

# What Do We Mean By Economic Output?

## Explanation of Economic Impact Terms

### Data

The data gathered for this model came from the American Bakers Association (ABA), Infogroup, federal and state government data, and IMPLAN. Infogroup is the leading provider of business and consumer data, which includes addresses, business titles and job totals. Since the Infogroup data are adjusted on a continual basis, staff from John Dunham & Associates (JDA) scanned the data for discrepancies, verifying individual facilities using Google Maps and web searches. Each facility has its own employee count. For facilities for which there were no employment data, median job figures are used. This is how the direct employment totals are calculated.

### Model

These employment totals are entered into the IMPLAN Model. The IMPLAN model is based on the input-output accounts published by the US Department of Commerce, Bureau of Economic Analysis and is one of the standard models used to calculate economic impact figures. Input-Output tables representing the economy in 2018 were used in this analysis and impacts are then inflated to a 2020 dollar year. The IMPLAN model is designed to run based on the input of specific direct economic factors, like direct jobs or production value, and generates estimates of direct jobs, wages, and outputs.

### What is Meant by the Term Direct?

Direct Impacts are those jobs, wages, or economic output solely attributable to the industry defined for the study; in the case of the baking industry this includes operators involved in the production, importation and distribution, and retailing of baked goods including breads, cakes, pies, pastries, cookies, crackers, tortillas, pasta, pretzels, cereal and granola bars, baking mixes, and other bakery products. Pre-prepared dough and frozen bakery products manufacturers are also included in the definition of the industry. We like to say that they are the jobs that one can count. If one goes to an operator facility and counts the number of people working there, that would be the direct employment (although there may be many more people working than there are jobs since many people work only part-time). JDA uses direct employment at these facilities that are defined to be part of the industry to calculate all of the other effects presented in the study.

### What is Meant by the Term Indirect/Supplier?

Indirect/Supplier is the term used in economic impact studies to define those effects that result from firms in the defined (or Direct) industry purchasing goods and services from other industries. JDA defines these as impacts in its models. For example, when a baker pays rent on their property to their landlord, or when they hire advisors or consultants to provide their expertise in managing their business, they are creating indirect/supplier effects in the real estate sector or business and personal services sector.

In the case of importers, distributors, and retailers, that handle products through a supply chain, the value of the goods being stocked are not counted as indirect/supplier impacts; only those goods and services used to provide the services are included.

## **What is Meant by the Term Induced?**

Induced effects are the response by the economy that occur through re-spending of income received by employees and business owners measured in the direct and indirect/supplier parts of the economy. When people work in the industry or for firms that supply goods and services to the industry, they receive wages and other payments. This money is recirculated through their household spending inducing further local economic activity. Economists call these induced impacts the multiplier effect of an activity or industry.

Examples of induced effects are the jobs created in a diner located outside of a baked goods manufacturing plant where people purchase sandwiches for lunch, or at the gas station where they purchase fuel for their commute, or even in neighborhoods, where workers purchase houses, go to restaurants or visit the movie theater.

## **What Specifically Do You Mean When You Say a Job?**

Jobs are a measure of the annual average of monthly jobs in each industry as defined by the Quarterly Census of Employment and Wages put out by the BLS. Jobs in our models are derived independently and do not match jobs reported by government entities. JDA often defines industries differently, and generally include more firms and facilities than are surveyed by the government. Jobs are measured in full-time equivalent units.

## **What is Meant by The Term Economic Output or Economic Impact?**

JDA uses output in its models as a general measurement of economic impact because this is the broadest and most comparative measure. In general, output represents the value of industry production for the year calculated in terms of producer prices. Output differs depending on the industry being measured. In the case of the manufacturing impact, output is similar to gross sales for baked goods manufacturers. For importers, distributors, and retailers, output does not represent sales, but rather is similar to the accounting measure of gross margin. The value of the products being stocked or sold by these firms are not included as part of output, even if they are transformed in some way. One way to look at it is the distribution and retail output is total sales revenue minus its cost of goods sold. This is similar to the wholesale or retail markup on a product.