

The key to prosperity is a greener transport system

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Investing in public transport and active travel has greater potential to increase prosperity than road investment and has social and environmental advantages.

Policy makers and politicians are rightly keen to bring jobs and prosperity to their local areas and to enhance the well-being of residents. Transport can be an important enabler of these aims but too often the focus is on building new roads, which is incompatible with climate change and does not solve congestion.¹ The evidence shows that investing in public transport and active travel can play a key role in boosting prosperity in many areas of Britain, as well as bring multiple social and environmental benefits.

Investment in public transport can boost productivity

Productivity can be boosted through agglomeration benefits, i.e. advantages generated by the clustering of employers, employees, consumers and supporting infrastructure, as occurs in many towns and cities. While any improvement in transport that moves people more easily to a given place could contribute to agglomeration benefits, public transport is likely to be particularly effective because it moves people so efficiently, not least by requiring less land-take than cars to move a given number of people. There is a variety of evidence to support this argument:

- Work led by Tom Forth at the Open Data Institute Leeds suggests that a key reason why UK cities are significantly less productive than similar-sized cities in Europe is a lack of good public transport.² Long public transport journey times into a given city centre reduce the effective size of that city, particularly at peak hours – sacrificing the agglomeration benefits that would be expected given the size of the surrounding population. Based on analysis of Birmingham, and assuming that agglomeration benefits in the UK are as significant as in France, this research has estimated that simply improving the reliability of bus journey times into Birmingham could increase its GDP/capita by 7%.^{3,4}
- Analysis by the Centre for Cities supports the theory that lack of public transport reduces the ‘effective size’ of big cities and estimate that this costs the UK economy £23.1 billion each year.⁵ They point out that *“Rome and Manchester are the same size but Rome is 55% more productive, partly because a much larger share of its workforce can travel into the city centre by public transport.”*
- Work for the Onward think tank has also suggested that weak public transport connectivity to some of Britain’s largest regional cities is holding back growth.⁶
- Other work by the Centre for Cities suggests that conurbations, such as the Rhine-Ruhr in Germany and The Netherlands’ Randstad, have higher productivity than their national economies due to the higher densities of knowledge-based workers. These agglomeration benefits are helped, in turn, by strong public transport links, particularly between the cities and their immediate hinterlands.⁷
- A US study has estimated that a 10% increase in public transport (by adding rail or bus seats or rail miles) in cities is associated with a 1-2% increase in productivity.⁸

- A study of Crossrail in London estimated that agglomeration added 25% to the benefits of the project.⁹

There is also evidence that investment in walking¹⁰ and cycling¹¹ can boost productivity.

Public transport and active travel can ‘unlock’ more land for housing

They do this in ways that enhance the quality of life for local residents, avoiding building in more car-dependency. For example, Create Streets and Sustrans have taken a real plan for a new housing extension to the market town of Chippenham, based around a £75 million large road scheme, and redesigned it for people instead of cars.¹² They have proposed a revised scheme which delivers the same number of homes with a much smaller loss of greenfield land, and which reduces the spend on roads to £10 million whilst upgrading rail and bus services, cycle routes, town centre facilities and supporting local businesses. The revised scheme should create healthier communities, fewer climate impacts and a more prosperous town.

The evidence that roads generate prosperity is weak

Contrary to the assumptions of some policy makers, the evidence linking road-building to prosperity is actually limited and weak. Even a review for the Department for Transport acknowledged that *“there is a limited amount of robust evaluation evidence on the economic impacts of specific roads investment projects”*.¹³

Where evidence does exist, it suggests that new roads often have only limited economic impact. For example, one study looked at National Highways own evaluation reports for 80 strategic road schemes. Of these, 25 had been justified, prior to construction, on the basis of their expected economic benefits. However, on completion, the majority had either no, weak, or anecdotal evidence of economic impact.¹⁴

Similarly, a comprehensive review by the ‘What Works Centre for Local Economic Growth’ found that the evidence for economic benefits from any transport infrastructure was relatively limited, and that, whilst road schemes are sometimes shown to have positive effects, this is often not the case.¹⁵ For example, the majority of evaluation studies reviewed for roads showed no (or mixed) effects on employment.¹⁶

Meanwhile, building new roads often brings substantial social, environmental and health costs.¹⁷

Wales provides a template for doing this better

Rather than assuming that roads are the answer, we need to appraise the most cost-effective solutions for local transport problems (e.g. congestion, safety, connectivity) while delivering on other societal goals (e.g. climate, health, prosperity, levelling up).

The Welsh Government did this with its review of how to reduce congestion on the M4 in south east Wales.¹⁸ As a result, instead of recommending a £1.6 billion new road, the review concluded that a comprehensive package of measures would be the most beneficial solution, including alternative public transport and active travel infrastructure. Taken together, these should improve journey time and reliability on the M4; cost half the amount of the new road; and bring wider benefits in terms of environment, communities, public health and fair access to transport.¹⁹

Similar reviews in all England’s regions, which appraise all possible solutions rather than defaulting to road building, would help deliver travel benefits at the lowest cost while also delivering on prosperity, climate and health goals.

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- ¹ Transport for Quality of Life (2018) [Radical Transport 2-Pager #3: The case for shifting road spending to sustainable travel](#).
- ² Forth T (2023) [Birmingham isn't a big city at peak times: How poor public transport explains the UK's productivity puzzle](#). Article in City Monitor, 31/01/19, updated 24/08/23.
- ³ Forth T (2019) [Birmingham is a small city](#). Web article, Tom Forth website, 14/01/19.
- ⁴ See endnote 2.
- ⁵ Rodrigues G & Breach A (2021) [Measuring Up: Comparing public transport in the UK and Europe's biggest cities](#). Report by Centre for Cities.
- ⁶ Blagden J & Tanner W (2021) [Network effects: Why levelling up demands a new approach to connectivity](#). Report for Onward.
- ⁷ Swinney P (2016) [Building the Northern Powerhouse: Lessons from the Rhine-Ruhr and Randstad](#). Report for Centre for Cities.
- ⁸ Chatman D.G. & Noland R.B. (2014) [Transit Service, Physical Agglomeration and Productivity in US Metropolitan Areas](#). Urban Studies, 51(5), 917-937.
- ⁹ Graham D.J. (2007) [Agglomeration, Productivity and Transport Investment](#). Journal of Transport Economics and Policy, Vol. 41, No. 3, pp. 317-343.
- ¹⁰ E.g. Improvements in pedestrian networks were found to be four times more effective than improving roads at increasing the productivity of the key service sectors in Hong Kong; and a New Zealand study found statistically significant positive associations between locations that are more walkable and higher productivity in central Auckland. Zhou Y, Zhang L & Chiaradia A.J.F. (2022) Estimating Wider Economic Impacts of Transport Infrastructure Investment: Evidence from Accessibility Disparity in Hong Kong. Transportation Research: Part A: Policy and Practice, August 2022, v. 162, pp. 220-35. DOI: 10.1016/j.tra.2022.05.014; Rohani M & Lawrence G (2017) [The Relationship Between Pedestrian Connectivity and Economic Productivity in Auckland's City Centre](#). Technical Report 2017/007, Auckland Council.
- ¹¹ E.g. The Dublin bikeshare scheme was estimated to provide agglomeration benefits of up to €6.7 million (2017 prices). Bullock C et al (2017) [The economic contribution of public bike-share to the sustainability and efficient functioning of cities](#). Sustainable Cities and Society 28, 76–87.
- ¹² Create Streets & Sustrans (2024) [Stepping off the road to nowhere: How changing transport modelling can create green growth, sustainable transport and beautiful streets and homes](#).
- ¹³ Frontier Economics Ltd (2017) [Exploring the economic benefits of strategic roads](#). Report for DfT and Highways England.
- ¹⁴ Sloman L, Hopkinson L & Taylor I (2017) [The Impact of Road Projects in England](#). Report for CPRE.
- ¹⁵ What Works Centre for Local Economic Growth (2015) [Evidence Review 7: Transport](#).
- ¹⁶ Ibid.
- ¹⁷ See endnote 1.
- ¹⁸ Welsh Government (2019) [Terms of reference for the South East Wales Transport Commission](#).
- ¹⁹ Transport Commission for South East Wales (2020) [Final recommendations: One region, one network, one ticket](#).