

# New Seasonal Adjustment Factors for Household Data Series

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SEmiannually, the Bureau of Labor Statistics publishes the factors to be used during the following 6 months for seasonal adjustment of the major labor force series. Table 1 presents the seasonal adjustment factors for the eight major labor force components for the period July-December 2003. The factors for these components for the first 6 months of 2003 were published in the February 2003 issue of *Employment and Earnings*. The eight seasonally adjusted series that result from the application of these factors are used in the computation of the seasonally adjusted figures for the national overall levels of labor force, employment, and unemployment and for the overall unemployment rate.

The new seasonal factors have been extrapolated using the X-12 ARIMA program with data through June 2003 for each series. The ARIMA models used were the same as those used earlier in the year for the extrapolation of the factors for January through June; they were identified in the February 2003 issue of this publication. The historical seasonally adjusted data, including those for the first 6 months of 2003, will not be revised until the release of December 2003 data in January 2004.

Because of the changes introduced at the beginning of 1990, 1994, 1997, 1999, and 2000 in the survey and processing procedures on which the labor force series

estimates are based,<sup>1</sup> prior adjustment factors were re-estimated in these X-12 ARIMA runs to link the pre-1990, pre-1994, pre-1997, pre-1999, and pre-2000 data with the subsequent data for purposes of seasonal adjustment. Without prior adjustment, those changes could have caused distortions in the seasonal decomposition. The prior adjustment factors for the eight major components are shown in table 1 together with the seasonal factors.

More detailed information on the seasonal adjustment procedures and the revision of historical data is included in "Revision of Seasonally Adjusted Labor Force Series in 2003," *Employment and Earnings*, February 2003.

Data for any of the several hundred seasonally adjusted labor force series and the July-December 2003 seasonal adjustment factors for any of the other directly-adjusted series—there are 108 in addition to the 8 major components—may be obtained from BLS upon request or through the BLS Web site. Requests for data or inquiries concerning seasonal adjustment methods or the availability of machine-readable files of other labor force data should be addressed to the Division of Data Development and Publications, Office of Employment and Unemployment Statistics, Bureau of Labor Statistics, Washington, DC 20212-0001.

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<sup>1</sup>The changes were described in the February 1994, March 1996, and the February 1997, 1999, and 2003 issues, respectively, of this publication.

## Changes in Seasonal Adjustment Procedures

Effective with the release of December 2003 estimates in January 2004, BLS will begin using the concurrent seasonal adjustment procedure instead of projected seasonal factors to produce seasonally adjusted Current Population Survey (CPS) labor force estimates. Concurrent seasonal adjustment uses the entire data series up to and including the current month's data to create new seasonal factors each month. BLS introduced the use of concurrent seasonal adjustment for the national establishment data in June 2003 with the release of data for May 2003. For details on concurrent adjustment, see George Methee and Robert McIntire, "An Evaluation of Concurrent Adjustment for the Major Labor Force Series," in the 1987 *Proceedings of the Business & Economic Statistics Section*, American Statistical Association, pp. 482-487, and David A. Pierce and Sandra K. McKenzie, "On Concurrent Seasonal Adjustment," *Journal of the American Statistical Association*, September 1987, Vol. 82, No. 399.

**Table 1. Prior adjustment and June-December 2003 seasonal adjustment factors for the eight major civilian labor force components**

Series	Mode of adjustment	Prior adjustment factors			Projected seasonal adjustment factors					
		Pre-1990	Pre-1994	Pre-2000	July	August	September	October	November	December
Total employment:										
Men, 20 years and over .....	Multiplicative	0.992		0.983	1.008	1.008	1.004	1.007	1.001	0.998
Women, 20 years and over .....	Multiplicative			0.988	0.988	0.990	1.001	1.004	1.004	1.006
Men, 16 to 19 years .....	Multiplicative	0.939	0.956		1.241	1.103	0.975	0.978	0.957	0.959
Women, 16 to 19 years .....	Multiplicative				1.178	1.097	0.948	0.978	0.968	0.994
Total unemployment:										
Men, 20 years and over .....	Multiplicative				0.939	0.917	0.896	0.909	0.950	1.010
Women, 20 years and over .....	Multiplicative				1.068	1.090	1.000	0.959	0.953	0.913
Men, 16 to 19 years .....	Multiplicative				1.201	1.010	0.910	0.895	0.950	0.897
Women, 16 to 19 years .....	Multiplicative				1.260	0.966	0.948	0.960	0.992	0.825