

**Center for
Business and
Economic
Forecasting, Inc.**



**REGIONAL AND COUNTY EMPLOYMENT,
POPULATION AND PERSONAL INCOME
PROJECTIONS**

April 12, 2002

REGIONAL AND COUNTY EMPLOYMENT, POPULATION AND PERSONAL INCOME PROJECTIONS

April 2002

County jobs, employment and labor force projections were prepared by the Center for Business and Economic Forecasting, Inc. (CBEF) in cooperation with the Colorado Divisions of Local Government's (CDLG) Demography Section. They cover all 63 counties in the state. The process involved preparing estimates of labor demand and supply and then bringing these two elements into balance. The steps in this process are outlined below.

The first step in the demand forecast consisted of preparation of a forecast for the state of Colorado. The most important variables for purposes of the county projections was nonagricultural wage and salary employment. The forecasts were prepared in April 2002. The forecast was generated by CBEF's econometric model of the Colorado economy and was based on the 25-year US forecast prepared by DRI-WEFA. The CBEF model contains equations, which represent the relationship among various state and national economic variables. These relationships are estimated using statistical fitting procedures based on historical data extending back to 1970. Examples of the types of relationships in the CBEF models include manufacturing employment, which depends on national capital goods spending, among other variables. Another is retail employment, which depends, in part, on Colorado retail spending.

The state forecast of nonagricultural wage and salary employment was converted into the jobs concepts used at the county and regional level. The first such concept, referred to as "ES202+" employment, includes jobs reported for unemployment tax purposes plus military and farm jobs. The second, described as "Jobs Adjusted", includes all employment including that of self-employed and other workers not covered by the ES202 report. Historical estimates for these concepts were available at the county level through 2000 when the projections were prepared.

In the next step, the state ES202+ employment and jobs adjusted forecasts were allocated among 14 Planning and Management Regions. Within each region ES202+ employment and jobs adjusted were distributed among its counties. Initial distribution was based on capture rates, or the share of the net job growth in the state or a region estimated to be captured by each region or county. Capture rate estimates reflect historical growth patterns, judgment, and knowledge about future developments in various regions of the state. For example, capture rates were adjusted to include impacts from large new employers. For counties in the Denver region, county capture rates were based on the most recent allocations of growth among the counties prepared by the Denver Regional Council of Governments. The initial estimates were then examined and adjusted based on judgment and input from regional experts.

Then, the labor force demand was calculated. Labor force demand is defined as the number of workers, not jobs, needed in each region or county. These estimates were computed using projections of multiple-job-holding rates, or the share of the resident employed labor force holding more than one job, and the number of unemployed persons. Historical estimates of multiple-job-holding rates were based on Census information and perceptions of local planners. Initial projections were based on statewide trends. The county unemployment rates are projected based on state trends.

Earlier versions of these projections also estimated labor supply and commuting between regions and counties. These earlier projections showed substantial excess demand for the state as a whole and most regions. In the model used earlier, this meant sizable net commuting into the state and many regions and counties. It was felt that these results were unrealistic and might have reflected underestimates of labor supply. It was decided to exclude labor supply and commuting estimates from this year's projections. In the next year, more data from the 2000 Census concerning commuting, labor force participation and multiple job holding will be released. With this new information better labor supply estimates can be prepared. Future versions of these projections will again include estimates of labor supply and commuting.

Personal income was also projected for all counties and regions. Income projections are consistent with the jobs, labor force and population projections described above. Historical data for county level personal income were available through 1999 from the U.S. Bureau of Economic Analysis when these projections were done. The personal income projections were based on the projections of regional and county jobs, employment and labor force described above and projections of population, consistent with the jobs and labor projections, prepared by the Colorado Division of Local Government, Demographic Section. Components of personal income were projected based on the growth in various employment or population statistics in the region or county relative to the state and the projected growth of the income component in the state. The following components were projected for years after 1999:

Farm Earnings- Based on farm employment

Nonfarm earnings- Based on nonfarm employment, ES-202 and military.

Contributions for Social insurance- Based on nonfarm employment.

Residence Adjustment- The 1999 estimates were projected forward based on changes in state residence adjustment. No attempt was made to adjust for changes in commuting patterns.

Dividends, Interest and Rents- Based on total population.

Transfers- Based on population 65 and over.

Questions about the forecasts should be addressed to Bill Kendall at the Center for Business and Economic Forecasting. (303-329-8491 or Bill@CBEF-Colorado.com)