

## Summary and conclusions

One of the principle arguments made for investing in infrastructure, such as roads, ports and railways, is that this strengthens the economic structure. Prior to taking decisions, governmental agencies conduct social cost-benefit analyses (SCBA). This report examines whether, given the stated objective of strengthening the economic structure, there is reason to adapt the evaluation of a project. The report's key findings are:

*In addition to the serving as a policy supplement to the concept of strengthening the economic structure, the SCBA is based on a broad welfare concept.*

Although economic structure concerns the product-side of the economy, it has no additional, clearly defined scientific definition. As such, it must be regarded as more of a 'meta-policy objective'. Hence, as based on policy papers, studies and interviews, we define this objective as 'the availability, the quality, the spatial distribution and the cohesion of production factors'. Infrastructure is *one* of the production factors.

The Ministry of Economic Affairs' policy document, titled 'Strengthening the Economic Structure', opts to supplement the so-called broad welfare concept. At issue then is not only the economy's immediate ability to recover costs, but rather also the quality of life, nature and the environment. For this reason, the distribution of activities, or the spatial structuring effect of infrastructure, is important - not only the net-effects occurring on a national level. We identify the following lines of approach:

1. *Macro-economic*: This concerns aspects such as gross domestic product, productivity, sector structuring, employment, competitiveness and business climates. A new infrastructure project provides the economy with a positive impulse. In contrast to this are the costs: the elimination of other expenditures, higher national debt or higher tax rates produces negative effects. In the Netherlands, a highly developed economy with a closed infrastructure network, the effect, with regard to for example gross national product, is too small to be measured. However, it should indeed be possible to measure the effects stemming from a comprehensive package of (profitable) investment projects spread over a number of years.
2. *Spatial*: ports and airports lead to regional specialization. Roads and public transport also attract economic activity, which often involves the shifting of economic activities within a particular region, or, to a lesser degree, between various regions. There may be, to a limited extent, net welfare effects stemming from benefits of scale.
3. *Social*: For infrastructure this concerns the opening up of sparsely populated, remote regions and mobility options (namely public transport) for society's more vulnerable groups.
4. *Environment*: the creation of new infrastructure, which results in increased traffic generation and land use, usually has negative consequences for nature and the environment. Opting for other modes of transport or better integration can however sometimes lead to better performance.

The SCBA stems from the same broad welfare concept and this is linked to the ways in which strengthening the economic structure is supplemented. If we look at the specific (welfare) effects stemming from a stronger economic structure, no significant benefits were discovered that are not currently included in the SCBA.

*When decisions about projects are taken in practice, both the SCBA results and the effects 'hidden' in the SCBA are assessed.*

Stimulating economic development is a primary element of the government's spatial policy. In this, infrastructure is increasingly analyzed in conjunction with (investment in) other spatial developments, such as nature and recreation, water storage and quality, and residential and work locations.

From an analysis of the argumentation involved with larger projects, it appears that in addition to the results of the SCBA (or the efficiency), the effectiveness (the realization of policy objectives) also plays an important role in the decisions taken about projects. At issue then is, for example, strengthening levels of employment in the north of the country or Rotterdam's position as a main port. Such effects are implicitly included in the SCBA, but not always made explicitly apparent. A distinction is made between two types of effects:

1. Net effects that are 'hidden' in the broader list of benefits. Examples of this include the accessibility of a specific region or the enlargement of public transport's market share. These are indeed included in a larger list of benefits (overall travel time gains), but are not made explicitly apparent.
2. Effects on the distribution between groups and regions that are indeed implicitly or explicitly assessed in the SCBA, but which do not lead to a net-effect in the outcome. This applies to, for example, employment effects in a specific region or the effects on lower incomes.

Insights into these effects can be compared to an analysis of effectiveness. Formal guidelines, which the SCBA should adhere to, also recommend this, if this is to be regarded as relevant to policy. A consistent set of project-related policy objectives must be concretely identified.

In such an analysis, supplemental effects leading to other SCBA results are emphatically not the issue. Effects from which welfare aspects already included in the SCBA are indeed explicitly made apparent.

*For projects that have broad strategic objectives, it can be beneficial to make these effects apparent, but this will not lead to a different SCBA result.*

On a per project basis, it should be determined if it is worthwhile to conduct such a supplementary analysis. If the answer is yes, it must then be determined how comprehensive this analysis should be? Such a comprehensive analysis certainly requires a significant amount of additional research effort. We therefore recommend a distinction to be made between two types of projects:

1. For projects that must solve a specific accessibility bottleneck, a SCBA will provide much satisfactory information.
2. For projects that have broad strategic objectives, it can be beneficial to conduct a comprehensive analysis of effectiveness. This relates to objectives such as strengthening the regional economy, improving international competitiveness or supporting social cohesion.