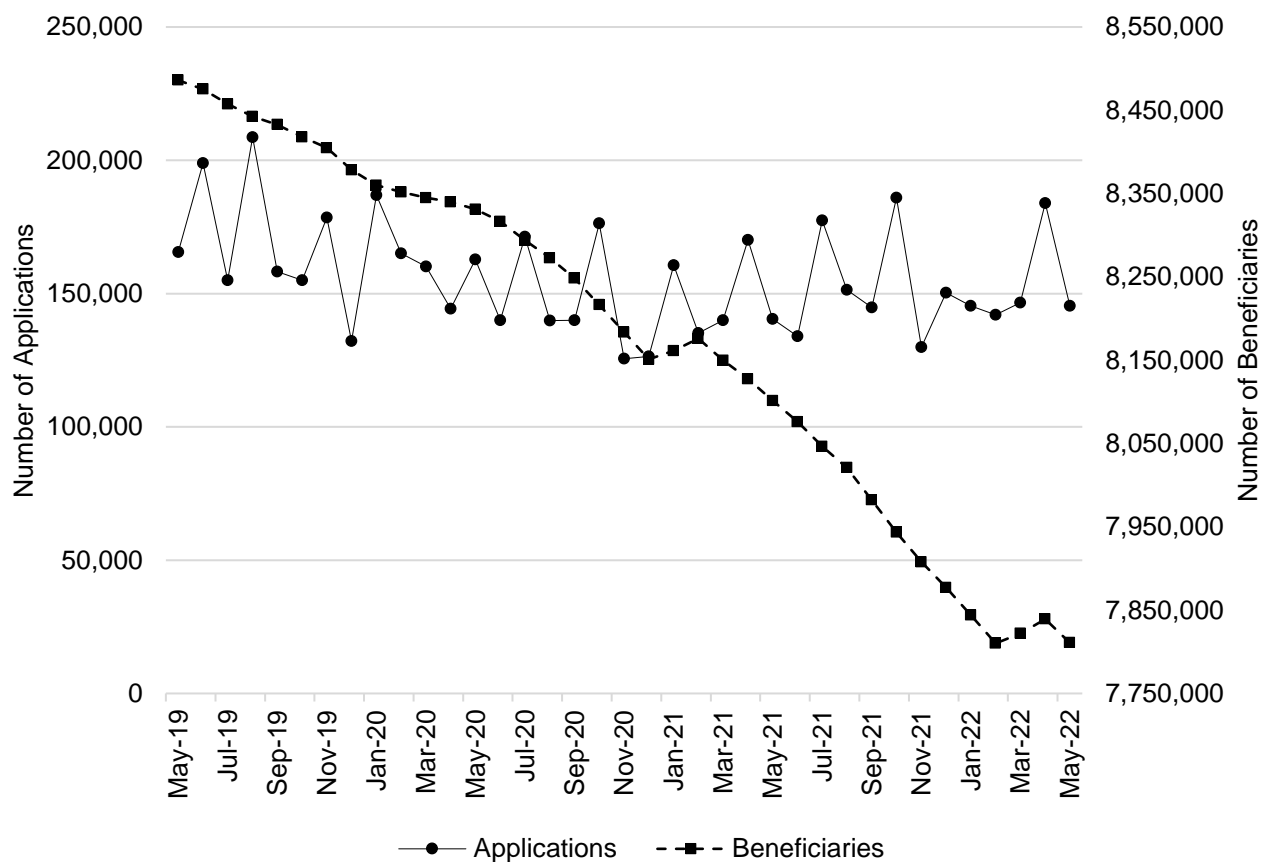


Figure 5. Number of SSDI Applications and Beneficiaries May 2019 to May 2022

Source: Selected Data from Social Security's Disability Program (SSA 2022), <https://www.ssa.gov/oact/STATS/dibStat.html>

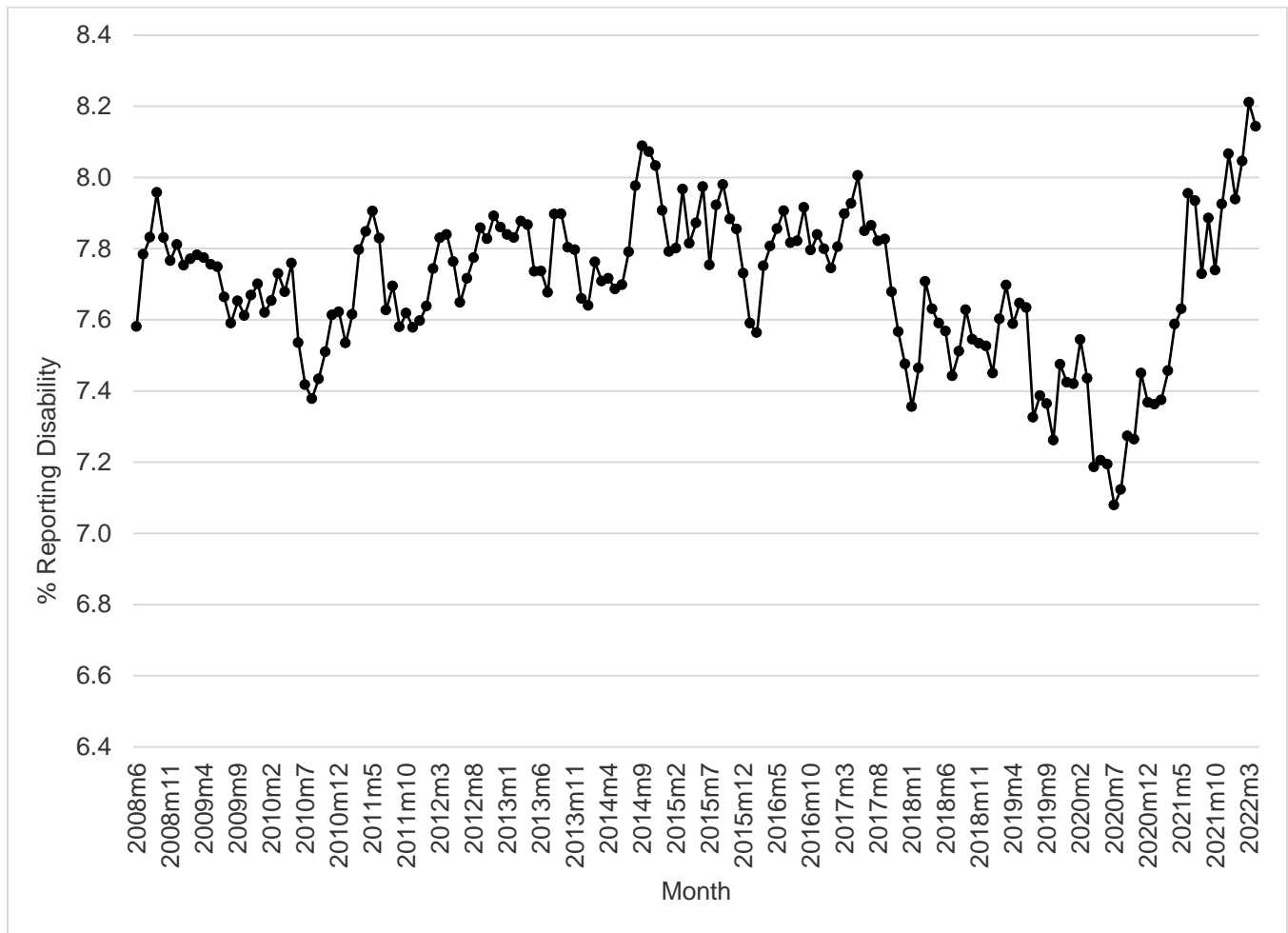


Figure 6. Percent reporting disability among civilian non-institutionalized population ages 18-64, June 2008-April 2022

Source: Tabulations of Current Population Survey data by Hailey Clark, Nicole Maestas and Ari Ne'eman.