

Validating the 2013 County Forecast

Introduction

There are no generally accepted criteria for validating a long term county forecast other than to compare future growth rates of the indicators with historical growth rates. If future rates of growth are inconsistent with historical rates (and no extenuating circumstances or conditions would justify such inconsistencies), there is reason to suspect the reasonableness of the forecast.

Absent of inconsistencies between rates of historical growth and forecasted growth, predicted future values are assumed to be plausible. The assumption of plausibility is the result of how the model was originally developed, where the basis for the relationships used to predict the indicators was economic theory.

Another validation criteria for the county forecasts is to compare growth rates of the forecasted county indicators to the forecasted state indicators. This exercise was generally performed in the development of each county model and each final county forecast.

In no instance are the forecasted growth rates of county indicators inconsistent with the growth rates observed historically.

In no instance are the forecasted growth rates of county indicators inconsistent with the growth rates of the same indicators for the state.

Validation criteria presented here

A further validation occurs when the sum of the 58 county forecasts are compared with the independent forecast for California, derived from the June 2013 UCLA forecast for the state.

Compared are nine separate economic indicators that are forecast for each county from 2013 to 2040. They include demographic indicators such as population and households, and economic indicators such as employment, income, and taxable sales.

It is inevitable that independent forecasts will produce slightly different results, and forecast error is going to occur. The validity of the forecast is to minimize this forecast error.

A reasonable and intuitive criterion would have the difference between the sum of the indicators for all 58 counties and that same indicator forecast for California be at or under 5 percent (throughout the forecast horizon).

It is interesting to note (and emphasize) that the sum of the counties is rarely equal to the state total. This is true for the historical data as well as the forecasts, for many reasons.

Data collected from state agencies will frequently not sum exactly to the total provided for the state. Much of the time, this difference is more than simple rounding.

This is true for employment where the sum of county level employment is frequently different from the reported employment by industry for California, by approximately 2 percent every year.

For certain indicators it is possible to allocate them to the state but not to any particular county. Vehicle registrations, particularly trucks, can be registered in the state but to no particular county. Taxable sales that are “use” taxes are allocated to the state but no particular county. There are other types of taxable sales recorded in the state totals that are not allocated to a particular county.

Results of the Validation

The 2013 forecasts for all 58 counties are very similar to the independent forecast for California. The sum of all 58 counties is within 5 percent of the state forecast for the majority of the indicators. The exceptions to this are, retail sales, total taxable sales, net migration, households, employment, and new housing units.

The county-level forecasts for retail sales and total taxable sales also differ from the state-level forecasts. In the UCLA model, growth is faster in the bear term, but slower thereafter. In the county-level forecasts, growth is relatively even throughout the projection period. Both scenarios are plausible, but there is little reason to believe that sales will decelerate significantly over the long term.

The sum of the county net migration forecasts generally track the UCLA statewide forecast from 2013 to 2040, but the difference often varies by a substantial amount. Net migration is a volatile series and the history is measured with significant error. For many of the counties, it is difficult to accurately measure population and migratory patterns. Consequently, we are unconcerned with the divergence that is apparent in the validation assessment.

Like the net migration forecast, the county-level housing unit forecasts differ from the state forecast. We believe that housing production will accelerate over the next few years, as the market corrects the significant imbalances that have occurred. After this point, construction activity should normalize, settling at rates that are somewhat lower than predicted by the UCLA model.

For total non-farm employment, the UCLA model predicts faster growth throughout the forecast period. However, as previously discussed, there are substantial differences between state-level data and the sum of county-level totals. After accounting for this factor, the forecast from the UCLA model is generally within 5 percent of the total for all counties.

In addition, the housing-unit data exhibits a substantial divergence in 2012. This is due to reporting errors by the data providers. It is expected that these errors will be remedied, and that the data for 2013 will be more reliable.





