

WHY DID DISABILITY ALLOWANCE RATES RISE IN THE GREAT RECESSION?

BY NORMA B. COE AND MATTHEW S. RUTLEDGE*

Introduction

When job opportunities decline due to a weak economy, *application* rates for Social Security Disability Insurance (DI) typically rise. At the same time, prior research has found that *allowance* rates – the percent of applicants who are awarded benefits – tend to fall, perhaps because more of the applicants during a recession are too healthy to qualify. The question is whether the same pattern was evident during the Great Recession.

This *brief*, which summarizes a recent study, confirms that application rates followed the familiar upward pattern during the Great Recession.¹ Indeed, the DI application rate rose by about 33 percent between 2007 and 2010. Yet, the study found that the DI *allowance* rate rose from 42 percent to 50 percent, despite the fact that applicants were generally healthier than during preceding expansions – a puzzling outcome that is explored in this *brief*.

The discussion is organized as follows. The first section reviews how individuals' decisions to apply for DI can be influenced by economic conditions. The second section describes the data and methodology used in the study. The third section presents the results, comparing application rates, allowance rates, and the composition of applicants during the

Great Recession to prior periods. The final section concludes that the cause of the jump in DI allowance rates during the Great Recession is not due to observable characteristics of the applicant pool, but may reflect the recession's unusual severity, which made it easier for applicants with health limitations to prove that it was too difficult to find a job.

DI Applications and the Business Cycle

The federal Disability Insurance (DI) program, administered by the Social Security Administration, provides benefits for disabled individuals. Cash benefits can start five months after disability onset, and recipients also receive Medicare coverage that begins 24 months after cash benefits. To apply for DI, applicants must have a work-limiting health condition that is expected to last at least 12 months and prevents them from holding down any suitable job in the economy, not just their most recent job.²

For the individual, an application decision requires weighing the costs of forgoing potential earnings from current and future employment vs.

* Norma B. Coe is an assistant professor in the Department of Health Services at the University of Washington and an affiliated researcher with the Center for Retirement Research at Boston College (CRR). Matthew S. Rutledge is a research economist with the CRR.

the benefits of obtaining a future stream of disability and Medicare benefits. The decision also involves an assessment of the probability of being accepted and any costs associated with applying. The individual's health status clearly affects both the probability of acceptance to disability and the costs of working.

The state of the economy can also affect application decisions in several ways. First, during a recession, workers are more likely to be unemployed, increasing the attractiveness of applying for a DI benefit as a potential source of income. Second, for unemployed workers, the biggest cost associated with a DI application has already been paid, which is the requirement that an applicant be out of the labor force. Third, if being unemployed worsens an individual's health, applying for and being awarded DI may become more likely. On the other hand, a factor that could make individuals less likely to apply is the availability of extended unemployment insurance.³

Numerous studies have established that DI applications do increase during periods of rising unemployment.⁴ A few studies have also looked at the effect of prior recessions on DI allowance rates, concluding that applicants are less likely to be awarded benefits when economic conditions are poor.⁵ This finding is consistent with the hypothesis that individuals with a borderline health problem are less likely to apply during good economic times and more likely to apply during bad times. Thus, these marginal applicants swell the size of the applicant pool during recessions, raising the overall health status of the pool and lowering the allowance rate. The question is whether these patterns were apparent during the Great Recession.

Data and Methodology

The analysis uses data from the *Gold Standard File* of the *Survey of Income and Program Participation* (SIPP), a nationally-representative longitudinal survey of households conducted by the U.S. Census Bureau. Each SIPP panel covers every four months over a two- to four-year period and contains information on social, economic, demographic, and employment characteristics. The *Gold Standard File* is matched to the Social Security Administration's disability application records, which include data on the date of application, application outcome, and benefit received.⁶

The study compares DI applicants and recipients in the Great Recession to the previous recession and intervening expansion; specifically the periods

covered are 2001-03 (Dot-Com Recession), 2004-06 (expansion), and 2008-2010 (Great Recession). The sample covers working-age individuals, those ages 25-61 at the start of their respective SIPP panel.

The quantitative analysis uses a probit regression to explore the determinants of two different dependent variables measuring DI activity: the application rate and the allowance rate (among those who applied).⁷ The independent variables include a comprehensive set of health, socio-economic, and demographic characteristics and indicators for the time period. The time-period indicators are then interacted with the individual characteristics to assess how the composition of applicants and awardees varied across the different periods.

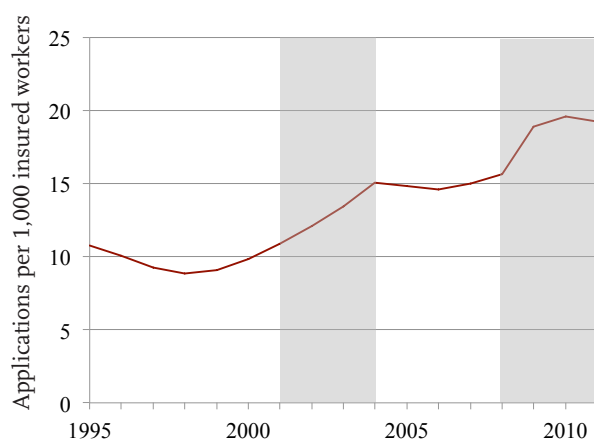
Results

The analysis proceeds in two steps. The first step is to examine DI application and allowance rates since 2001 to see whether they fit with prior research and intuition. The second step, using the regression analysis, aims to explain variations in the patterns by looking at changes in the composition of the applicants.

Trends in DI Activity

Starting with the DI application rate, Figure 1 presents trends for the 1995-2010 period, with shading representing the two recessions. Consistent with

FIGURE 1. DISABILITY INSURANCE APPLICATION RATES PER 1,000 INSURED WORKERS, 1995-2010



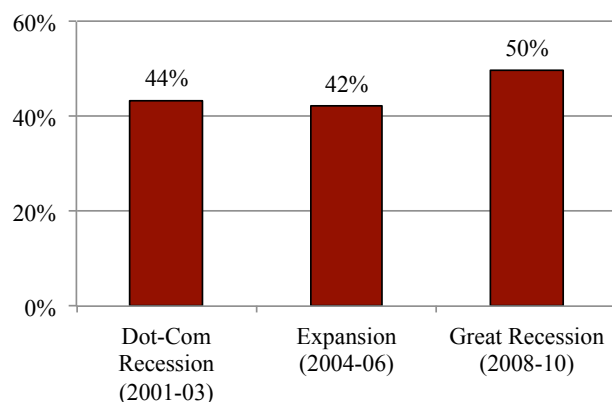
Note: Shaded periods represent recessions.

Source: U.S. Social Security Administration (2013).

prior research, the application rate increased in the wake of rising unemployment. In both the 2001-03 and 2008-10 periods, the jump in the application rate was dramatic. Interestingly, during the intervening expansion, it merely leveled out rather than declining as the economy improved.

The other key indicator of DI activity is the allowance rate.⁸ As noted above, allowance rates are expected to fall during periods of high unemployment as economic necessity draws in healthier applicants, who are less likely to meet the DI eligibility criteria. But, as shown in Figure 2, the Great Recession shows the opposite result – the allowance rate increased sharply from 42 percent during the expansion of the mid-2000s to 50 percent in 2010. The Great Recession allowance rate was also higher than the rate during the Dot-Com Recession. Both of these differences are statistically significant.⁹

FIGURE 2. DISABILITY INSURANCE ALLOWANCE RATES, 2001-2010



Note: Allowance rates are defined as the percent of applicants who are awarded DI benefits.

Source: Authors' calculations from *Survey of Income and Program Participation, Gold Standard File* (2001, 2004).

This pattern of a higher allowance rate during the Great Recession is puzzling. But if the Great Recession atypically drew in a greater percentage of applicants with poor health and/or poor job skills, a rising allowance rate would make sense.

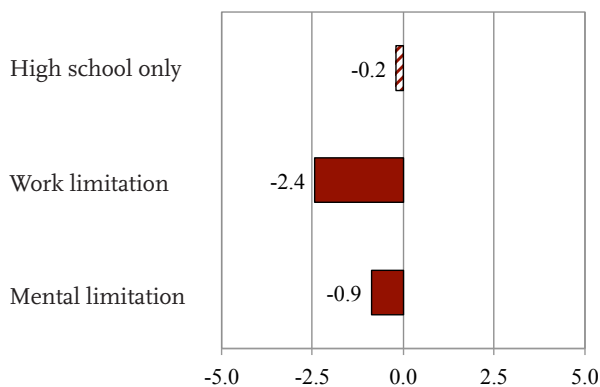
Changing Composition of the DI Applicant Pool

The regression analysis can be used to see if changes in the makeup of DI applicants – such as health or education – can help explain the unexpected jump in

the allowance rate during the Great Recession.¹⁰ The connection of health to allowance rates is straightforward: the worse an individual's health, the more likely the application is to be accepted. The connection to education is more indirect. Those with less education are more likely to have jobs that require heavy physical labor and, thus, are more difficult to perform with certain health ailments.

Strikingly, the probit results do not support either hypothesis about rising allowance rates. Compared to the applicants in the economic expansion, the education levels of the applicants in the Great Recession show no statistically significant difference, and they are actually less likely to have either a work limitation or mental limitation (see Figure 3).

FIGURE 3. IMPACT OF SELECTED APPLICANT CHARACTERISTICS ON DI APPLICATION RATES, GREAT RECESSION COMPARED TO ECONOMIC EXPANSION



Note: The solid bars indicate the coefficient is statistically significant at least at the 10-percent level.

Source: Authors' calculations from *Survey of Income and Program Participation, Gold Standard File* (2001, 2004).

While the probit results did not turn up any evidence to help explain the rising allowance rate, one other related analysis was tried using an adaptation of the Blinder-Oaxaca decomposition technique. This technique aims to quantify the relative importance of changes in the independent variables – the characteristics of the DI applicants – to the changes in the dependent variable – the allowance rate. These results also failed to provide any explanation for a significant increase in the allowance rate.¹¹ Thus, the rise in the allowance rate that actually occurred was due to some unobserved change in the relationship between the applicant's characteristics and the allowance rate over the time period studied.

Conclusion

Rising unemployment clearly induces more individuals to apply for disability insurance. The results summarized here show this expected pattern during the Great Recession. At the same time, both prior research and intuition suggest that a smaller percentage of these applicants would be successful in obtaining DI benefits. However, the results show the opposite pattern during the Great Recession: a significant jump in allowance rates. The compositional analysis of the applicants predicts only a slight rise in the allowance rate, nothing like the actual jump of nearly 8 percentage points during the Great Recession.

A few tentative observations may point to areas worth further exploration. For example, perhaps the applicants of the Great Recession – while generally healthier at the beginning of the application period compared to prior applicant pools – experienced a deterioration in health by the time their application was reviewed. The rationale here is that the experience of losing a job during this period was particularly stressful and could have aggravated certain health conditions. If so, these individuals may have been more likely to meet the eligibility criteria than is apparent from our examination of their baseline health status. Another possibility is that the applicants during the Great Recession were more likely to be individuals who are averse to applying for any type of “safety net” benefits, including DI benefits. But, upon experiencing a layoff with no clear prospect of a new job, they turned to DI as a last resort and their health was just bad enough to meet the eligibility criteria. In other words, they were borderline cases who turned out to be more on the “DI award” side of the border. Finally, perhaps the severity of the Great Recession led to a change in award standards or made it easier for applicants to prove that their job prospects were very poor, allowing more individuals with any given health ailment to meet the DI eligibility criteria.

Endnotes

- 1 Coe and Rutledge (2013).
- 2 A suitable job is determined by considering an applicant's age, education, and work experience. See Chen and van der Klaauw (2008).
- 3 Rutledge (2012).
- 4 See, for example, Autor and Duggan (2003).
- 5 See, for example, Rupp and Stapleton (1995) and Stapleton and Dietrich (1995).
- 6 For a more detailed discussion of the data and methodology, see Coe and Rutledge (2013).
- 7 The full study on which this *brief* is based also used a third dependent variable: the award rate, which is the percentage of all individuals in the sample – not just applicants – who receive DI benefits.
- 8 The allowance rate used here includes both applicants who were successful during the initial benefit determination and those who succeeded upon appeal.
- 9 The Social Security Administration's *Annual Statistical Supplement* reports that the allowance rate fell from 38.4 percent in 2008 to 35.7 percent in 2010, part of a longer decline from a peak allowance rate of 52 percent in 1998. This report appears to contradict this study's finding of a higher allowance rate, but conversations with SSA actuaries suggest that these numbers are not directly comparable. The denominator for the *Supplement's* allowance rate includes an increasing number of applications from ineligible individuals (those with not enough work experience to be "disability insured"). These applications are rejected even before the initial determination, and thus are not in the SIPP data. The applications from ineligible individuals are a by-product of the SSI application process, which requires applicants to seek benefits from all other available sources, including SSDI.
- 10 For a more detailed discussion of results, see Coe and Rutledge (2013). In addition to capturing DI applicants, their results also include individuals who applied to the Supplemental Security Income program only.
- 11 The results do confirm findings of previous research that certain characteristics of applicants – such as older ages and higher incomes – tend to increase allowance rates. However, the influence of these factors is largely offset by the better health status of the applicants in the Great Recession.

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About the Center

The Center for Retirement Research at Boston College was established in 1998 through a grant from the Social Security Administration. The Center's mission is to produce first-class research and educational tools and forge a strong link between the academic community and decision-makers in the public and private sectors around an issue of critical importance to the nation's future. To achieve this mission, the Center sponsors a wide variety of research projects, transmits new findings to a broad audience, trains new scholars, and broadens access to valuable data sources. Since its inception, the Center has established a reputation as an authoritative source of information on all major aspects of the retirement income debate.

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Contact Information

Center for Retirement Research
Boston College
Hovey House
140 Commonwealth Avenue
Chestnut Hill, MA 02467-3808
Phone: (617) 552-1762
Fax: (617) 552-0191
E-mail: crr@bc.edu
Website: <http://crr.bc.edu>