Social Security Disability Applications near Retirement Ages

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Abstract

How much do more generous Social Security Disability Insurance (DI) benefits encourage applications? This relatively simple and straightforward question has proven difficult to answer empirically due to the challenges present in distinguishing between the effects of cash benefits and those of health insurance provided to DI beneficiaries through the Medicare program. As a result, existing estimates of cash benefit elasticities may be biased. In order to identify an effect of cash benefits on the application decision, variation in cash incentives independent of Medicare health insurance benefits is needed. We propose a new approach to estimating the benefit elasticity of disability applications that capitalizes on just such variation, while separating the cash incentives from the medical coverage incentives. We focus on the special age window between the Early Retirement Age and the Normal Retirement Age (NRA), and exploit an exogenous variation in disability cash benefits that results from the fact that for Americans born after 1937 disability benefits are increasingly more attractive compared to Old Age benefits due to the increase in the NRA that increased the penalty for early retirement. This quasi-experimental approach allows us to more reliably estimate the effect of cash benefits on the decision to file for disability benefits.

I. Background and Research Question

How much do more generous SSDI benefits encourage disability applications? This simple question has proven difficult to answer empirically due to challenges of distinguishing empirically between the effects of cash benefits and those of health insurance provided to DI beneficiaries through the Medicare program. As a result, existing estimates of cash benefit elasticities may be biased. In order to identify an effect of cash benefits on the application decision, variation in cash incentives independent of Medicare health insurance benefits is needed. We propose a new approach to estimating the benefit elasticity of disability applications that capitalizes on just such variation. We focus on the special age window between the Early Retirement Age (ERA) and the Normal Retirement Age (NRA), and exploit the fact that, beginning with the cohort born in 1938, disability benefits became comparatively more attractive in the ERA-NRA window due to increases

in the NRA that increased the penalty for early retirement. We implement a quasi-natural experimental design to estimate the effect of cash benefits on DI applications independent of effects of Medicare. This study design also avoids the potential drawback of using a reduced form specification to study changes in the incentive structure faced by individuals.

Key to our work is the insight that DI applications aged between the ERA and NRA are unlikely to be motivated to apply for DI by Medicare incentives because Medicare coverage becomes available to DI awardees only two years following a DI award. But an applicant in in ERA-NRA window would almost surely reach age 65 and gain Medicare eligibility regardless of the outcome of the DI application. Therefore estimating the benefit elasticity of DI applications at these ages provides a clean measure of the cash incentive effect on the DI applications.

As noted, one of the key provisions of the 1983 Amendments to the Social Security Act, the increase in the NRA for cohorts born after 1937, provides us with a quasi-experiment in which we can analyze the effects of an exogenous increase in disability benefits in comparison with retirement benefits. We will compute difference-in-differences estimates, comparing differences in the DI application propensity across birth cohorts across to age groups: that is, the cross-cohort difference for an older age group (age 62 to the NRA) minus the cross-cohort difference for a younger age group (say age 55 to 60). This comparison allows us to control for any "cohort effect" that may bias estimates of the effects of increased (comparative) benefits. Specifically, if individuals in the younger sample who were born after 1937 are also more likely to apply to the DI program, then an increase in DI applications at the older ages is likely to include a pure cohort-effect; so the true effect of increased DI benefits could be computed as the difference between the effect computed for the older age sample (cash benefit effect plus pure cohort effect) and the effect for the younger age sample (pure cohort effect).

We are not the first to notice that with the increased in the normal retirement age disability benefits have become more attractive [Mitchell and Phillips (2000), Duggan, Singleton, and Song (2007), Li and Maestas (2008), as well as Coe and Haverstick (2010)]. However, we raise a number of issues that may make previous results problematic. First, we separate the sample by age and concentrate on individuals 62 and

older (but younger than the NRA) because they actually have access to both retirement benefits and disability benefits. For these individuals the comparative appeal of disability benefits is meaningful. Many researchers in the last decades have purposely avoided these older individuals because of the potential problem of having to account for the additional benefit structure coming from the Old Age Benefits program. Others pooled the data by age, not separating those who actually face the (relative) increase in DI benefits for whom is something that is years ahead. The latter is a key issue because it can potentially confound a pure cohort effect with a truly meaningful effect of facing a more appealing disability benefit structure.

II. Data and Estimation Strategy

We will use the ten available waves of the Health and Retirement Study (HRS), which cover the1992 to 2010 period, both in its public release form as well as with some of the restricted data needed to identify state of residence among other characteristics. The key outcome variable is whether an individual applies for DI benefits including appeals or re-applications. We will also use an array of demographic and socio-economic variables, as well as a rich set of health measures. Following Kreider and Riphahn (2000), we construct predictions of the probability of being granted DI benefits, the expected DI benefit amount, the expected earnings of non-applicants, and the expected retirement benefits, all of which are potential explanatory variables in the main equation predicting DI application. In those estimations, we control for the sample selection from application and being approved. The econometric methodology we use includes binary outcome panel models accounting for the potential initial condition problem and incidental parameter problem. We control for individual time-invariant and time-variant heterogeneity, and also correct for potential selectivity bias which arises from the timing choice of DI application.

An essential variable to characterize the relationship between benefits and application probabilities is whether the individual was born after 1937, for whom DI has become more attractive than retirement benefits, compared with earlier cohorts that did not experience retirement benefit cuts. An important additional variable in our estimation is the indicator for whether the individual is already receiving retirement benefits, which will capture the fact that after receiving retirements benefits many individuals could find interesting to consider disability if they are not able or willing to work much, disability will provide higher

lifetime benefits, the exact level of which will be a function of the time of application and receipt of benefits. To account for the endogeneity of retirement benefit receipt, we model jointly the decision to apply for DI and claim/receive retirement benefits, allowing for flexible error correlation structure.

III. Policy Relevance

Disentangling the effects of DI cash benefits incentives and the effects of DI health insurance incentives, and getting right the cash benefit elasticity is highly informative for policymakers. The SSA has implemented a series of policy changes since the inception of the DI program, including changing the financial incentives (such as introducing a Trial Work Period, allowing for the Extended Period of Eligibility, changing the Substantial Gainful Activity levels, and more recently the Ticket to Work program), and modifying the Medicare incentives (such as Expanded Availability of Health Care Services). However, the effects of those two types of policy changes have been very difficult to identify and evaluate. Our analysis of the DI application response to benefit levels can shed new light on the effect of DI cash benefit, and could be highly informative for policy makers while gauging the effectiveness of possible reforms to the disability programs or to the retirement program which affects the appeal of the DI program.

IV. References

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