

Disability Insurance and the Great Recession: The Flow of SSDI Claims to the Hearings Level

Nicole Maestas
Harvard University and NBER

Kathleen J. Mullen
RAND

Alexander Strand
Social Security Administration

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1. Introduction

Allowance rates of administrative law judges for Social Security Disability Insurance (SSDI) have declined in recent years—from 61 percent in 2009 to 44 percent in 2014 (Ray, 2015)—leading analysts to question whether the observed decline is due to changes in the behavior of judges or changes in the composition of applicants induced by the Great Recession. Maestas, Mullen and Strand (2015) show that the Great Recession induced new applications from people with less severe impairments, resulting in a decrease in the allowance rate at the initial determination level. We build on previous work and examine how the Great Recession affected 1) the number and composition of applicants who went on to appeal their initial denial and 2) allowance rates at the hearings level. We find that the Great Recession induced a flow of appeals to the hearings level with a lower than average probability of allowance. This reduced allowance rates but we estimate that, absent the effects of the Great Recession, allowance rates would have begun to decline around 2009.

2. Methods

We analyze SSDI claiming from the unemployment rate trough in October 2006 (when the unemployment rate was 4.4 percent) through the peak in October 2009 (10.0 percent) to the end of 2012 (7.9 percent). Since then, unemployment rates have returned to pre-recession levels. We follow initial claims filed during this period, including appeals to the reconsideration and hearings levels. We observe a follow-up period of at least 44 months for all possible appeals.¹³

Our approach is to relate monthly variation in the number of SSDI claims in a state to monthly variation in the state's unemployment rate at the time of filing. We estimate regressions of the following form:

$$(1) \quad y_{st} = \beta U_{st} + \alpha_s + \delta_t + \varepsilon_{st}$$

where y_{st} is the number of SSDI claims appealed to the hearings level in state s at month-year t , where t is the month of initial filing, U_{st} is the state unemployment rate in month-year t , and α_s and δ_t are state and month-year fixed effects, respectively. This specification exploits variation in the severity and timing of the Great Recession across states while controlling for common national trends in SSDI claiming. The coefficient of interest, β , gives the estimated increase in the number of appeals of initial claims associated with a one-point increase in the unemployment rate at the time of filing. We refer to these counts as “induced” appeals.¹⁴

We estimate equation (1) using counts of claims as the dependent variable rather than claiming rates or logs of rates. Although logs of rates are popular in the literature (Stapleton et al, 1998; Cutler et al, 2012) and we used logs of counts in Maestas et al. (2015), estimation using counts allows us to decompose the number of induced claims into allowances, denials and other outcomes at each administrative level. Similarly, we decompose the number of induced claims

¹³ We use administrative data from the 831 files linked to the Case Processing and Management System (CPMS) including all appeals determined by September 2016.

¹⁴ We estimate similar equations for claims at the initial and reconsideration levels and for claims that are allowed, denied or dismissed at each level, as seen in Table 2.

by diagnosis and reasons for allowance determination (e.g., meets the listings, impairment not severe or vocational factors). (We omit the latter decompositions due to space constraints).

The dependent variable is the count of applications received in a state in a given month and the counts naturally scale up to the annual-national level by multiplying them by the factor 12*51 (12 months times 50 states and the District of Columbia). We tested specifications with a lagged unemployment rate and found that models with contemporaneous unemployment rate (at the time of filing) had approximately the same predictive power as models with lags up to six months and better predictive power than models with longer lags.

3. Findings and Discussion

Table 1 presents summary statistics on the caseload per state-month, by administrative level and determination outcome. Of the 2,666 average initial claims per state and month, 914 were initially allowed and 1,751 were initially denied. Of the initial denials, 761 proceeded to the

Table 1. Mean number of claims, allowances and denials per state-month, by administrative level

	Initial	Reconsideration	Appellate	Any/All Levels
Claims	2,666.0	760.9	743.1	
Allowances	914.3	102.3	431.8	1,446.0
Denials	1,751.0	643.5	198.9	1,219.0
Dismissals			106.6	
Allowance rate within level (%)	34.3	13.4	58.1	54.2
Claims as % of initial denials		43.5	42.4	

N= 3,825 state-months, representing 10,345,394 claims.

Table 2. Effects of unemployment rate on SSDI claims, allowances and denials per state-month, by administrative level

	Initial	Reconsideration	Appellate	Any/All Levels
Claims	144.1** (58.5)	70.6** (30.7)	56.4** (24.1)	
Allowances	30.6* (15.7)	7.7* (3.9)	24.7** (9.5)	62.7** (25.9)
Denials	113.5** (46.7)	60.6** (26.0)	22.5** (10.3)	81.4** (34.0)
Dismissals			8.3* (4.8)	
Allowance rate within level (%)	21.2	10.8	43.8	43.5
Claims as % of initial denials		62.2	49.6	

** Significant at the 1 percent level. * Significant at the 5 percent level.

reconsideration level and 743 to the hearings level. These numbers imply allowance rates of 34, 13 and 58 percent at the initial, reconsideration and hearings levels respectively. As seen in the

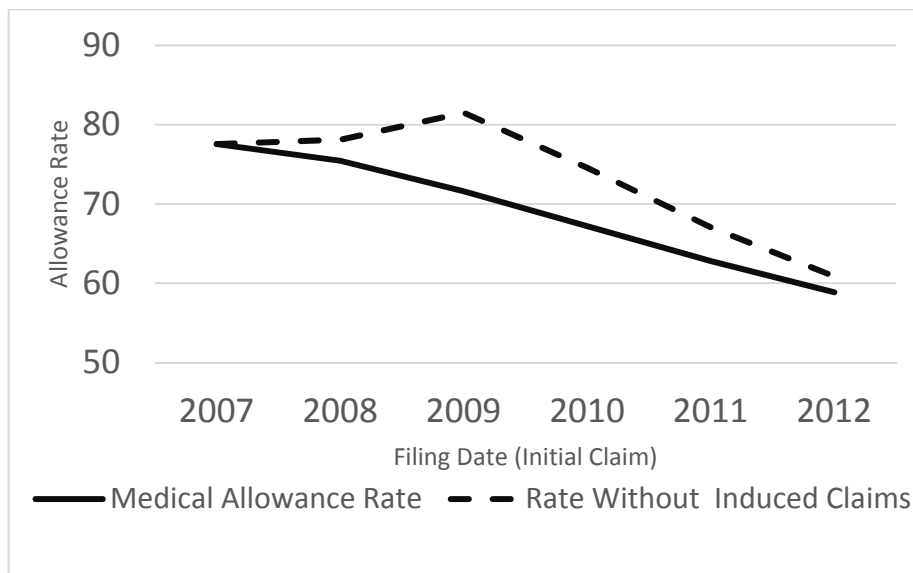
final column, taken together, of the 2,666 initial claims, 1,446 (54 percent) were allowed at any of the administrative levels and 1,219 (46 percent) were denied at all the administrative levels that they pursued.

In comparison, Table 2 shows equivalent numbers for induced claims—that is, those claims induced by a one-point increase in the unemployment rate at the time of filing—estimated using equation (1). The estimates imply allowance rates for induced claims of 21, 11 and 44 percent at the initial, reconsideration and appellate levels respectively—all below the equivalent rates for the average applicant during the same period. The aggregate allowance rate for induced claims (reflecting allowance at any administrative level) of 44 percent is below the 54 percent average.

There are compositional differences as well. Fifty percent of induced initial denials are appealed to the hearings level, compared to only 42 percent of all initial denials. Moreover, induced claims are more likely to have a mental or musculoskeletal diagnosis than the general caseload (not shown).

To summarize, the Great Recession induced both allowances and denials at all observed administrative levels. However, the induced claims were more likely to result in denial at all levels for which the claimant pursued his or her claim.

Figure 1. SSDI hearings-level allowance rates 2007-2012, actual and assuming no Great Recession



These effects combine to influence the allowance rate at the hearings level. We illustrate the effect of the Great Recession on the hearings-level allowance rate with a simple simulation. First, we multiply the estimated coefficients in Table 2 by the observed change in unemployment rates between 2006 and each following year to simulate the numbers of claims and allowances that are due to the Great Recession. Next, we subtract the induced claims from the total claims and allowances to simulate the number of claims and allowances that would have been observed at the hearings level if the unemployment rate had remained unchanged (i.e., at 4.6 percent, the average annual unemployment rate in 2006) over the entire period from 2007 to 2012. Finally, to

obtain the counterfactual allowance rate in the absence of the Great Recession we simply divide non-induced allowances into non-induced claims at the hearings level. In the figure, the solid line represents the actual medical allowance rate among all applications at the hearings level and the dashed line represents the simulated medical allowance rate removing the induced applications.

As can be seen in the figure, since there was no change in the average annual unemployment rate between 2006 and 2007, there were no induced claimants and the actual and counterfactual allowance rates in 2007 were the same. However, by 2009, the unemployment rate had risen to 9.3 percent. This induced a flow of claims to the hearings level with a lower than average probability of allowance. Figure 1 shows that without the Great Recession and the accompanying induced claims, the allowance rate would have *increased* through 2009. However, we estimate that, even without the Great Recession, the allowance rate would have started falling after this. The figure shows that the magnitude of the secular decline in hearings-level allowance rates after 2009 was at least as large or larger than the impact of the Great Recession.

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