

Solving the UK's Productivity Problem: the role of transport investment policy

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Why you should read this

Government has across-the-board policy and infrastructure plans, aiming to improve on the nation's poor productivity record. But what role can transport investment play in helping realise these wider ambitions? Here we examine the evidence emerging from a recent National Institute of Economic and Social Research (NIESR) report that looked at a series of productivity initiatives across the wider economy.

This article focusses on the transport implications of: housing expansion; new investment in the defence sector; in R&D more generally; the development of digital technologies including AI; the transformational expansion of the nation's electrical supply network; and the search for foreign direct investment.

What do these developments, each of them embracing an ambition to improve on the nation's poor productivity performance, mean for the national transport system?

1.0 Introduction

NIESR jointly with the Productivity Institute, recently published a piece titled 'Joining Up Pro-Productivity Policies in the UK'.¹

There are 14 papers by different authors on the subject area of how best to stimulate the economy through increasing productivity, a key policy driver, of course, for today's Government.

We saw the NIESR report as an opportunity to look for the implications for transport from adoption of these wider policies for local, regional and national economies to achieve better productivity outcomes. We aim to identify what transport investments might be needed in support.

Of course there may be other economic aims that transport investments can deliver—increased efficiency in the rail sector is not covered here, for instance—and there are plenty of other reasons why transport investment may be worthwhile based on social, safety, health, equity, and environmental gains. Some of these may in turn feed through into improved economic performance outcomes.

But to re-iterate: here we look at possible wider economic/productivity measures and their implications for transport policy.

This is not the usual exam question transport analysts set themselves, which, following 'Green Book' guidance, is more about how best to quantify likely productivity impacts across the wider economy from a given transport sector investment. Here we are trying to do the opposite: learn what types of transport sector investments will best support measures designed to directly increase productivity outcomes in the wider economy.

1. NIESR Occasional Paper LXV, July 2025, see: [NIESR Occasional Paper LXV. Joining Up Pro-Productivity Policies in the UK](#)

2.0 Productivity—an overview

Productivity in the UK has not been performing well in comparison with other countries since the global financial crash of 2008, and this is very widely seen as being why the nation has seen such weak economic growth over the last 15 years.

A focus on joining up policy measures is a key part of the NIESR report on productivity because the evidence suggests that the problem is endemic. Co-ordination of initiatives across sectors is therefore required.

The NIESR work signals a need to embed transport decisions along with complementary measures.

Government now sees infrastructure investment as being a key part of its economic growth strategy.² It wants infrastructure planning processes to be accelerated accordingly and sees joined up investment across sectors as being important—hence the publication of a 10-Year Infrastructure Plan, for example.

The economic role of transport projects

Government expects investment in transport to act as an enabler of productivity growth. The belief is that a stronger economy can be achieved through productivity improvements arising from transport projects such as the new Oxford–Cambridge rail line now under construction, the planned new Lower Thames road crossing at Dartford, and additional runways at Heathrow and Gatwick airports.

2. UK Infrastructure: A 10 Year Strategy – GOV.UK

While projects such as these are enthusiastically adopted and supported by Government, much less is known about how they might come to bear positively on the relevant parts of the national economy, and their specific productivity impacts remain something of a mystery.

Conventional transport project business cases will rarely indicate a strong—or even a positive—economic return from such projects using today's Green Book appraisal methodologies. It may be that such transport investments are a necessary but not sufficient condition for productivity gains (although many would point to methodological limitations in project appraisals).

The NIESR report reflects this concern when it speaks of the need **“to align policies regarding transport, housing, skills and digital budgets, so that they are synchronised rather than siloed”**.³

3.0 The NIESR/ Productivity Institute report: ‘Joining Up Pro-Productivity Policies’—a short review

The NIESR publication has 14 papers on the subject of joining up pro-productivity policies, one of which centres on the transport sector. The others provide evidence or argument on how higher productivity across the wider economy can be achieved—and how it will improve national economic outcomes.

The papers reveal a shared concern centred on:

- over-centralisation
- a lack of regional structures to coordinate cross-sector investment and
- fragmented decision-making at local, regional and central levels.

The future should be regional and coordinated across economic sectors.

We summarise here what can be learned from nine of these papers which cover the question of how productivity gains—and hence economic growth—could be supported or stimulated by improvements in the transport sector.

We first provide short ‘boxed’ extracts from each of these papers in turn, noting key points where a transport perspective forms part of the wider narrative, and highlighting **in bold** our key transport policy take-outs.

3. NIESR paper *op cit*, page xv

Pro-Productivity Policies for this Parliament

BART VAN ARK, STEPHEN MILLARD, ADRIAN PABST & ANDY WESTWOOD

"Instead of centralising power under the auspices of Treasury control, better UK policy-making needs a full, if incremental, system of devolution whereby devolved bodies have greater decision-making powers and financial autonomy including the ability to raise tax."

"Increased infrastructure investment is of vital importance to boost UK productivity performance... **notably though a focus on improving the diffusion, dissemination and transmission linkages between London and the rest of the country** and the role that infrastructure and housing play in these transmission mechanisms."

"Another challenge is to **align policies regarding transport, housing, skills and digital budgets**".

"A particular priority is to increase investment in higher level vocational and technical skills"

Reforming the UK Fiscal Framework and Boosting Public Investment – a Perspective from Scotland

ANTON MOSCATELLI & GRAEME ROY

"There are **shared competencies and areas where coordination between UK, Scotland and local policy is needed** to secure the best outcomes"

Rewiring the UK Central Government Machine: How to Embed Pro-Productivity Policies Through Disciplined Pluralism

PATRICK DIAMOND

"Treasury's Green Book Methodology for appraising investment... weakens the position of low growth regions"

"...the UK is amongst the most centralised of advanced economies.."

"[There is a need to] ..**enable combined authorities to form integrated regional units to spur economic development** and decentralisation"....

"There should be strategic capacity at the regional level, essential not only for economic growth and spatial development, but [also] in tackling problems at the devolution periphery.... Many English combined authorities may not be of sufficient scale to effectively discharge their policy responsibilities for spatial economic development. As such it will be necessary to bring several combined authorities with elected mayors into single combined authorities ... into **single regional units that organise and oversee ... development plans**... devolved powers should be comparable with [those of] the devolved nations]."

Dysfunctionality in UK Central Government: Understanding the Impact of Treasury Control

DIANE COYLE, DAVID RICHARDS, MARTIN SMITH & SAMUEL WARNER

"Many of the new devolved bodies see their role as **fostering local development and improving transport infrastructure but in reality they have insufficient resources to make a real impact on economic growth.**"

UK Science and Innovation; five years since the missing £4bn

TOM FORTH & RICHARD JONES

"We specifically identified Northern Ireland, North West England and the Midlands as places where business spending on R&D is high, but public sector spending is lacking."

"...knowledge spillovers from publicly funded research are known to be localised, roughly defined by commuting distance. Knowledge intensive clusters arise from formal R&D collaborations. Entrepreneurial activity, informal knowledge exchange... physical proximity accelerates the accumulation of agglomeration benefits."

"Productivity issues ... hugely lagging in European terms since 2008 ... with the central high density regions of the UK—the North and the Midlands—seeing economic strength... [but where] ... productivity stagnated earlier and at a far lower level than the economy of South East England and NW Europe"

"Businesses in the ... North and the ... Midlands invested above the UK average rate [but] the public sector invested substantially less."

"Germany's regional economies have converged since re-unification in 1990.... The economic performance of North England and the Midlands is especially pronounced in its large cities... Meanwhile, **...continuing higher capital investment in transport in South East England continues to increase agglomeration benefits there.**"

Raising Regional Productivity

ADRIAN PABST

[On the June 2025 Comprehensive Spending Review] **"The welcome investments in transport, housing, skills, energy and defence need to be synchronised rather than siloed".**

"A number of questions arise... [how to] ... kickstart growth and productivity in the country's second tier cities which lag comparable cities in [other] advanced economies? Do inter-regional spillovers justify a concentration of investments in the South... e.g. a third runway at Heathrow? ...does ...Government ...have a strategy to help regenerate small towns, rural and coastal areas, and if so how are these linked to local and regional plans?"

"The growing gap between regions also extends to health and well-being....The largest gaps between prosperous and poor areas are in primary school educational standards, housing and public transport. Of those three sectors, **public transport has seen the sharpest decline between 2019 and 2024....** An aging infrastructure network where investment projects have been delayed or cancelled altogether."

"How will the **Government's housing policy affect regional labour markets ..including ... better transport connectivity to improve access to employment?**"

"key to the success of a security-shaped industrial strategy is to link it to place and people. Advanced manufacturing and the defence industry are **mostly located in less prosperous less productive regions. That is where the increase in... investment needs to be concentrated.**"

Attracting Transformational [Foreign Direct Investment] FDI to Boost Productivity

NIGEL DRIFFIELD & XIAOCAN YUAN

“The UK exhibits high levels of regional inequality...The necessary conditions .. for FDI to boost productivity .. entail ...key activities or value chains ...[and] ... equally places the emphasis on the importance of **enlarging travel-to-work areas in the UK**, such that firms can access a wider pool of available labour...**particularly in the North and Midlands.**”



Productivity: Transport and Housing

TIM LEUNIG

The transport sector paper by Professor Tim Leunig uses comparisons between the UK and other countries with higher productivity—especially the USA—to explore how national transport policy could be re-set in conjunction with housing policies. He suggests that: to “raise agglomeration effects and improve productivity towards US levels, the UK should copy the USA and build more roads, especially motorways as part of its long-term infrastructure strategy”.

He suggests a focus on links to ports for this type of investment along with better connections between cities. He suggests transport user pricing needs to change to follow the US model too, with lower road user costs (to mimic the lower fuel taxes in the US). And he urges lower fares on public transport into cities too.

Agglomeration gains and higher urban productivity would also come, he suggests, from allowing far more housing at higher densities in and adjoining our principal cities. He illustrates this point by showing housing density comparisons in cities in other European nations. For Cambridge, for example, he urges an extra million houses, with the city growing outwards. And for London, he notes that house prices are so high, frustrating the expansion of the workforce catchment that could yield further agglomeration benefits.

In summary, he urges moving towards the lower transport costs of the USA and the **adoption of higher housing densities of European cities to increase agglomeration effects and hence productivity.**

Reforming Infrastructure, Housing and Land Use Planning to Enhance Productivity

PHILIP MCCANN & RAQUEL ORTEGA-ARILÉS

"In particular, the UK lacks the diffusion and dissemination processes to translate the growth from London outwards."

"UK cities outside of London typically have much smaller and less dense transport infrastructures than their European comparators, and therefore they also have much smaller catchment area potential. This limits their productivity growth performance..."

"The UK ...has the slowest inter-city train speeds in Western Europe and the largest number of non-connected cities within 90-minute timeframes, even though UK population densities are among the highest in Europe."

"The costs of UK intercity rail journeys are far higher than any other European country."

"Lines of thinking [that] 'factor mobility between cities [would] drive inter-regional convergence processes' dominated UK policy thinking from the 1980s onwards.. [so]... knowledge and best practice would naturally diffuse throughout the economy: ... 'A rising tide lifts all boats'.... The problem is that over four decades since the 1980s, this simply did not happen... leaving a 'hub no spokes' economy with limited diffusion mechanisms"

"The UK has given little priority to city linking over the last four decades, either in terms of intra-urban linking or intra-city linking, except in the case of London.."

"The key issue we will focus on is that housing is an explicitly location-specific factor, allowing households to work in the broad commuting arena accessible from that particular location".

"Many commentators have argued that the reason for this spatial concentration of public investment in London and its close hinterland is that the logic of the Green Book, the HM Treasury framework for the appraisal of public policy investments, overly favours the most prosperous regions of the UK"

4. Implications for transport investment policy

(i) Appraisal methodology

We note that the NIESR paper says this:

"a stronger economy can be achieved through productivity improvements arising from transport projects"

but also that:

"projects such as HS2, Oxford-Cambridge, NPR) all tend to have poor benefit-cost ratios (BCRs)."

Recent changes to the Treasury Green Book insist that transport investment appraisals will in future need to reflect 'place' and this might indicate an analytical development that allows the conjunction of changes in the wider economy to enter transport project appraisals.

But this proposed new area of appraisal technology, for now at least, remains to be developed. In its absence, the prioritisation of transport investments will tend to favour those parts of the country with higher land values and where economic performance is relatively better.

(ii) Densifying land-use and transport policy

Both Leunig and McCann/Ortega-Arilés identify housing and activity density as a major difference between UK cities and those in comparable countries. This is important for the relationship between land-use, transport and productivity in two key ways:

- Directly, in that the **agglomeration effects in cities rely primarily on activity density** and the benefits this unlocks for labour markets and knowledge and market spillovers
- Indirectly, since the **efficiency of public transport is enhanced by dense demand drivers**, both residential and commercial

- This in turn enables a denser public transport network, improving access to labour market catchments. By providing a more viable alternative, it also discourages reliance on, and the perceived need for, car ownership in cities, which in turn has productivity benefits for the efficient use of scarce land resources and for making cities **more attractive via public realm investment**.⁴

Thus, densification of both land-use and public transport can create conditions for a virtuous circle of more productive economic activity.⁵

4. As an example, when Nottingham introduced a tram service it facilitated the pedestrianisation and removal of car traffic from parts of the city centre which improved footfall rates.

5. The productivity performance of Manchester is a case in point.

(iii) Connections with London

We noted that: **“Increased infrastructure investment is of vital importance to boost UK productivity performance... notably though a focus on improving the diffusion, dissemination and transmission linkages between London and the rest of the country”—**and this, (from different authors, making a similar point):

“the UK lacks the diffusion and dissemination processes to translate the growth from London outwards... with the slowest inter-city train speeds in Western Europe”.

This message is of direct relevance to the major cities to be served by HS2 and a strong economic reason why Phase 1, now under construction, should not be left ‘high & dry’—stranded, and disconnected from the existing national rail network.

For more remote areas in the UK, the current intention to proceed with extra runways at LHR and LGW, could be used to improve air connections to the capital.

There are no major highway sector schemes of relevance in the pipeline to address better connectivity with London, and indeed, with a policy of reluctance to levy road user charges combining with a now long-established policy of leaving vehicle fuel taxes unchanged, road traffic is likely to continue its pattern of slow continuous growth on the national motorway system, which in turn means declining journey speeds and higher levels of disruptive incidents.

So, insofar as this policy linkage is regarded as crucial in economic terms, given the preponderance of financial, political and legal resource in the national capital, then it is only HS2 of investments on Government’s radar screen, that can bring about this specific benefit to the wider national economy.

(iv) More transport planning resources are needed regionally/locally

We noted that **“Many of the new devolved bodies see their role as fostering local development and improving transport infrastructure but in reality they have insufficient resources to make a real impact on local economic growth.”**

Insofar as Government is looking for regionally/locally-led initiatives to improve transport infrastructure, it seems unlikely that restoring the skills needed locally will happen with any urgency. In the case of rail, these resources could be provided by the newly re-nationalised industry, with GBR obligated to insert a joined-up local/regional dimension into ongoing rail sector planning processes.

(v) Transport networks matter to improve economic productivity from R&D investment

We noted that “...**knowledge spillovers from publicly funded research are known to be localised, roughly defined by commuting distance....Physical proximity accelerates the accumulation of agglomeration benefits.**”

This point serves to act as an essential check on decision-making on national R&D investment. Is there a sufficiently wide employment base (with suitable qualifications) within commuting distance to fulfil new jobs in R&D? Is there anything that can be done to help create the necessary labour market catchment?

(vi) The drivers of regional disparity vs regional convergence

We saw that: “**continuing higher capital investment in transport in South East England continues to increase agglomeration benefits there.**”

Interestingly this may be a case of a policy pivot point being experienced right now.

It is true that London/South East has achieved a significant positive step-change in connectivity through transport investment (especially in rail) over the last 25 years:

- Jubilee Line Extension—opening up Canary Wharf development
- London Overground—the 360° orbital railway, transforming the accessibility of inner London suburbs

- Thameslink 2000—proving the north-south component of a London & SE regional express rail network – as enjoyed by Paris (RER) and leading German cities (S-Bahnen)
- Elizabeth Line—providing the east-west component of a regional express network
- Major rebuilds/expansions of key central London rail stations (St Pancras, Kings Cross, London Bridge, Blackfriars), and, in the wider South East, Reading, Gatwick Airport)
- Rail link to LHR Terminal 5
- Multiple Docklands Light Railway extensions.

What lies ahead for the South East still accounts for the lion's share of the nation's new major transport project expenditure—East West Rail and the Lower Thames Crossing (Gatwick Runway 2 and possibly Heathrow Runway 3), all in the wider south east. But this is nonetheless a slowdown from what has been delivered so far this century, with Crossrail 2, for example, put to one side—for now at least.

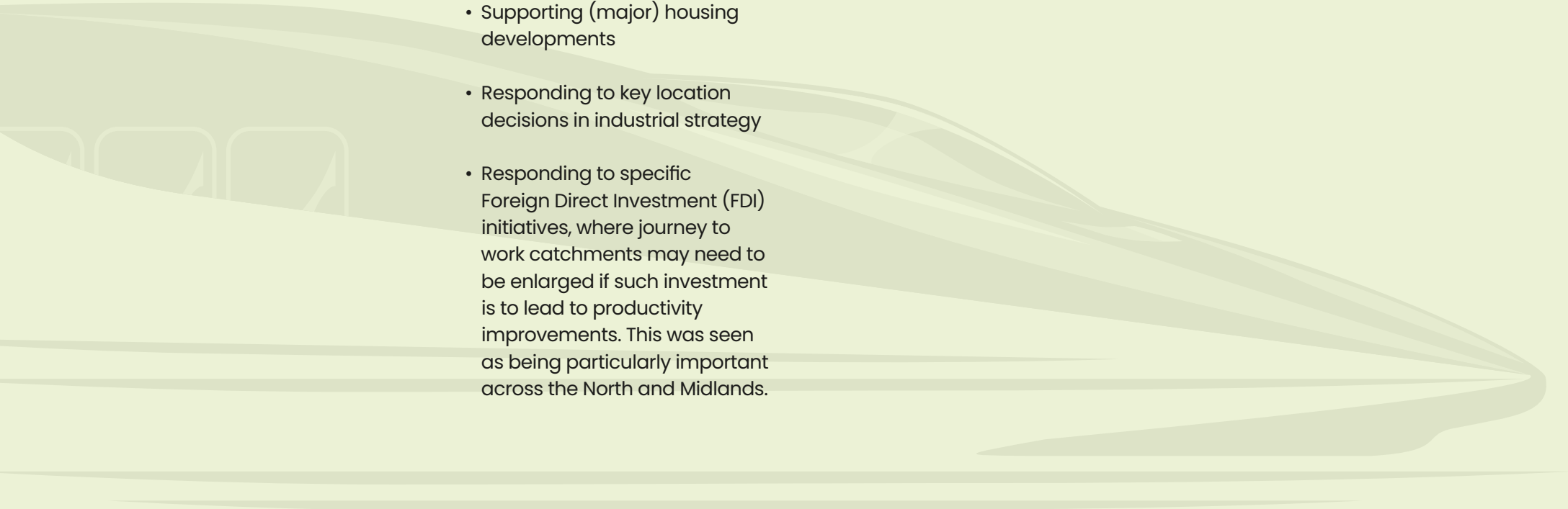
Transport for London capital investment is now, and for the foreseeable future, at nothing like the high levels experienced over the last 25 years. Here, there's a risk of 'an ebb tide strands all boats', as it were. Meanwhile, office development in the City of London is at record levels.

The contribution of transport investment to expanding London-based development through 'ever-increasing' agglomeration benefits can no longer be expected going forward. We are at an inflection point that could see a lessening of regional disparities rather than their re-enforcement, even as overall national economic growth prospects diminish.

(vii) Transport investment needed to support regional productivity initiatives

To raise regional productivity levels, we find from this review that there are four strands of development where transport investment may be needed in response to significant initiatives taken in:

- Providing access to colleges and other facilities created to build skills and provide training
- Supporting (major) housing developments
- Responding to key location decisions in industrial strategy
- Responding to specific Foreign Direct Investment (FDI) initiatives, where journey to work catchments may need to be enlarged if such investment is to lead to productivity improvements. This was seen as being particularly important across the North and Midlands.



5. Conclusions

Transport policy direction is needed both to inform and support the multiple productivity ambitions set across the economy. This calls for fully joined up planning across land use, housing, utilities, tech, R&D, education & training, and transport, with both the private and public sectors involved. This can only be made to happen at the level of devolved regional authorities and devolved nations.

This review has focussed on expert views on policies across the board to improve UK productivity levels.

Our aim was to **identify transport measures that could and should be taken in support of industrial, housing, social, educational/training and all other economic measures** to stimulate local, regional and national productivity levels.

We noted a common presumption that higher capital investment in transport in South East England will continue and so further increase London's agglomeration benefits (and therefore the scale of its regional advantage).

But this, we suggest, may turn out to be unfounded because of an end (for now at least) to the major programme of rail investment in and around the capital, so evident, over the last 25 years.

We came to six key conclusions:

(i) Government has outlined four initiatives that are likely to trigger a need for better and expanded transport services to deliver regional productivity growth. These potentially arise in response to:

- New or expanded **training/skills development** colleges/facilities
- Large-scale **housing developments** of suitable density
- Key locational decisions in its **industrial strategy**

- Specific **Foreign Direct Investment** (FDI) initiatives, where journey to work catchments may need to be enlarged.

We question whether transport sector bodies with forward planning responsibilities are sufficiently linked into these key policy action areas.

(ii) Our **regional cities have much smaller and less dense transport infrastructures than their European comparators**, and therefore they offer businesses and industry much smaller catchment area potential. Weak public transport networks in our regional cities are limiting their productivity growth.

The mutual symbioses from activity density, sustainable connectivity and quality of place will unlock agglomeration and therefore productivity gains.

(iii) Knowledge spillovers from publicly funded research are known to be localised, roughly defined by commuting distance. Physical proximity accelerates the accumulation of agglomeration benefits.

Investment in better transport services may be needed to generate a sufficiently wide catchment of employees qualified to fulfil new R&D posts and deliver sought-after productivity gains.

(iv) While many of the **new devolved bodies** see their role as fostering local development and improving transport infrastructure, in reality they have **insufficient planning and development resources** to do so, and this includes in the fields of transport planning and project appraisal. NIESR identifies the importance of joining up policy across sectors. Transport investment is often a necessary condition for productivity gains from measures taken in the wider economy, when it removes connectivity constraints. This is consistent with the TAG/Green Book approach to investment appraisal but is often not fully developed or evidenced in policy decisions. A rigorous approach here should help devolved bodies secure independence from a narrow departmental governance oversight going forward.

(v) **Connectivity with London** does matter—to deliver the diffusion and dissemination processes needed to translate London's economic strength outwards. Currently the nation has the slowest inter-city train speeds in Western Europe. Some key policy decisions related to HS2 remain outstanding—and in some cases pressing—and the implications for achieving higher national productivity levels should be recognised.

But we also note that:

(vi) an assumption of continuing higher capital investment in transport in South East England will continue to increase London's agglomeration may turn out to be unfounded, with investment in London itself, which has been at such high levels, now much reduced.

