The evidence base for the impact of transport is unevenly distributed and under-reviewed.

This evidence and gap map shows the available evidence, and gaps in the evidence, on the effectiveness of transport sector intervention in low- and middle-income countries.

The evidence is highly concentrated on the outcome of transport infrastructure (especially roads), service and use. It is also concentrated in a specific region, East Asia and the Pacific, and urban populations.

Sectors with great development potential, such as waterways, are under-examined, reflecting under-investment.

**What is this evidence and gap map about?**

Transport interventions can play a key role in the achievement of many of the United Nations sustainable development goals (SDGs). This evidence and gap map (EGM) contains the evidence base for all forms of transport: roads, bridges and paths, railways and trams, sea, ports and inland waterways, and civil aviation. For each part of the transport sector, the interventions are divided into infrastructure, incentives and institutions.

**What studies are included?**

Eligible studies had to be studies of the effects of a transport intervention, which is either the transport infrastructure or service itself, or transport-related incentives or institutions.

Studies had to be impact evaluations designed to determine effects, including regression analysis. Before versus after, ex-ante studies, and modeling studies without an empirical application are not included.

The EGM contains 466 studies, of which 34 are systematic reviews.

**What are the main findings of this EGM?**

The studies are concentrated by sector and by outcome. The majority of the studies are in the intervention category of roads, bridges and paths, being mainly about roads. Of the three...
sub-categories – infrastructure, incentives, and institutions – infrastructure is the most studied.

There is a moderate number of studies on railways, but the large majority of these are from East Asia, notably China. There are few studies on the other two intervention categories: sea and inland waterways, and air.

The studies follow the infrastructure. The large number of Chinese rail studies reflects the rapid growth in the Chinese railway system. The lack of studies of inland waterways in Africa reflects the lack of investment in this mode of transport.

The most frequently reported outcomes relate to transport use, such as mode of transport and travel time. This is followed by health and education, and economic development outcomes. Other outcomes are environment, equity and culture.

There are very few studies of known adverse effects like displacement.

Transport studies are under-reviewed. Typically, 20-30% of studies in an EGM are systematic reviews. In this transport map, however, reviews make up only 34 studies out of 466, accounting for a 7% share. Moreover, the majority of the included reviews have methodological weaknesses, such as failure to conduct meta-analysis and to assess risk of bias.

What do the findings of the map mean?

The map points to a clear research agenda. A first step would be to review the included systematic reviews. Based on this analysis, and that of the map, consultation with stakeholders can determine research priorities for reviews and primary studies.

Since these studies contribute to the global public good of building the evidence base, this process is best done in a coordinated manner.

How up-to-date is this EGM?
The authors searched for studies published up to May 2020.

What is the Campbell Collaboration?
Campbell is an international, voluntary, non-profit research network. We summarise and evaluate the quality of evidence about programmes in the social and behavioural sciences. Our aim is to help people make better choices and better policy decisions.

About this summary

The interactive EGM is available here: https://onlinelibrary.wiley.com/pb-assets/assets/18911803/Transport%20EGM-1638374245.html

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