

# Recession-Induced Disability Insurance Take-up: Do Ethnic Networks Matter?\*

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## Abstract

We examine the role of ethnic networks in recession-induced SSDI take-up among immigrants in the United States. We show that immigrants from ethnic groups with high take-up rates are more likely to go on disability when jobs become scarce. This effect is concentrated among those people with good or fair levels of self-reported health, suggesting that ethnic networks play a role in driving those with marginal disabilities to apply for SSDI benefits during recessions.

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## **1. Introduction**

The Social Security Disability Insurance (SSDI) program is designed to provide insurance against the risk of being unable to work due to a disability. If everyone with such a disability applied for and ultimately received payments, and only those with sufficiently severe disabilities were awarded benefits, social networks would likely have little impact on SSDI take-up. However, if applying for SSDI is overly complex due to paperwork or eligibility ambiguity, information sharing within social circles may prove important. Moreover, if many SSDI recipients are indeed able to work, stigma within networks may act to discourage work-capable disabled individuals from pursuing SSDI.

In this paper, we focus on ethnic networks among immigrants, using past SSDI take-up within country of origin groups to proxy both for availability of information about SSDI and stigma against take-up for those able to work within networks. Following Furtado et al. (2022) who consider the role of work norms in SSDI participation, we narrow in on decisions of work-capable disabled individuals by focusing on SSDI take-up specifically in response to changing economic conditions. We find that SSDI take-up increases more during economic downturns among immigrants in country of origin groups with high take-up rates. Moreover, this relationship is driven by people with intermediate levels of health.

## **2. Samples and Regression Framework**

### *2.1 Data*

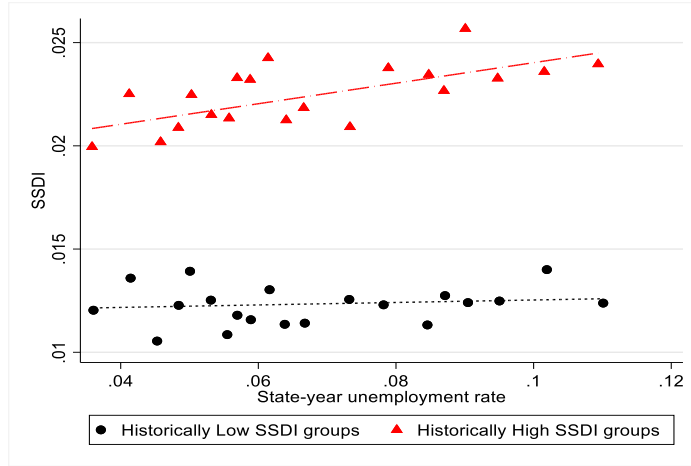
Initially, we use data from the 2001 to 2016 samples of the American Community Survey (ACS), as reported by the Integrated Public Use Microdata Series (IPUMS, Ruggles et al. 2017). Our baseline ACS sample consists of immigrants (naturalized citizens and noncitizens) between the ages of 25 and 61 who have been in the US for at least five years and do not reside in group quarters. The ACS does not directly ask about SSDI income. Instead, the survey asks individual respondents about their Social Security income more broadly, but our sample limitations help to identify SSDI beneficiaries.

We supplement our analysis with data from the Annual Social and Economic Supplement (ASEC) to the March CPS from the years 2001 to 2017 (IPUMS, Flood et al. 2017). Compared to the ACS, the CPS dataset provides a more accurate measure of SSDI income and better health measures. The dependent variable in the CPS sample is defined as whether a person received Social Security income *for a disability* in the previous year.

We measure the strength of a person's social network by the share of that person's origin country who received SSDI payments in the 5 percent sample of the 2000 U.S. Census (Ruggles et al. 2017), before our sample period. We gather data on annual state unemployment rates from the Local Area Unemployment Statistics program within the Bureau of Labor Statistics (BLS).

## 2.2 Graphical intuition

We start by graphically exploring the relationship between unemployment rates and SSDI take-up separately for immigrants from countries with historical high and low SSDI receipt. Figure 1 shows, unsurprisingly, that immigrants from countries in the top 25 quantile (triangles) of historical SSDI receipt are substantially more likely to receive benefits than those in the bottom 25 quantile (dots). More importantly, this difference widens as the unemployment rate increases pointing to the possibility that when jobs are scarce, ethnic networks play a stronger role in determining take-up. This may be because marginally disabled individuals, capable of working, are incentivized to pursue SSDI payments upon job loss, but only those with access to information about the program and little stigma to take-up end up receiving benefits.



Note. ACS data.

### 2.3 Regression specification

The main empirical specification used in the analysis is

$$SSDI_{iost} = \beta_1 UR_{st-1} \times \overline{SSDI}_o + \beta_2' X_{iost} + \gamma_o + \delta_{st} + \varepsilon_{iost} \quad (1)$$

where  $SSDI_{iost}$  is equal to 1 if person  $i$  born in country  $o$ , living in state  $s$  in year  $t$  receives any SSDI income, 0 otherwise. Our right-hand side variable of interest is the interaction between the state unemployment rate,  $UR$ , in the year prior to the survey and the SSDI take-up rate among immigrants from the same country of origin  $\overline{SSDI}$ . Empirically, the  $\beta_1$  parameter is identified from variation across countries of origin (140 origin countries) and state-year unemployment rates. By using a measure of average SSDI take-up from before our sample period, we alleviate concerns related to Manski's reflection problem.

The vector  $X$  controls for a series of individual characteristics including gender, race, marital status, whether there are children in the household, educational attainment, disability level (measured with broad categories of disability in the ACS analysis and subjective health in the CPS analysis), and a full set of age as well as years in the U.S. dummy variables. The state-year fixed effects ( $\delta_{st}$ ) control for all factors affecting all immigrants living in the same state in the same year equally. The country-of-origin fixed effects ( $\gamma_o$ ) absorb any unobserved

tendencies for immigrants from particular backgrounds to take up SSDI.

### **3. Results**

#### *3.1 ACS results*

We start by examining the separate effects of state unemployment rates and historical SSDI take-up rates on individual SSDI take-up. In this specification, we include only state and year fixed effects, rather than the state-year and country-of-origin fixed effects. As seen in column 1 of Table 1, immigrants are more likely to receive SSDI benefits when they come from communities that had high take-up rates in 2000, before our sample period. The effect of unemployment is positive, but not statistically significant. In column 2, we add the interaction of the historical measure of SSDI and the lagged unemployment rate. The estimate of the coefficient on the interaction term is positive and significant, suggesting that ethnic network effects are stronger when jobs are scarce. In column 3, we estimate specification (1), replacing the un-interacted lagged unemployment and historical SSDI variables with state-year fixed effects and country of origin fixed effects, respectively. The coefficient on the interaction term between historical SSDI and lagged unemployment rate is little changed.

The estimate of 2.44 suggests that a percentage point increase in the unemployment rate results in a 0.11 percentage point increase in SSDI take-up for Cape Verdean immigrants, the highest SSDI take-up group (4.3 percent of Cape Verdean immigrants were on disability in the 2000 Census), but no increase for immigrants from Saudi Arabia, the lowest SSDI take-up group (no Saudi Arabians were receiving benefits that year). In sum, despite the rather demanding set of controls we use in our regression analysis, the pattern depicted in Figure 1 persists: Ethnic networks appear especially important during economic downturns when the more marginally disabled are applying for benefits.

We next conduct a placebo-style analysis by taking advantage of the fact that the Social Security retirement program has basically the same work-history and legal status requirements as the SSDI program, but individuals above retirement age need not prove a disability to receive payments. If our results are driven by differences in legal status, work experience, or labor

market conditions by country of origin, we would expect to see especially large increases in Social Security claiming in this sample during bad economic times for immigrants in groups with high average SSDI take-up. If, in contrast, our results are driven by information sharing about SSDI or stigma against leaving the workforce before retirement age (despite only a marginal disability), then average SSDI take-up will not be associated with the impact of business cycles on Social Security retirement claims.

We rerun specification (1) using a sample of immigrants age 62 and above. As can be seen in Column 5 of Table 1, in this sample, the estimate of the coefficient on the interaction between unemployment rates and average SSDI take-up is not statistically different from zero, fairly small in magnitude relative to the mean of the dependent variable and even has a negative sign. This finding suggests that our SSDI results neither are driven by years of experience requirement or documented status, nor by the likelihood of job loss or becoming disabled during bad economic times. Ethnic networks appear to be driving our results for SSDI take-up.

Table 1. Business Cycle and SSDI benefit Receipt (ACS 2001-2016)

Sample:	Working age individuals (25-61)			Retirement age individuals (62+)
	SSDI	SSDI	SSDI	Retirement benefits
Dependent variable:	(1)	(2)	(3)	(4)
Average origin SSDI in 2000 $\times$ Lagged unemployment rate in state-year cells		2.5061* (1.167)	2.4367* (1.053)	-7.0118 (5.831)
Lagged unemployment rate in state-year cells	0.0166 (0.011)	-0.0718** (0.013)		
Average origin SSDI in 2000	0.4109** (0.075)	0.2119* (0.084)		
Observations	2,537,827	2,537,827	2,537,827	618,061
Dependent variable (mean)	0.0144	0.0144	0.0144	0.622

Notes. Other controls included in all columns are outlined in Section 2.4. Columns (1) and (2) include state and year fixed effects. Columns (3) and (4) include state-year and country-of-origin fixed effects. We cluster the standard errors by state and country of origin cells. Levels of significance: \*\* p<0.01, \* p<0.05, + p<0.10.

### 3.2 CPS results

We now turn to Current Population Survey (CPS) data where we observe information on self-reported health of the individual. When we repeat equation 1 using CPS data in column 1 of Table 2, a somewhat larger coefficient on the interaction of historical SSDI and lagged

unemployment rate is found, perhaps because of the better measure of SSDI in the CPS data, but this is insignificant due to the smaller sample size in the CPS. However, this overall effect appears to mask significant variation across health groups. When the regression is repeated separately for each health status group in columns 2-6 of Table 2, a significant estimate of the coefficient on the average SSDI-unemployment rate interaction term is only found for those with good or fair self-reported health and not for those with excellent, very good or poor health. This is consistent with the idea that people in perfect health do not qualify for SSDI, and people with the worst health apply for and are awarded benefits regardless of the state of the economy or average SSDI take-up in their origin groups. These results are consistent with the findings of Maestas et al. (2021) that it is the applicants with marginal disabilities that are most likely to go on disability during bad economic times.

Table 2. Business Cycle and SSDI benefit Receipt by Health Status (CPS 2001-2017)

Sample:	All	Excellent health	Very good health	Good health	Fair health	Poor health
Dependent variable: SSDI						
	(1)	(2)	(3)	(4)	(5)	(6)
Average origin SSDI in 2000 × Lagged unemployment rate in state-year cells	5.6355 (4.031)	-1.8014 (5.198)	2.4007 (4.126)	22.3053** (6.258)	25.1327** (5.391)	-34.2828 (79.648)
Very good health	0.0005 (0.001)					
Good health	0.0058** (0.001)					
Fair health	0.0423** (0.006)					
Poor health	0.1263** (0.011)					
Observations	115,030	30,016	38,009	35,255	8,863	2,485
Dependent variable (mean)	0.0112	0.0019	0.0029	0.0090	0.0489	0.1354

Notes. All specifications also include the same controls as in Table 1. Standard errors are clustered by state and country of origin cells. Levels of significance: \*\* p<0.01, \* p<0.05, + p<0.10.

#### 4. Conclusion

We find that immigrants from groups with high SSDI take-up rates are especially likely to receive SSDI in response to increases in the unemployment rate. This result does not appear to be driven by differences across ethnic groups in terms of eligibility for the program or sensitivity to business cycles. However, those with mid-range subjective health drive our baseline findings. We view these results as evidence that social networks play a role in

determining SSDI take-up. Policy implications, however, depend on whether the significance of ethnic networks is attributable mostly to information sharing or social stigma.

## References

Flood, S., King, M., Ruggles, S., and Warren, J.R. Integrated Public Use Microdata Series, Current Population Survey: Version 5.0 [dataset]. Minneapolis, MN: University of Minnesota, 2017. <https://doi.org/10.18128/D030.V5.0>

Furtado, D., Papps, K.L., and Theodoropoulos, N. (2022) “Who Goes on Disability when Times are Tough? The Role of Work Norms among Immigrants,” *European Economic Review*, Volume 143, 103983.

Maestas, N., Mullen, K.J. and Strand, A. (2021) The Effect of Economic Conditions on the Disability Insurance Program: Evidence from the Great Recession *Journal of Public Economics* 199, 104410.

Ruggles, S., Genadek, K., Goeken, R., Grover, J. and Sobek, M. Integrated Public Use Microdata Series: Version 7.0 [dataset]. Minneapolis: University of Minnesota, 2017. <https://ipums.org/projects/ipums-usa/d010.v7.0>