

Appendix (For Online Publication)

Here we outline the calculations in Table 6 in detail.

Lower receipt in closing ZIPs: We calculate losses from lower receipt separately for SSDI adults, SSI adults, and SSI children. From Appendix Table A.19, the decline in SSDI receipt in closing ZIPs is 11.9 percent. The mean number of DI allowances per quarter per ZIP is 12.8, and there are an average of 17 affected ZIPs per closing. This amounts to an annual decline of 104 SSDI recipients as a result of the average closing. The average DI benefit is around \$1,300 per month. We also consider the value of Medicare: from the CPS, we estimate that approximately 20 percent of DI beneficiaries in the Medicare waiting period do not have health insurance, and we use the [Finkelstein, Hendren and Luttmer \(2015\)](#) estimate of the value of Medicaid (\$1600/year) as a conservative estimate for the value of Medicare for those without health insurance coverage. In addition, we assume—again, conservatively—that the discouraged applicant loses 2 years of benefits, meaning that the discouraged applicant eventually applies and receives disability benefits. We assume that the average SSDI recipient values the SSDI benefit and health insurance coverage 50 percent more than the average taxpayer (reflecting a higher marginal utility of income for a disabled individual but also the deadweight loss of taxation), so we multiply the total benefit by 0.5. The social value of SSDI benefits (including insurance coverage) foregone is therefore \$1.7 million.

We use an analogous analysis to calculate losses from the decline in SSI receipt. For SSI adults, the decline in receipt is 15.4 percent from Appendix Table A.19; there are 10.1 SSI adult recipients per quarter per ZIP and 17 affected ZIPs per closing, resulting in 106 fewer SSI adult recipients. The monthly SSI benefit is approximately \$700; from the CPS, we estimate that 50 percent of SSI adult recipients would not have health insurance without SSI. The calculation for SSI children is similar: a decline in receipt of 12.7 percent, an average of 6.5 SSI children per quarter per ZIP, 17 affected ZIPs per closing. This results in 56 fewer SSI child recipients. We assume that all SSI children would have health insurance without SSI. Under the same assumptions used for the SSDI calculations, the social value of SSI benefits foregone is \$1.4 million.

Lower receipt in neighboring ZIPs: We calculate losses from lower SSDI and SSI receipt in neighboring ZIPs in the same way that we calculate losses in closing ZIPs. The decline in neighboring ZIPs is 8.7 percent for SSDI (average of 13.2 recipients per quarter per ZIP), 9.9 percent for SSI adults (average of 10.4 recipients per quarter per ZIP), and 8.9 percent for SSI children (average of 6.6 recipients per quarter per ZIP). There are an average of 99 neighboring ZIPs per closing,

resulting in declines of 458 SSDI recipients, 407 SSI adult recipients, and 232 SSI child recipients per closing per year. This translates into losses of \$7.3 million for SSDI and \$5.7 million for SSI. The neighboring ZIP losses are substantially larger than the closing ZIP losses because there are many more neighboring ZIPs than closing ZIPs.

Higher applicant time and earnings decay: We consider time costs from increased office congestion and longer travel time as well as earnings decay from longer processing times. We assume a 15-hour increase in application time from congestion (as we do in the implied value of time calculations) and use the estimate from Table 4 of a 0.2 hour increase in travel time. There are 17 affected ZIPs on average per closing, with an average of 35.3 applicants per ZIP per quarter who continue to apply after the closing. We assume a \$20/hour value of time and that one-half of applicants are actually affected by these costs (i.e., some applicants never interact with the field office). This gives 1,200 affected applicants per closing, with a total cost of \$360,000 for congestion costs and \$5,000 for travel costs for closed ZIPs. For neighboring ZIPs, we consider only congestion costs and estimate them at \$2.39 million using the same method.

To calculate earnings decay from longer processing time, we use the increase in processing time resulting from the closing from Table 4: 3.0 days for closing ZIPs and 2.8 days for neighboring ZIPs. Autor et al. (2015) estimate that a 2.4 month increase in processing time reduces annual employment by one percentage point. From this estimate, a one-day increase in processing translates into a 0.0139 percentage point reduction in employment, which amounts to \$2.78 annually assuming average annual earnings of \$20,000. We assume that this earnings decay lasts for a period of 10 years, so the average earnings decay is \$28 per additional day of processing time. We multiply this decay by the increase in processing days, and then multiply this amount by the number of applicants per ZIP, the number of affected ZIPs, and a 1/3 applicant rejection rate (since the earnings decay only applies to rejected applicants). These assumptions yield earnings decay costs of \$68,000 for closed ZIPs and \$416,000 for neighboring ZIPs.

Administrative savings from processing fewer applications: We start with the SSA's annual administrative budget of \$12 billion,²⁵ two-thirds of which is used to administer the disability programs.²⁶ We calculate from our data that field offices process approximately 4.4 million disability applications per year. This yields an estimated cost of \$1,800 in processing costs per application. The reduction in applications is 11.0 percent for closing ZIPs (with 17 ZIPs on average per closing

²⁵See Social Security Administration FY 2017 Budget Overview.

²⁶“SSA’s Administrative Costs by Funding Source—INFORMATION,” Letter from Robert M. Rothenberg to Margaret Malone, Wayne Sulfridge, and David Warner, December 8, 1999.

and 40 applicants per ZIP per quarter) and 5.4 percent for neighboring ZIPs (with 99 ZIPs on average per closing and 43 applicants per ZIP per quarter). We multiply the \$1,800 in processing costs per application by the application decrease of 1,204 to get an estimated \$2.2 million in administrative savings per closing. We multiply this amount by 1.2 to reflect the marginal cost of public funds.

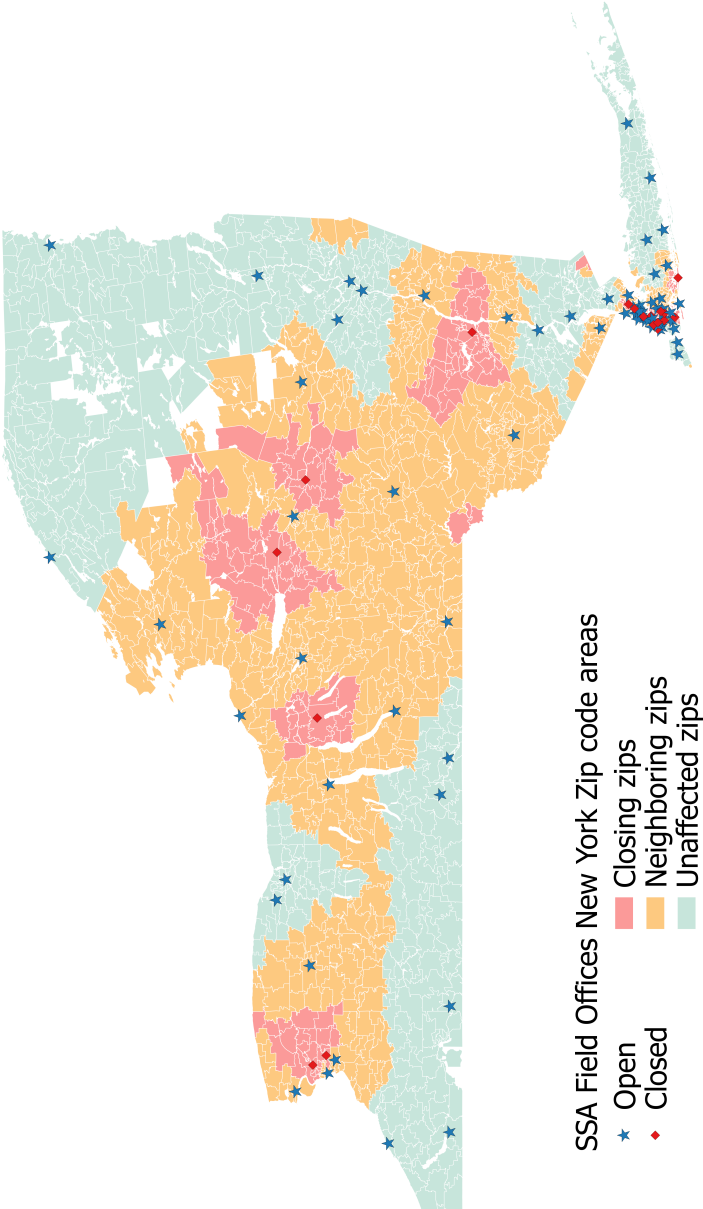
Administrative savings from closing field office: According to a recent Congressional report, recent field office closings have saved \$4 million over 10 years in lease costs.²⁷ We therefore estimate an annual savings of \$400,000 per closing and multiply this amount by 1.2 to reflect the marginal cost of public funds.

Application cost savings from discouraged applicants: Since we include foregone benefits of discouraged applicants in the costs of field office closings, we include application cost savings to discouraged applicants as a benefit of field office closings. As in “administrative savings from processing fewer applications,” there are 1,204 fewer applicants between closing and neighboring ZIPs. We assume that applications take on average 40 hours to complete and the applicant value of time is \$20 per hour. This amounts to \$1.0 million in applicant cost savings.

²⁷“Reduction in Face-to-Face Services at the Social Security Administration,” United States Senate Special Committee on Aging, Summary of Committee Staff Investigation, No Date, page 15.

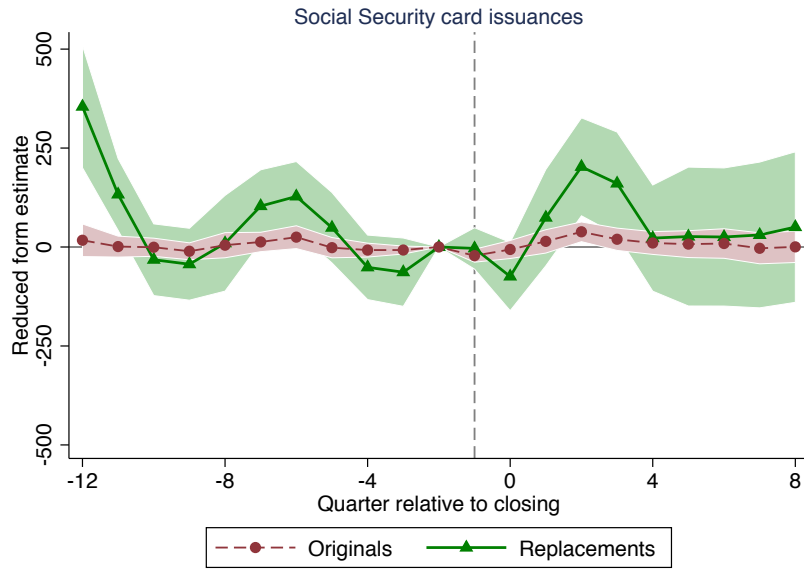
Appendix Figures and Tables

Figure A.9: Map of Field Office Closings and ZIP Classification in New York



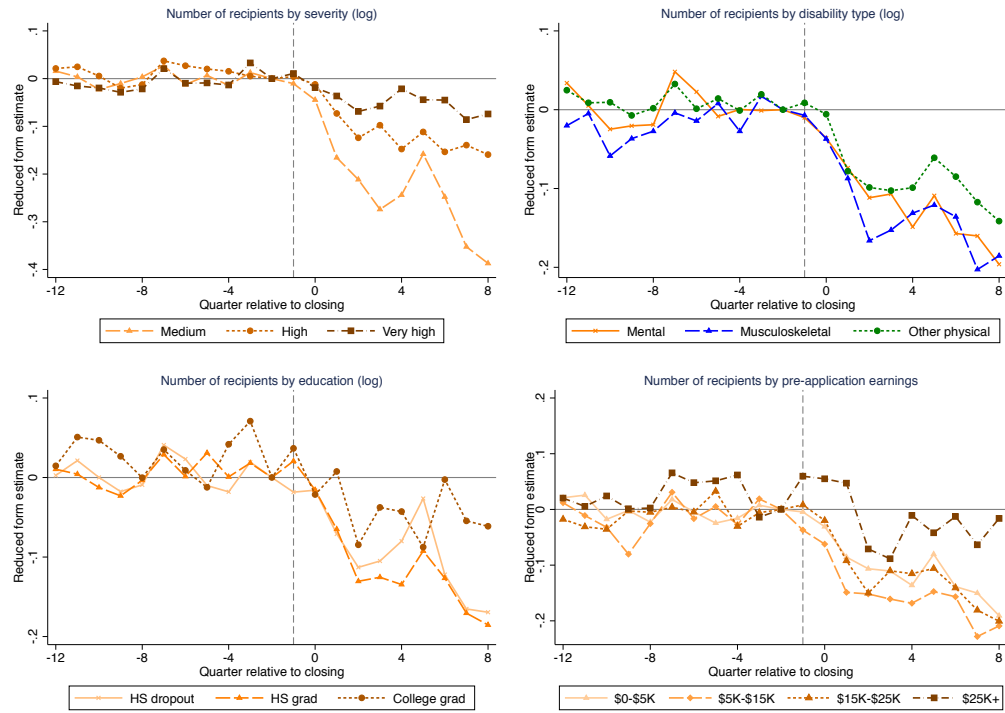
Source: Authors' mapping based on Social Security Administration and Census Bureau data.

Figure A.10: Effect of Closings on Social Security Card Issuances



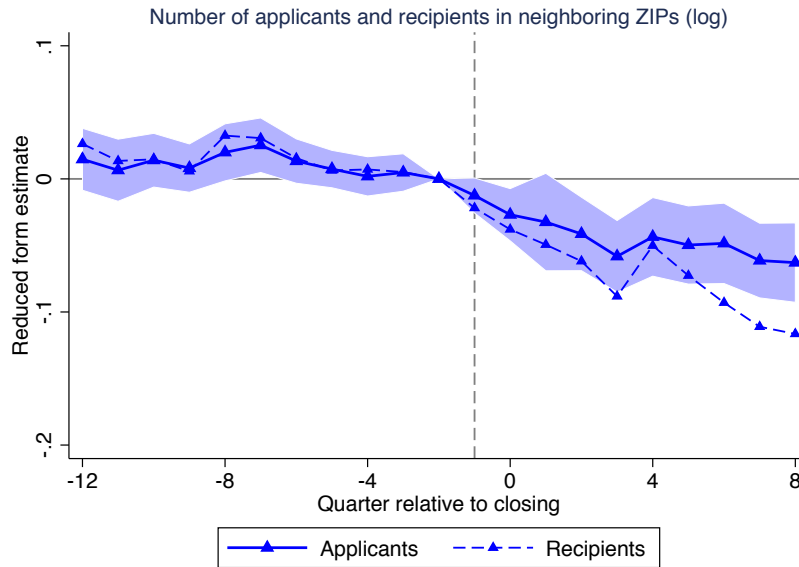
Notes: Figure plots estimates of δ_τ coefficients from equation (1), where the dependent variable is Social Security card issuances (either original or replacement) in a given ZIP and quarter. Shaded regions are 95 percent confidence intervals.

Figure A.11: Effect of Closings on Number of Disability Allowances, by Subgroup



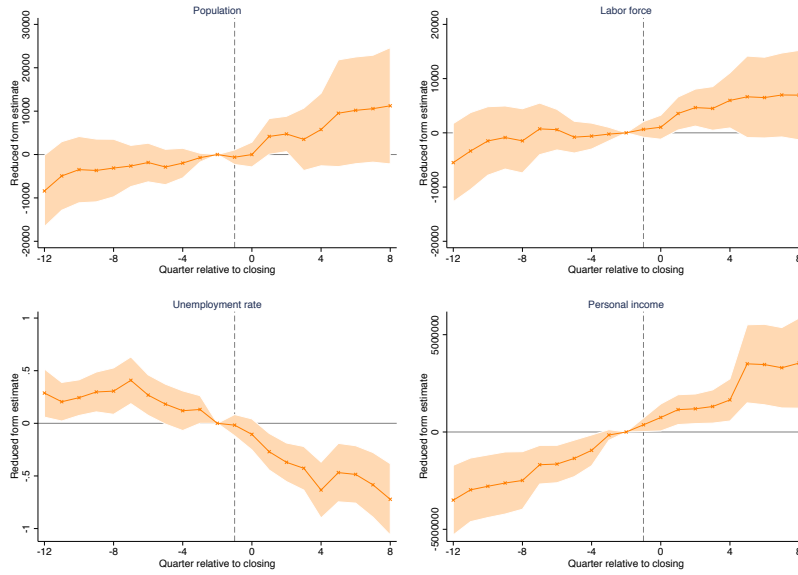
Notes: Figure plots estimates of δ_τ coefficients from equation (1), where the dependent variable is the log number of disability allowances by subgroup. Sample is ZIP codes whose nearest office closes after 2000 and that have an average of at least three disability applications per quarter in the year before the closing. Regressions are weighted by recipient volume in the year before the closing.

Figure A.12: Effect of Closings on Number of Disability Applications and Allowances for Neighboring ZIPs



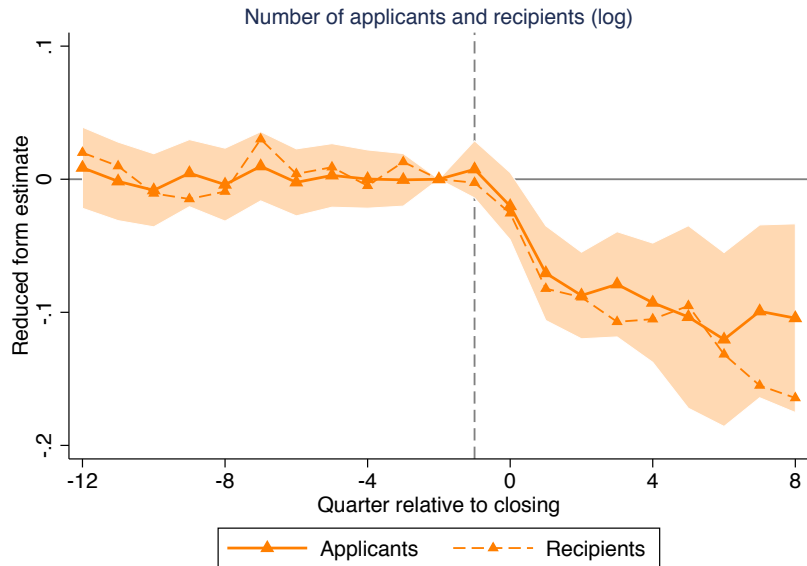
Notes: Figure plots estimates of δ_τ coefficients from equation (1) where the $Treated_i$ indicator is replaced by a $TreatedNbr_i$ indicator. The dependent variable is the log number of disability applications (solid series) or the log number of disability recipients (dashed series). Shaded region is 95 percent confidence interval for disability applications (solid series). Sample is ZIP codes whose nearest office is a neighbor of an office that closes after 2000 and that have an average of at least three disability applications per quarter in the year before the closing. "Neighboring" ZIPs are ZIPs whose nearest office is the second or third closest office of a closing ZIP prior to the closing event. Regressions are weighted by application (recipient) volume in the year before the closing.

Figure A.13: Differential Trends in Macroeconomic Conditions Between Control and Treatment ZIPs



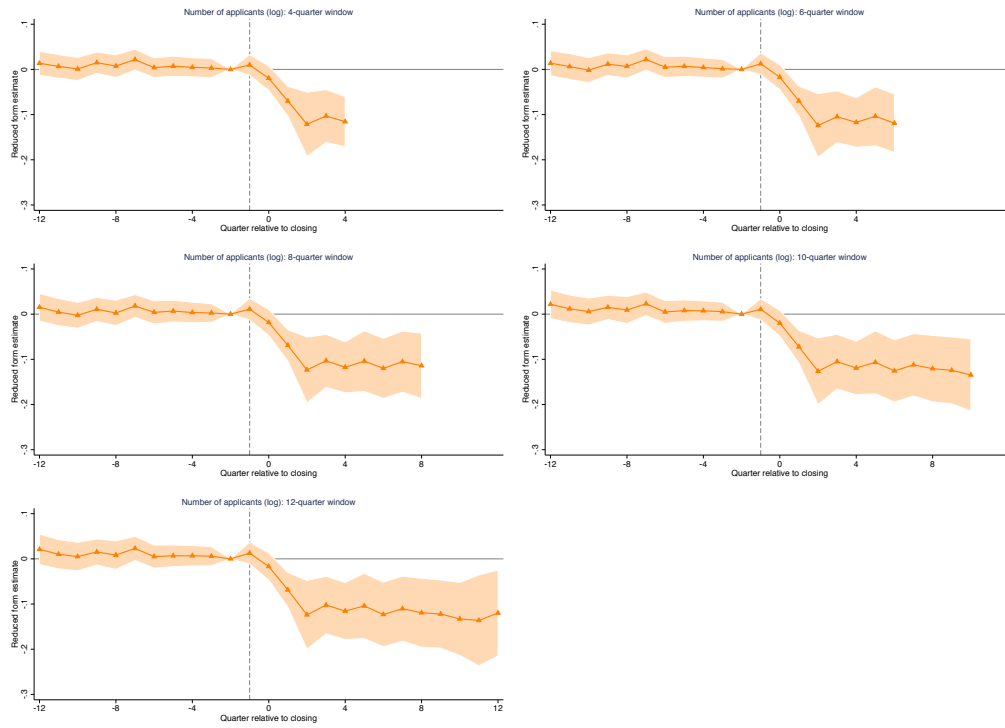
Notes: Figure plots estimates of δ_τ coefficients from equation (1), where the dependent variable is the macroeconomic measure indicated. Shaded region is 95 percent confidence interval. Sample is ZIP codes whose nearest office closes after 2000 and that have an average of at least three disability applications per quarter in the year before the closing. Regressions are weighted by application volume in the year before the closing.

Figure A.14: Effect of Closings on Applications and Allowances, Controlling for Local Economic Conditions



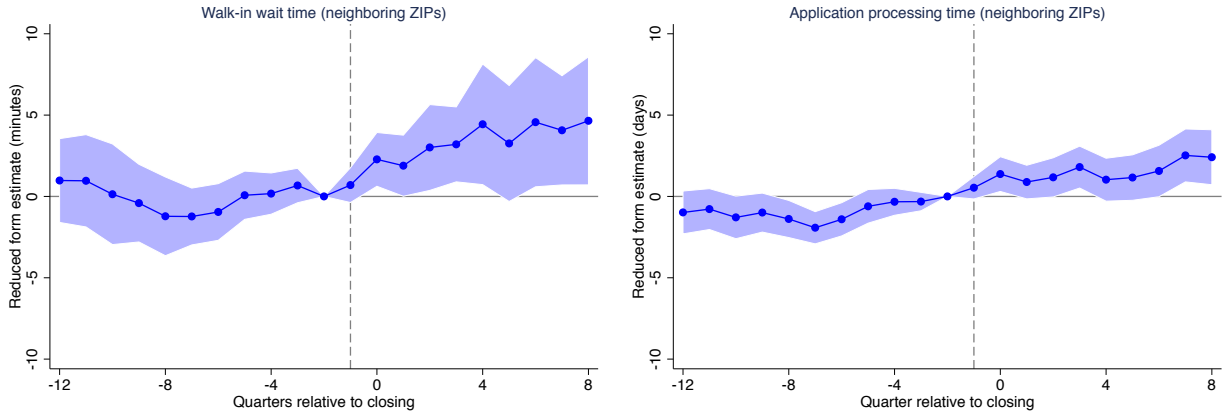
Notes: Figure plots estimates of δ_τ coefficients from equation (1) with local unemployment rate and population controls, where the dependent variable is the log number of disability applications (solid series) or the log number of disability recipients (dashed series). Shaded region is 95 percent confidence interval for disability applications (solid series). Sample is ZIP codes whose nearest office closes after 2000 and that have an average of at least three disability applications per quarter in the year before the closing. Regressions are weighted by application (recipient) volume in the year before the closing.

Figure A.15: Effect of Closings on Applications, Using Different Time Windows



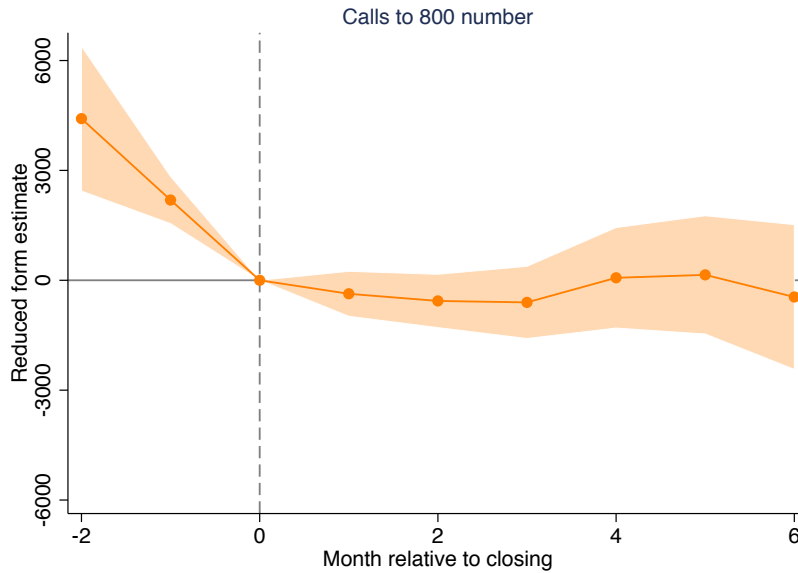
Notes: Figure plots estimates of δ_T coefficients from equation (1) for different minimum lengths of time between the treatment closing and control closings. The dependent variable is the log number of disability applications. Shaded region is 95 percent confidence interval. Sample is ZIP codes whose nearest office closes after 2000 and that have an average of at least three disability applications per quarter in the year before the closing. Regressions are weighted by application volume in the year before the closing.

Figure A.16: Effect of Closings on Measures of Field Office Congestion for Neighboring ZIPs



Notes: Figure plots estimates of δ_τ coefficients from equation (1) where $Treated_{ic}$ is replaced with $TreatedNbr_{ic}$. The dependent variable is average walk-in wait time in minutes at nearest field office (left) or the average number of days it takes the field office to process a disability application (right). Shaded region is 95 percent confidence interval. Sample is ZIP codes whose nearest office is a neighbor of an office that closes after 2000 and that have an average of at least three disability applications per quarter in the year before the closing. "Neighbor" office is defined as an office that is the second or third closest office of a ZIP code whose closest office closes. Regressions are weighted by application volume in the year before the closing.

Figure A.17: Effect of Closings on Calls to Social Security Administration 800 Phone Number



Notes: Figure plots estimates of δ_τ coefficients from equation (6), where the dependent variable is call volume from a given area code in a given month. Shaded region is 95 percent confidence interval.

Table A.7: Summary Statistics of All Closing, Neighboring, and Unaffected ZIP Codes

	Closing ZIPs		Neighboring ZIPs		Unaffected ZIPs		p-values from t-tests		
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Closing vs. neighboring	Closing vs. unaffected	Neighboring vs. unaffected
ZIP characteristics (2000)									
Population	9,178	14,380	9,306	13,933	8,615	12,519	0.675	0.061	0.000
Poverty rate	13%	10%	13%	10%	13%	10%	0.829	0.040	0.001
Median income	\$39,346	\$18,762	\$39,056	\$17,020	\$39,626	\$15,928	0.608	0.466	0.019
Male	50%	4%	50%	4%	50%	4%	0.542	0.019	0.003
Female	50%	4%	50%	4%	50%	4%	0.542	0.019	0.003
White	83%	22%	83%	21%	86%	20%	0.476	0.000	0.000
Black	9%	18%	9%	18%	7%	15%	0.646	0.000	0.000
Hispanic	6%	12%	6%	11%	6%	14%	0.795	0.084	0.006
Other race	2%	13%	2%	11%	1%	14%	0.368	0.009	0.001
Age 0-19	27%	6%	28%	6%	28%	6%	0.003	0.000	0.000
Age 20-44	33%	8%	34%	7%	34%	6%	0.032	0.019	0.630
Age 45-64	24%	6%	24%	5%	24%	5%	0.001	0.007	0.131
Age 65+	15%	5%	15%	6%	14%	6%	0.006	0.000	0.000
HS dropout	20%	12%	20%	11%	22%	13%	0.935	0.000	0.000
HS graduate	34%	12%	34%	11%	35%	11%	0.359	0.000	0.000
Some college	26%	8%	26%	8%	26%	9%	0.004	0.086	0.036
College graduate	20%	16%	19%	14%	18%	13%	0.019	0.000	0.000
Never married	24%	10%	23%	9%	23%	9%	0.084	0.000	0.000
Currently married	58%	11%	58%	11%	59%	11%	0.471	0.000	0.000
Previously married	18%	6%	19%	6%	18%	6%	0.186	0.198	0.000
Walk-in wait time (2005)	7.19	7.53	8.86	9.00	8.85	8.24	0.000	0.000	0.926
Qrtrly. disability apps (2000)	18	36	19	36	17	32	0.114	0.477	0.000
N	1,921		7,550		22,445				

Notes: Table presents summary statistics for all ZIP codes in the United States. Closing ZIPs are ZIPs whose closest office closes. Neighboring ZIPs are ZIPs whose closest office is the second or third closest office of a closing ZIP. Unaffected ZIPs are ZIPs that are neither closing nor neighboring ZIPs. "ZIP characteristics" are calculated from the 2000 Census, "walk-in wait time" from Social Security Administration data (where 2005 is the earliest available year), and "quarterly disability applications" from Social Security Administration data.

Table A.8: Summary Statistics of Treatment and Control ZIPs

	Treatment ZIPs		Control ZIPs		p-values from t-test
	Mean	Std Dev	Mean	Std Dev	
ZIP characteristics (2000)					
Population	14,581	16,186	14,646	16,276	0.923
Poverty rate	14%	10%	14%	10%	0.722
Median income	\$41,759	\$18,828	\$41,883	\$18,566	0.874
Male	49%	3%	49%	3%	0.848
Female	51%	3%	51%	3%	0.848
White	77%	24%	78%	24%	0.628
Black	13%	21%	13%	20%	0.551
Hispanic	7%	14%	8%	14%	0.951
Other race	2%	14%	2%	14%	0.999
Age 0-19	27%	6%	27%	6%	0.794
Age 20-44	35%	7%	35%	7%	0.965
Age 45-64	23%	4%	23%	4%	0.953
Age 65+	14%	5%	14%	5%	0.836
HS dropout	21%	11%	21%	11%	0.489
HS graduate	32%	10%	32%	11%	0.842
Some college	25%	6%	25%	6%	0.987
College graduate	22%	17%	22%	17%	0.733
Never married	26%	9%	26%	9%	0.786
Currently married	55%	10%	55%	10%	0.886
Previously married	19%	5%	19%	5%	0.987
Walk-in wait time (year before closing)	15.17	11.05	12.60	8.38	0.000
Qrtrly. disability apps (year before closing)	41	58	35	49	0.007
N	1,181		1,121		

Notes: Table presents summary statistics for treatment and control ZIP codes, as described in Section 3. Treatment ZIPs are closing ZIPs (ZIPs whose nearest office closes) that experience the current closing, while control ZIPs are closing ZIPs that experience the closing at least two years in the future. Since ZIPs can serve as a control for multiple closings, for control ZIPs we calculate the walk-in wait time and disability application summary statistics by averaging values in the year before the closing across all closings for which that ZIP is a control ZIP. "ZIP characteristics" are calculated from the 2000 Census, "walk-in wait time" from Social Security Administration data (where 2005 is the earliest available year), and "quarterly disability applications" from Social Security Administration data.

Table A.9: P-values from Tests of Statistical Differences Across Subgroups

	Application level	Allowance level
Allowance vs. application		0.0128
Severity		
Low vs. medium	0.0001	N/A
Low vs. high	0.0198	N/A
Low vs. very high	0.0551	N/A
Medium vs. high	0.0047	0.0081
Medium vs. very high	0.0000	0.0000
High vs. very high	0.0000	0.0001
Disability type		
Mental vs. musculoskeletal	0.0058	0.0303
Mental vs. other physical	0.9914	0.0407
Musculoskeletal vs. other physical	0.0078	0.8807
Education		
HS dropout vs. HS grad	0.4181	0.3835
HS dropout vs. college grad	0.0917	0.1305
HS grad vs. college grad	0.1140	0.0041
Age		
18-34 vs. 35-49	0.9764	0.0270
18-34 vs. 50+	0.0967	0.2180
35-49 vs. 50+	0.0628	0.0003

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Table presents p-values of t-tests for differences in estimates in Tables 2 and 3 across subgroups using seemingly unrelated regression. The specifications are given by equation (2) estimated for different subgroups.

Table A.10: Estimates of the Effect of Closings on Log and Level Applications and Allowances by Subgroup

	Applications					Receipt				
	Log estimates		Level estimates			Log estimates		Level estimates		
	Pt. Est.	Std. Err.	Pt. Est.	Std. Err.	Mean	Pt. Est.	Std. Err.	Pt. Est.	Std. Err.	Mean
All	-0.110***	(0.0300)	-12.36**	(4.863)	39.7	-0.133***	(0.0312)	-5.863***	(2.201)	21.7
Severity										
Low	-0.0841**	(0.0322)	-5.598*	(3.032)	18.0	N/A		N/A		
Medium	-0.269***	(0.0518)	-3.387***	(0.834)	6.9	-0.244***	(0.0478)	-2.988***	(0.781)	6.9
High	-0.160***	(0.0393)	-2.973**	(1.342)	8.5	-0.148***	(0.0371)	-2.589**	(1.246)	8.5
Very high	-0.0473	(0.0302)	-0.398	(0.613)	6.2	-0.0407	(0.0286)	-0.286	(0.607)	6.2
Disability type										
Mental	-0.116***	(0.0351)	-4.316**	(1.874)	12.3	-0.151***	(0.0341)	-2.338***	(0.888)	6.9
Musculoskeletal	-0.0654**	(0.0318)	-2.153*	(1.298)	10.2	-0.108***	(0.0358)	-1.100*	(0.635)	5.1
Physical	-0.116***	(0.0309)	-5.887***	(2.192)	17.2	-0.110***	(0.0311)	-2.425**	(1.053)	9.7
Education (years)										
HS dropout	-0.129***	(0.0315)	-3.670***	(1.309)	9.9	-0.123***	(0.0338)	-1.497**	(0.638)	5.1
HS graduate	-0.0879***	(0.0264)	-4.115**	(1.905)	19.4	-0.123***	(0.0298)	-2.304**	(0.913)	10.6
College graduate	-0.0397	(0.0311)	-0.0582	(0.204)	2.4	-0.0507	(0.0317)	-0.126	(0.138)	1.6
Pre-application earnings										
\$0-\$5,000	-0.130***	(0.0332)	-9.365***	(3.243)	18.7	-0.140***	(0.0340)	-3.889***	(1.349)	9.0
\$5,000-\$15,000	-0.101***	(0.0319)	-2.026	(1.340)	8.9	-0.142***	(0.0368)	-1.124*	(0.578)	4.5
\$15,000-\$25,000	-0.0893***	(0.0307)	-0.943**	(0.462)	5.0	-0.116***	(0.0332)	-0.691**	(0.292)	3.1
\$25,000+	-0.0112	(0.0396)	-0.0250	(0.626)	7.0	-0.0451	(0.0342)	-0.165	(0.393)	5.1
Age (years)										
18-34	-0.117***	(0.0350)	-2.991***	(1.125)	7.9	-0.133***	(0.0357)	-0.748**	(0.326)	3.1
35-49	-0.116***	(0.0318)	-3.696***	(1.400)	12.9	-0.185***	(0.0396)	-1.766***	(0.666)	6.1
50+	-0.0882***	(0.0266)	-2.744*	(1.490)	13.1	-0.107***	(0.0290)	-2.113**	(1.018)	9.3

Notes: *** p<0.01, ** p<0.05, * p<0.1. Table presents estimates of the effect of field office closings on log and level applications and allowances by subgroup, specifically estimates of β from equation (2). The "mean" columns report the average for the control group over the post-closing period. Sample is ZIP codes whose nearest office closes after 2000 and that have an average of at least three disability applications per quarter in the year before the closing. Regressions are weighted by application (recipient) volume in the year before the closing. Standard errors in parentheses.

Table A.11: Correlations Across Diagnosis, Severity, and Education Subgroups and Estimates Within Fine Subgroup

Correlations among diagnosis, severity, and education categories

	Diagnosis			Severity			
	Mental	Musc	Other phys	Low	Med	High	V. high
Sev: low	0.00	0.05	-0.05				
Sev: med	-0.10	0.12	-0.02				
Sev: high	0.19	-0.18	-0.01				
Sev: very high	-0.10	-0.01	0.10				
Ed: HS dropout	0.03	-0.01	-0.01	0.04	-0.03	-0.01	-0.01
Ed: HS grad	-0.03	0.03	0.00	-0.01	0.03	0.00	-0.02
Ed: coll grad	0.00	-0.03	0.03	-0.06	0.01	0.02	0.05

Estimates of effect of closings on applications within subgroups

	Diagnosis			Severity			
	Mental	Musc	Other phys	Low	Med	High	V. high
Sev: low	-0.0761*	-0.0286	-0.113***				
	(0.0423)	(0.0312)	(0.0349)				
Sev: med	-0.151***	-0.231***	-0.222***				
	(0.0391)	(0.0508)	(0.0455)				
Sev: high	-0.166***	-0.0497	-0.135***				
	(0.0400)	(0.0351)	(0.0400)				
Sev: very high	-0.0642**	-0.0220	-0.0279				
	(0.0248)	(0.0384)	(0.0318)				
Ed: HS dropout	-0.136***	-0.0788**	-0.122***	-0.124***	-0.192***	-0.124***	-0.00415
	(0.0374)	(0.0333)	(0.0323)	(0.0329)	(0.0434)	(0.0427)	(0.0314)
Ed: HS grad	-0.0807**	-0.0509*	-0.0979***	-0.0551*	-0.236***	-0.122***	-0.0455
	(0.0342)	(0.0306)	(0.0285)	(0.0286)	(0.0487)	(0.0397)	(0.0289)
Ed: coll grad	-0.0113	-0.00728	-0.000960	0.0210	-0.0349*	-0.0243	0.0128
	(0.0199)	(0.0236)	(0.0307)	(0.0236)	(0.0196)	(0.0166)	(0.0206)

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Top half of table presents correlations across severity, diagnosis, and education subgroups. Bottom half of table presents estimates of the effect of field office closings on log applications by fine subgroup (e.g., low severity and high school graduate), specifically estimates of β from equation (2). Sample is ZIP codes whose nearest office closes after 2000 and that have an average of at least three disability applications per quarter in the year before the closing. Regressions are weighted by application volume in the year before the closing. Standard errors in parentheses.

Table A.12: Factors that Predict Office Closings or Timing of Closings

	Office ever closes			Timing of closing		
	2000	2006	2012	2000	2006	2012
Population (2000)	-2.40e-07*** (4.86e-08)	-1.33e-07*** (4.43e-08)	-6.94e-08** (2.98e-08)	7.16e-06* (4.31e-06)	2.47e-07 (3.78e-06)	-7.04e-08 (9.77e-07)
Pop. Density (2000)	2.28e-06 (7.06e-06)	5.18e-06 (7.01e-06)	7.29e-06 (4.90e-06)	0.000183 (0.000130)	9.10e-05* (5.05e-05)	-0.000134*** (3.51e-05)
Applications (previous year)	-1.20e-05*** (2.65e-06)	-4.81e-06*** (1.28e-06)	-9.13e-07 (6.31e-07)	0.000417** (0.000203)	0.000150 (0.000110)	2.60e-05 (2.91e-05)
Processing time (previous year)	0.000286 (0.00106)	0.000794 (0.00105)	0.000599 (0.000814)	-0.0125 (0.0376)	0.00668 (0.0381)	0.00673 (0.0106)
Num. offices < 20 km	0.00394** (0.00175)	0.00340* (0.00174)	-0.000630 (0.000829)	-0.0184 (0.0433)	-0.00691 (0.0231)	0.0557*** (0.0149)
Wait time (previous year)		-0.00155** (0.000763)	0.000587 (0.000812)		0.00671 (0.0517)	0.00151 (0.0228)
Observations	1,331	1,288	1,235	117	80	23

Notes: *** p<0.01, ** p<0.05, * p<0.1. Columns 1-3 present estimates from equation (3) of how observable office characteristics predict the likelihood of closing. The sample is all SSA field offices that are open in the given year, and the dependent variable is whether the office closes. Columns 4-6 present estimates from equation (4) of how observable office characteristics predict the timing of a closing conditional on closing. The sample is all SSA field offices that are open in the given year but will close by 2014, and the dependent variable is the year in which an office closes. Population density is population per square kilometer of the office's service area. Standard errors in parentheses.

Table A.13: Estimates of the Effect of Closings Using Alternative Distance Measures

Distance measure	Applications		Allowances	
	Pt. Est.	Std. Err.	Pt. Est.	Std. Err.
Straight-line	-0.110***	(0.0300)	-0.134***	(0.0312)
Driving time	-0.102***	(0.0298)	-0.128***	(0.0314)
30-km fixed	-0.126***	(0.0380)	-0.142***	(0.0371)
60-km fixed	-0.111***	(0.0302)	-0.131***	(0.0313)
90-km fixed	-0.110***	(0.0301)	-0.133***	(0.0313)

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Table presents estimates of the effect of field office closings on log applications and log allowances, specifically estimates of β from equation (2), using different measures of distance: straight-line distance from ZIP centroid to the closed office, driving time from ZIP centroid to the closed office, and radii of different lengths around the closed office. Sample is ZIP codes whose nearest office closes after 2000 and that have an average of at least three disability applications per quarter in the year before the closing. Regressions are weighted by application (recipient) volume in the year before the closing. Standard errors in parentheses.

Table A.14: Correlations Between Severity and Earnings in the Two Years Before Application

	Average earnings in 2 years before application			
	\$0-\$5K	\$5K-\$15K	\$15K-\$25K	\$25K+
Sev: low	0.14	0.01	-0.06	-0.16
Sev: med	-0.12	0.05	0.06	0.08
Sev: high	0.05	-0.05	-0.02	0.00
Sev: very high	-0.12	-0.02	0.05	0.15

Notes: Table presents correlations between severity and average earnings in the two years before application.

Table A.15: Estimates of the Effect of Closings by Geographic Measures

	Pt. Est.	Std. Err.	N
Population density			
Low (rural)	-0.136***	(0.0463)	348,928
Medium	-0.104***	(0.0288)	254,999
High (urban)	-0.0949***	(0.0232)	417,895
Distance to own office			
Low (< 10 km)	-0.110***	(0.0300)	330,031
Medium (10-30 km)	-0.0972**	(0.0371)	335,560
High (>30 km)	-0.0990**	(0.0419)	297,978
Distance to neighboring office			
Low	-0.105***	(0.0255)	356,618
Medium	-0.0532	(0.0439)	253,683
High	-0.138***	(0.0387)	353,268

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Table presents estimates of the effect of field office closings on log applications and log allowances, specifically estimates of β from equation (2), by different measures of geography. Sample is ZIP codes whose nearest office closes after 2000 and that have an average of at least three disability applications per quarter in the year before the closing. Regressions are weighted by application volume in the year before the closing. Standard errors in parentheses.

Table A.16: Estimates of the Effect of Closings by Measures of Information

	Pt. Est.	Std. Err.	N
Proportion on disability			
Low	-0.0154	(0.0363)	216,908
Medium	-0.122***	(0.0220)	503,747
High	-0.165**	(0.0703)	293,208
Proportion applying for disability			
Low	-0.147***	(0.0556)	298,205
Medium	-0.0902***	(0.0257)	321,127
High	-0.147***	(0.0470)	402,490
Chetty et al. (2013) EITC information measure			
Low	-0.100***	(0.0229)	193,959
Medium	-0.0974*	(0.0506)	466,590
High	-0.120**	(0.0556)	354,347
Num. broadband providers			
Low	-0.125***	(0.0342)	45,075
Medium	-0.114***	(0.0255)	130,758
High	-0.0668***	(0.0193)	182,421
Num. broadband-connected households			
Low	-0.150***	(0.0354)	62,794
Medium	-0.0448	(0.0407)	93,862
High	-0.0721***	(0.0206)	201,598

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Table presents estimates of the effect of field office closings on log applications, specifically estimates of β from equation (2), by potential measures of information. Proportion on disability is the ratio of individuals on SSI or SSDI in a county to the county's population. Number of applications is the fraction of the ZIP's population applying for disability between 1996 and 2000. The Chetty et al. (2013) measure is the amount of bunching of self-employed individuals at EITC kinks, which the authors estimate by ZIP-3 and interpret as a measure of EITC knowledge. Regressions are weighted by application volume in the year before the closing. Standard errors in parentheses.

Table A.17: Estimates of the Effect of Closings on Online Applications by Education Subgroup

	Pt. Est.	Std. Err.
Online applications		
All	0.0710	(0.0565)
High school dropouts	0.00394	(0.0578)
High school graduates	0.0568	(0.0549)
College graduates	0.103***	(0.0331)
Non-online applications		
All	-0.150***	(0.0338)
High school dropouts	-0.161***	(0.0341)
High school graduates	-0.134***	(0.0324)
College graduates	-0.0917**	(0.0401)
N	1,021,822	

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Table presents estimates of the effect of field office closings on log online applications and log non-online applications, specifically estimates of β from equation (2), by education subgroup. Regressions are weighted by application volume in the year before the closing. Standard errors in parentheses.

Table A.18: Estimates of the Effect of Closings on Log Applications by Program

	DI adult			SSI adult			SSI children		
	Pt. Est.	Std. Err.	Cntrl. Ct.	Pt. Est.	Std. Err.	Cntrl. Ct.	Pt. Est.	Std. Err.	Cntrl. Ct.
All	-0.0736***	(0.0245)	20.6	-0.146***	(0.0339)	22.0	-0.146**	(0.0580)	11.4
Severity									
Low	-0.0218	(0.0272)	7.7	-0.133***	(0.0342)	11.9	-0.120*	(0.0651)	4.9
Medium	-0.240***	(0.0476)	5.2	-0.263***	(0.0528)	3.1	-0.0531	(0.0406)	0.5
High	-0.0827**	(0.0351)	3.3	-0.197***	(0.0455)	4.0	-0.169***	(0.0567)	5.5
Very high	-0.0347	(0.0268)	4.3	-0.0357	(0.0343)	3.0	-0.000454	(0.0183)	0.4
Disability type									
Mental	-0.0853***	(0.0291)	4.2	-0.140***	(0.0396)	7.1	-0.149**	(0.0580)	6.9
Musculoskeletal	-0.0351	(0.0273)	6.9	-0.109***	(0.0363)	9.3			
Other physical	-0.0756***	(0.0251)	9.5	-0.157***	(0.0366)	5.7	-0.123**	(0.0566)	4.4
Education (years)									
HS dropout	-0.0874***	(0.0270)	4.5	-0.154***	(0.0354)	8.1			
HS graduate	-0.0657***	(0.0250)	12.5	-0.121***	(0.0285)	11.7			
College graduate	-0.00504	(0.0261)	2.0	-0.0500*	(0.0283)	0.9			
Pre-application earnings									
\$0-\$5,000	-0.0758***	(0.0287)	4.1	-0.156***	(0.0352)	12.7			
\$5,000-\$15,000	-0.0820***	(0.0274)	5.9	-0.134***	(0.0368)	5.2			
\$15,000-\$25,000	-0.0742***	(0.0244)	3.9	-0.0712**	(0.0345)	2.3			
\$25,000+	0.00218	(0.0324)	6.7	-0.0323	(0.0505)	1.8			
Age (years)									
0-9							-0.124**	(0.0572)	7.8
10-17							-0.166***	(0.0580)	3.5
18-34	-0.0753**	(0.0291)	3.5	-0.154***	(0.0384)	6.6			
35-49	-0.0784***	(0.0271)	7.6	-0.159***	(0.0366)	8.7			
50+	-0.0613***	(0.0229)	9.4	-0.124***	(0.0324)	6.6			

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Table presents estimates of the effect of field office closings on log applications by program, specifically estimates of β from equation (2). Sample is ZIP codes whose nearest office closes after 2000 and that have an average of at least three applications in the relevant program per quarter in the year before the closing. Regressions are weighted by application volume in the year before the closing. Standard errors in parentheses.

Table A.19: Estimates of the Effect of Closings on Log Allowances by Program

	DI adult			SSI adult			SSI children		
	Pt. Est.	Std. Err.	Cntrl. Ct.	Pt. Est.	Std. Err.	Cntrl. Ct.	Pt. Est.	Std. Err.	Cntrl. Ct.
All	-0.119***	(0.0274)	12.8	-0.154***	(0.0382)	10.1	-0.127**	(0.0498)	6.5
Severity									
Low		N/A			N/A			N/A	
Medium	-0.216***	(0.0441)	5.2	-0.238***	(0.0496)	3.1	-0.0469	(0.0436)	0.5
High	-0.0792**	(0.0336)	3.3	-0.193***	(0.0450)	4.0	-0.134**	(0.0515)	5.5
Very high	-0.0302	(0.0258)	4.3	-0.0347	(0.0345)	3.0	-0.000551	(0.0198)	0.4
Disability type									
Mental	-0.116***	(0.0288)	2.6	-0.139***	(0.0417)	3.6	-0.152***	(0.0511)	4.2
Musculoskeletal	-0.0945***	(0.0316)	4.0	-0.124***	(0.0432)	2.2			
Other physical	-0.0895***	(0.0262)	6.2	-0.142***	(0.0384)	4.4	-0.0464	(0.0531)	2.3
Education (years)									
HS dropout	-0.0763***	(0.0284)	2.6	-0.139***	(0.0408)	3.7			
HS graduate	-0.124***	(0.0298)	7.8	-0.130***	(0.0332)	5.2			
College graduate	-0.0312	(0.0241)	1.4	-0.0177	(0.0239)	0.5			
Pre-application earnings									
\$0-\$5,000	-0.0818**	(0.0314)	1.8	-0.162***	(0.0384)	5.7			
\$5,000-\$15,000	-0.130***	(0.0332)	3.3	-0.144***	(0.0411)	2.2			
\$15,000-\$25,000	-0.113***	(0.0304)	2.6	-0.0488	(0.0325)	1.2			
\$25,000+	-0.0440	(0.0284)	5.1	-0.0183	(0.0401)	1.0			
Age (years)									
0-9							-0.100**	(0.0505)	4.6
10-17							-0.158***	(0.0496)	1.8
18-34	-0.0636**	(0.0272)	1.5	-0.126***	(0.0406)	2.4			
35-49	-0.159***	(0.0349)	4.2	-0.187***	(0.0448)	3.5			
50+	-0.0891***	(0.0252)	7.1	-0.140***	(0.0388)	4.2			

Notes: *** p<0.01, ** p<0.05, * p<0.1. Table presents estimates of the effect of field office closings on log allowances by program, specifically estimates of β from equation (2). Sample is ZIP codes whose nearest office closes after 2000 and that have an average of at least three applications in the relevant program per quarter in the year before the closing. Regressions are weighted by recipient volume in the year before the closing. Standard errors in parentheses.