

## **Do Disability Benefits Discourage Work?**

Nicole Maestas and Kathleen Mullen

RAND

and

Alexander Strand

SSA

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Inspector General (2008) found that in 2006 the average processing time for cases in the initial determination phase was 131 days, or just over a third of a year. Average (cumulative) processing times for cases reaching the appeals phases were 279 days (0.76 years) for reconsideration, 811 days (2.22 years) for ALJ, 1,053 days (2.88 years) for AC and 1,720 days (4.71 years) for Federal Court. Just under a third of cases made it to the ALJ level, where approximately 61% of denials were overturned (GAO 2004). Less than 5% of cases progressed to the AC level and less than 1% of cases progressed to Federal Court.

Individuals who apply for SSDI benefits must stop working or reduce their earnings below the SGA threshold for a period of five months before they are entitled to receive benefits, or until the allowance decision is made (whichever comes later). Up to 19 months of back payments are available depending on the onset and allowance decision dates. The average monthly benefit was \$1,120 in 2009 (Social Security Administration, 2010, Table 36). Once benefits commence, beneficiaries begin a nine-month Trial Work Period (TWP) which allows individuals to “test” their ability to return to work by relaxing the restriction that earnings may not exceed the SGA threshold. The TWP is followed by a three-month Grace Period before individuals earning above the SGA threshold have their benefits suspended. Thus, SSDI beneficiaries may engage in SGA for up to twelve months (not necessarily consecutively) while receiving their full benefits without any penalty. Over the next three years, during an extended period of eligibility (EPE) benefits are paid for months in which earnings are below SGA, and not paid when earnings are above SGA. Finally, upon reaching the Social Security Full Retirement Age, SSDI benefits are automatically converted to Social Security retired worker benefits and the SGA earnings restriction is lifted. Very few beneficiaries leave the rolls for a reason other than death (35% in 2009) or automatic conversion to retired worker benefits (54%). In 2009, only 8% of worker beneficiaries’ benefits were terminated because they no longer qualified for benefits; of those, 39% failed a medical review (Continuing Disability Review, or CDR) whereas 61% were found to earn more than SGA (Social Security Administration, 2010, Table 50).

### **3. Empirical Strategy**

The goal of this paper is to estimate causal models of labor supply of the following form:

$$y_i = X_i\beta + \gamma DI_i + u_i, \quad (1)$$



where  $y_i$  is earnings (or labor force participation) of applicant  $i$ ,  $X_i$  denotes observed characteristics (e.g., age, type of impairment) that may influence labor supply,  $DI_i = 1$  if the applicant was allowed (i.e., is observed to be a SSDI beneficiary at any time after the initial determination), and  $u_i$  is an error term. In observational data, inference is hampered if some unobserved characteristic, such as severity of the impairment, impacts both labor supply and SSDI allowance. For instance,

$$y_i = X_i\beta + \gamma DI_i - s_i + \varepsilon_i,$$

where  $s_i$  denotes unobserved severity, which can be thought of as the (unobserved part of) earnings loss associated with the individual's impairment, and which is uncorrelated with any remaining idiosyncratic element  $\varepsilon_i$ . Then in the regression above  $u_i = -s_i + \varepsilon_i$ , and if  $E[s_i | DI_i] \neq 0$ , ordinary least squares (OLS) regression gives a biased estimate of the average treatment effect,  $\gamma$ . In particular, OLS estimates  $\gamma - [E[s_i | DI_i = 1] - E[s_i | DI_i = 0]]$ . As observed by Bound (1989), assuming  $\gamma < 0$  and severity positively correlated with SSDI receipt, OLS overestimates the magnitude of the coefficient on  $DI$  and provides an upper bound on the labor supply effect of SSDI.

From SSA's point of view, in an ideal world SSDI is awarded to individuals whose potential earnings – in the absence of SSDI benefits – are less than the SGA threshold:

$$X_i\beta - s_i + \varepsilon_i < SGA.$$

In practice, however, cases are assigned to disability examiners who have imperfect information, and so the assignment rule becomes based on the contrast:

$$X_i\beta - \hat{s}_{ij} < SGA,$$

where  $\hat{s}_{ij}$  denotes the estimate by examiner  $j$  of the severity of individual  $i$ 's impairment. This estimate is a function of both the individual's impairment severity – which the examiner observes in greater detail than the econometrician, through medical records and test results – and characteristics of the examiner assigned to the case, such as previous experience or personal perceptions/tastes. Let

$$\hat{s}_{ij} = s_i + \sigma_j + \nu_{ij},$$













































































