

# **An Empirical Analysis of Unemployment Duration and Disability Application Decisions**

**(Extended Abstract)**

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The aim of this research is to examine the changes in the decision to apply and the timing of application for disability from the Social Security Disability Insurance (DI) program as well as from the Supplemental Security Income (SSI) program, of the different pools of applicants in the most recent recessionary period, and their connection with unemployment duration and unemployment insurance policies. We will also analyze how the health of the applicants to the DI and SSI programs varies over the business cycle. The 2007-09 economic recession, resulted in the highest national unemployment rate in nearly 30 years, and the duration of unemployment also reached record highs. Disabled workers are typically hit harder by labor market volatility than other groups of workers, and between 2008 and 2010 job losses among workers with disabilities far exceeded those of workers without disabilities. During, and immediately following the recession, applications to the DI program rose significantly, compounding a secular trend of the last couple of decades (Autor 2011, Kirk 2012).<sup>1</sup>

Previous studies show that the propensity to apply for disability benefits rises in the economic downturns and falls during the good times. We believe it is reasonable to argue that individuals suffering from severe health limitations are expected to apply for disability soon after the onset of the disability, regardless of labor market conditions. However, individuals with less severe health limitations and limited financial resources who may be considered as “marginal” applicants are those whose decision and timing to apply are more sensitive to labor market conditions. If job prospects are plenty, or individuals are optimistic about future job prospects, marginal applicants would wait longer to apply for disability,

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<sup>1</sup> The number of DI applicants reached a record high of 2.93 million in 2010, after reaching 2.81 million in 2009, while the number of SSI applicants (of ages 18 to 64 applying for disability benefits) also reached record highs of 2.28 million in 2009 and 2.31 million in 2010. DI had close or above a million awardees in both 2009 and 2010, further straining a program that faced financing challenges even before the recession, while the number of SSI awardees was close or above 700,000 in 2009 and 2010.

perhaps relying on other government programs such as unemployment insurance, while they would choose to apply for disability sooner during recessions when job prospects are dim (See also Rutledge 2011, and Krueger and Muller, in progress). This suggests that the composition of disability applicants has changed with the recession, which we expect will result in timing shift of disability applications.

It is also particularly complex and important to study for younger individuals with health limitations who would worry about getting rejected because they are simultaneously collecting unemployment benefits and searching for a new job. If opportunities are dim in the near future, as in economic downturns, people with health limitations who would find gainful employment in good economic times may forego unemployment benefits and job search, and instead apply for disability benefits directly. Consequences of such a “premature” application to the disability programs are fourfold: 1) it increases the administrative costs of screening due to a larger number of applications; 2) it may increase the probability of errors in screening as the new pool of applicants would contain more able applicants resulting in both denying legitimate claims due to the administrative burden, as well as accepting able individuals to the program; 3) it may affect job prospects of applicants negatively if/when they are denied disability insurance as they have stopped searching for new jobs and perhaps reduce their investments in their own human capital; 4) longer average years receiving disability considering the low rates of termination of benefits due to health recovery or income from work above the SGA level that we observe in the programs.

We use the Health and Retirement Study (HRS), a longitudinal survey that started in 1992 to interview individuals born in 1931-1941 and their spouses. The HRS has added both younger and older cohorts since, to provide a very general and detailed picture of older Americans’ economic, health and socio-demographic status. It conducts interviews biennially with the latest available data corresponding to 2010. The dataset provides detailed information on the timing of disability application as well as rich information about employment history, health, income, wealth and demographics, with which we will be able to examine the factors that affect individuals’ decisions and timing to apply for disability before, during and immediately after the Great Recession using discrete choice econometric models. These

econometric models will have to take into account that disability applications to DI and SSI are affected by different eligibility rules as well as different program incentives, and should potentially account for the fact that for some individuals applying to both programs can be part of their choice set. Additionally, following the literature on disability applications we will incorporate forward looking variables like predicted benefits, predicted award probabilities, as well as predicted earnings for non-applicants. Accounting for these forward looking variables opens interesting econometric issues regarding the endogeneity and simultaneity of these variables which might require a departure from the traditional probit or logit binary choice models, and instead consider a Full Information Maximum Likelihood approach of a system of equations with a rich correlation structure. We will also be using the Current Population Survey (CPS) as the primary source of labor force statistics for the U.S. population.

An increasing body of research provides considerable evidence that large social insurance programs, like DI and SSI, are affected by the business cycle of an economy, not only in the US but also in other advanced economies. Interestingly, the demand for these programs tends to grow precisely when governments suffer a contraction in their budgets, putting under even more pressure the financial situation of the given economy. Additionally, it is clear that those types of programs cannot be considered in isolation, and individuals strategically rely on unemployment insurance or disability to ride the bad times in the labor market. Understanding the sensitivity of our public programs to the economic conditions, and how the application decisions of individuals vary with the incentive structures in these programs and related programs is key in order to formulate policies geared towards sustainability and efficiency. The business cycle effects are likely to reveal themselves in the composition of applicants, in terms of their health, income, and wealth, as well as an array of characteristics linked to their labor market participation. In the last years, while the explicit incentives of the US disability programs have remained stable, unemployment insurance has changed tremendously, going from a short-term support for those looking to quickly go back to work, to a generous European-like system that supports individuals for close to two years. Understanding how these could have affected disability programs, and how these effects could be

felt for the years to come, is key to understand how these programs will likely evolve in the future, and how the effects of any reforms will be shaped by the interactions of all these programs.