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# Transport investment, transport intensity and economic growth: interim report

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## Committee's main findings

The Committee's main findings at present are:

- In certain circumstances transport investment may have economic impacts which are additional to those measured in conventional cost benefit appraisal. These additional impacts could be either positive or negative. Recent research may help identify the circumstances in which such impacts might be significant. The Committee's further work will consider the feasibility of developing this work into practicable improvements in appraisal methodology. At present this is an open question.
- There is scope to achieve some reduction in national traffic volumes through restraint measures which will at the same time improve economic efficiency. This is likely to entail packages of price and non-price measures, focused on congested parts of the network. The Committee's work does not enable it to say anything about the scale of traffic reduction which could be achieved without harmful effects on the economy.
- While in certain circumstances transport schemes may bring added economic benefits to an area needing regeneration, in other circumstances the opposite might occur. Better communications will enlarge markets for goods, services and workers: the area as a whole may gain or lose from this depending on the structure and competitiveness of the local economy. It follows that there is no simple, unambiguous link between transport provision and local regeneration.
- The Committee believes that the state of the art in local and regional economic impact studies is under-developed. The pervasive, often implicit assumption, that the benefit of improved accessibility will always accrue to the target area may often be misplaced; the possibility of the net impact running counter to regeneration objectives cannot be ruled out. The Committee indicates some thoughts about an improved approach which it will consider further for its final report.

## Introduction

This interim report contains provisional findings from SACTRA's current examination of how changes in the transport system affect the economy. At the request of the Department, the report focuses on the economic impact of measures to restrain traffic growth, and on the significance for road project appraisal of links between road investment and regeneration. We may need to modify these findings in the light of further work on our present remit.

## General concepts

Changes to transport - whether in the form for example of capacity increases, charges or physical restrictions on travel - alter the cost of travel. These changes in transport costs may alter travel patterns and affect traffic volumes, patterns of land use, the operation of labour markets and the location and organisation of business. Thus transport changes may affect the economy, both at national and regional levels. However, hard evidence on the scale of impacts is scarce.

## Impacts

The available evidence does not support arguments that new transport investment in general has a major impact on economic growth in a country with an already well-developed infrastructure. At regional and local level, in particular, the issue of impact is made more complex by the possibility that changes in quality of access can either benefit or harm the area in question. We do not accept the results of macroeconomic studies (e.g. Aschauer (1989)), which purport to identify very large returns from infrastructure investment. We are at present unpersuaded by the size of the impact of transport on jobs claimed by a number of European studies (e.g. European Commission (1997)). We intend to examine these more fully for our final report.

## Cost benefit analysis

There are well established appraisal techniques for assessing the costs and benefits of transport changes. Economists have repeatedly demonstrated that, in a *perfectly* competitive economy, a fully-specified cost benefit analysis (CBA) would capture all the economic impacts of a change to the transport system. Economic benefits such as the benefits to a firm of workers being prepared to travel further to work are another representation of the value of time savings included in the CBA, not additional to these benefits.

## Perfect versus imperfect competition

Markets are not, however, perfectly competitive. As a result, there are two important conditions influencing economic impacts: first, the extent to which transport-using industries are perfectly competitive; and, secondly, the extent to which prices in the transport sector reflect social costs.

Where monopoly power is prevalent in transport-using industries, firms will charge prices to maximise profit, but these prices will be higher than they should be to maximise economic welfare. Similarly, if there are potential economies of scale that cannot be realised in a small local market, again prices are higher than they need or should be. In these circumstances and provided prices in the transport sector reflect marginal social cost, a transport scheme which opens the area up to wider competition and a wider market may bring prices down, and may in turn produce additional economic activity. The end result is benefits which are *greater* than the direct benefits as assessed by the CBA.

Conversely, if transport-using industries are perfectly competitive and prices in the transport sector are less than marginal social costs (e.g. congestion or pollution costs are not fully paid for by the producer of them), total benefits will be less than the direct benefits assessed by CBA. Other possible combinations of circumstances in the transport-using and transport sectors exist for which it is not possible to state a general rule about the existence and sign (positive or negative) of additional impacts.

We have commissioned new work, extending recent research into the implications of imperfect competition (Venables and Gasiorek (1997)). This work provides a theoretical framework which illuminates the linkages between transport and the economy and may help to identify the circumstances in which transport changes could have a significant economic impact. For example:

- It lends support to the view that in certain circumstances there will be economic impacts additional to those captured by CBA. Crucially, these impacts could be *either* positive or negative.
- It also lends support to the concept of network effects.
- It gives some general guidance as to the circumstances in which improving transport links between regions could work to the advantage or disadvantage of peripheral regions, or of industrial sectors within regions.