ECONOMIC BRIEF NO. 28

The Basics of Revenue Forecasting

This series of economic briefs explores fundamental concepts in economics and community and economic development.

Every public official involved with budgets has an economist somewhere in the background providing forecasts of total revenue and estimating revenue impact of proposed tax changes. These numbers are crucial because work can't begin on the next fiscal year's budget without some idea of how much revenue will be available for allocation.

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How do economists forecast revenue? Usually they have a recipe; but like cooking, revenue forecasting is as much art as science. The basic ingredients in the recipe are the income forecast and the tax and fee structure. The seasonings are what economists refer to as elasticities—historical measures of how tax revenue responds to changes in personal income or to changes in tax rates.

How well the forecast turns out depends on whether any surprises take place in the interim. Just as power outages can mess with a pie, unexpected events can make mincemeat of economic forecasts.

An income forecast is the starting point for state revenue because general fund revenue is closely linked to state personal income. So a simple forecast projects the general fund as a share of state personal income based on past numbers. Such a forecast isn't very precise, so economists usually look at individual components of revenue, mainly income and sales taxes. That's where elasticities come in.

Individual income tax revenue is closely linked to state personal income. A 10 percent income increase generates about an 11 percent increase in individual income tax receipts; or in economic jargon, income taxes have an income elasticity of 1.1.

Sales tax revenues are also linked to income, but not all spending is subject to sales tax. Most services are exempt, as are many business purchases; and as income rises, people tend to shift more spending to services, which are not taxed.

Thus, sales tax income elasticity is only about 0.78. A 10 percent increase in the state's personal income generates about 7.8 percent more revenue from sales taxes. Similar calculations are used for other state revenue sources like "sin" taxes and fees.

The revenue projections in the article on page 3 are different from forecasts. Projections of future revenue are based on past experience, plus changes in the tax structure already approved. Projections are typically for five to fifteen years. These multiyear projections are based on average income growth rates, whereas annual forecasts are based on a specific expected income level for the next year. Unlike projections, which assume no legislative changes, forecasts also reflect expected changes in tax rules and rates.

Revenue forecasts need to be as accurate as possible. The closer forecasts can come to actual revenue, the better spending decisions a public body can make.

In furtherance of Clemson University's land-grant mission, the Community & Economic Development Program at Clemson provides access for community leaders in South Carolina to expertise in all branches of knowledge on the University campus.