

New Seasonal Adjustment Factors for Household Data Series

Robert J. McIntire

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 12 major labor force components for the period July-December 1999. The factors for these components for the first 6 months of 1999 were published in the January 1999 issue of *Employment and Earnings*. The 12 seasonally adjusted series which 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 the overall unemployment rate.

The new seasonal factors have been extrapolated using the X-11 ARIMA program with data from January 1990 through June 1999 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 January 1999 issue of this publication. The historical seasonally adjusted data, including the first 6 months of 1999, will not be revised until the beginning of 2000.

Because of the changes introduced at the beginning of 1994, 1997, and 1999 in the survey and the processing procedures on which the labor force series estimates are based,¹ prior adjustment factors were used in these X-11 ARIMA runs to link the pre-1994, pre-1997, and/or pre-1999 data with the subsequent data for purposes of seasonal adjustment. Without prior adjustment, those changes could have caused distortion in the seasonal decomposition. The pre-1994 and pre-1997 prior adjustment factors used in these runs were the same as those used in the runs that provided

Robert J. McIntire is an economist and Chief of the Division of Data Development and Publications, Office of Employment and Unemployment Statistics, Bureau of Labor Statistics.

¹The changes were described in articles in the February 1994, 1997, and 1999 issues, respectively, of this publication.

Table 1. Prior adjustment and July-December 1999 seasonal adjustment factors for the 12 major civilian labor force components

Procedure and series	Prior adjustment factors	Seasonal adjustment factors					
		July	August	September	October	November	December
Multiplicative adjustment (Divide factor into original value)							
Agricultural employment:							
Men, 20 years and over	(¹)	1.087	1.060	1.059	1.045	.989	.929
Women, 20 years and over .....	.776	1.122	1.099	1.086	1.032	.968	.930
Men, 16 to 19 years .....	.860	1.590	1.439	1.046	.858	.752	.697
Women, 16 to 19 years .....	.853	1.540	1.509	1.086	.844	.777	.646
Nonagricultural employment:							
Men, 20 years and over	² .996, 1.003	1.005	1.006	1.000	1.004	1.004	1.001
Women, 20 years and over	³ .996	.989	.989	1.002	1.007	1.009	1.009
Unemployment:							
Men, 20 years and over .....	.938	.969	.921	.929	.899	.920	1.008
Women, 20 years and over .....	.976	1.064	1.098	1.035	.972	.957	.887
Additive adjustment (Subtract factor from original value)							
Nonagricultural employment:							
Men, 16 to 19 years	-68	728	415	-147	-79	-98	-125
Women, 16 to 19 years	-96	646	376	-168	-186	-139	-33
Unemployment:							
Men, 16 to 19 years	-47	158	-28	-60	-38	-54	-92
Women, 16 to 19 years	(¹)	136	-23	-24	-47	-26	-84

¹ No prior adjustment was done.

² For this series, the factors are pre-1997 and pre-1999. The first factor shows the adjustment of pre-1997 data relative to subsequent data; the second factor shows the adjustment of pre-1999 data relative to subsequent data. The actual

net adjustment to pre-1997 data is the product of the two factors.

³ For this series, the prior adjusted period was pre-1999 rather than pre-1994.

the factors for January through June. The pre-1999 prior adjustment factors are new in these runs because these are the first runs that include data reflecting the changes in population controls introduced in January 1999. Prior adjustment factors to control for those changes were found to be warranted for 16 series, including two of the 12 major components, and 10 of those 16 series now have two prior adjustment points (pre-1994 and pre-1999, or pre-1997 and pre-1999). The prior adjustment factors for the 12 major components are shown in table 1 alongside 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,” *Employment and Earnings*, January 1999.

Data for any of the several hundred seasonally adjusted labor force series and the July-December 1999 seasonal adjustment factors for any of the other independently adjusted series—there are about 170 in addition to the 12 major components—may be obtained from BLS upon request. 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, Bureau of Labor Statistics, Washington, D.C. 20212-0001.