

## Executive Summary

This report presents findings from a systematic review of evaluations of the local economic impact of transport projects. It covers evidence on roads, rail (including light rail and subways), trams, buses, cycling and walking. Evidence on ports and airports will be considered in a further report. This review is the seventh produced by the What Works Centre for Local Economic Growth.

The review considered more than 2,300 policy evaluations and evidence reviews from the UK and other OECD countries. It found 29 impact evaluations that met the Centre's minimum standards.

## Approach

The Centre seeks to establish causal impact – an estimate of the difference that can be expected between the outcome for areas that have broadband provision and the average outcome they would have experienced without provision (see Figure 1). Our methodology for producing our reviews is outlined in Figure 2.

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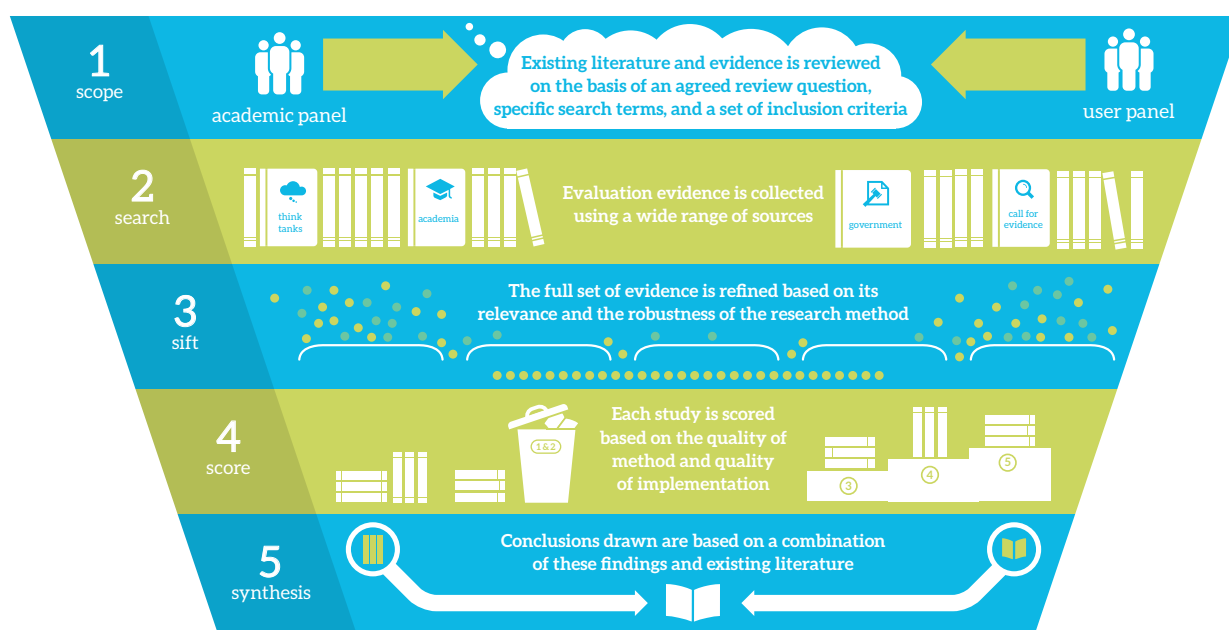
Three types of transport projects were considered:

1. Expansion and improvement of transport infrastructure
  2. Service enhancement (e.g. improving reliability, increasing frequency)
  3. Changing how existing infrastructure is supplied and consumed:
    - Pricing interventions (e.g. fare subsidies)
    - Changing ownership (e.g. privatisation)
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Figure 1: Evaluating impact



Figure 2: Methodology



## Findings

This section summarises the detailed findings. We emphasise that many of these findings depend on a small number of studies. They are, however, consistent with other research on the economic impact of transport improvements.

### What the evidence shows

- Road projects can positively impact local employment. But effects are not always positive and a majority of evaluations show no (or mixed) effects on employment.
- Road projects may increase firm entry (either through new firms starting up, or existing firms relocating). However, this does not necessarily increase the overall number of businesses (since new arrivals may displace existing firms).
- Road projects tend to have a positive effect on property prices, although effects depend on distance to the project (and the effects can also vary over time).

- The impact of roads projects on the size of the local population may vary depending on whether the project is urban, suburban or rural.
- There is some evidence that road projects have positive effects on wages or incomes.
- There is some evidence that road projects have a positive effect on productivity.
- Rail projects tend to have a positive effect on property prices, although effects depend on distance to the project (and the effects can also vary over time).

## Where there is a lack of evidence

- We found no high quality evaluations that provide evidence on the impact of rail infrastructure on employment, and only a limited number of evaluations showing that road projects have a positive effect.
- We found no high quality evaluations that provide evidence on the impacts of trams, buses, cycling and walking schemes on any economic outcomes.
- Even when studies are able to identify a positive impact on employment, the extent to which this is as a result of displacement from other nearby locations is still unresolved. More generally, the spatial scale of any employment effects varies and we do not have enough evidence to be able to generalise about the spatial distribution of effects if they occur. The same is true for other outcomes. The scale at which the studies evaluate impact varies from adjacent neighbourhoods to much larger US counties.
- Surprisingly, very few evaluations consider the impact of transport investment on productivity (we found just three studies, two for roads and one for rail). Although the use of such productivity effects to calculate 'wider economic benefits' in transport appraisal is underpinned by a larger evidence base, it is still worrying that so few evaluations can demonstrate that these effects occur in practice.
- We have little evidence that would allow us to draw conclusions on whether large-scale projects (e.g. high speed rail or motorway construction) have larger economic growth impacts than spending similar amounts on a collection of small-scale projects (e.g. light rail or junction improvements).
- More generally, we do not know how differences in the nature of improvements (e.g. journey time saved or number of additional journeys) affect local economic outcomes.
- There is some evidence that context matters. For example, property price effects may depend on the type of property, while wage effects may differ between low skilled and high skilled workers. But, once again we do not have enough evidence to be able to generalise.

## How to use these reviews

The evidence review highlights a number of factors for policy makers to be aware of when considering transport policy:

- Much more empirical work remains to be done on understanding the impact of infrastructure improvements on local economic growth. The economic benefits of transport infrastructure spending – particularly as a mechanism for generating local economic growth – are not as clear-cut as they might seem on face value.
- While it is understandable that political debate focuses on expenditure figures across different parts of the UK, they do not help answer the question of what would happen if expenditure was distributed differently. Arguments for spending more in areas that are less economically successful

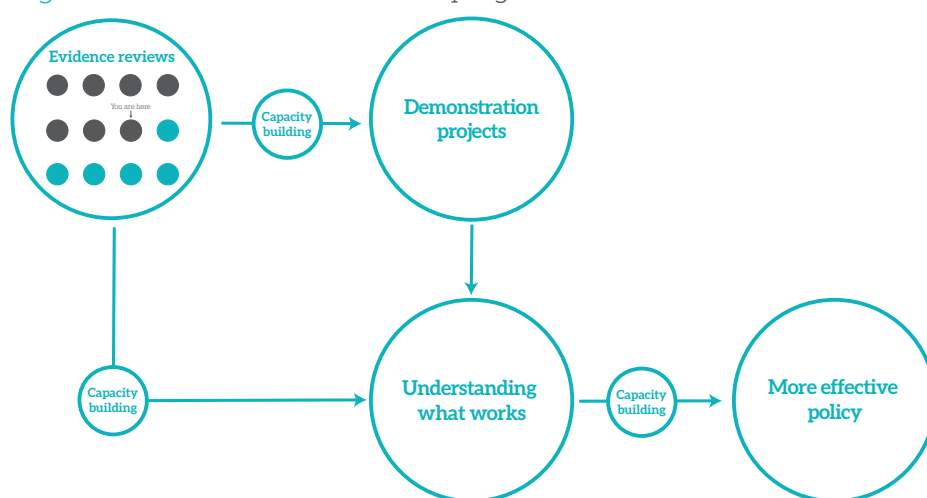
hinge on the hope that new transport is a cost-effective way to stimulate new economic activity. As this review shows, we do not yet have clear and definitive evidence to support that claim.

- These findings raise fundamental questions about scheme appraisal and prioritization, and about the role of impact evaluation in improving decision-making around transport investment.

## To determine policy priorities

The Centre's reviews consider a specific type of evidence – impact evaluation – that seeks to understand the causal effect of policy interventions and to establish their cost-effectiveness. In the longer term, the Centre will produce a range of evidence reviews that will help local decision makers decide the broad policy areas on which to spend limited resources. Figure 3 illustrates how the reviews relate to the other work streams of the Centre.

Figure 3: What Works Centre work programme



## Helping to fill the evidence gaps

As should be clear from this review, there are many things that we do not know about the local economic impact of infrastructure. To help fill these evidence gaps, the final part of the review provides a number of recommendations aimed at improving the evaluation and appraisal of transport schemes.

The Centre's longer term objectives are to ensure that robust evidence is embedded in the development of policy, that these policies are effectively evaluated and that feedback is used to improve them. To achieve these objectives we want to:

- work with local decision makers to improve evaluation standards so that we can learn more about what policies work, where.
- set up a series of 'demonstration projects' to show how effective evaluation can work in practice.

Interested policymakers please get in touch.

This work is published by the What Works Centre for Local Economic Growth, which is funded by a grant from the Economic and Social Research Council, the Department for Business, Innovation and Skills and the Department of Communities and Local Government. The support of the Funders is acknowledged. The views expressed are those of the Centre and do not represent the views of the Funders.

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