

Unemployment Rate Model Changes

by
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New calculation procedures improve accuracy

Working cooperatively with the U.S. Bureau of Labor Statistics, (BLS) the Alaska Department of Labor and Workforce Development's Research and Analysis Section (DOLWD/R&A) is changing the way monthly unemployment rate¹ estimates are calculated. The change will take place with the January 2005 estimates to be released in early March 2005. The new methodology is the product of intensive research and testing. It will result in:

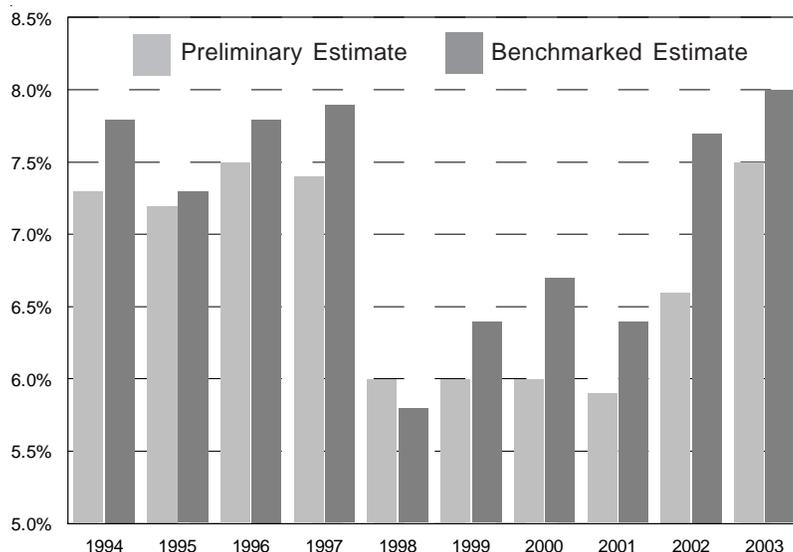
- More accurate estimates due to the use of enhanced procedures
- Improved ability to capture shocks to the economy (e.g., turns in the business cycle, terrorist attacks) due to "real-time benchmarking"²
- Improved over-the-year comparisons and analysis
- Smaller end-of-year revisions

History

The unemployment rate is probably the best-known measure of the labor market. It measures unutilized labor supply and is useful in the study of the economic cycle. For more than thirty years, DOLWD/R&A has participated in a BLS federal-state cooperative statistical program to produce Alaska statewide and substate unemployment rates. The methodologies used to produce the estimates are both consistent from state to state and comparable to the official concepts and measures of the Current Population Survey (CPS), the official survey instrument for measuring unemployment within the U.S. The size of the CPS sample, however, is too small to yield reliable monthly estimates at the state and local level. Consequently, unemployment rates for states and sub-state areas must be developed using other means.

Since 1989, Alaska unemployment rate estimates have been derived indirectly through BLS-

1 Benchmark Revisions To Alaska Unemployment Rate



Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section and U.S. Bureau of Labor Statistics

designed time series models that rely on historical relationships among monthly household survey data, wage and salary employment and unemployment insurance claims. Because of the potential for bias in the models, and to ensure comparability in the estimates across all states, the monthly estimates were annually benchmarked to the state CPS annual averages. This method was historical in that the correction was performed retrospectively, at the end of the calendar year, after 12 months of preliminary estimates had already been produced and published. In nine of the last ten years, the annual benchmark resulted in an upward revision in Alaska's rate. (See Exhibit 1.)

Exhibit 2 presents Alaska's 2003 statewide monthly unemployment rates, the model-generated preliminary estimates and the benchmarked rate as scaled to reflect the annual average CPS rate. In all 12 months, benchmarking to the CPS resulted in an increase in the rate. Because of these revisions, comparisons between previous year benchmarked data and current year preliminary estimates were unreliable. Real-time benchmarking should significantly improve the validity of over-the-year comparisons.

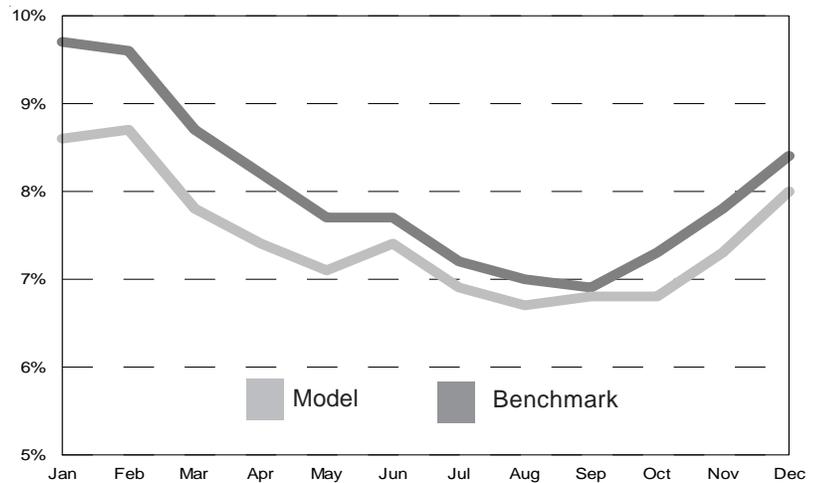
During 2004, the states prepared monthly estimates using both the established and proposed methodologies. The 2004 dual estimation rates are illustrated in Exhibit 3. Although in all cases the new model resulted in different rates, the differences varied by month. The new estimates differ because of the improved modeling approach and the use of real-time benchmarking to monthly national estimates.

All monthly historical data for 1978-2004 will be replaced with re-estimated series. Estimates for 1976-1977 will also be added to the series. More information on the methodological change is available from the website of the Bureau of Labor Statistics, Division of Local Area Unemployment Statistics at <http://www.bls.gov/lau/lauschanges2005.htm>. Or contact Brynn Keith at brynn_keith@labor.state.ak.us.

¹ The unemployment rate is the number of unemployed people as a percentage of the civilian labor force, which consists of all employed and unemployed people ages 16 and higher. The Bureau of Labor Statistics classifies people as *employed* if they performed any work for pay or profit during the reference week (the week including the 12th day of the month) or held a job but were temporarily absent because of illness, vacation, inclement weather, a labor dispute, or personal reasons. To be counted as *unemployed*, people must not have been employed during the reference week, must have been available to work during that week, and must have either made some specific effort to find work during the previous four weeks or been laid off from their job and expecting to be recalled. People without jobs who fail to meet those conditions are classified as *not in the labor force*.

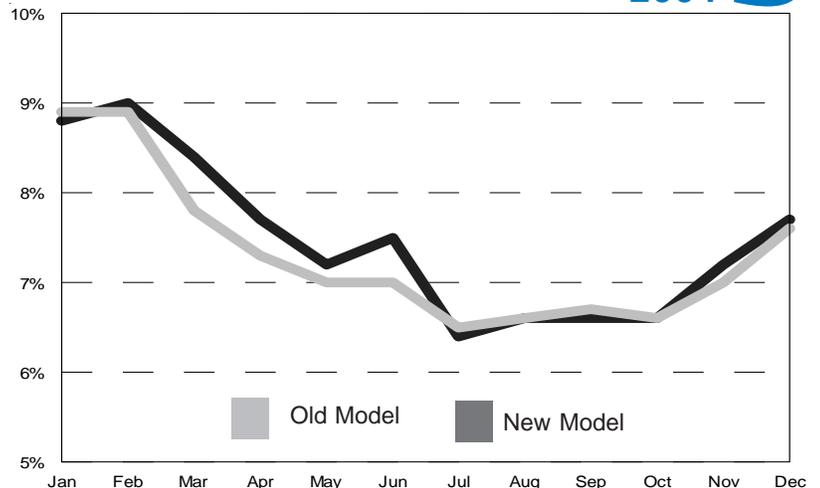
² A benchmark is a reliable total to which less reliable estimates are controlled. In the new model, the reliable control total (benchmark) is the monthly Current Population Survey national estimate. Real-time benchmarking means that the adjustment to the reliable total (benchmarking) occurs as part of the monthly estimation (in real time). The previous method used a State benchmark that is the CPS annual average of employment.

2003 Unemployment Rates Model and Benchmark



Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section and U.S. Bureau of Labor Statistics

Old and New Model Rates 2004



Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section and U.S. Bureau of Labor Statistics