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Guest Commentary



New Dynamic Revenue Estimating Model: Not Quite What Anyone Expected

By Martin Helmke

The state Department of Finance's long-awaited dynamic revenue estimating model has finally seen the light. And as with most honest research efforts, it turns out to be not quite what anyone expected.

Pressure for a respected state agency to produce a model that would demonstrate the stimulative effects of tax decreases (i.e., the secondary effects that tax changes have on taxpayer behavior and on the economy as a whole) came from those who were convinced that tax cuts pay for themselves partly or entirely through these "dynamic" effects. Caution was expressed by those who felt that data limitations and ignorance of taxpayer behavior would render such a model useless, and would tempt both sides of the debate to misuse the model to selectively "prove" desired outcomes.

In 1994, the Legislature assigned the task of developing a dynamic revenue model to the Department of Finance's revenue estimating unit, a staff known for its competence and integrity. Finance in turn contracted with faculty at UC Berkeley to formulate the general structure of the model and to perform a search of academic literature on tax impact analysis. Finance personnel then performed the actual construction and calibration of the model.

That's the short story. In fact the resulting "computable general equilibrium" model, comprises more than 1000 equations that describe the various components of California's economy in terms of the taxes to which they are subject. The controlling behavioral assumptions of the model were not estimated by Finance staff, but

Mr. Helmke is a consultant to the California Senate Committee on Revenue and Taxation. He has been with the committee for 12 years and has a total of 20 years of staff service in the Senate.

were derived from various academic studies. Finance's model then serves as the framework within which these assumptions interact with all of California's economic sectors, with the tax structure, and with the rest of the nation and the world.

One of the most important assumptions built into the model is that the state budget must remain balanced. If the model is used to examine the impact of a tax reduction, then the state budget is assumed to be reduced to accommodate the tax cut. Finance's default assumption is that such budget reductions would be shared among health, welfare and education programs; the economic effects of these budget cuts are in turn estimated by the model, as they partially offset the stimulative effect of the proposed tax reduction.

Initial model results show that about 18 percent of a corporation tax reduction would be offset by a stimulated revenue increase; for sales tax the "dynamic" effect would offset about 8 percent of the "static" revenue loss; for income tax the dynamic effect is estimated to be only 1 percent. The model also estimates dynamic effects in other economic aggregates. For example, a \$1 billion reduction in corporation taxes is estimated to increase labor demand by 12,000, to increase the number of households in California by 13,000 and to increase personal income by about \$600 million.

In its current state of development, the model can show us only the long-term dynamic effects of tax changes; it can't specifically estimate dynamic effects in, say, the first and second years of a tax cut. Nor can the model distinguish the effects of a corporate rate cut from those of an increase in the research credit. But the model does provide us with a new and important window into the workings of California's economy, for which we are all grateful.

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