

Economic impact studies

An economic impact study (assessment or analysis) traces the total economic activity generated by a policy, investment, project, venue or activity (‘case study’) in a pre-defined impact area. This impact area is determined by the nature of the explored case study and can enhance an individual city or municipality, a region or an entire country or continent. Economic impact assessments support the decision making process in understanding the economic consequences of all kinds of relevant questions such as:

- How much income does a project or policy generate in country A?
- What portion of sales by local businesses is due to sector F?
- How many jobs in the region are supported by sector G?
- How much tax revenue will project Y generate?
- How much income do households and businesses generate in area 1?
- What will the permanent and temporary economic effects be of project Z?



The wide scope of the above mentioned questions already suggests that economic impact studies are one of the most often applied economic models. One should keep in mind, however, that economic impact studies do not include the environmental and broader social impacts such as quality of life. Hence, impact studies are only one of the tools available for both public and private decision makers.

Measured economic effects

Economic impact studies estimate the direct, indirect and induced effects of a proposed case study:

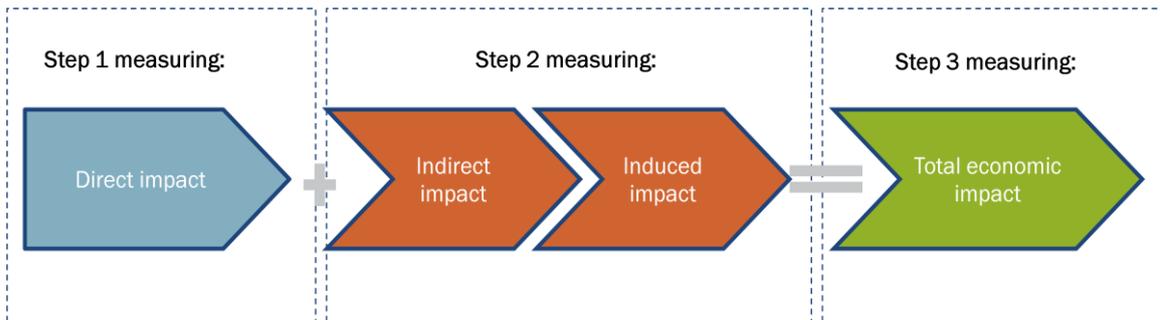
Direct effects are production changes associated with the immediate effects of change in expenditures. An impulse in construction activity, for instance, leads to an increase in wages, profits, taxes paid, etc.

Indirect effects are the production changes resulting from various rounds of re-spending of the receivers of the direct spending impulse in other backward-linked sectors. Architects and brick suppliers, for example, will receive orders from the construction companies responsible for the construction of the ordered development.

Induced effects are the effects resulting from the re-expenditures of households. Employees of companies earn wages that are spend on goods and services. This means that not only the purchases of the construction companies are included, but also the expenses of the employees of the construction companies, etc.

How to measure economic impact?

Based on standard economic impact models, Decisio developed a generic economic impact model that is applicable to almost any kind of case study. In addition, our model is very transparent and easy accessible for the client and its referred audience. Our basic approach is based on three steps:

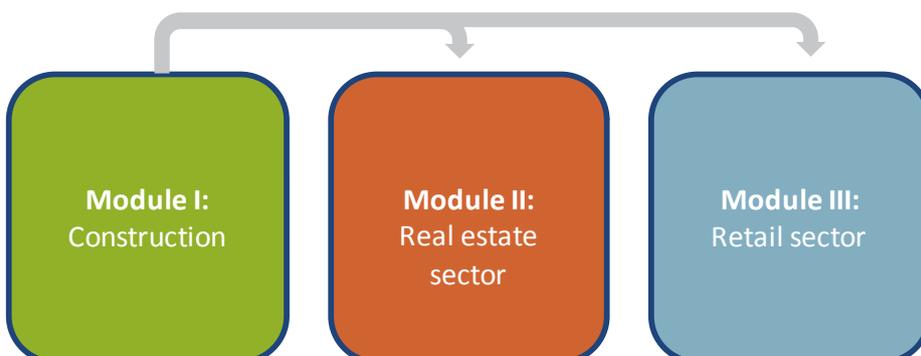


Step 1: Measuring the direct impact

The direct impact of a case study contains the created direct expenditures and are associated with the first round of spending in the economy (without any subsequent transactions).

The building of a new shopping mall, for example, will create temporarily jobs in the construction sector and permanent jobs in retail and affiliate sectors such as cleaning and maintenance. In addition, the real estate owners will generate income from lease contracts and the local government will be able to collect sales tax revenues.

Based on the scope of the economic impact assessment, Decisio will focus its efforts on those sectors in the pre-defined impact area that are affected most by the studied entity. For the example above, Decisio would focus on the construction sector, the real estate sector and the retail sector. To do this, Decisio's researchers create different modules which allow us to determine the direct impact per sector and the interrelations between these modules (see illustration below):



Direct impact cannot be measured without input data. Hence, the most important part of step 1 is the collection of input parameters. The nature of these input parameters is determined by the scope

of the project. For the first module, for example, Decisio will quantify the required construction activities based on the development plan and the construction plans.

Step 2: Measuring the indirect and induced impact

The next step is to estimate the indirect economic effects on the economy. These secondary impacts are more difficult to quantify and there are different approaches possible to do this. When enough data is available, however, Decisio will prefer to use an **input-output model** to calculate these indirect effects.

An **input-output model** is a quantitative economic tool that captures intersectoral transactions. It contains large tables of data that describe the transactions in pre-defined impact areas. These tables help the users to track the flow of money from one sector to the next. The technique of input-output analysis is originally created by Wassily Leontief (1965).

Input-output models result in so called Leontief multipliers. These multipliers capture the size of these indirect effects from a change. For example, an economic multiplier of 2.5 would mean that for each euro spent, € 2.50 is generated, of which € 1.50 is additional indirect spending (indirect and induced). There are several types of multipliers depending on the measured economic output (income, value added, employment, import, etc.).

In case it is not possible to perform an input-output assessment, Decisio will use alternative approaches that rely more on (off-the-shelf) macro-economic aggregates and/or expert judgments to determine the activity and multipliers. These studies can be enriched with primary survey data, deskresearch and other formal models.

Step 3: Calculating the total economic impact

In the final step, Decisio will not only add up the total direct and indirect effects, but will also in a qualitative way assess the economic and socio-economic effects that are even more difficult to quantify. Public education, for instance, creates benefits to society that are very difficult to quantify and to link to a specific institute.

As mentioned before, an economic impact analysis is just one of the available tools for both public and private decision makers, so in essence, this third step links the results of the study to other tools such as the **social cost-benefit analysis**¹ or an environmental impact study.

¹ A Social cost-benefit analysis is a systematic and cohesive method to survey all the impacts caused by an urban development project. It comprises not just the financial effects (investment costs, direct benefits like tax and fees, et cetera), but all the social effects, like: pollution, safety, indirect (labour) market, legal aspects, etc.

Case study examples

- Example 1: The public authorities of an island wish to gain insight in the extensive economic impact of a private development project in order to support the decision making process to determine the optimal zoning plan.
- Example 2: An application has been submitted by a large chain retail store to amend the official zoning plan to allow a new 2,000 square meter retail store on the outskirts of town. The public authorities want to see if the suggested positive impact on the local economy is true before they make any decision.
- Example 3: The food industry of the Netherlands wish to illustrate its importance for the Dutch economy, stressing the amount of jobs, value added and export revenues depending directly and indirectly on activities in the food sector.

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