Local Employment Dynamics

By Jeff Hadland,
Economist

Alaska joins Census program, making more local data available

Alaska is now part of the U.S. Census Bureau's federal-state program that integrates employee wage data from state unemployment insurance records with Census Bureau data. The new program allows anyone to access new data to pinpoint everything from where workers live to which industries are hiring the most young workers.

Alaska joined the Local Employment Dynamics program in January 2007. It evolved from just a handful of participating states early in the decade to virtually every state in 2008. The program is just a few states away from becoming a true national program.

By using existing data collected for administrative purposes – such as individual states' unemployment insurance programs – and its own data, the Census Bureau can produce new statistics at minimal cost without burdening the public with another survey questionnaire. Innovative statistical and computing techniques produce the same high level of confidentiality that's afforded survey and census data, according to the Bureau's mission statement for the program.

Alaska has been a leader in using unemployment insurance wage records to look at job turnover, identify new hires, track workers over time and provide information about special worker groups such as youth, older workers, women and nonresidents. The LED program builds on that – it uses the Census Bureau's unique national data resources to provide new quarterly data series that wouldn't be possible otherwise.

As a partner state in the voluntary program, Alaska provides data from its unemployment insurance wage records and Quarterly Census of Employment and Wages business address information, data expertise and state-specific knowledge. The Census Bureau then tabulates and incorporates the information from Alaska and the other partner states with a variety of data sources, including information from internal Census records, the Social Security Administration and other agencies.

In return, the Census Bureau delivers to Alaska and other partner states three key products: (1) Quarterly Workforce Indicators providing information about a state's economy at detailed industry and geography levels, (2) enhanced unemployment insurance data, and (3)

1 Quarterly Workforce Indicators
Municipality of Anchorage, First Quarter 2007

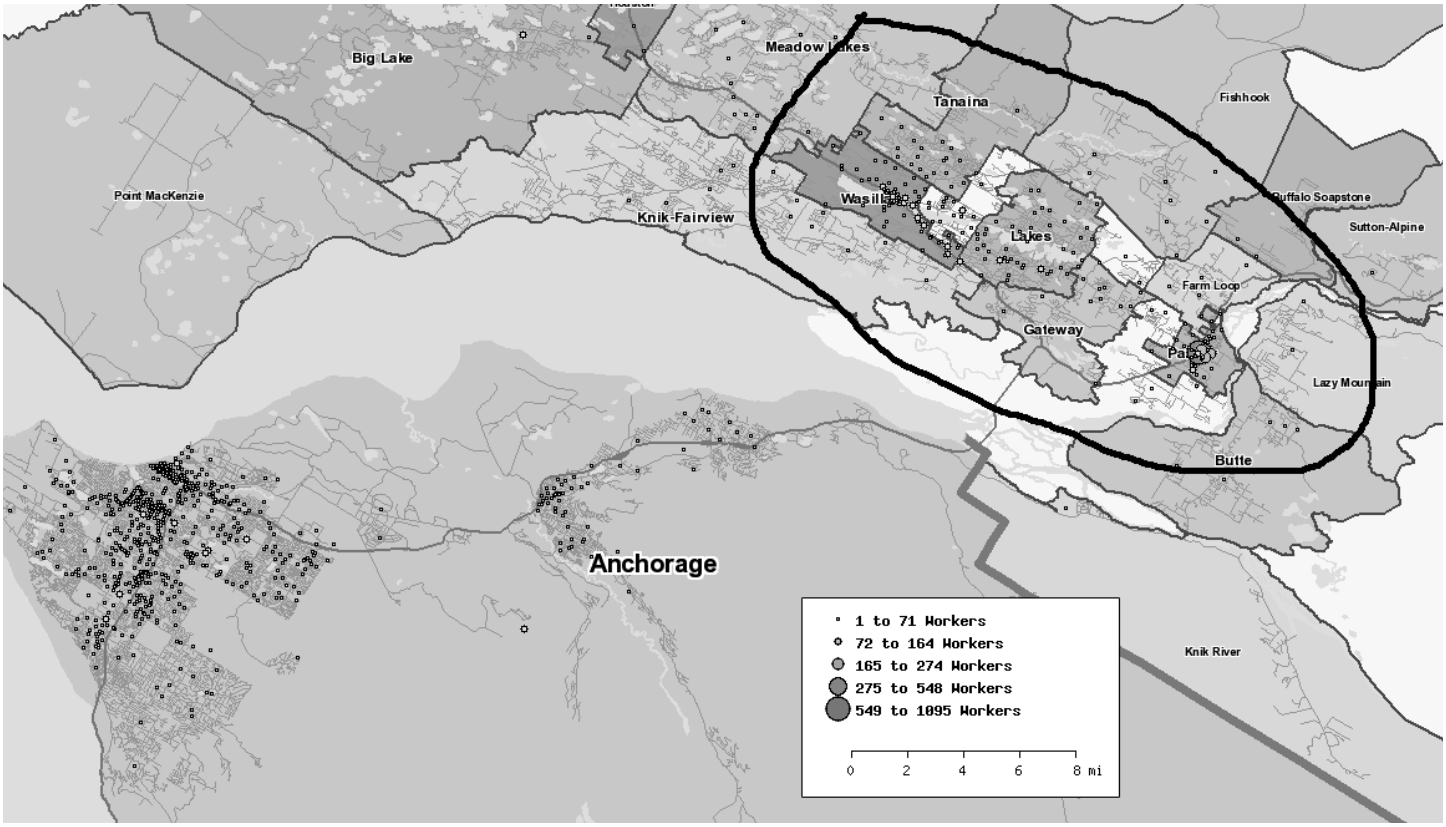
Quarterly Workforce Indicators – Quick Facts

	Anchorage		Alaska	
	First Quarter 2007	Average of First Quarter 2007 and Three Prior Quarters	First Quarter 2007	Average of First Quarter 2007 and Three Prior Quarters
Total employment	130,868	135,930	277,852	293,435
Net job flows	908	1,226	4,392	2,333
Job creation	6,698	9,081	17,043	24,174
New hires	22,244	28,541	46,705	64,831
Separations	24,800	32,379	52,749	78,341
Turnover	11.2%	12.3%	10.8%	12.4%
Average monthly earnings	$3,856.00	$3,823.75	$3,593.00	$3,584.25
Average new hire earnings	$2,678.00	$2,724.75	$2,598.00	$2,593.75

Note: On the U.S. Census Bureau Web site, QWI Online, the user selects any quarter.

Source: U.S. Census Bureau, Local Employment Dynamics; Alaska Department of Labor and Workforce Development, Research and Analysis Section

2 What You'll See with OnTheMap
Place of work for people who live in the Mat-Su Borough



A screenprint from the U.S. Census Bureau's OnTheMap Web site (above) shows the Anchorage/Mat-Su region place of work for the people who live in the encircled portion of the Mat-Su Borough – called a "commute shed" on the Web site. OnTheMap allows users to choose small geographic areas, even down to neighborhoods, by using their computer cursor to define the area. (*Trends* is limited to black and white; the Web site has considerably more detail than this screenprint.)

Source: U.S. Census Bureau; Alaska Department of Labor and Workforce Development, Research and Analysis Section

information about changes in employers. Alaska and other partner states also receive periodic reports on customized research done in collaboration with the Census Bureau.

The two primary LED data products that are particularly useful to data users ranging from city planners to politicians are the Quarterly Workforce Indicators, or QWI Online, and a powerful geographic analysis tool called OnTheMap. Both are available on the Census Bureau's Web site, lehd.did.census.gov.[1]

It's important to remember, though, that the two products are very new and are still being tested for accuracy – they'll improve over time as more information is obtained. The data quality depends on the accuracy of worksite location information, correct assignment of workers to those locations, completeness of UI wage record information and very current place of residence information.

Also, in order to maintain each person's confidentiality, the Census Bureau uses special procedures that include switching one Census respondent for another. Although these procedures allow more data to be released, they can negatively affect the quality of data, especially in small areas.

Quarterly Workforce Indicators – QWI Online

The Quarterly Workforce Indicators are a set of economic indicators – including employment,

[1] The Web site will say "U.S. Census Bureau – Longitudinal Employer-Household Dynamics" across the top. Go to Quick Links on the left and click on "QWI Online" or "OnTheMap."

job creation, wages and worker turnover – that can be queried at the state and borough/census area level in Alaska, as well as by detailed industry, gender and age of workers.

The Census Bureau produces 29 labor force indicators and publishes eight of them in QWI Online. (See Exhibit 1.) The eight include total employment measures of change such as job flow, new hires, separations and average earnings. The Census Bureau provides the additional 21 to the Alaska Department of Labor and Workforce Development, which releases them to the public upon request.

The 29 indicators are produced for every partner state but are only available for the quarters for which data were supplied by each state. Alaska currently has QWI data online for all quarters beginning in 2001. New QWI information is available for a specific quarter about nine months after the end of that quarter.

The Census Bureau provides the following Quarterly Workforce Indicators online that are available by industry, gender and age:

Total Employment – The total number of workers who were employed by the same employer in both the reference quarter and the previous quarter. This indicator answers the questions,

- Who is filling what jobs?
- What industries are the biggest employers?
- What industries employ the largest numbers of particular types of worker?

Job Change – The difference in employment between the reference quarter and the previous quarter at each business. This indicator answers the questions,

- Which industries are expanding employment?
- Which industries are contracting employment?

Job Gains – The number of new jobs that are created by either new area businesses or the expansion of employment by existing firms. This indicator answers the question,

- What industries are creating the most jobs?

New Hires – The total number of hires that weren't employed by that employer during the previous four quarters. This indicator answers the questions,

- What industries are hiring the most workers?
- Which industries are hiring older workers?
- Which industries are hiring young workers?
- What geographic areas are doing the most hiring?

Separations – The total number of workers who were employed by a business in the reference quarter, but not in the subsequent quarter. This indicator answers the questions,

- What workers are leaving jobs?
- What industries are workers leaving?

Turnover Rate – The turnover rate = (1/2) x (full-quarter hires + full-quarter separations) divided by employment. This indicator answers the questions,

- What's the turnover rate in the work force?
- What proportion of workers is new?

Average Monthly Earnings – The total quarterly earnings of all full-quarter employees divided by the number of full-quarter employees, divided by 3. This indicator answers the question,

- What are the average earnings of core employees?

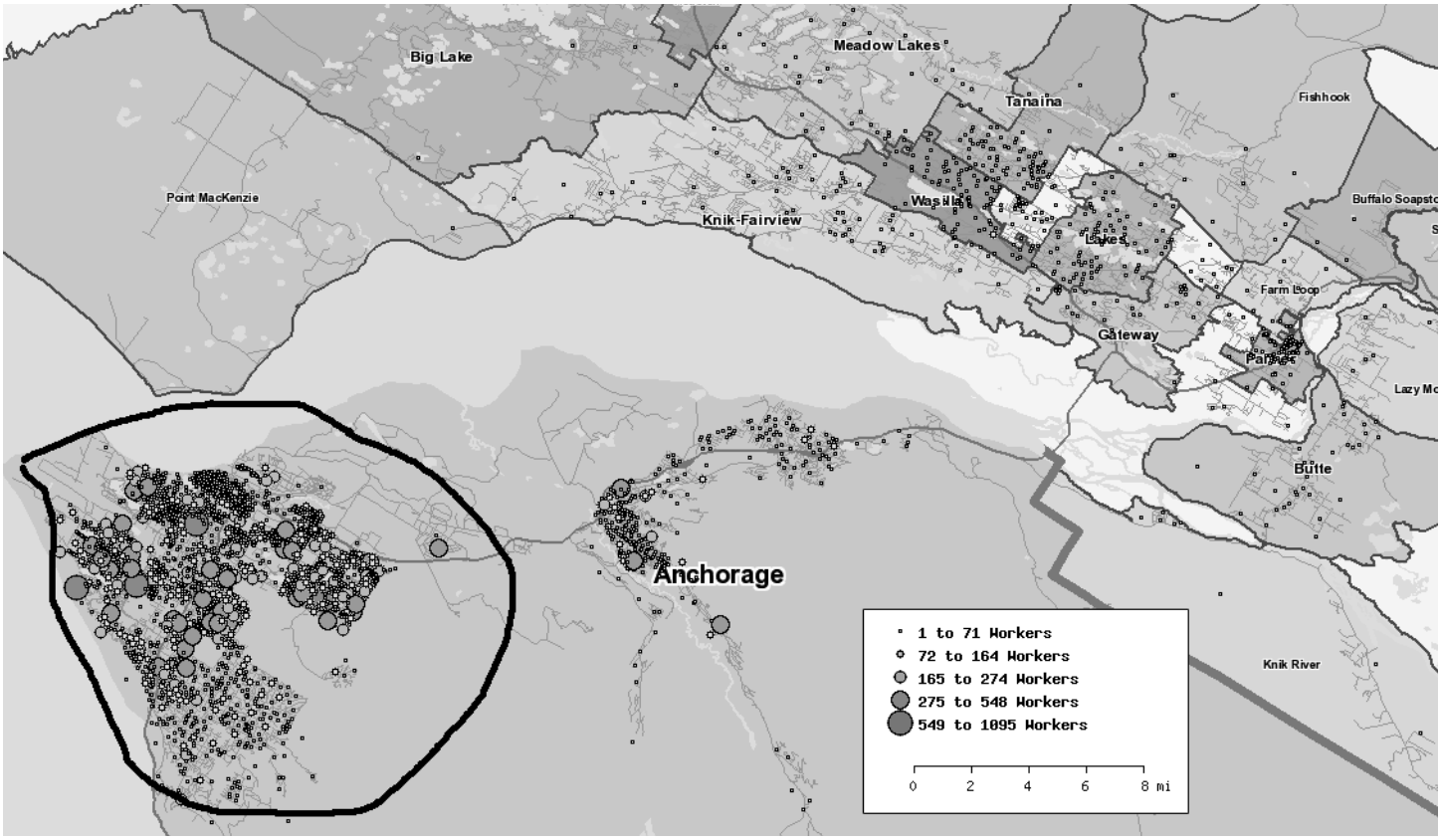
Average Monthly Earnings for Full-Quarter New Hires – The total quarterly earnings of all full-quarter new hires divided by the number of full-quarter new hires, divided by 3. This indicator answers the question,

- What are new hires earning?

OnTheMap

OnTheMap is an easy-to-use interface for creating, viewing, printing and downloading

Another OnTheMap Image 3
Place of residence for people who work in Anchorage



Another screenprint from the U.S. Census Bureau's OnTheMap Web site (above) shows the Anchorage/Mat-Su region place of residence for the people who work in the encircled portion of the Municipality of Anchorage. It's called a "labor shed" on the Web site. (*Trends* is limited to black and white; the Web site has considerably more detail than this screenprint.)

Source: U.S. Census Bureau; Alaska Department of Labor and Workforce Development, Research and Analysis Section

work force-related maps, profiles and underlying data. Because the tool can be used to look at user-specified geographic areas, including small neighborhoods or geographic areas that cross state boundaries, or an entire borough, the output can better meet unique user needs. However, the current data file for all the participating states only includes 2002, 2003 and 2004 data for worker origin and destination data, and the Quarterly Workforce Indicators profile data files.

Many states have used OnTheMap for disaster planning – examining economic and transportation scenarios by identifying place of work and place of residence information for geographic areas affected by a specific event such as a tornado. OnTheMap is highly effective in identifying alternate transportation routes for roads that would be most impacted by a road closure in a particular area.

OnTheMap is useful to get answers to those and other work force, transportation and economic development questions such as,

- Where do workers employed in a particular geographic area live?
- What are the workplace destinations for workers living in a particular community or neighborhood?
- How do specific employment areas compare in terms of worker origin patterns, worker ages, annual earnings and industry-sector employment? How are these areas changing over time?
- How many jobs are located within five, 10, and 20 miles of a planned employment

training center or transit stop?
- How many workers live along a transit corridor and work downtown or in some other area along the same corridor?

Two powerful examples of products generated by OnTheMap are the "commute shed" and "labor shed" reports.

The commute shed report allows the user to select a geographic area as the worker's place of residence using the Web site's freehand draw capability. (Geographic areas can be selected with good precision down to neighborhoods.) The map that's generated shows the worksite locations of workers who live in that residence area. (See Exhibit 2.)

In that Alaska example, the worksite locations of residents of a portion of the Matanuska-Susitna Borough were identified. Many residents of the Mat-Su Borough work in the borough, but many commute to Anchorage. The size of the circle indicating the worksite locations is indicative of the number of workers employed at that location. Detailed tabular commute and labor shed reports may be generated in addition to the map.

Labor shed reports show similar data, but in the reverse. In the second Alaska example (see Exhibit 3), the geographic location of work locations is selected in Anchorage and the place of residence of those workers is indicated by circles of varying size on the map. A table of the residence locations is available, including areas outside the map area.

The Census Bureau plans to release a new and improved OnTheMap product later this year which should be easier to use and have more functionality. The Bureau and states also are working to improve the accuracy and completeness of the underlying data.

Right now, federal government, military and self-employed worker information isn't included in the data files, but quarterly information for these groups may be added in the future.