Modeling with IMPLAN
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Assuming at least a crude familiarity with the IMPLAN PRO software, there are several basic steps to conducting an area economic assessment. Prior to any work with the I-O analysis tools, care needs to be taken to describe the economic scenario to be assessed. Next, the region of analysis is chosen. In the third step, the kinds of industries and the kinds of changes are entered into the model after the model is built. Finally, the analyst needs to output the findings and interpret the data for the client.

The Economic Scenario

The economic scenario represents the kind of change that your are intending to introduce. Most changes can come about in three basic ways:

1. A change in production or employment
2. A change in regional purchases
3. A change in household income

A change in production or employment is typically entered as a change in total industrial output or jobs in the industry or industries we are interested in. This is the typical “impact” assessment where a firm is shutting down, starting up, or expanding. This kind of assessment is both most common and the easiest to do.

A change in regional purchases is another kind of scenario. This is the most common kind of assessment that would be associated with, for example, a recreation or a tourism situation. Here, relying perhaps on surveys, analysts input expected changes in local demand for goods and services due to some planned economic change. Here we would simply bump output up in sets of specific categories. In a recreation example we might increase hotel spending, dining and drinking, general retail trade, along with spending for motor vehicle fuel and maintenance. In these cases, we have the option of “forcing” the people to purchase all or default amounts of the goods and services locally.

A change in household income is another option. Here we are simply increasing or decreasing disposable income for a group or groups of householders. We could, for example, attempt to model local spending impacts associated with a tax cut or a change in social security payments in an area. This kind of analysis presupposes good intelligence about regional households, their levels of disposable income, and their distribution in particular income groups. This kind of analysis requires an extra measure of interpretation because in most economies, households “leak” a large fraction of their spending out of the regional economy. Properly accounting for this leakage is important to the analysis.
Choosing the Region

It is very important to specify the region properly. Is the Quad City region, for example, primarily a two county economy, or can it more accurately be described as a six or an eight county economic region? If I am studying Cedar Rapids, should I always include Johnson County to the south? Is a small one-county economy sufficient to describe the changes that I am measuring? Is a statewide assessment too large?

Picking the appropriate region is important. It often depends on the client. Many times the client wants the effects that you are measuring to be localized. That usually means limiting the region in size, say to just one or two counties. Other times, the industry or the situation to be studied is either large or simply and obviously transcends a local economy. In that case, a larger region is called for.

When you name the model and the region is chosen, the software simply compiles the basic information and readies the data for creating the model. The attached picture tells the kind of data produced.

Creating the model

Once the region is chosen, then the model needs to be compiled. This is a no-brainer. Just let the software do all of the work.
The model construction finalizes all social accounts and compiles the multipliers. We generally compile “Type SAM” multipliers as they are more inclusive of household economic activity.

**Modeling the Economic Change**

The three kinds of scenarios discussed above are displayed below: This one is a typical industrial shock where input or employment are changed.
In the next example, we are assuming changes in demand for local goods and services attributable to tourism.
In this example, sets of incomes are changed

Interpreting the Output

Once the impacts or the changes have been compiled, then you can either scan the findings or output the findings.