The microdynamics of job loss and depression

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Depression rates among adults have been raising in Denmark and many other developed countries, making depression the leading productivity-impairing health problem during prime working age. A particularly disruptive consequence of depression, often a temporary condition, is unemployment, which might lead to permanent consequences for career paths and strong productivity losses for the employer. Layoff and unemployment, on the other hand, may themselves result in depression, implying a dramatic amplification of the initial economic shock.

In this paper we study in unprecedented detail the relationship of depression and unemployment, using detailed register data to follow all Danish adults from 1995-2014. In particular, we conduct a month-level event study analysis estimating the unemployment risk around depression onsets, as well as the depression risk around layoffs.

To that end, we merge information on individual consumption of antidepressants with information on labor market outcomes at the individual level, using weekly data on unemployment benefits. The observation period covers several macroeconomic boom and bust periods.

We find a pattern of antidepressant consumption peaking 1-2 months before unemployment, indicating that the consumption is at its highest right around the time when people are notified about their upcoming layoff. This pattern is consistent across gender, age groups and across time, despite strong fluctuations in the unemployment rate during the observation period.

This pattern is in line with involuntary unemployment leading to symptoms of depression and hence consumption of antidepressants. As a next step we seek to exploit more exogenous variation in job loss, such as mass layoffs, and region / industry specific job losses. Moreover, we plan to explore reverse causality running from depression to job loss, focusing on the risk of job loss around the onset of depression, and in particular individuals who have been depressed or on sickness leave for a longer time.