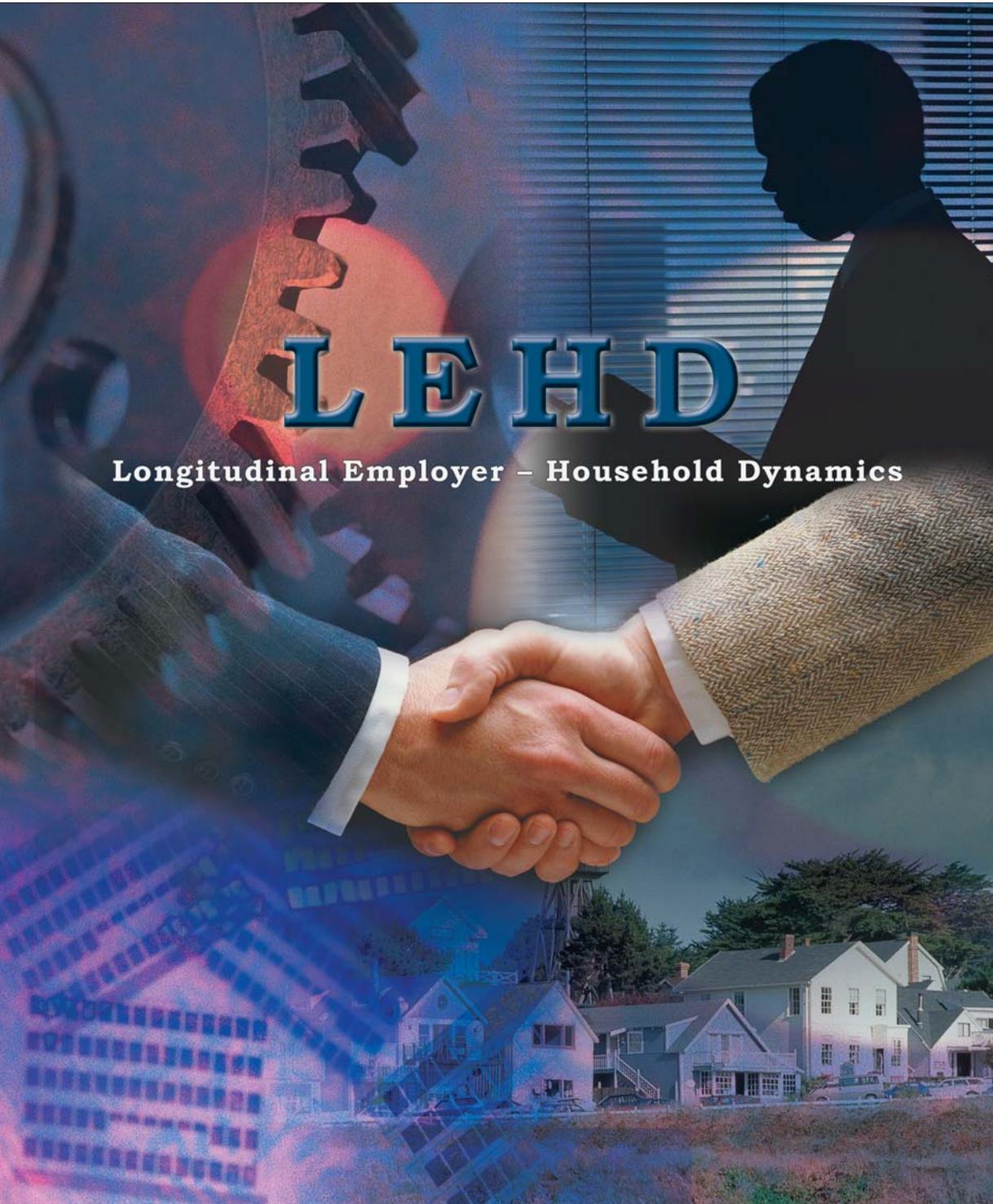


Filling Data Gaps

The LEHD State Partnership



LEHD

Longitudinal Employer - Household Dynamics

U S C E N S U S B U R E A U

Helping You Make Informed Decisions • 1902-2002

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU



What Is the LEHD/State Partnership?

The Longitudinal Employer – Household Dynamics (LEHD) program is an innovative new state/federal partnership between the Census Bureau and ten states (CA, FL, IL, MD, MN, NC, NJ, OR, PA, and TX). Both sides gain from this partnership. States fulfill their mandate of providing high quality local labor market information to their customers. The Census Bureau uses state unemployment insurance (UI) wage record and ES202 data to fulfill its Title 13 mandate: improving the Census Bureau's economic and demographic censuses, surveys, and intercensal population estimates. The Memoranda of Understanding (MOU) between the Census Bureau and the state partners specify that this is a voluntary partnership. Research beyond that specified in the MOU must have the express written authorization of the state data custodian.

States receive three key products from the Census Bureau: (1) quarterly workforce indicators about the state economy at detailed industry and geography, (2) enhanced UI wage records, and (3) information about successor/predecessor firms:

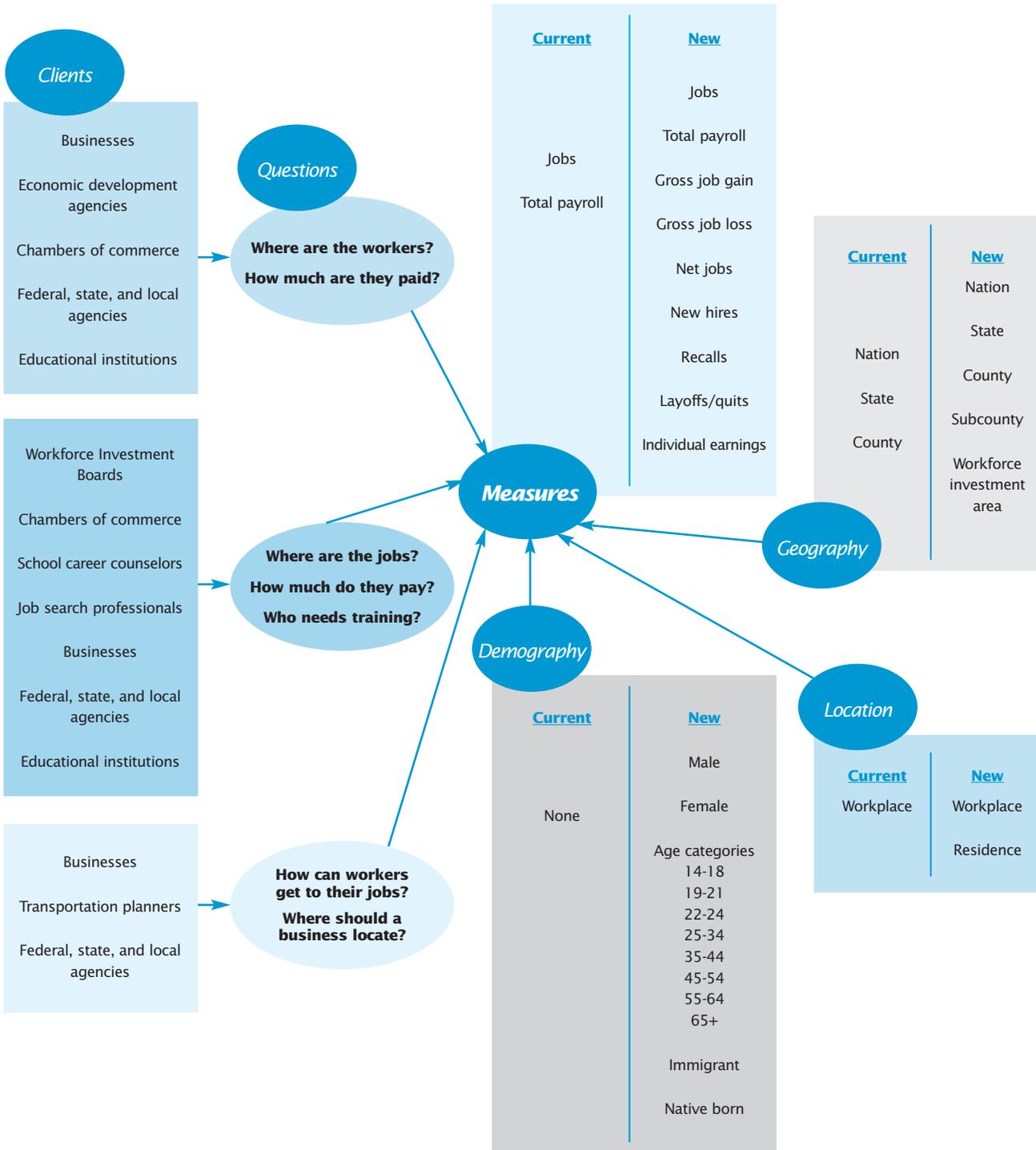
Quarterly Workforce Indicators

States receive 29 indicators for each county, for each industry, for each quarter for which they provide data. These indicators include:

- Measures of job gain and loss for different types of workers – so that economic development agencies know where jobs are created and for whom.
- Measures of hires and layoffs for different types of workers – so that Workforce Investment Boards know what skills to provide.
- Measures of employment by where people work and where they live – so that transportation planners know where roads and public transportation should be located to reduce congestion and pollution, while improving emergency evacuation routes, and businesses know where to locate their establishments and attract workers.
- Measures of earnings by type of worker – so that job search professionals can provide information on job location decisions and career counselors can tell students where to get jobs.



Quarterly Workforce Indicators



Quarterly Workforce Indicators — What They Are

1. Total Employment (for example, Texas and North Carolina Temporary Help Industry)
 - A. Beginning of period
 - B. End of period
2. Change in Employment (for example, California Health Care Industry)
 - A. Job creation¹
 - B. Job destruction¹
 - C. Net job change¹
3. Turnover (for example, Education Industry in Miami/Dade County, Florida)
 - A. Accessions¹
 - New hires¹
 - Recalls¹
 - B. Separations¹
4. Earnings (for example, High Tech Industry in Montgomery/Frederick Counties, Maryland)
 - A. All employees¹
 - B. Accessions¹
 - C. Separations¹
 - D. New hires¹
5. Change in Earnings
 - A. Accessions¹
 - New hires¹
 - Recalls¹
 - B. Separations¹

Disaggregated by:
Nine Age Categories –
14-18, 19-21, 22-24, 25-34, 35-44, 45-54, 55-64, 65+, All

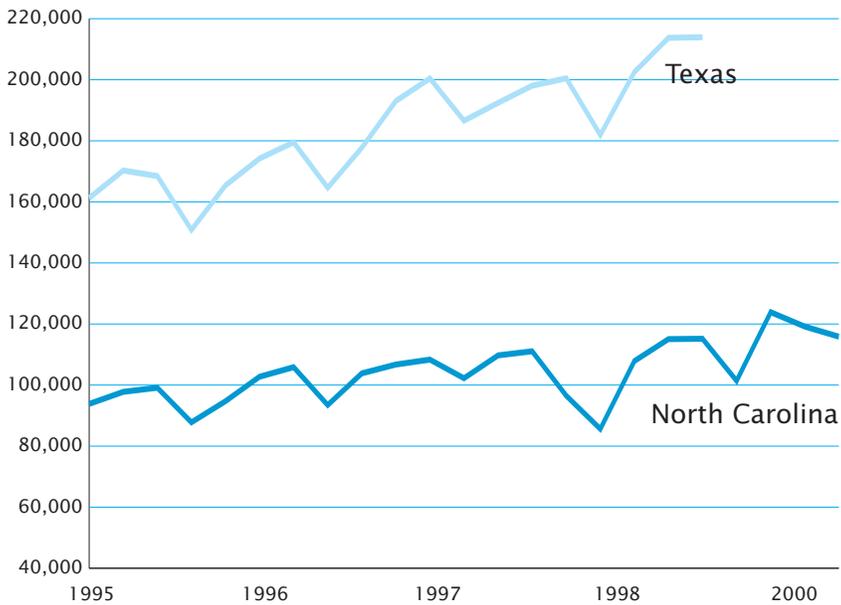
Gender –
Men, Women, All

¹These series are also available by the degree of workforce attachment.

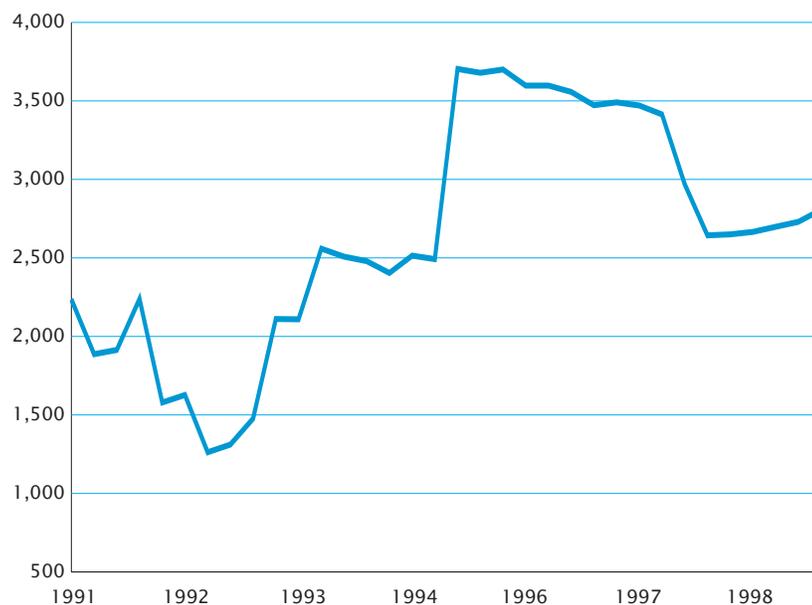


Quarterly Workforce Indicators — What Was Available Before LEHD

Employment in the Temporary Help Industry in Texas and North Carolina



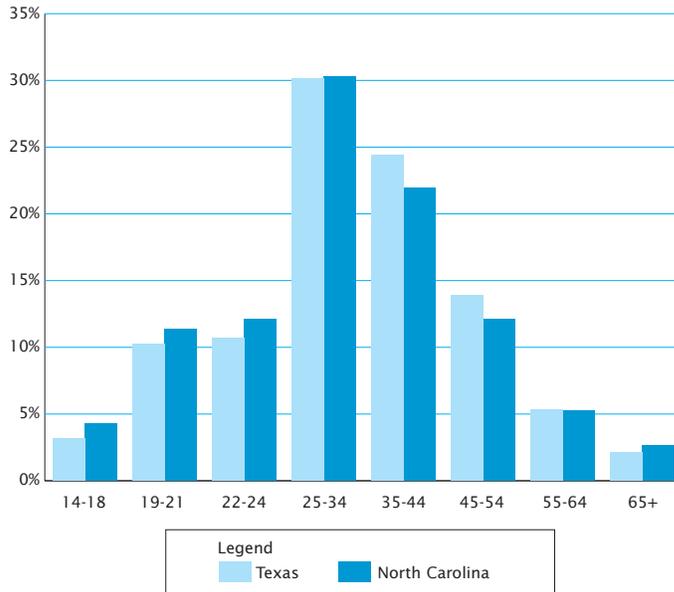
Employment Growth in High Technology Industries in Montgomery and Frederick Counties, Maryland



Quarterly Workforce Indicators — What LEHD Adds

1. Total Employment: Example

Who Works in the Temporary Help Industry?



Why We Care

- Temporary help – fastest growing employment sector
- One-fifth the size of manufacturing
- Major input is labor, but no information available about the workforce

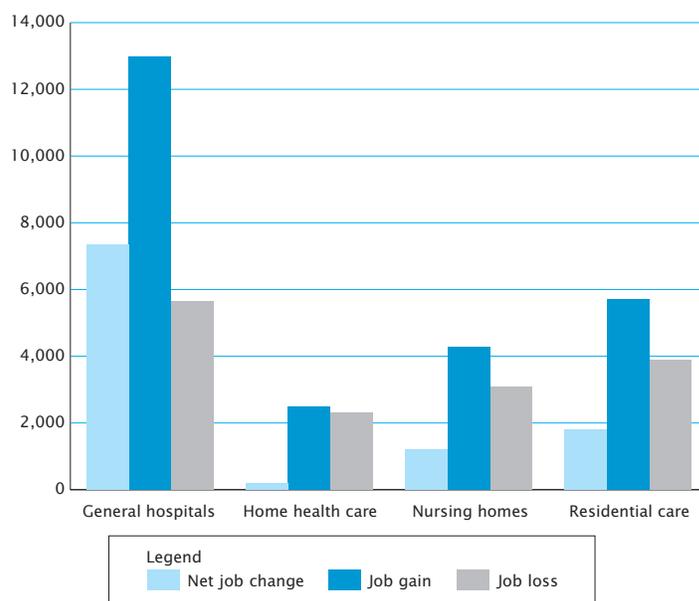
Key Clients

- Labor market information agencies
- Workforce investment boards

Source: Texas Workforce Commission, North Carolina Department of Employment Security, LEHD Program

2. Change in Employment

Job Gains and Job Losses in the California Health Care Industry



Why We Care

- Aging population
- Labor – key input of production
- Quick indicator of shift in demand – change in employment between hospitals and nursing homes

Key Clients

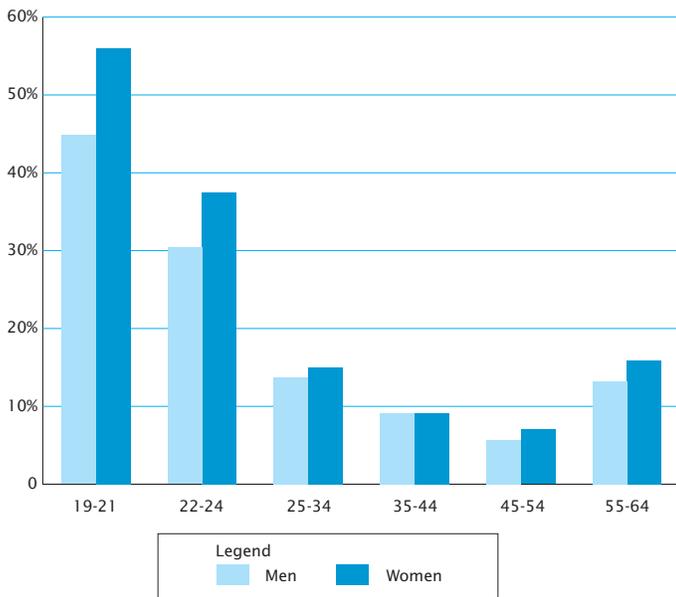
- Local businesses
- Caregiver training initiative
- California Department of Economic Development

Source: California Employment Development Department LEHD Program

Quarterly Workforce Indicators — What LEHD Adds

3. Turnover: Example

Turnover Rates for Workers in Elementary/Secondary Education in Miami/Dade County, Florida



Why We Care

- Governor Bush mandated statewide performance measures
- Little data for counties about turnover, earnings changes, job gains and losses

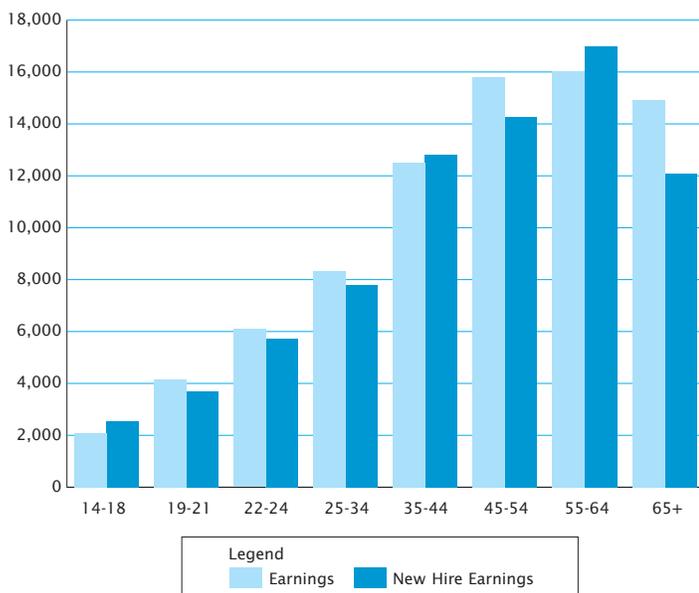
Key Clients

- State legislature
- Florida Department of Education

Source: Florida Agency for Workforce Innovation Florida Department of Education; LEHD Program

4. Earnings: Example

Earnings of All Workers and Earnings of New Hires in High Technology Industries in Montgomery and Frederick Counties, Maryland



Why We Care

- Volatile industry
- Engine of job growth
- Labor is a key input that is important for competitiveness

Key Clients

- High technology businesses hiring workers
- Workers looking for high technology jobs
- Maryland Department of Business and Economics

Source: Maryland Department of Labor, Licensing and Regulation; LEHD Program

Other LEHD Products — Edited Wage Records

State partners receive edited wage record data and edited individual employment histories that are created without using any confidential Census Bureau data. The editing is based on name-matching technology developed at the Census Bureau. The process is crucially dependent on the name information received with state wage data. It also exploits LEHD's very large computing capacity to generate individual earnings histories. Both are used in the matching process to identify donor records.

- The wage record editing process has two stages. The first stage uses observation-weighted name information to identify false matches miscoding of a social security number (SSN) resulting in another valid SSN on file. The second stage uses name, earnings, and within-firm employment history to match donor records (plugs) to job interruptions (holes).
- LEHD has worked with a number of state wage records. In a typical state, approximately 4 percent of all name-SSN combinations are found to be false matches, affecting 0.5 percent of all records. Across all years, about 8 percent of wage records qualify as potential plugs, but slightly less than 1 percent contribute to the definition of a hole.
- The overall match rate varies between 15 and 23 percent of eligible holes, depending on the quality of the underlying data.
- Preprocessing of records through Stage 1 unduplication improves match rates in Stage 2 by more than 40 percent. The net total increase in number of successfully matched records, when compared to an exact name-based matching process, is more than 200 percent.
- Typically, the number of single-period interrupted spells is reduced by over 15 percent.
- It is important to note that the reason the data can be returned to the states is because processing occurs before any Census Bureau data are used. The states agree that the data can only be used for statistical purposes—not program administration.



Other LEHD Products — Successor/Predecessor Information

This activity uses worker flows to improve information on changes in economic entities – successor/predecessor UI accounts (SEIN) and reporting units (SEINUNITs) – over time. The resulting product is useful in its own right to our partner states, and to the Census Bureau. It has the additional benefit of eliminating false worker and job flows from the employment dynamics estimates.

Key Findings

For UI data:

- The industry with the most successor/predecessor changing is eating and drinking establishments (SIC 5810), followed by doctor's offices (8011).
- The industry into which most businesses are acquired is industry 7363 (temporary help), followed by eating and drinking establishments.

For industries of particular interest: employment agencies (7361) and temporary help (7363):

- The main predecessor firms for industry 7363 are in eating and drinking establishments (5810), firms with no industry provided, 7363 itself, and construction firms (1711).
- When the predecessor firm continues, and still sends large numbers of employees to temporary help agencies (7363), they are predominantly in industries: temporary help agencies (7363), eating and drinking establishments (5810), grocery stores (5411), department stores, (5311) and employment agencies (7361).
- For employment agencies (7361), there are significant employment flows from one firm in the industry to another. The other main industries that send large clusters of workers to employment industries are primarily temporary help (7363), eating and drinking establishments (5810), and grocery stores (5411).



Other LEHD Products — Additional Research

Partner states have indicated interest in additional work in the areas of low-wage work, worker skill, immigration, and aging. LEHD staff have attracted external grants from the Rockefeller Foundation, the Sloan Foundation, the Russell Sage Foundations, and the National Institute on Aging to support this research. Partner states receive interim reports customized to their states.

Low Wage Work: Selected Results

- LEHD has worked with state partners to identify the low-wage population in each state. About 12 percent of workers have low wage jobs according to our definitions: 16 percent of women and 9 percent of men.
- Of these low-wage workers, 24 percent are foreign born.
- Eleven percent of all low-wage workers are employed in eating and drinking establishments; 11 percent in educational services, and 10 percent in business services.
- Almost 70 percent of low-wage workers are employed in only ten 2-digit industries.
- Women are more likely to remain low-wage than men; foreign born workers are more likely to remain low-wage than native born.
- Firm and industry placements matter: two-thirds of those who escape low-wage work do so through a job change, and about one-half do so through an industry change. This varies – if workers are in health services, staying with the industry is the best way out of low-wage work.

Worker Skill: Selected Results

- LEHD staff have developed measures of worker skill, for each worker in the dataset.
- Consistent upskilling of the workforce has occurred in partner states during the 1990s.
- While the amount of human capital increased for the typical business, tremendous differences exist across businesses – even within the same industry. Some businesses upskill and others downskill over the same period. Technology is a driving force.
- Continuing businesses and entering businesses used more human capital at the end of the 1990s than they did at the beginning of the decade—not because they employed more workers, but because the workers they employed were more skilled.
- Exiting businesses generally used less human capital than either continuers or new entrants.

Immigration: Selected Results

- LEHD is analyzing state data to describe the evolution of the immigrant population in each state over the 1990s and into 2002.
- The largest immigrant group is Mexican.
- The Philippines account for the next largest group (from a single country).
- Most immigrant workers are between 25 and 44 years old: 61 percent of Mexicans, 50.7 percent of Filipinos, 60.8 percent of Vietnamese, and 48.1 percent of U.S. born workers are in this age group.
- Immigrants from Europe and Cuba are most likely to still be working after age 65—7.85 percent of Cuban workers, 6.1 percent of Europeans, and 3.4 percent of native born workers.

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