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Unemployment and Disability: Evidence from the Great Recession

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It is well known that disability insurance (DI) enrollment is countercyclical. Less is known about why DI is countercyclical. There are two broad theories. The first theory is that health shocks are greater in recessions than in expansions. People might suffer different shocks when the economy is worse, the care they receive for shocks may be inferior, or the accumulation of shocks may compound health problems. In this theory, disability insurance rises in a recession because impairment is truly greater. The second theory is one of opportunity costs. This theory argues that a person at the same level of impairment will be more likely to apply for DI in a recession, because the return to staying in the labor force is lower.

In this paper, we explore the link between recessions and DI, disentangling the health shock and opportunity cost theories. We start by analyzing the historical link between unemployment and disability insurance. We do this in part to understand the best fitting temporal relationship between the two and in part to understand the impact of the Great Recession of 2009-10 on DI receipt. Given the severity of the Great Recession, one might suspect that its effect on DI would be more than proportionately greater than for a less severe recession. On the other hand, large extensions of unemployment insurance made available during the recession might have limited the increase in DI resulting from the downturn.

Using both national and state data, we show that DI receipt responds rapidly to the economy: the best fitting annual relationship between unemployment and DI receipt is a contemporaneous one. Accounting for this relationship, we find that the Great Recession is a ‘normal’ recession. DI receipt rose, but did so by about the amount that one would expect given the severity of the economic shock.

We then proceed to disentangle the health shock and opportunity cost theories. To do this, we use geographically-linked data from the Health and Retirement Study (HRS), enabling us to add area-specific unemployment rates to individual-level data on health, job changes, retirement, and disability.

To examine the health shock theory, we consider the how health shocks translate into physical and mental health status at different points in the business cycle. The health shock theory implies that there are more shocks during a recession, or that functional levels after a given shock should be worse for shocks that occur during a recession compared to shocks that occur outside of a recession. Our measures of health shocks are common and effects range from moderate to severe; they include new cases of heart disease, cancer, stroke, psychiatric issues, back pain, diabetes, and arthritis. Controlling for area and time fixed effects, we find no evidence for the health shock theory. Health shocks adversely influence physical and mental health functioning, but the impact on DI application is no greater during a recession than during an expansion. Self-reported activity limitations and poor functional status do not explain the cyclicality of DI application.

To examine the opportunity cost theory, we estimate models of DI application as a function of demographics, household composition, health insurance status and source, and job characteristics. Although less educated workers are indeed more likely to apply for DI benefits (consistent with the opportunity costs theory), holding health status (and the onset of new conditions) constant across older workers aged 52 to 64, we find that the strong link between unemployment and DI applications remains even after controlling for various measures meant to capture the opportunity costs of DI application. Thus we similarly found no support for the opportunity costs hypothesis.

Given repeated extensions of Unemployment Insurance benefits during the Great Recession, it is possible that the normal reduction in the opportunity costs of applying for DI that would occur during recessions was dampened. Individuals cannot technically receive UI while applying for DI since they must demonstrate active job search activities while receiving UI. Future work should consider the role of extended Unemployment Insurance and whether it did, indeed, dampen the rise in DI applications during the Great Recession.

The full working paper is available on our website, www.nber.org/programs/ag/rrc/books&papers.html, as paper NB12-12.

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