

LEHD Past, Present and Potential

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2023 Local Employment Dynamics Partnership Virtual Workshop
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Past

Table 4: Matching DER Data to the Business Register

DER Total		Match to		
		Business Register	Single-Unit File	Multi-Unit File
EINs	105,095	95,122 (90.5%)	94,438 (89.8%)	28,923 (27.5%)
Jobs	192,720	172,832 (89.7%)	171,585 (89.0%)	82,546 (42.8%)

Martha Stinson

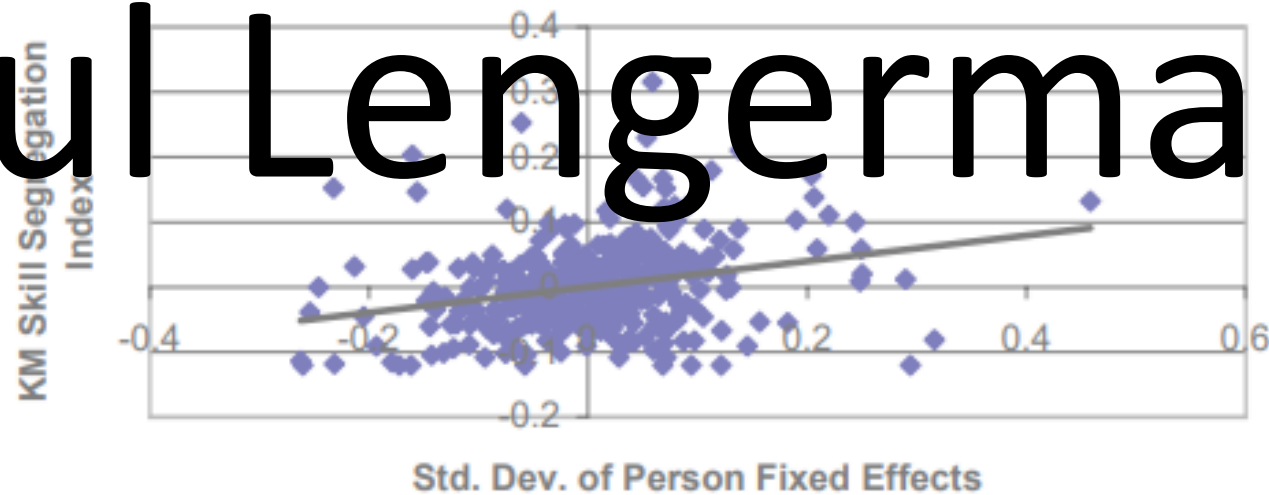
Table 5: DER to Business Register Match Rates by Year

	Year Job first reported in Detailed Earnings Records						
	1995*	1996	1997	1998	1999	2000	Total
Total jobs	51,115	30,905	31,471	31,603	32,078	15,548	192,720
Non-matched Jobs	1,848	598	752	589	553	15,548	22,982
<u>Non-matched Jobs in year</u> <u>Total Jobs in year</u>	3.6	1.9	2.4	1.8	1.7	100	10.3
<u>Non-matched Jobs in year</u> <u>Total Non-matched Jobs</u>	9.3	3.0	3.8	3.0	2.8	78.2	100

*Jobs in this column either began in 1995 or were already in progress by 1995. Jobs in all other columns began in the year listed.

Paul Lengeremann

Figure 1: Skill Segregation & Worker Heterogeneity, Illinois 1998 (3 Digit SIC)



Gary Benedetto

Firm Condition	Worker Condition	Possible Interpretation
<i>Predecessor Category</i>		
1 F1 True: firm exit	W1 True: more than 80% of workers go to successor	ID change or merger/acquisition
2 F1 True: firm exit	W1 False: fewer than 80% of workers go to successor	Merger/acquisition or reason unclear
3 F1 False: firm continues	W1 True: more than 80% of workers go to successor	ID change or merger/acquisition
4 F1 False: firm continues	W1 False: fewer than 80% of workers go to successor	Merger/acquisition or reason unclear
<i>Successor Category</i>		
1 F2 True: firm entry	W2 True: more than 80% of workers come from predecessor	ID change or spin-off/breakout
2 F2 True: firm entry	W2 False: fewer than 80% of workers come from predecessor	Spin-off/Breakout or reason unclear
3 F2 False: firm continues	W2 True: more than 80% of workers come from predecessor	ID change or spin-off/breakout
4 F2 False: firm continues	W2 False: fewer than 80% of workers come from predecessor	Spin-off/Breakout or reason unclear

Table 1.1: Variables Used in Analysis

Demographics	
Education	Based on statistical match to Decennial Census 1990
Non-white	Based on race variable in Census NUMIDENT
Race Missing	Based on race variable in Census NUMIDENT
Sex	Based on sex variable in Census NUMIDENT
Job Characteristics	
ln(Annualized Real Wage)	Annualized wage measure based on quarterly earnings (UI)
Experience	Potential experience measure constructed using observed experience and date of first appearance in sample
Age	Base on date-of-birth measure reported in the Census NUMIDENT
Negative Experience Dummy	Dummy for negative values of potential experience
Firm Characteristics	
ln(Firm Employment)	Natural log of the sum of workers with positive annualized earnings
SIC 2-Digit Group (10-17)	Mining and Construction
SIC 2-Digit Group (20-29)	Manufacturing
SIC 2-Digit Group (30-39)	Manufacturing
SIC 2-Digit Group (40-49)	Transportation, Communications, Electric, Gas, and Sanitary Services
SIC 2-Digit Group (50-59)	Wholesale and Retail Trade
SIC 2-Digit Group (60-67)	Finance, Insurance, and Real Estate
SIC 2-Digit Group (70-79)	Services
SIC 2-Digit Group (80-89)	Professional Services
Time Dummies	
4 Full Quarters Worked 1990	Dummy
4 Full Quarters Worked 1991	Dummy
4 Full Quarters Worked 1992	Dummy
4 Full Quarters Worked 1993	Dummy
4 Full Quarters Worked 1994	Dummy
4 Full Quarters Worked 1995	Dummy
4 Full Quarters Worked 1996	Dummy
4 Full Quarters Worked 1997	Dummy
4 Full Quarters Worked 1998	Dummy
Less Than 4 Full Quarters Worked 1990	Dummy
Less Than 4 Full Quarters Worked 1991	Dummy
Less Than 4 Full Quarters Worked 1992	Dummy
Less Than 4 Full Quarters Worked 1993	Dummy
Less Than 4 Full Quarters Worked 1994	Dummy
Less Than 4 Full Quarters Worked 1995	Dummy
Less Than 4 Full Quarters Worked 1996	Dummy
Less Than 4 Full Quarters Worked 1997	Dummy
Less Than 4 Full Quarters Worked 1998	Dummy
Discontinuous Employment Dummy	Dummy
0 Full Quarters Worked	Dummy
1 Full Quarters Worked	Dummy
2 Full Quarters Worked	Dummy
3 Full Quarters Worked	Dummy
4 Full Quarters Worked	Dummy
State Dummies	
State 1	Dummy
State 2	Dummy
State 3	Dummy

Bryce Stephens

Simon Woodcock

Table 1.1: Properties of Connected Groups of Workers and Firms

	Full Analysis Sample ^a	Dense Sample 1 ^b	Dense Sample 2 ^b	Simple Random Sample ^c
Number of Groups	4,735	1,147	1,087	9,427
Number of Workers	15,305,508	92,539	90,500	49,200
Number of Firms	73,206	7,427	7,551	10,014
Number of Worker-Firm Matches	15,305,508	92,539	90,500	93,182
Number of Matches in Smallest Group	5	5	5	1
Proportion of Matches in:				
Largest Group	99.06	67.25	68.82	59.37
Second Largest Group	0.0006	24.70	22.68	20.30
Third Largest Group	0.0003	0.04	0.04	0.06
Groups containing 5 or more matches	100	100	100	84.44
Groups containing only 1 match	0	0	0	5.50

^a Results combined across three completed data implicates.

^b One percent dense random samples of workers employed in 1997, drawn according to the dense sampling algorithm in Appendix 1.C. Results are combined across three completed data implicates.

^c One percent simple random sample of workers employed in 1997. Results are from one completed data implicate.

Table 2: Summary Statistics

Panel A

	Data sample	Number of obs.	Mean	Standard Deviation
Computer Inv. per worker (\$1000)	1992 ASM X UI Wage	8339	0.2819	1.4539
Computer Inv. per worker (\$1000, weighted)	1992 ASM X UI Wage	8339	0.7313	1.6881
Computer Inv. /Machinery Inv.	1992 ASM X UI Wage	6835	0.1110	0.2272
Computer Inv. /Machinery Inv. (weighted)	1992 ASM X UI Wage	6835	0.1261	0.1802
1991 county skill, $\theta_i^{>75}$	UI Wage	184	0.1957	0.0476
1991 county skill, θ_i^{mn}	UI Wage	184	-0.2065	0.1143
1991 estimated firm effect	UI Wage	916,896	-0.0113	0.1179
1991 firm skill, $\theta_j^{>75}$	UI Wage	916,896	0.2268	0.2943
1991 firm skill, θ_j^{mn}	UI Wage	916,896	-0.1131	0.6473

Panel B

1991 county skill, $\theta_i^{>75}$	UI Wage	184	0.1957	0.0476
1991 county skill, $\theta_i^{>75}$ (matched CI/MI sample)	UI Wage X 1992 ASM	6835	0.2471	0.0407
1991 county skill, $\theta_i^{>75}$ (weighted, matched CI/MI sample)	UI Wage X 1992 ASM	6835	0.2497	0.0399
1991 county skill, $\theta_i^{>75}$ (matched CI/EMP sample)	UI Wage X 1992 ASM	8339	0.2478	0.0400
1991 county skill, $\theta_i^{>75}$ (weighted, matched CI/EMP sample)	UI Wage X 1992 ASM	8339	0.2498	0.0397

Nicole Nestoriak

Andrew Green

Kevin McKinney

Lars Vilhuber

Table 2.1: Distribution of Ethnicity/Place of Birth for the Residential and Workforce Samples

Place of Birth	Proportion of Total Sample	Proportion of Total Work Sample	Proportion of each POB's population in both
Africa	0.005	0.006	0.819
Caribbean	0.006	0.006	0.784
Central America	0.009	0.009	0.755
Central Asia	0.005	0.004	0.613
Middle East/N. Africa	0.008	0.007	0.694
Oceania	0.001	0.001	0.758
Socialist Europe	0.006	0.006	0.687
South America	0.018	0.018	0.766
Southeast Asia	0.008	0.007	0.661
Western Europe	0.012	0.011	0.711
Asian N.H. U.S.-born	0.009	0.010	0.797
Black N.H. U.S.-born	0.106	0.101	0.728
Hispanic U.S.-born	0.080	0.083	0.797
Other N.H. U.S.-born	0.009	0.010	0.784
White N.H. U.S.-born	0.489	0.506	0.796
Canada	0.004	0.004	0.773
China	0.008	0.007	0.694
Colombia	0.007	0.007	0.700
Cuba	0.010	0.015	0.718
Dominican Rep.	0.012	0.011	0.694
El Salvador	0.010	0.010	0.772
Former U.S.S.R.	0.008	0.008	0.719
Germany	0.005	0.004	0.726
Guatemala	0.005	0.005	0.757
Haiti	0.006	0.006	0.784
India	0.010	0.010	0.785
Iran	0.004	0.003	0.718
Italy	0.006	0.005	0.650
Jamaica	0.009	0.009	0.814
Japan	0.003	0.003	0.691
Mexico	0.057	0.059	0.739
Philippines	0.013	0.014	0.821
Poland	0.006	0.006	0.732
Puerto Rico	0.015	0.012	0.613
South Korea	0.007	0.007	0.718
Taiwan	0.005	0.005	0.728
United Kingdom	0.005	0.005	0.827
Vietnam	0.008	0.007	0.715
Total	30,380,515	23,378,773	0.770

Liliana Sousa

Source: Author's calculations using the 2000 U.S. Census of Population and Housing 1-in-6 sample and the LEHD Employer Characteristics File and Employment History File. The U.S.-born population is reported by racial/ethnic group where N.H. designates non-Hispanic ethnicity.

Table 2.2: Firm-Level Labor Supply Elasticities

Model	ϵ_R^E	ϵ_R^N	ϵ_S^E	ϵ_S^N	ϵ
Male Elasticities					
No Controls	.47	.11	-.47	-.62	.96
Full Model	.54	.13	-.54	-.7	1.09
Female Elasticities					
No Controls	.39	.09	-.39	-.63	.83
Full Model	.45	.1	-.45	-.7	.94

The first row in each model represents estimates from equation (4) where the only regressor in each model is log earnings. The second row estimates the same equations, and includes age, age-squared, firm size, along with indicator variables for nonwhite, Hispanic, completing a high school diploma, some college, and college degree or greater, and year effects. The first four columns report the average firm-level elasticities of recruitment from employment and nonemployment, and the separation elasticities to employment and nonemployment respectively. The final column combines these elasticities, along with the calculated shares of separations/recruits to/from employment, separation rates, and growth rates to obtain the labor supply elasticity facing the firm.

Doug Webber

TABLE 1.8b: LEHD sample summary statistics

Distribution over:			
NAICS sector		Race	
	Percent		Percent
Agriculture (11)	1.85	White	83.3
Mining (21)	0.54	Black	4.47
Utilities (22)	2.41	U.S. Indian or Alaskan Native	0.91
Construction (23)	7.14	Asian	4.55
Manufacturing (31-33)	26.03	Pacific Islander	0.18
Wholesale Trade (42)	6.27	Two or more	6.6
Retail Trade (44-45)	7.84		
Transportation and Warehousing (48-49)	5.13		
Information (51)	2.42		
Finance and Insurance (52)	2.26		
Real Estate (53)	0.94		
Professional Services (54)	3.7		
Management (55)	1.04		
Administrative (56)	1.84		
Educational Services (61)	10.3		
Health Care and Social Assistance (62)	3.99		
Arts, Entertainment, and Recreation (71)	1.02		
Accommodation and Food Services (72)	1.8		
Other Services (81)	2.24		
Public Administration (92)	11.23		
Education categories		State	
	Percent		Percent
No school	1.02	California	31.6
Nursery to 4th grade	0.57	Colorado	4.7
5th or 6th grade	1.64	Idaho	1.83
7th or 8th grade	1.17	Illinois	19.02
9th grade	1.18	Indiana	3.65
10th grade	1.41	Kansas	4.78
11th grade	1.56	North Carolina	7.73
12th grade, no diploma	2.72	Oregon	4.61
High school graduate	26.22	Washington	7.28
< 1 year of college	7.77	Wisconsin	14.81
1+ years of college	16.55		
Associate degree	8.61		
Bachelor's degree	18.64		
Master's degree	7.27		
Professional degree	1.89		
Doctorate degree	1.79		

Mike Strain

Ian Schmutte

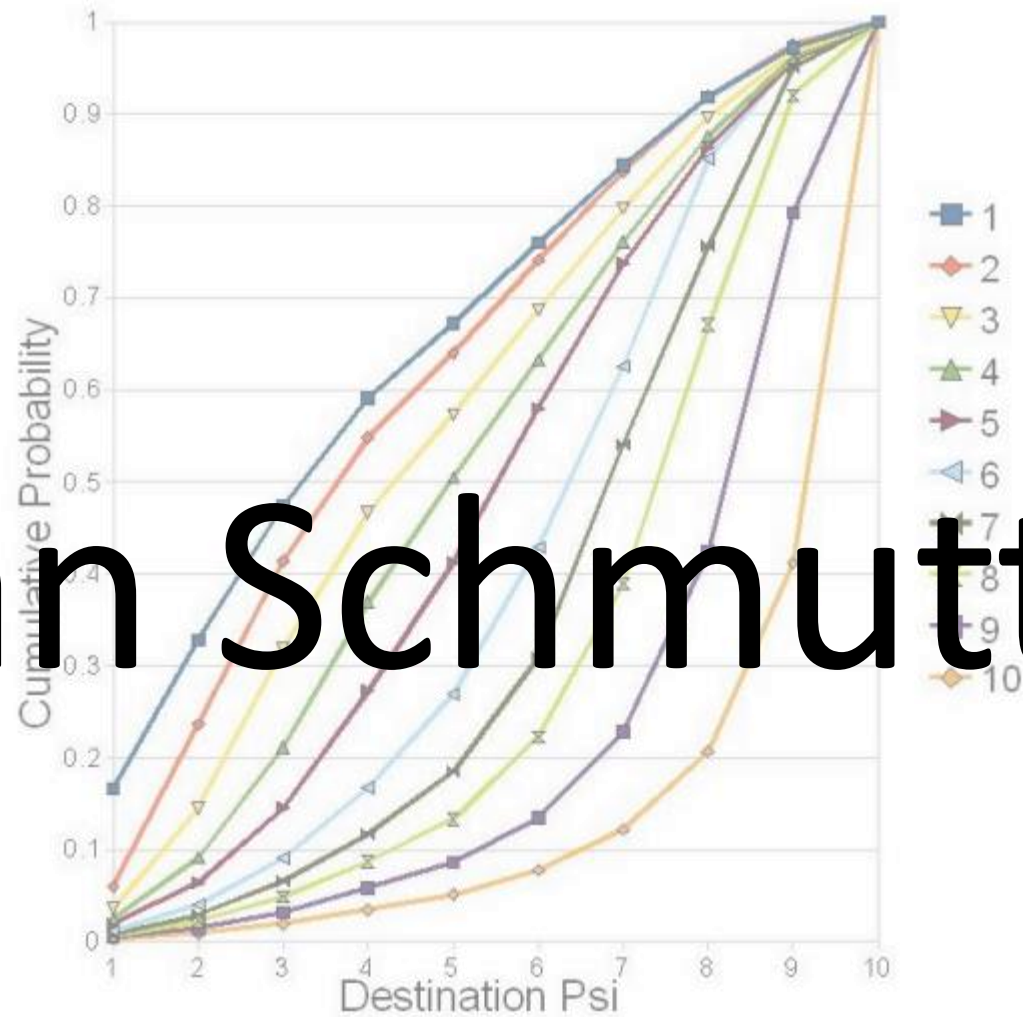


Figure 2.1: Cumulative probability of transition to each decile of the wage premium (ψ) distribution, by decile of origin

Present

Longitudinal Employer-Household Dynamics

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- Research
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Applications

- J2J Explorer
- LED Extraction Tool
- OnTheMap
 - OnTheMap for Emergency Management
- PSEO Explorer
- QWI Explorer
- VEO Explorer

Useful Links

- Center for Economic Studies
- J2J Data
- LODES Data
- PSEO Data
- QWI Data
- VEO Data
- LED Workshop

Contact Information

Email us:

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[LODES/OnTheMap](#)

[QWI/QWI Explorer](#)

[J2J/J2J Explorer](#)

or

Census Call Center: [301-763-INFO \(4636\)](#) or [800-923-8282](#)

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Veteran Outcomes Experimental Data Released

The U.S. Census Bureau announces the release of experimental Veteran Employment Outcomes (VEO) statistics. These tabulations show earnings and employment outcomes for U.S. Army veterans one, five, and 10 years after discharge, by military occupation, rank, demographics, industry and geography of employment. VEO data can be accessed via [VEO Explorer](#), an interactive data tool.

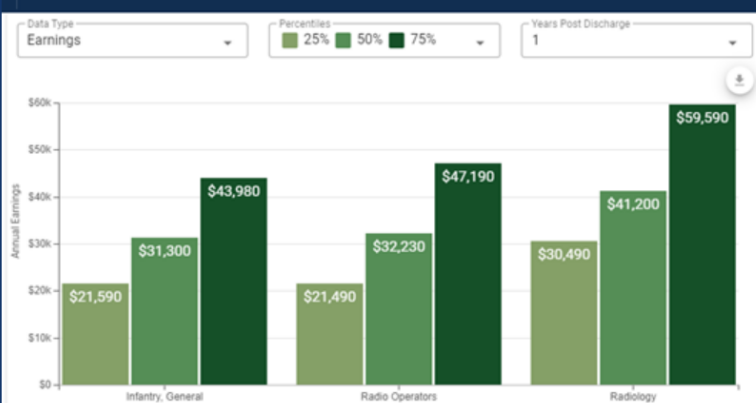
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Veteran Employment Outcomes Explorer

LEHD HOME



What's New?

- 03/14/23: [Final Agenda and Teams Links Set for 2023 LED Partnership Workshop](#)
- 01/25/23: [Keynote Speaker Announced and Registration Now Available for the 2023 LED Partnership Virtual Workshop](#)
- 12/14/22: [Call for Workshop Presentations for the 2023 LED Partnership Virtual Workshop](#)
- 12/08/22: [Save the Date - 2023 LED Partnership Virtual Workshop Scheduled for March 28-30](#)

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About Us

The Longitudinal Employer-Household Dynamics (LEHD) program is part of the [Center for Economic Studies](#) at the [U.S. Census Bureau](#). The LEHD program produces cost effective, public-use information combining federal, state and Census Bureau data on employers and employees under the [Local Employment Dynamics \(LED\) Partnership](#). State and local authorities increasingly need detailed local information about their economies to make informed decisions. The LED Partnership works to fill critical data gaps and provide indicators needed by state and local authorities.

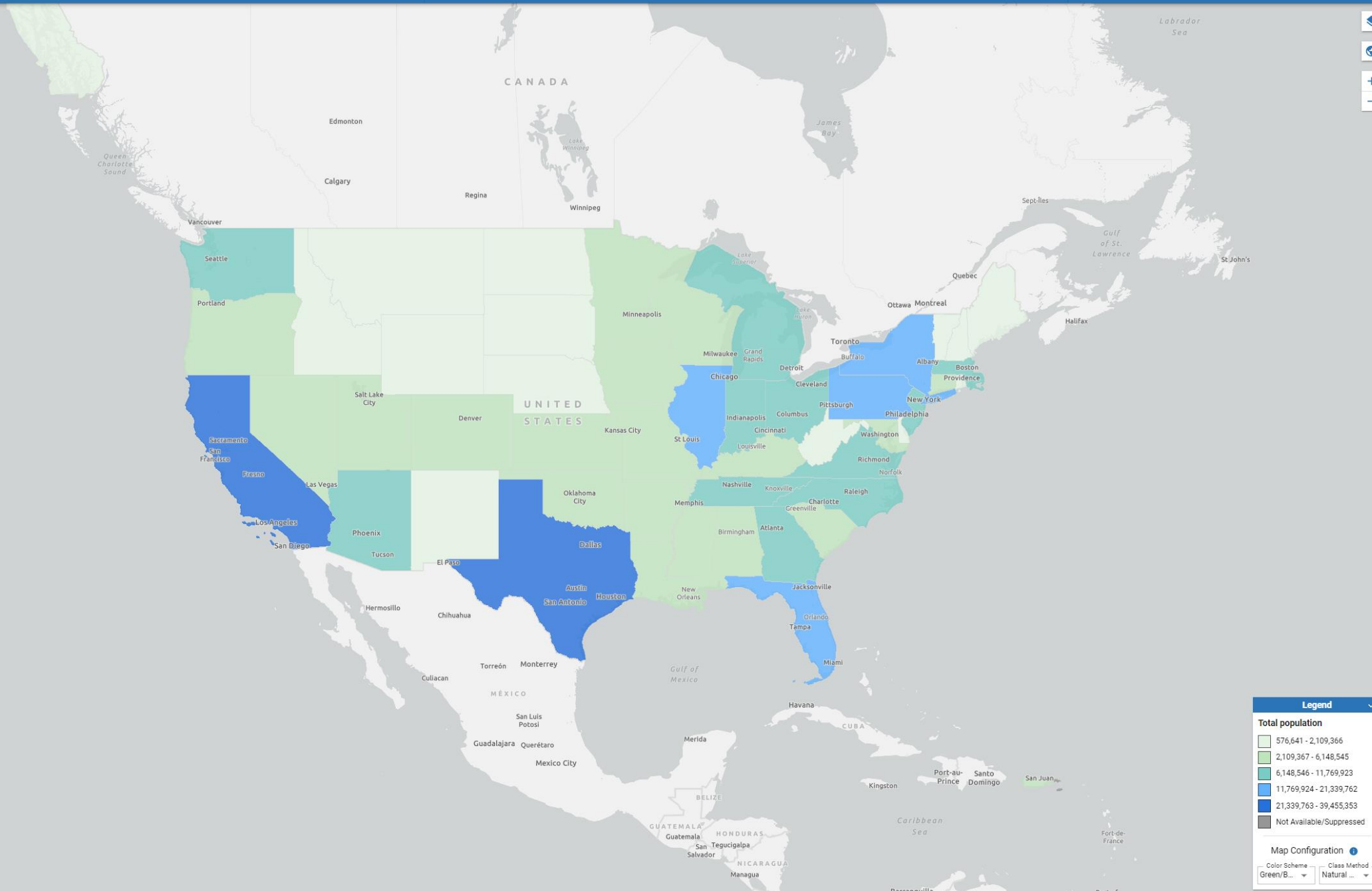
Under the LED Partnership, states agree to share Unemployment Insurance earnings data and the Quarterly Census of Employment and Wages (QCEW) data with the Census Bureau. The LEHD program combines these administrative data, additional administrative data and data from censuses and surveys. From these data, the program creates statistics on employment, earnings, and job flows at detailed levels of geography and industry and for different demographic groups. In addition, the LEHD program uses these data to create partially synthetic data on workers' residential patterns.

All fifty states, the District of Columbia, the Commonwealth of Puerto Rico, and the U.S. Virgin Islands may participate in the LED Partnership. Composition of the LED Partnership can vary as each eligible member determines their participation and/or navigates the agreement process. The [LED Partnership Map](#) provides the most current LED Partnership status.

The LEHD program staff includes geographers, programmers, and economists. Our mission is to provide new dynamic information on workers, employers, and jobs with state-

Potential

Search for a location
State Metro County City/Town ZIP Code Tract



Legend
Total population
576,641 - 2,109,366
2,109,367 - 6,148,545
6,148,546 - 11,769,923
11,769,924 - 21,339,762
21,339,763 - 39,455,353
Not Available/Suppressed
Map Configuration
Color Scheme: Green/B...
Class Method: Natural ...

Region View

Select a geography



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Community Resilience Estimates

March 03, 2022



The Community Resilience Estimates track how at-risk every neighborhood in the United States is to the impacts of a disaster. The Community Resilience Estimates use American Community Survey microdata and Population Estimates Program data to measure the capacity of individuals and households to absorb the external stresses of the impacts of a disaster.

- **API Call:** api.census.gov/data/2019/cre
- **Examples and Supported Geographies:** api.census.gov/data/2019/cre.html
- **Variables:** api.census.gov/data/2019/cre/variables.html
- **Example Call:** `api.census.gov/data/2019/cre?get=NAME,PRED12_M,PRED3_M,PRED3_E,PRED0_M,PRED12_E,POPUNI,PRED0_E&for=state:26&key=YOUR_KEY_GOES_HERE`

Related Information

Community Resilience Estimates

The Census Bureau's CRE provide an easily understood metric for how at-risk every neighborhood in the United States is to the impacts of COVID-19. [>](#)

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