The University of Texas at TYLER Soules College of Business

Hibbs Brief

Hibbs Institute for Business & Economic Research

Regional Economics: Economic Impact Analysis

Dr. Manuel Reyes-Loya

In this issue of our ***Hibbs Brief***, we share some basics of a valuable tool frequently used in regional economics, the *Economic Impact Analysis*.

An *Economic Impact Analysis* examines the total economic effects—changes in total output, employment and personal income across a geographic area, such as state, county, or city—that result from some significant change in economic activity or "economic shock" to the region. Significant economic changes can take the form of the location of a new plant in that area, new investment by an existing firm to expand production, the possible closure of a plant, a new university, and even changes in governmental policy or regulatory standards.

Economic impact analysis is useful precisely because it estimates total economic effects across a region. Firms, for example, generally know quite well how much an investment in a plant expansion is expected to add to their net revenue over time. However, this larger economic impact analysis helps determine (and quantify) the benefit that spreads across the region—the added extra supplier output and personal income throughout the county (or groups of counties), increased jobs for suppliers as well as the company making the investment, and any increased tax revenues for local governments. Knowing these very real, extra economic effects will often help firms make good decisions with full community support.

To estimate an economic impact we often employ a modeling technique known as Input-Output. In a nutshell, the Input-Output analysis illustrates the interaction between an industry and all other industries in an economy, and how all of them are linked by the intermediate inputs they provide one another to produce goods and services. An Input-Output model works as an iterative process where all rounds of interactions among industries are captured, and the exchanges of products or services in return for income are calculated to obtain an overall effect measured in dollars. Since employment is important not only to producers, but to policymakers, the number of jobs created or supported is also calculated by the model.

There are several Input-Output commercial software packages available, such as IMPLAN, REMI PI+, or JobsEQ, that provide their unique regionalized models. They employ national databases (e.g. Bureau of Economic Analysis, Bureau of Labor Statistics, etc.) to develop these models and provide varied interfaces and mechanisms to users who are able to conduct economic impact analyses at different levels of sophistication.

Economic impacts are frequently broken down into three types of effects, direct, indirect, and induced.

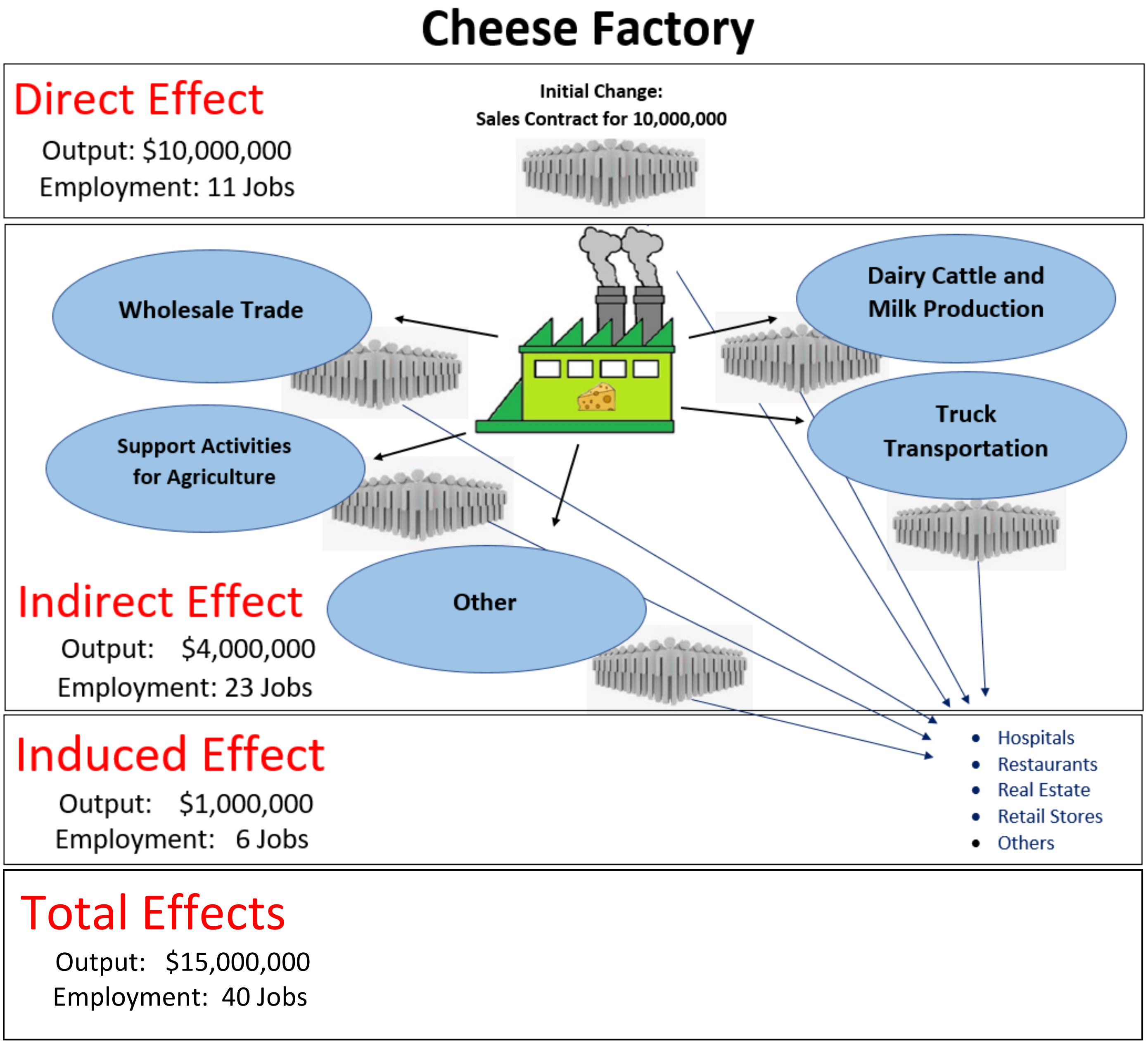
- The *direct effect* refers to the initial change, the initial investment (usually) for a project undertaken by a local business or government.
- *Indirect effects* are the sum of all rounds of interactions—further expenditures by suppliers and subcontractors to make the concrete or replenish their own stockpiles— among all industries in an economy derived from the initial change in business activity.
- *Induced effects* measure the household spending on goods and services by all employees (and owners) who receive additional income generated by both direct and indirect expenditures (original change and subsequent supplier rounds).

Stakeholders use the results of economic impact analysis to evaluate a potential investment decision or policy change and then decide whether to make the change. Some examples of practical uses include:

- A local government analyzing a change in property taxes or increase in minimum wages.
- Analyzing the full local benefits of a start-up project to help persuading a bank to grant a loan.
- A business showing the local benefits from their planned expansion in support of their request for a short-term tax abatement or other economic incentive from the government.
- A local government estimating the expected costs and benefits from a proposed new regulation or zoning change.

Economic Impact Analyses are one of the services provided by the ***Hibbs Institute***.

Here is a quick example to illustrate an economic impact study:



Note: Numbers have been adjusted for simplicity.

Hibbs Institute for Economic & Business Research
3900 University Blvd. ▪ Tyler, Texas 75799 ▪ 903.566.7365 ▪ HibbsInstitute@uttyler.edu