

# Who Is Screened Out? Application Costs and the Targeting of Disability Programs

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# Introduction

- ▶ Social Security Disability Insurance (SSDI or DI) provides cash benefits and Medicare to disabled workers in the United States.
- ▶ In 2015, it covered nearly 9 million workers.
- ▶ Additionally, Supplemental Security Income (SSI) offers cash welfare and Medicaid eligibility to nearly 7 million low-income, disabled Americans, including 1.4 million children in 2015.
- ▶ This program strictly targets those with severe disabilities who are unable to work.

# This Paper

- ▶ This paper examines the role of application costs in the targeting of disability programs and importantly looks at trade-offs between screening through ordeal and targeting.
- ▶ The authors use a novel dataset of 1.6 million initial disability applications to estimate the effect of application costs on the composition of program participants using a natural experiment that lead to closing of some field offices that assisted in the application process.
- ▶ They find that application costs are a key determinant of program participation, and that the targeting of disability programs is sensitive to the stringency of the application process.

# Institutional Background and Data I

- ▶ The Social Security Administration (SSA) administers both SSDI and SSI.
- ▶ The application process is complex and time-consuming, requiring extensive documentation and medical evidence.
- ▶ The authors use a novel dataset of 1.6 million initial disability applications to estimate the effect of application costs on the composition of program participants.
- ▶ The dataset includes all initial disability applications filed between 2006 and 2015, and includes detailed information on the characteristics of applicants, the medical evidence they submit, and the outcomes of their applications.
- ▶ They use variables such as disability type and severity, age, education, and languages spoken to estimate the effect of application costs on the composition of program participants.

# Institutional Background and Data II

- ▶ importantly, study channels through which application costs affect the composition of program participants, use office wait times, processing times and staff counts to quantify congestion at neighborhood offices.

# First Stage

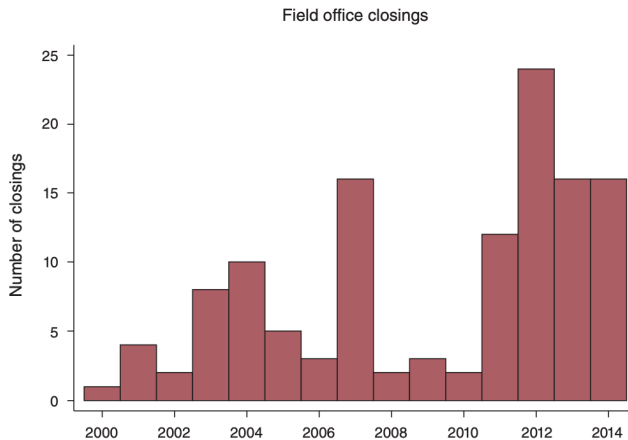


FIGURE 1. TIMING OF FIELD OFFICE CLOSINGS

# Treated Zip Codes

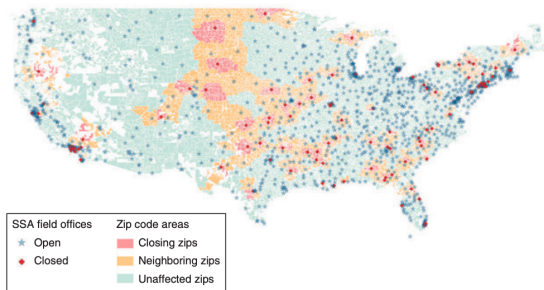


FIGURE 2. MAP OF FIELD OFFICE CLOSINGS AND ZIP CODE CLASSIFICATION IN THE UNITED STATES

# Effect on Applications and Allowances

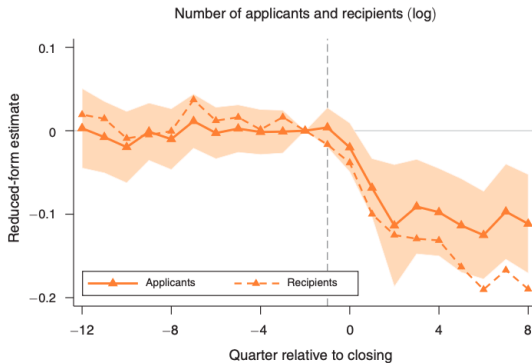


FIGURE 3. EFFECT OF CLOSINGS ON NUMBER OF DISABILITY APPLICATIONS AND ALLOWANCES



# Who is Screened Out?

TABLE 2—ESTIMATES OF THE EFFECT OF CLOSINGS ON DISABILITY APPLICATIONS

	Count (log)			Proportion/average		
	Point estimate	Standard error	Control count	Point estimate	Standard error	Control mean
All	-0.100	(0.0288)	39.7			
Severity						
Low	-0.0483	(0.0295)	18.0	0.0278	(0.00444)	0.425
Medium	-0.338	(0.0503)	6.9	-0.0274	(0.00402)	0.184
High	-0.173	(0.0367)	8.5	-0.0118	(0.00318)	0.209
Very high	-0.0327	(0.0271)	6.2	0.0114	(0.00239)	0.183
Disability type						
Mental	-0.115	(0.0356)	12.3	-0.00522	(0.00376)	0.289
Musculoskeletal	-0.0576	(0.0298)	10.2	0.0101	(0.00255)	0.276
Other physical	-0.109	(0.0283)	17.2	-0.00485	(0.00353)	0.435
Education (years)				0.0666	(0.0201)	11.8
High school dropout	-0.142	(0.0275)	9.9			
High school graduate	-0.0740	(0.0280)	19.4			
College graduate	-0.0496	(0.0288)	2.4			
Pre-application earnings (\$)				413.1	(202.0)	\$15,362
\$0–\$5,000	-0.112	(0.0338)	18.7			
\$5,000–\$15,000	-0.0887	(0.0331)	8.9			
\$15,000–\$25,000	-0.0928	(0.0294)	5.0			
\$25,000+	-0.0414	(0.0343)	7.0			
Language						
Speaks English	-0.0621	(0.0976)	24.9	0.00719	(0.0172)	0.623
Does not speak English	-0.107	(0.0530)	14.7			
Age (years)				0.469	(0.118)	40.7
18–34	-0.126	(0.0339)	7.9			
35–49	-0.130	(0.0292)	12.9			
50+	-0.0489	(0.0262)	13.1			
Applicant behavior						
Files online	0.135	(0.0682)	2.8	0.0374	(0.00741)	0.075
Files in person or by phone	-0.194	(0.0319)	36.9			
Provides email address	0.260	(0.0795)	4.2	0.0455	(0.00953)	0.111
No email address	-0.158	(0.0309)	35.4			
Has representation	0.264	(0.0711)	2.2	0.0325	(0.00545)	0.054
No representation	-0.139	(0.0297)	37.4			

Notes: The first set of columns presents estimates of the effect of field office closings on log applications by subgroup, specifically estimates of  $\beta$  from equation (5), which is a regression of log applications for a subgroup on *zip code fixed effects*, *quarter-by-state fixed effects*, a treatment indicator, event quarter indicators, an interaction

# Who is Screened Out?

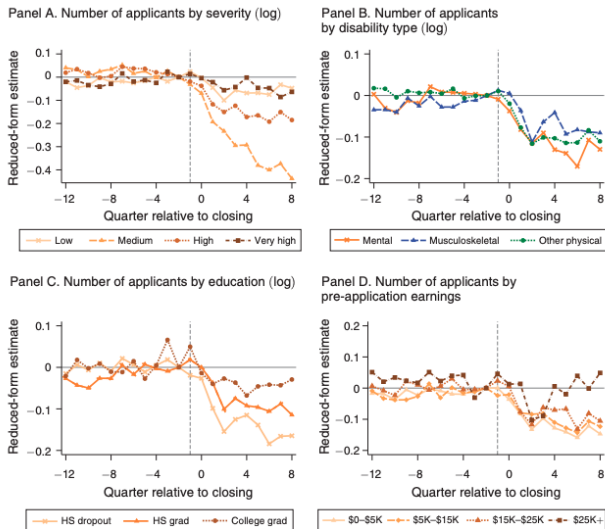


FIGURE 4. EFFECT OF CLOSINGS ON NUMBER OF DISABILITY APPLICATIONS, BY SUBGROUP

*Notes:* The figure plots estimates of the effect of the closing on applications by subgroup in closing zip codes in the event quarters before and after the closing. Specifically, the figure plots estimates of  $\delta_t$  coefficients from equation (4), which is a regression of the number of disability applicants by subgroup on zip code fixed effects, quarter-by-

# Who is Screened Out?

TABLE 3—ESTIMATES OF THE EFFECT OF CLOSINGS ON DISABILITY RECEIPT

	Count (log)			Proportion/average		
	Point estimate	Standard error	Control count	Point estimate	Standard error	Control mean
All	-0.155	(0.0301)	21.7			
Severity						
Low	N/A			N/A		
Medium	-0.319	(0.0484)	6.9	-0.0417	(0.00689)	0.329
High	-0.165	(0.0351)	8.5	-0.00376	(0.00532)	0.359
Very high	-0.0287	(0.0255)	6.2	0.0455	(0.00647)	0.312
Disability type						
Mental	-0.190	(0.0358)	6.9	-0.0120	(0.00338)	0.289
Musculoskeletal	-0.129	(0.0354)	5.1	0.00279	(0.00325)	0.252
Physical	-0.132	(0.0280)	9.7	0.00924	(0.00386)	0.459
Education (years)				0.0197	(0.0281)	11.9
High school dropout	-0.180	(0.0314)	5.1			
High school graduate	-0.153	(0.0321)	10.6			
College graduate	-0.0931	(0.0278)	1.6			
Pre-application earnings (\$)				516.2	(249.3)	\$18,328
\$0-\$5,000	-0.154	(0.0338)	9.0			
\$5,000-\$15,000	-0.168	(0.0384)	4.5			
\$15,000-\$25,000	-0.134	(0.0327)	3.1			
\$25,000+	-0.0948	(0.0312)	5.1			
Age (years)				0.510	(0.145)	43.0
18-34	-0.210	(0.0336)	3.1			
35-49	-0.255	(0.0386)	6.1			
50+	-0.0908	(0.0279)	9.3			

*Notes:* The first set of columns presents estimates of the effect of field office closings on log allowances by subgroup, specifically estimates of  $\beta$  from equation (5), which is a regression of log allowances for a subgroup on zip code fixed effects, quarter-by-state fixed effects, a treatment indicator, event quarter indicators, an interaction between the treatment indicator and a “post” indicator (coefficient of interest  $\beta$ ), and an interaction between the treatment indicator and an “event year zero” indicator. The second set of columns presents estimates of  $\beta$  for the same equation, where the dependent variable is the proportion of recipients with that characteristic (for indicator variables like severity, disability type, applicant behavior, and language) or the average of the characteristic across recipients (for continuous variables like education, earnings, and age). Earnings and education estimates include only adult allowances. The “control count” is the number of individuals in the control zip code in a category, and “control mean” is the mean characteristic in the control group. “Low” severity is not applicable at the allowance level because low severity is defined as being denied. The sample zip codes in which the nearest office closed

# Robustness I

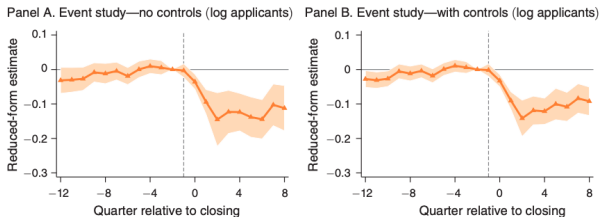


FIGURE 5. ROBUSTNESS: EVENT STUDY SPECIFICATIONS, WITH AND WITHOUT UNAFFECTED ZIP CODES

*Notes:* The figure plots estimates of the effect of the closing on applications in closing zip codes in the event quarters before and after the closing, using an event study specification with and without controls. Specifically, the figures plot estimates of  $\delta_t$  coefficients from equation (6), which is a regression of the number of disability applications on zip code fixed effects, quarter-by-state fixed effects, and event quarter indicators. The dependent variable is the log number of disability applications. The left graph includes only closing zip codes, while the right graph also includes unaffected zip codes, which help to identify the quarter-by-state fixed effects. For both, the sample contains only zip codes with an average of at least four disability applications per quarter in the year before the closing. Regressions are weighted by application volume in the year before the closing.

# Robustness II

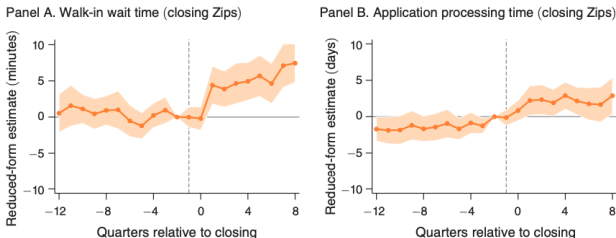


FIGURE 6. EFFECT OF CLOSINGS ON MEASURES OF FIELD OFFICE CONGESTION

*Notes:* The figure plots estimates of the effect of the closing on walk-in wait time (left) and application processing time (right) in closing zip codes in the event quarters before and after the closing. Specifically, the figures plot estimates of  $\delta_\tau$  coefficients from equation (4), which is a regression of the dependent variable on zip code fixed effects, quarter-by-state fixed effects, a treatment indicator, event quarter indicators, and event quarter indicators interacted with the treatment indicator. The dependent variable is average walk-in wait time in minutes at the nearest field office (left) or the average number of days it takes the field office to process a disability application (right). The shaded region is the 95 percent confidence interval. The sample is zip codes in which the nearest office closes after 2000 and that have an average of at least four disability applications per quarter in the year before the closing. Regressions are weighted by application volume in the year before the closing.

# Mechanisms

TABLE 4—ESTIMATES OF THE EFFECT OF CLOSINGS ON TYPES OF APPLICATION COSTS

	Closing zip code			Neighboring zip code		
	Point estimate	Standard error	Control mean	Point estimate	Standard error	Control mean
Applications (log)	−0.100	(0.0288)	39.7	−0.0460	(0.0134)	42.5
Recipients (log)	−0.155	(0.0301)	21.7	−0.0928	(0.0146)	22.6
Congestion measures						
FO processing time	3.426	(0.732)	28.8	1.764	(0.515)	28.4
Apps with processing time > 40 days	5.052	(1.551)	7.3	3.245	(0.739)	7.6
Walk-in wait times	4.842	(1.199)	13.6	3.211	(0.991)	16.3
Travel cost measures						
Driving time	10.43	(1.691)	23.5			
Driving distance	12.83	(1.423)	24.3			
Transit time	37.45	(6.617)	89.4			

*Notes:* The table presents estimates of the effect of field office closings on log applications, log allowances, and measures of application costs for closing and neighboring zip code. Specifically, the table presents estimates of  $\beta$  from equation (5), which is a regression of the dependent variable on zip code fixed effects, quarter-by-state fixed effects, a treatment indicator, event quarter indicators, an interaction between the treatment indicator and a “post” indicator (coefficient of interest  $\beta$ ), and an interaction between the treatment indicator and an “event year zero” indicator. For the neighboring zip code regressions, the treatment indicator is replaced by an indicator for being a neighboring zip code of that closing. A closing zip code is a zip code in which the nearest office closes. A neighboring zip code is a zip code in which the nearest office is the second or third closest office of a closing zip code. Walk-in wait time is the average time (in minutes) that a visitor to a field office waits to be seen. Processing time is the number of days it takes a field office to send an application to a state disability determination services office. Driving time, driving distance, and public transit time to the nearest field office are calculated using Google Maps with the trip originating from the zip code centroid. The sample is zip codes in which the nearest office closed after

# Conclusion

- ▶ The authors find that application costs are a key determinant of program participation, and that the targeting of disability programs is sensitive to the stringency of the application process.
- ▶ They find that the stringency of the application process affects the composition of program participants, and that the targeting of disability programs is sensitive to the stringency of the application process.
- ▶ They also find that the stringency of the application process affects the composition of program participants, and that the targeting of disability programs is sensitive to the stringency of the application process.