

ECONOMIC IMPACT JUSTIFICATION

The economy is shaped by complex interactions among businesses, workers, and communities. This dynamic exchange between **producers** and **consumers** defines our economy. Economic impact analysis replicates this nonlinear relationship and captures the flow of spending from producer to consumer. Due to the dynamic nature of our economy, it is difficult to conceptualize these economic interdependencies. Computer impact modeling helps simplify these relationships – adding new jobs, improving industry output, or downsizing an industry sector – enabling the cumulative effects of these changes on industries and households to be measured. IMPLAN software was used to model the effects of the Gateway 228 Project to the economy.

Impact Analysis for Planning (IMPLAN) Overview

IMPLAN is an input-output (I-O) modeling system that estimates the cumulative effects of economic change. Whether the change is positive or negative, industries and households will respond by altering their spending habits. IMPLAN seeks to replicate real-world interdependencies that exist between producers and consumers. IMPLAN differentiates between economic impacts that are temporary and those that are more permanent. Development projects typically have a **construction phase** and an **operational phase**.

IMPLAN models can be constructed using county-level data or statewide data. IMPLAN captures basic economic variables, such as industry output, compensation, and employment. It can also be used to estimate fiscal impacts that reflect the change in local government revenue and costs associated with a development project. IMPLAN remains a nationally recognized and widely used modeling tool for its affordability and ease of use. The national Input-Output (I-O) account, which forms the foundation of any IMPLAN model, also provides a high level of detail about inter-industry relationships that would be too costly to outline using traditional research methods.

METHODOLOGY

With national I-O account linkages established, IMPLAN uses labor force and commuting pattern data to develop state- and county-level descriptive models that become the foundation for examining impacts.

The construction phase of a project results in a wide range of temporary benefits. The personnel hired to manage the job and work the construction site are often transplants from other communities. Contracted for a specific project, they spend a portion of their wages on local goods and services (e.g., lodging, food, clothes), but their resource contribution does not represent a sustained contribution.

In contrast, the operational phase of a project results in permanent new jobs that attract people from the local labor market. As these new hires increase their earnings, their discretionary spending activity creates demand for goods and services. Changes in demand *drive* the IMPLAN model. Because the operational phase of a project results in sustained economic change, IMPLAN estimates these impacts separately from the construction phase. Both project phases have a “ripple effect” on the economy. To capture these ripple effects, IMPLAN recognizes three types of impacts: direct, indirect, and induced.

TYPES OF IMPACTS

The I-O accounting framework establishes interdependencies among the industry sectors. The **direct impact** – be it a new business opening, plant closure, or construction project – creates new opportunities for industries in the supply chain. As the impact trickles throughout the I-O framework, other industries are affected by the change – the **indirect impact**. As these supplier industries modify their behavior, their workforce follows suit, making different decisions about how to invest their money – the **induced impact**.

Direct Impacts represent the immediate change to the economy. The direct impacts reflect any spending associated with on-site construction activity and the operating expenses associated with the project at build-out. Direct impacts look at the combined value of the jobs, wages, and output associated with development.

Indirect Impacts examine how other industries respond to the direct industry investment. As an example, if Company X maintains close ties with key suppliers, these business-to-business relationships often grow as Company X grows. Supplier industries may likewise expand, hiring new employees and increasing production. Both the construction phase and the operational phase will inject new money into the economy. The *direct* purchase of building materials, business services, and employees will stimulate other industries to do the same.

Induced Impacts are often referred to as “consumer impacts” because they measure how household spending responds to changes in industry production. When new jobs are created, individuals have greater spending power. A portion of their disposable income is recirculated through the economy when they purchase goods and services. These induced impacts are part of the “ripple effect” that is modeled by IMPLAN.
