

## Department of Finance Econometric Models

The Department of Finance uses the most widely accepted forecasting methodology. This method uses historical statistical data to estimate, through regression analysis, systems of simultaneous equation called econometric models. These models fit historical relationships among various economic variables such as personal income, employment, inflation, industrial production, etc. These systems of equations are then solved into the future to predict the levels of key economic conditions. This is the best method to utilize when the past is a good predictor of the future.

Developing a California economic forecast requires a projection for the U.S. economy. The Department develops a national forecast, using a sophisticated commercial U.S. macroeconomic model from IHS Global insight. The original version of this model, the Wharton Econometric Forecasting Model, was constructed by Nobel Laureate Lawrence Klein. IHS Global Insight is now the most widely-used U.S. econometric model and forecasting service. It is well respected for its forecasting and econometric modeling throughout government and private industry.

The Global Insight model is an intricate econometric dynamic equilibrium growth model that encompasses over 1,800 economic, financial, and business concepts and more than 1,500 equations that track nearly every conceivable economic activity, including final demands, aggregate supply, prices, incomes, international trade, industrial detail, interest rates, and financial flows. In growth models, the expansion rate of technical progress, the labor force, and the capital stock determine the productive potential of an economy. Both technical progress and the capital stock are governed by investment, which in turn must be in balance with post-tax capital costs, available savings, and the capacity requirements of current spending. As a result, monetary and fiscal policies will influence both the short and the long-term characteristics of such an economy through their impacts on national saving and investment.

The Department develops and maintains its own econometric model of the California economy. Since the California forecast focuses primarily on employment and personal income, the model divides the economy into nearly 30 industry components based on the North American Industrial Classification System with some modifications to highlight areas unique to California—computers, aerospace, information. Based on the U.S. economic forecast and on the latest California economic data, industry employment and wage rates are forecast. These are then multiplied to derive total wages and salaries—the largest component of personal income. Projections of other income sources—proprietors' income, interest, dividends, rent, and transfer payments—are added to wages and salaries to estimate total personal income. Industry employment is totaled to project total employment. Other economic variables, including construction activity and the unemployment rate, are also projected as they affect some industry employment components and revenue sources.

To prepare for the development of the Governor's budget forecast, the Department hosts an Outlook Conference in November of each year. A variety of notable California forecasters from academia, government and private industry are invited to this conference to review recent events and economic information and to discuss the

future of the U.S. and California economies. Topics of the agenda include outlooks for the U.S. and global economies and the condition of significant California industries such as high technology, entertainment, and aerospace. This provides the Department with the insights from notable experts. These experts are asked to review a tentative forecast and provide suggestions and comments.

This approach is consistently applied by the Department's experienced and well-qualified economic research staff. They have, for years, produced forecasts that have been cited as some of the most accurate projections of the California economy.

The Department also prepares a revised economic forecast for the May Revision. This follows the same process as used in the Governor's Budget except, owing to the limited time available for its preparation, an Economic Outlook Conference is not held.