

Complementary measures to facilitate regional economic benefits from High Speed Rail

Final Report

to Greengauge 21

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Urban & Regional Policy

48 St Agnes Road
Birmingham
B13 9PN

Tel 0121 442 2341
Fax 0121 247 4601
e-mail alanwenbansmith@pobox.com

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Foreword

Greengauge 21 is carrying out research to illuminate the debate on high-speed rail in Britain. A critical area of interest is the regional developmental impact of high-speed rail: will improved accessibility between the nation's major centres help re-balance growth pressures to the advantage of remoter places, or will there simply be a reinforcement of the dominant position of London?

To help shed light on this issue and assist the Development Programme being completed in summer 2009, Greengauge 21 commissioned Alan Wenban-Smith to provide advice on the question of whether there are complementary policies that would influence the outcome of the regional impact question posed above. This is the report of his consultancy, *Urban & Regional Policy*.

The views expressed in it are Alan's alone, and are not intended to represent the views of Greengauge 21 or of any member of the Public Interest Group.

Alan's assessment is that we lack, as a nation, the necessary governance and appraisal mechanisms to deliver the complementary measures that would help to ensure that the effects of high-speed rail investment include a beneficial impact on regional economies. Thus there is no national agency responsible for re-thinking the national pattern of settlement and economic activity alongside and in response to the opportunities HSR creates: regional housing allocations and regional patterns of public expenditure arise from separate and partial processes. Compounding this problem, public investment appraisal regimes are aligned with the aims of individual Departments and so do not provide the means to justify complementary actions – yet without such actions the case for HSR itself is weakened.

A more integrated approach to public investment plans might form part of a package of complementary measures, but will only be effective in attracting and shaping private investment, he argues, within the framework of a new national perspective on the desirable pattern of regional development, and of appraisal regimes with corresponding breadth.

Jim Steer
Greengauge 21

Overview

Urban & Regional Policy was commissioned by Greengauge 21 to examine whether (and if so how) complementary actions could increase the regional benefits flowing from provision of a national High Speed Rail (HSR) network. Our broad conclusions are:

Need for complementary action

- *HSR could contribute decisively to changing the North-South balance of the UK, bringing great economic, social and environmental benefits to the nation as a whole;*
- *This outcome depends on complementary measures: HSR on its own could increase the dominance of the Greater South East within the UK;*
- *Local and regionally based actions will be relatively ineffective without a national policy context, particularly on priorities for regionally relevant expenditure and broader appraisal methods.*

Relevant issues

- *In the absence of a national perspective on the pattern of activity and settlement across regions, the PSA objective of reducing regional disparities is not realistic;*
- *The disconnect between local and central decision-making inhibits integration of complementary measures relevant to HSR in terms of both content and timing;*
- *Regional economic advantage arises primarily from the capacity to innovate: R&D, institutional capabilities and labour markets are all important to this, along with connectivity to relevant business centres and markets;*
- *With complementary measures in the transport, housing and cultural fields, HSR can bring greater depth of skills and geographical breadth to conurbation labour markets;*
- *Current instruments of regional planning and investment (RESs, RSSs, RFAs, etc) are inadequate, and the effect of housing and congestion targets is to focus resources on the Greater South East;*
- *Complementarity with airport development would be increased by HSR widening access to a few long haul 'gateways' and substituting for at least some short haul capacity;*
- *Mutual benefit to core cities and satellites can be generated by developing complementary specialisations within polycentric subregional groupings, and coordinating access to HSR;*
- *Current appraisal regimes do not provide an adequate basis for justifying complementary actions, but without them the HSR itself will struggle to have a helpful impact on regional economic differentials.*

Priorities for action

- *A national perspective on regional development is the starting point for integrating transport networks with each other and with complementary measures;*
- *The first priority for HSR and complementary measures is the Manchester-Leeds-Birmingham 'central constellation,' to balance to the Greater South East and act as the core of a revitalised 'North';*
- *Prioritising transport investment to serve major national and regional economic purposes (as per Eddington) requires broader and longer-term appraisal methods than those currently in use;*
- *Changes in governance are needed to support more joined-up action within both national and subnational government, and between national decisions on HSR routing and local/regional action on complementary measures.*

Complementary measures to facilitate regional benefits from High Speed Rail

1 Introduction

Purpose

- 1.1 The aim of the project is to identify actions or policies which could be implemented alongside provision of an HSR network, and which would help secure advantages to other regions and nations of the UK as well as the Greater South East (GSE – London, South East and East GO regions).
- 1.2 It should be noted at the outset that in this report the term ‘region’ in relation to the UK is intended to include the devolved national administrations of Scotland and Wales, even when not specifically mentioned as such. However, the application to Scotland (in particular) is constrained by its geographical circumstances and the lack of a Scottish interviewee. Consequent limitations on the generality of the conclusions are noted where appropriate.

Context

- 1.3 The study postulates the existence of an HSR network comprising lines in each of the five corridors identified in Figure 1.1 below, some 20 years from now. At present the connectivity within this network, or with other existing or projected transport and development projects, is not specified, though the Government has published a discussion paper proposing an initial link between London and Birmingham with a connection to Heathrow¹. Network design issues relevant to regional benefit are considered in the present study.

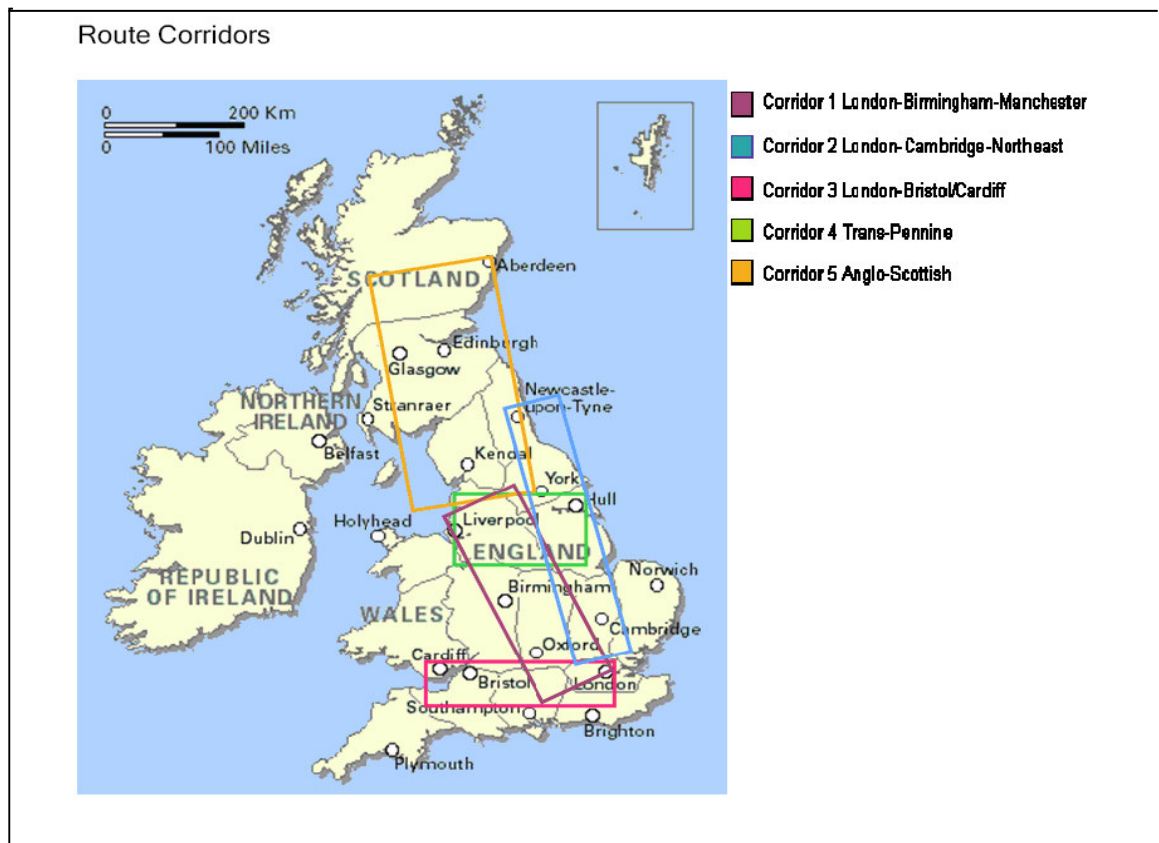


Figure 1.1: High Speed Rail (HSR) corridors

- 1.4 Great uncertainties surround the economic, climate and energy resource context in which an HSR network would operate. It is likely that supplies of oil will become relatively more expensive, scarce and insecure, and that processes producing greenhouse gases will be constrained by regulation and/or taxation. While other technologies will take over some of the roles of oil (especially for power generation and heating) energy costs will increase. New technologies will take time to mature and their costs are likely to be higher still.
- 1.5 It is not the purpose of this study to investigate such issues, but as they cannot be ignored the following working assumptions have been made:
- a) Social and economic networks with a high level of dependency on individual mobility will become relatively expensive to maintain. There will be corresponding economic and quality of life advantages from patterns of settlement, production and activity with lower dependency on physical movement²;
 - b) The global economy is entering a period of unprecedented volatility, and it cannot be assumed that matters will return to 'business as usual' in the next year or two, if at all. However, for the purposes of this study, it is assumed that the social fabric of the UK will be sufficiently robust, and the levels of skills, innovation and entrepreneurial activity in its economy will be sufficient to secure fundamental social and economic stability;
 - c) The rise of the Indian and Chinese economies, the relative decline of the USA and the damage done by the credit crunch are all likely to impinge unfavourably on the UK. Within the UK, the dominance of financial services in the GSE economy cannot perhaps be expected to continue to the same degree as in the post WW2 period, and the structure of other regional and national economies will also change. Positive responses to these events will depend very much on their capacity to innovate;
 - d) The future balance between regions and nations of the UK is highly uncertain, but it is clear that the need to mobilise the full economic potential of 'UK plc' will be greater than ever. The Business Secretary, Lord Mandelson, has stressed the importance of this, and the importance of innovation in both public and private sectors as the means of bringing it about.

Background

- 1.6 Economic theory predicts that better transport between two regions or nations will tend to work to the competitive advantage of the stronger area, and to the disadvantage of the weaker area³ (as discussed later – paras 2.6- 2.8). An example of this 'two way road' effect is the relative decline suffered by Cornwall following the upgrading of the A30⁴.
- 1.7 However, the processes involved are complex, and extend well beyond the field of transport, and better links need not necessarily produce such a result. First, it is characteristic of rail (and especially HSR) to concentrate rather than (like roads) spread accessibility; and second, a broader approach, integrating transport provision with other economic, social and environmental measures could perhaps exploit this feature to the advantage of the 'weaker' regions. As noted above, the degree of inequality between GSE and other UK regions may change due to other factors.

¹ DfT (Jan 2009), 'Britain's Transport infrastructure: High Speed 2'

² Note that physical patterns influence, but do not dictate, patterns of activity and movement: diffuse patterns of settlement are not *necessarily* disadvantageous, but may require different complementary measures

³ M Lafourcade & J-F Thisse (2008) 'New economic geography: a guide to transport analysis', Paris School of Economics, Working Paper No 2

⁴ a senior SW region interviewee spoken to by the author for the report to DfT on 'The integration of Regional Transport Strategies with spatial planning policies', MVA (2004) pointed out that Cornwall only qualified for ERDF assistance *after* the completion of the A30 dualling, and considered there was a causal connection

Approach and structure

- 1.8 Although integrated land-use and transport (LUTI) models are making significant progress, they are still a long way from being able either to represent the kinds of wider effects that might follow introduction of HSR, or (still less) help in the design of complementary non-transport measures⁵.
- 1.9 This study therefore adopts a ‘Theory of Change’ (ToC) approach. In essence, a chain of reasoning is proposed connecting actions and outcomes. Because in complex situations we lack enough experience, information and knowledge to be sure about these linkages, this is in effect setting up a theory of change. Each link in the chain is then tested against such evidence as is available, which may include both quantitative and qualitative material. This initial ToC is not presented as an explanation of the role of complementary action, but as an hypothesis to be tested through the research.
- 1.10 The initial Theory of Change (ToC) connecting wider regional benefit with complementary actions alongside construction of an HSR network is summarised in Figure 1.2. This was developed in consultation with Greengauge 21, and tested and refined through desk studies of relevant published material and interviews with people with relevant knowledge and experience. These two strands of work are described in more detail in Chapters 2 and 3 respectively; in consequence a substantially revised ToC is presented in Chapter 4, and our conclusions concerning appropriate complementary measures in Chapter 5.

Figure 1.2: Initial Theory of Change (ToC)

1. **Direct benefit of HSR connectivity:** HSR confers advantages to businesses locating in the centres it serves, in the form of better direct links to other city regions, to London and to gateways to other world and European centres. Resulting growth of sectors capable of benefiting from these advantages will lead to agglomeration, promoting their further growth.
2. **Indirect benefit of HSR connectivity:** the effect on centres served (directly or indirectly) in turn generates indirect benefits across the regional/city-region catchment, with increased demand in related supply chains and labour markets leading to further diffusion of growth in residential and service sectors. This could be promoted and/or reinforced by appropriate local spatial planning policies.
3. **Increasing regional connectivity:** relieved of some inter-city traffic by HSR, actions to remodel services and stations on the conventional rail network could exploit the capacity released to increase labour market accessibility in both London and regional centres.
4. **Complementary subregional action:** such wider benefits would be increased by further complementary action to regenerate urban areas, integrate public transport networks, and (through the spatial planning system) upgrade the quantity and quality of housing accessible to on these networks. Complementary actions to enhance city centre capacity, environment and cultural attractions in the regional centres would help redress the imbalance between London and other regions, and their ability to attract (and retain) nationally and internationally mobile talent;
5. **Complementary national policy:** Since the mid-1980s the underlying rationale of regional policy has been essentially social: to mitigate the social effects of structural change rather than to influence its direction. To complement HSR, national spatial policy may need to address regional disparities in a different way, with a more active stance on differentiating and supporting distinct regional economic roles

⁵ a conclusion of a recent review for TfL of LUTI modelling for the Greater South East, chaired by the author (this is to be the subject of a paper to the 2009 European Transport Conference)

2 'Complementary measures' and wider regional benefits

Scope

- 2.1 To make a case for 'complementary measures' it is crucial to define what we mean by this term, and to ensure that any additional benefits ascribed to such action have not already been accounted for in the transport appraisal process. For the purpose of this study we have therefore taken 'complementary measures' as comprising the following categories of action:
- Changes to the HSR configuration from that which is most advantageous from a purely transport perspective (ie that generates the highest rate of return in a transport appraisal)⁶;
 - Changes to other transport services or infrastructure (eg to local public transport or inter urban rail) linked to HSR, beyond those justified by purely transport considerations⁶;
 - Actions outside the field of transport itself beyond that represented by a simple market or organisational response to the existence of HSR⁷.

Theoretical context

- 2.2 Many different kinds of work have a bearing on the issue of potential regional benefits from HSR, and on the complementary actions that might help realise this potential. However, there is little that is directly targeted on these issues. The main sources consulted for this report are listed in Appendix 1, under the following headings:
- Academic literature:** how such interactions arise, particularly the 'new economic geography';
 - Appraisal procedures:** the value that might attach to such interactions;
 - Consultancy and policy reports:** the relatively limited references to complementary actions in studies of HSR, either in the UK or elsewhere.
- 2.3 A brief and selective exploration of this material suggests that main issues relevant to this study are:
- The geographical extent of the effects of access to HSR within regions;
 - The potential effects of HSR on the distribution and levels of economic activity between regions;
 - The extent to which positive effects could be reinforced and negative effects countered by complementary measures undertaken in parallel.

The extent of HSR effects within regions

- 2.4 In general 'localisation' effects of transport (ie economic benefits derived from increasing the effective proximity of businesses to each other) fall off quite rapidly with distance, with little or no effect beyond 50 km or 80 minutes, and the most significant effects much closer than this. Dan Graham (Ref A1.2) found the largest effects are within 1 km radius for manufacturing and 10 km for services, and a similar conclusion was reached from ODPM work⁸.

⁶ for example by seeking to establish a new pattern of demand rather than simply taking advantage of an established travel market such as rail trips to London

⁷ for example by taking significant additional steps to attract new types of business to an area to capitalise on HSR, rather than simply relying on the presence of HSR to attract them

⁸ DfT stated: Durant and Overman (2002) find that localisation effects tend to occur within a 50 km radius and according to Rosenthal and Strange (2003), localisation effects diminish quickly even before 5 miles. The 2006 ODPM paper on Economic Linkages Across Space notes that there is some evidence of interaction across neighbouring locations but that these effects appear to decline steeply with distance. In the UK, for example, Rice and Venables find no evidence of effects between locations once travel times exceed 80 minutes.

- 2.5 HSR is most directly relevant to particular ‘high level’ services and higher tech manufacturing with a need for good longer-distance inter-city or international linkages. Relevant points from the literature and interviews are:
- a) The group of industrial sectors that *might* benefit could be similar to those that are sensitive to air services – which (according to York Aviation (2003)) accounts for up to 40% of employment in some regions⁹;
 - b) The (mainly anecdotal) evidence from experience of the impact of continental TGV is that *direct* benefit is more restricted, mainly to activities:
 - Where face-to-face meeting within a day (including evening social contact) is important; and (because of this)
 - Where travel time to an HSR station does not introduce a major time penalty.
 - c) Similar benefits arise from improved access to airports (long and short haul).
 - d) The main benefits arise over distances where the higher speed delivers a significant time saving relative to conventional rail. In France this seemed to be from about 2hrs upwards by TGV (Ref A1.5). Comments by others suggest that over shorter distances the regional impact could be negative – favouring relocation to the major centre¹⁰;

Effects of HSR on distribution and level of activity at regional level and above

- 2.6 The academic literature suggests a tension between three effects of better transport links:
- a) Better transport lowers supply chain and labour market costs, enhancing their competitiveness; it also improves communication between businesses generating agglomeration advantages (‘critical mass’); but
 - b) Better transport also allows every business wider locational choices, with lower location-specific land and labour costs; but in their individually rational exercise of this choice they may collectively produce a more dispersed pattern of activity with higher costs and poorer communications;
 - c) Particularly relevant to the issue of regional economic balance is the ‘two way road’ effect, previously described (para 1.6). In general, improving the links between them will allow a stronger region to increase its penetration of a weaker region’s markets, thus increasing regional disparities¹¹.
- 2.7 The balance between these interactions has relatively recently become the focus of the ‘new economic geography’ (NEG). Some key NEG conclusions (Ref A1.3) for this study are:
- a) *“The cumulative nature of the agglomeration process [means] affluent regions enjoy the existence of agglomeration rents that singleminded policies cannot easily dissipate. Consequently, a more balanced distribution of economic activities across regions [requires] more instruments to [the] policy portfolio.”*
 - b) However, *“a sufficiently extensive integration of the space-economy should favor the development of several large urban economic regions, which could be spread over the territory of the EU”*
 - c) The NEG analysis suggests that while increasing integration (eg through better transport) may at first tend to operate to the disadvantage of weaker regions (in accordance with the first quote), taken further there may begin to be advantages, particularly if the weaker regions can develop specialisations useful to the overall economy. Thus a half-hearted approach to regional integration risks falling between these two stools.

⁹ However, air- and rail-reliant sectors may not be entirely analogous – the symbiosis between transport and activity patterns means that the degree of dependence will depend on the quality, cost and configuration of the service compared with alternatives, and this will vary between places and over time

¹⁰ R Tym (2002), ‘*Economic performance and the high speed line: an ex-ante appraisal of the distributional effects*’, draft report for SRA summarising studies of impact of TGV in France

¹¹ Contrary to national policy to reduce such disparities, as discussed later (paras 5.12-15)

- 2.8 Too much weight cannot be placed on this theoretical analysis as it relies (among other things) upon highly simplified descriptions of regional economies. However, conventional transport appraisal does not deal with the larger dynamic economic effects of transport, and as these are essential to understanding the potential value of HSR to the regional and national economies, the indications from the NEG are relevant. Appraisal methodologies have more recently begun to advance into the NEG territory, as the significance of effects beyond the transport system itself have become more important to decision-makers¹².

Transport appraisal

- 2.9 For most of the post WW2 period appraisal was concerned primarily with Transport Economic Efficiency (TEE). However, transport improvements tend not to have lasting effects on the performance of the transport system itself – journey times, congestion, etc. Rather, the benefits are taken in the form of a wider choice by households and businesses of places to live, work and locate “... *in general, the value of direct transport benefits must decline if indirect economic benefits are to grow*”.^{13,14} The original transport improvement is thus transformed into a new pattern of settlement, activity and movement, and this in turn drives further physical development.
- 2.10 The TEE appraisal of transport relied on the proposition that, in a perfect market, the ultimate economic benefit would be equal to the initial user benefit, however long and tortuous the path between. However the *form* that the economic consequences take may be important to know (eg from an economic agglomeration or social regeneration perspective) and there may well also be important social and environmental impacts not otherwise accounted for. Moreover, these impacts of the initial transport change will feed back into a changed pattern of transport demand, so even narrowly-defined transport consequences (congestion, etc) will change.
- 2.11 The evolution of appraisal practice over the last 10 years (Appendix 3) has begun to grapple with these issues, in particular through identification of Wider Economic Benefits (WEBs) and GDP effects not included in the definition of economic welfare (DfT 2006). Some of these effects outside the transport system are very significant, in particular the effects of transport on the generation of agglomeration economies. In some examples WEBs add up to 50% of conventionally appraised benefits. Though in most cases the estimated additional benefits are much lower, it is crucial for the present purpose to note that these additions are *solely the result of the transport change*, without any complementary actions.
- 2.12 These developments in appraisal methodology remained for some time in the form of discussion and consultation papers, eg the WEB and Eddington references already given. Following the 2008 DfT consultation paper ‘*Towards a sustainable transport system*’ most of this material is now incorporated into official guidance ‘*Delivering a sustainable transport system*’ (‘DASTS’, DfT, 2009) and WebTAG Units 2.8 and 3.5.14.
- 2.13 For the present purpose, on the assumption that such effects will be *included* in the transport appraisal, it is important that they are *excluded* from the appraisal of complementary measures. This is the main reason for defining complementary measures in the relatively restricted way set out at 2.1 above.
- 2.14 Figure 2.1 sets out the relationship between the conventional (direct and indirect) transport benefits (2.9,2.10), WEBs (2.11) and benefits from complementary measures. This shows how indirect benefits tend to replace direct benefits over time, and how WEBs and benefits from complementary measures (being generally slow-acting processes) will tend to increase

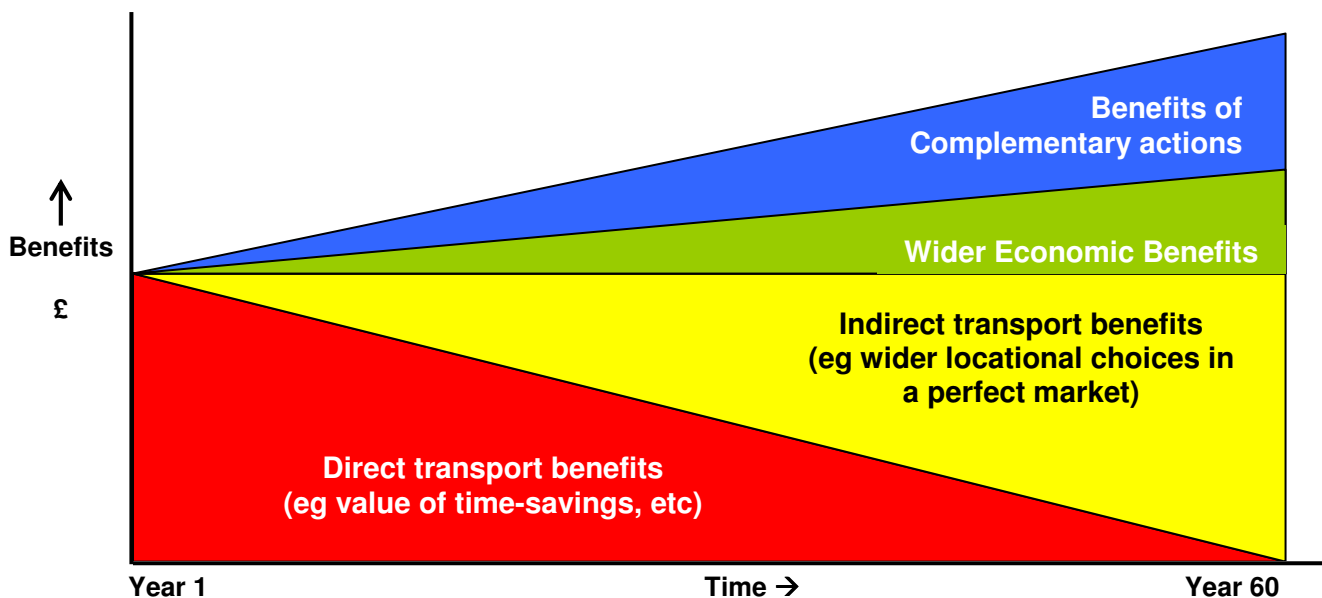
¹² DfT (2006) ‘*Eddington Report*’ Volume 3 and Appendices 3 and 4

¹³ SACTRA (1999), ‘*Transport and the Economy*’, para 23

¹⁴ National Travel Survey results since 1972 show over 60% of increased demand as being due to longer trips, the result of the changing locational preferences of residents, businesses and customers. In the short-medium term, these choices are mostly met through the turnover of existing stock rather than new development)

over time. It should be noted that although current appraisal practice requires benefits to be discounted over a 60-year period, the accuracy of the models on which TEE benefits are based falls off after 5-10 years¹⁵. Thus although means of estimating WEBs and benefits of complementary measures may be imperfect, they are not necessarily less reliable than the more familiar elements.

Figure 2.1: Benefits from transport and complementary measures



- 2.15 A final comment under this heading is that the longer-term effects of transport and other related actions (whether explicitly planned to be ‘complementary’ or not) are very large. If we look at urban forms, patterns of settlement and patterns of economic and social interaction over periods of the order of 60 years (ie since WW2), it is apparent that much more has happened than is explained by the factors currently included in transport appraisal. The existence of this gap is the case for a broader, and at this stage necessarily more qualitative, approach. However, a major conclusion of this report (see paras 5.16-18) is that a framework for identifying and quantifying such benefits needs to be developed.
- 2.16 In this connection it should be noted that (in the absence of such a framework) the brief, resources and timescale of the study did not permit exploration of either a range of options within each type of complementary measure, or the comparative efficacy of regional variations. Given the timescales involved and our limited current understanding of the detailed mechanisms, comment on such further detail would at present necessarily be surrounded by considerable uncertainty. However, the issue is obviously important, and may repay further study in the context of the recommendations made later concerning broader and longer-term appraisal.

¹⁵ WebTAG 2.7.1 para 1.8.6 refers to studies showing that induced traffic more than 5 years from scheme opening is systematically underestimated by transport models

3 Interviews

Procedure

- 3.1 It is important to bear in mind that the introduction of a national HSR network could take decades to achieve. It is in the nature of the discussion of such distant future events that it will rely more on opinion than ‘evidence’. The issue is whether the opinions are individually from people whose views carry some weight, whether the analysis is cogent, and whether together they present a coherent perspective. This issue will be returned to in Chapter 5.
- 3.2 Alongside desk studies, interviews undertaken in the course of the study were used to test both the Theory of Change (ToC – Figure 1.2) and the availability of evidence to support it. Interviewees (listed at Appendix 2(a)) were chosen to cover a range of relevant expertise, experience and perspectives, including governmental, academic, property and regional development – all at a senior level. They were briefed in advance with a short note, stating the assumptions, initial ToC and the principal issues for discussion with them (Appendix 2(b)). A note was prepared of key points made under the ToC headings, and this was sent to interviewees after the meeting, to correct or add to as appropriate.
- 3.3 Interviewees were selected on the basis of being able to offer authoritative opinions on the issues from as wide a range of standpoints as possible within time/resource constraints. To ensure maximum freedom of expression interviews were conducted under ‘Chatham House Rules’, and views expressed are not therefore attributed to individuals.
- 3.4 This chapter summarises the results of these interviews under the topic headings of the initial ToC as follows:
1. Direct benefits of HSR connectivity – local effects on businesses
 2. Indirect benefits – intraregional and subregional
 3. Benefits from inter-regional connectivity
 4. Benefits from complementary actions – regional and local
 5. Benefits from complementary actions – national

1. Direct connectivity

Businesses

- 3.5 Interviewees agreed with the research noted earlier (paras 2.4, 2.5), that direct business benefits of local linkages fall off quite rapidly. There was also a strong consensus that the sectors most likely to benefit from proximity to HSR hubs are business services with higher degrees of specialisation, and that these are highly concentrated in a few major city centres.
- 3.6 It was recognised however that better links to London for such activities may have a downside: at present regional branches of businesses engaged in high level services often act as ‘back offices’ for their London headquarters – serving regional clients, or doing lower level work in a cheaper location than London, and this effect could be exacerbated. The ‘new economic geography’ work quoted earlier points to a general need for complementary measures to counteract this effect (see para 2.7), and this is picked up later on.

Station location – central vs edge (‘Parkway’)

- 3.7 Because the kinds of activity that stand to benefit most from the improved linkages offered by HSR are concentrated in city centres, it was thought that greatest economic benefits would come from serving them directly, with centrally-located stations. Interviewees considered that elsewhere in the world HSR benefits have been enhanced more by direct connectivity than via ‘Parkway’ stations. The alternative of seeking to create new concentrations of relevant activity in an out-of-town location was felt likely to be more difficult than supporting an existing concentration.

2. Indirect connectivity (intra regional)

Local transport

- 3.8 As noted above benefit from direct access to an HSR hub is likely to be limited in sectoral or geographical extent. Respondents thought a crucial mechanism for extending the benefits would be better intra-regional connectivity. The CrossRail evaluation (DfT, 2006) was identified as showing that large agglomeration benefits can arise from very good connections to areas of high productivity by regional and subregional transport systems.
- 3.9 Good quality regional and subregional transport that also connects to an HSR hub would help to share the benefits of core city growth more widely, adding to benefits. This would particularly be the case if complementary specialisations were developed within polycentric subregional groupings (see paras 5.7-5.10, later), and can coordinate their access to HSR.
- 3.10 Improvements to rail services enabled by HSR releasing conventional capacity were thought to have an important economic effect on urban labour markets, where current or future demand would be constrained by capacity limits. This would be mutually reinforcing with the direct impact on businesses discussed earlier. Improved rail-based commuting in provincial cities would help attract businesses that might otherwise locate in London by mobilising a geographically wider and socio-economically 'deeper' labour market.
- 3.11 An example given of this potential was Leeds-Manchester, where the poor Transpennine rail link (and congestion of M62) splits what could be a very large single labour market into two smaller ones. New faster centre to centre rail services between Manchester and Leeds would help to enlarge the labour market (at peak times) and provide transport capacity for premium business uses (off peak). Views on the wider significance for the North of these two major centres fulfilling their potential for economic interaction and agglomeration are discussed further at paras 3.15 and 3.16 below.

Subregional spatial issues

- 3.12 The large scale agglomeration covering most of the Greater South East (London, South East and East regions) was considered by respondents to arise from distribution of complementary specialisations between a large number of centres enjoying a high degree of connectivity. Realising the potential of this 'polycentric' pattern elsewhere will depend on both subregional spatial and transport planning, and on wider national policy and governance issues (see paras 3.18 and 3.24 below).
- 3.13 As noted above (para 3.7) Parkway locations were considered second-best, but if forced by cost considerations they would need to be well-integrated into local transport and spatial planning. Even in these circumstances the contribution to infrastructure from increased property values was considered likely to be modest (while housing and retail generate substantial surplus land value in an out-of-town location, they each have drawbacks for HSR¹⁶; offices would be compatible but may not generate significant surplus).
- 3.14 To be commercially attractive, Parkway locations would require motorway access which might exacerbate existing problems of congestion. It was commented that Growth Areas at Ashford and Ebbsfleet seemed not to have generated significant synergy with CTRL (HS1), and on this evidence could well be a distraction elsewhere.

¹⁶ retail is a cuckoo in the nest – competing for premium space within a transport hub, but adding nothing to the regional economy; housing is too diffuse for the HSR link to generate much synergy

3. Inter-regional connectivity

Inter-regional transport – surface transport issues

- 3.15 It was noted by respondents that HS1 links the UK rail ‘twig’ to the continental European rail ‘tree’: some thought that part of the benefit to the rest of the UK may therefore depend on whether there is an option to by-pass London, offering faster direct services. For example, Stratford could serve London-Docklands and offer through connection to an East HSR line serving Cambridge and points North.
- 3.16 There were distinct and potentially conflicting views about some of the larger scale HSR configuration issues, in particular whether links to the North require lines both East and West of the Pennines (with or without a Transpennine link), or whether a single line could link both sides. Key issues raised included:
- a) A single line picking up both East and West (eg Newcastle-Leeds-Manchester-Birmingham-Heathrow-London) would link up the components of the North and give them better access to Heathrow as well as improved Manchester-London journey times, though transport benefits would be reduced because there would not be significant speed advantages from Leeds and Newcastle to London over the existing ECML;
 - b) While a trans-Pennine link is by itself too short to exploit HSR journey time advantages, it could be seen as contributing to the creation of a larger Manchester-Leeds economic entity, and as part of a longer Transpennine corridor with the prospect of improving links to North from the Midlands and to the M11 corridor;
 - c) The linking in of places like Sheffield and Liverpool presents problems which need to be addressed;
 - d) Against these broad economic arguments there was a view that HSR is only likely to be viable and economic (in transport appraisal terms) where it provides better *direct* links to London.

Inter-regional transport – air issues

- 3.17 The relationship between HSR and air travel was raised in every interview. There was some interest in the potential of HSR to substitute for at least some short haul flying, and the implications of this for regional airports. However, the main focus was the potential to improve links from regional centres to gateway airports, and the implications of this for the balance of Heathrow (and Stansted) with Manchester. As with HSR configuration there were a number of potentially conflicting views:
- a) Heathrow is currently overwhelmingly the most important UK airport, and the quality of HSR access is significant for ‘air reliant services’ representing 30-40+% of regional GVA. As things stand, Manchester cannot compete with Heathrow for airline interest because of poor inter-regional links, and HSR links to Manchester airport are probably less beneficial for the North than improving their direct links to Heathrow (though this would reinforce Heathrow’s existing dominance – for example, HS2 would “*make Heathrow a Birmingham airport*” benefiting Birmingham as a centre and the subregional economy, but affecting Birmingham Airport and perhaps disadvantaging some other centres served directly by it);
 - b) On the other hand, better HSR links to Manchester could boost its attractions to airlines and (with effective complementary measures), reducing pressure on Heathrow and improving North-South regional balance. However, as with HSR links to Frankfurt, other regional airports might suffer in consequence.

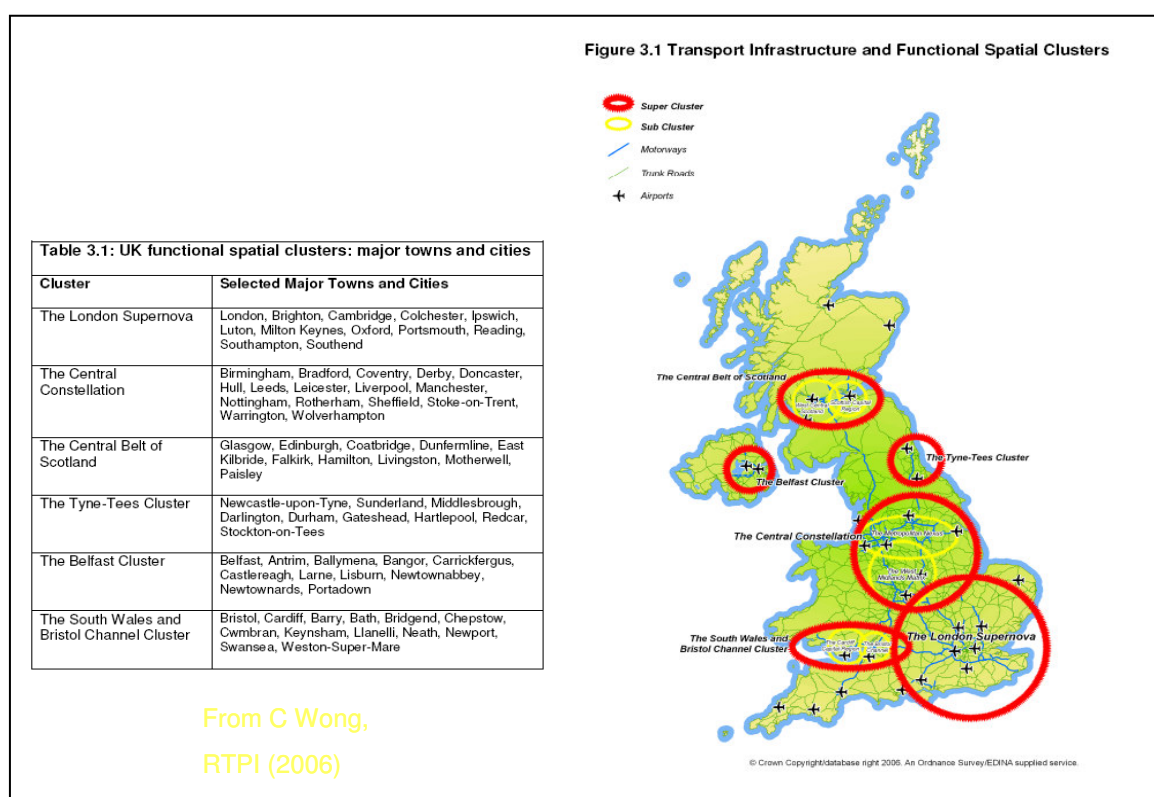
Inter-regional business/spatial issues

- 3.18 As with the Airports issues discussed above there were two broad ‘world views’:
- a) Recognising the status quo, in which London dominates the UK economy and the benefits to regional centres arise as much from better links to London as from better links

to each other. In this view, it was the quality of their links to London that caused dominant regional centres to emerge in the first place, especially for professional services. An example of regional benefit is the way in which Lyons-Paris relationships developed post TGV, with local firms growing because their local linkages outweighed the time penalty (~2 hrs) of direct contact in Paris;

- b) The alternative view is that the configuration of the HSR system should be conceived as an active ingredient in a new economic geography, not just replicating existing radials to London. The starting point for a counter-balance to the London/GSE ‘supernova’ would depend on realising the potential of a Leeds-Manchester agglomeration. This could benefit the rest of the North by providing a closer higher-order centre than London. There is already a strong relationship with Birmingham and the Midlands (the ‘central constellation’ of Figure 3.1), and in the longer term we could perhaps look to a larger ‘urban England’ agglomeration articulated by HSR on the Japanese model (cf Tokyo-Osaka region ~50m population).

Figure 3.1: Functional spatial clustering in the UK (Wong (2006), RTPI)



3.19 Michael Parkinson (ref A1.7) has pointed out the importance of cities as engines of regional and national growth, but also how the productivity of UK cities relative to their national and regional hinterlands has been generally poorer than that of their European counterparts. This may at least partly be due to lack of connectivity at subregional levels, reflecting a less well-integrated approach both within transport and between transport and development (CfIT, ref A1.4). At a broader level the series of INTERREG studies of economic regeneration has identified the potential of international HSR links (eg Paris-Randstadt and in future Paris-London-West Coast) to promote connectivity in the same kind of ways as suggested by Wong (above).

4. Complementary actions – regional and local

Spatial strategy

- 3.20 Spatial strategy at regional and subregional levels (including in this term land-use, transport and local economic development policies and programmes) was recognised by respondents as likely to be a particularly important component of measures complementary to HSR. Exploiting the economic opportunity of HSR may require distinctiveness of functions between places within a region (and between regional centres nationally). Examples that have been put forward are:
- a) The development of non financial services may become more important post credit crunch, and these favour face-to-face contact;
 - b) Exploiting better rail links (direct or indirect) to widen and deepen labour markets (the example of how in the past Newark used ECML to attract London commuters and as a result secured a wider local skills base);
 - c) R&D is particularly important to autonomous regional growth, and so complementary measures supporting its growth will be important. This depends as much on shared services and labour markets as on firm-to-firm contacts, providing opportunities for well-targeted local economic development and housing policies;
 - d) Support to cultural functions may also be important to developing a distinctive local offer (eg: Birmingham's CBSO, Ballet, etc helped create a critical mass of artistic talent and civic engagement with wider effects on its economic and social attractions).
- 3.21 In terms of narrower land-use and transport considerations, the following points were suggested about possible complementary means of exploiting HSR:
- a) If Parkways are favoured for other reasons, they would be better conceived as high density urban extensions with complementary transport (noting that out-of-town business parks in the North East have undermined weaker centres like Sunderland). City centre spurs from Parkways could offer a wider choice of HSR services (though at risk of diluting city centre attractions). The balance between these factors will depend on local factors, and is thus a matter for study in the context of specific centre-spur possibilities;
 - b) Associated development needs to be planned in a way that does not compromise the functions of HSR hubs as transport nodes. It is equally important not to lose sight of wider economic purposes in pursuit of narrower transport aims (eg Crossrail, where one view was that the project had been extended well past its original economic justification, in pursuit of narrower transport benefits). The broadening of transport appraisal since DASTS has reduced but not removed this danger (see para 2.12);
 - c) In seeking contributions to new infrastructure it is important to draw on the increment of value to *existing* property (as Victorian railways did), not just tax *new* development;
 - d) Maximising the benefit of HSR requires pro-active local/regional coordination of regeneration, transport and economy (upgrading Lille *ahead* of TGV added to its attractions for relocating businesses and workforces);
 - e) 'Spaceless growth', through telecoms and road networks, may suit some kinds of activity – but is car-dependent and so vulnerable to rising fuel costs.

Governance

- 3.22 Different places have different needs, opportunities and aspirations, and the key to appropriate complementary measures is the ability to differentiate these accordingly. Below national level, subregions are most likely to be relevant to HSR, and devolution to the subregional level is crucial to a joined-up response. However, this would require Government to loosen central controls and learn to live with more variation in practice and performance ('postcode prescribing'). Issues for Government include the following:

- a) Devolution is at least as much about clarity in defining and delivering *national* accountabilities as about local ones. Central Government should seek to secure national objectives through a clear national framework of incentives and disincentives, rather than through micro-management;
- b) Fewer, 'bigger' targets at national level would leave more scope for local trade-offs between lower order objectives;
- c) Addressing the tendency of subnational agencies looking to different Departments/KPIs, thus replicating Whitehall silos and leading to suboptimal delivery;
- d) Widening the scope of Regional Funding Allocations (RFAs) and using the improved RFA process and a stronger link to funding in the new RSS system to create better links between national, regional and local actions.

3.23 Local authorities and other subnational agencies will need to demonstrate greater capacity to exploit the opportunity that greater local discretion would offer, and to collaborate with each other. Particular examples of issues raised in this connection included:

- a) The need to create structures through the subnational review that enhance the capacity of regional and local institutions to work together (eg a simple majority vote of Council Leaders in the city regions would help overcome some of the problems of collaborative working – in the case of the Manchester TIF it would have obviated the need for a referendum on road pricing);
- b) Overcoming local authorities' tendency to begrudge resources to support a dynamic regional capital (and the parallel pressure on RDAs to be 'fair' between localities at the expense of clarity of purpose and direction);
- c) Strengthening civic leadership, to ensure that property considerations do not overwhelm the economic purposes of HSR-related development.
- d) Having a range of differing approaches would increase the ability of whole system of government to learn and adapt. . Examples of such learning from experience include:
 - that flexibility to spend is likely to be more important than tax raising powers;
 - that supplementary rates are an appropriate way of funding infrastructure.
- e) Imposing Mayors on big cities is not enough by itself: London has 'worked' to an extent because:
 - the Mayor has relatively few powers, and these are at an appropriate scale;
 - the role has attracted people able to exercise influence as well as power;
 - elsewhere, further progress towards single tier local authorities (unitaries) is likely to be necessary to coherent action, particularly if the regional level is removed.

5. Complementary actions – national

National economic, business and spatial strategy

3.24 Many of the problems and opportunities identified at regional level have their origins at national level. Dimensions of this raised by interviewees included:

- a) Continuing disparity of regional economies is bad for the UK economy as a whole and is an issue that can *only* be tackled at national level. HSR will have an impact on regional disparities, but exploiting the potential for this to be positive (and overcoming the possible negative impacts) requires national action on complementary measures to strengthen and diversify regional economies;
- b) The need for airport policy to be better linked with national and regional economic interests, rather than being dominated by 'predict and provide'. For example, the national response to climate change might concentrate long-haul air on Heathrow, and use HSR to substitute for short haul;

- c) The National Policy Statements required for operation of the Infrastructure Planning Commission established by the 2008 Planning Act imply a national view about the distribution of people and activity. Such a perspective would also provide a clearer basis for HSR, and should be made explicit. Although the Opposition have indicated they would scrap the IPC, they have supported the idea of National Policy Statements;
- d) The analysis of functional regions in para 3.18 and Figure 3.1 suggests that to support HSR national spatial strategy will need to distinguish between the different scales and locations of clusters. For example, the Tyne-Tees and Scottish clusters are both smaller and more remote from the currently dominant South East than the 'Central Constellation', and therefore at a greater disadvantage than the similarly sized South West/Wales cluster. HSR could help the South West/Wales directly by linking it better to the 'London Supernova', while Tyne-Tees and Scotland will benefit more indirectly by links to the 'Central Constellation'. However, in all cases the generation of benefit depends on complementary measures, and these may need to be more significant for the smaller and more distant regions and nations.

Governance

- 3.25 The wider purposes discussed above have implications for the structure of Government, and were the subject of strong comments from interviewees with relevant knowledge and experience:
- a) Central Departments have a poor capability to collaborate in the ways which would be needed to exploit HSR potential for competitiveness and regional balance:
 - DfT is more focused on transport for its own sake than on the wider purposes it serves. In relation to HSR, DfT and Network Rail focus on rail capacity to exclusion of almost all else;
 - BERR was currently more a Department of business regulation than an economic ministry capable of using RDAs to support a national economic strategy (though this may change under the pressures of the credit crunch)¹⁷;
 - CLG is focused on housing numbers, and carries too little weight to be effective at higher levels of policy.
 - b) Decision-making processes at the centre also came in for criticism:
 - The typical 20-year lead times for schemes like HSR is not inherent in the nature of the schemes, but is the result of institutional inadequacies in decision-making;
 - Too many major transport schemes are put forward speculatively leading to uncertainty, delay and lack of credibility for the whole sector.
- 3.26 Periods of better quality central decision-making on big picture items have been associated with consistent high quality leadership at a high enough level (eg – in very different ways – Heseltine in the early 1980s; Prescott in the late 1990s). One respondent commented in this connection that “*The quality of the leadership is as important as the quality of the project*”. Particular points about styles of leadership and planning included:
- a) Project managing large projects is not done well by civil servants. It requires private sector skills, but these must be contained and directed by clear public purpose, accountability and leadership – the Olympic Delivery Authority was given as a good example;
 - b) Continuity through changes of control over the timescale of HSR requires:
 - Bi-partisanship – avoiding single-party interests or institutional structures;
 - Political intelligence, to avoid wasting momentum when political control changes;

¹⁷ At the time of the interview there was a collaborative network of Government Offices (but no equivalent for RDAs). The appointment of Lord Mandelson into a wider role as First Secretary for Business, Innovation and Skills in June 2009 may have a significant effect on regional and national coordination

- ‘Catching the wave’: the credit crunch could well create the fluidity needed to promote a new vision and practices needed for railways;
 - Continuing national and local support requires stronger subregional structures, with a capacity for understanding public sentiment and responding in a timely and effective way to local concerns.
- c) Planning to manage uncertainty and change over the timescale of HSR requires ‘fewer, bigger targets’, and a style of planning that is indicative rather than directive – not inflexible masterplans.
- 3.27 The pattern of subnational governance is part of the central accountability, and Government needs to be pro-active about establishing this essential institutional infrastructure, rather than making it the subject of referenda. Complementary actions to maximise economic benefits will require strong local leadership, wielding powers not currently available to them. Other countries provide worthwhile examples:
- a) In the USA the ability to levy local taxes from existing residents and businesses and promote bonds to support local development has helped generate civic leadership;
 - b) In Germany the collaboration of national, Lande and local government bodies with clearly defined roles and resources has been a key factor in the successful integration of national, regional and local transport, and of transport as a whole with spatial plans.

Funding

- 3.28 Some respondents pointed out that, following NATA (and the current DASTS ‘refresh’), transport appraisal has shifted towards valuing economic, social and environmental effects more highly. However, there remain serious funding problems that would affect HSR, many of them linked to evaluation, including:
- a) Identifying associated developments which could contribute significantly to costs without compromising transport or economic benefits (see para 3.21);
 - b) The lack of significant headroom within RFAs (not in any case designed to accommodate national rail network schemes);
 - c) The high opportunity cost of even well-justified HSR if funded from national public resources in terms of other investments forgone,
 - d) In this context the indication in the Eddington Report that smaller schemes tend to have better BCRs than large ones¹⁸;
 - e) The absence of established means of evaluating dynamic effects on regional and national competitiveness (implicit in Eddington’s strategic recommendations), which might legitimately influence the allocation of national investment;
 - f) The absence of any framework for evaluation of complementary measures in conjunction with HSR, to reflect the potential for synergy.

¹⁸ Eddington Report, Vol 3, paras 1.29-30

4 Developing the Theory of Change

Revisiting the Theory of Change (ToC)

- 4.1 The initial ToC proposed in Chapter 1 (Figure 1.2) was framed in the same kind of way as conventional evaluations of transport investments: working from the direct, local and immediately observable effects of intervention towards the indirect, wider and longer-term effects. One of the purposes of the interviews was to test whether this initial explanation of how HSR and complementary measures work was valid.
- 4.2 The broad conclusion of the interviews is that HSR *could* make a major difference to the disparities between regions, but that this would require complementary measures beyond the capabilities of present institutions and planning processes to bring about. This should not be seen as a surprising conclusion – after all, after 12 years of a Government which has made this a central policy objective¹⁹, the gaps between regions have nevertheless continued to widen, as widely discussed and reported upon, for example:
- The Allsopp Review (Ref A1.12) pointed out that regional economic statistics were inadequate as a basis for an effective regional policy;
 - The McLean Report (Ref A1.13) noted the very small proportion of ‘regionally relevant’ government spending that was directed towards achieving regional policy objectives;
 - An influential IPPR report (Ref A1.14) pointed to the need to ‘renationalise’ regional policy from the EU and bring to bear a much wider range of policy instruments than those traditionally associated with ‘regional policy’;
 - In a partial response to these pressures, in 2005 the Government introduced Regional Funding Allocations (RFAs) for capital expenditure in the areas of housing, transport and economic development in the English Regions (Ref A1.15).
- 4.3 These sources suggest that the problem lies with national governance, rather than subnational agencies. Figure 4.1 compares the RFA capital guidelines issued in 2005 with total identifiable regional spending²⁰. It can be seen that the amounts allocated to ‘regional policy’ are very small compared with total regionally relevant²¹ spending (1-2%). This strongly suggests that significant complementary measures will require changes from the top down.

Figure 4.1: RFA by function and region, 2006-07 (£ million, capital)

Region	Transport		Housing		Economic development		Total regional	
	RFA	% regional spending	RFA	% regional spending	RFA	% regional spending	RFA	% regional spending
North West	113	6%	250	27%	382	35%	745	2%
North East	42	7%	86	24%	240	41%	368	2%
Yorkshire & Humber	83	7%	144	28%	295	39%	522	2%
East Midlands	71	7%	116	34%	156	43%	343	1%
West Midlands	88	7%	182	38%	272	52%	542	2%
South West	84	8%	137	40%	153	44%	374	1%
South East	135	8%	367	55%	157	29%	659	1%
East of England	92	8%	167	47%	129	45%	388	1%
Total	708	7%	1449	36%	1784	40%	3941	1%

Source: HMT (2005) Regional Funding Allocations: guidance for advice (Tables D1 and D2)

¹⁹ The 1998 RDAs Act was in the first wave of New Labour legislation, and the PSA to ‘reduce the persistent gap in growth rates between the regions’ was introduced in 1992

²⁰ HMT (July 2005), ‘Regional Funding Allocations: guidance on preparing advice’

²¹ ‘regionally relevant’ is defined in the McLean Report as spending that is both *in* and *for* the region in question

- 4.4 Revised RFAs for the period 2008/9-2010/11 were issued in 2008²². Comparisons are made difficult by the absence of information about changes in the price base, the lack of comparable totals of national regionally-relevant expenditure, and changes in the range of programmes included in the RFA. However, the overall totals, though higher than 2005 (£6.5bn compared with £3.9bn, part of which simply be the different basis) are not different enough to alter the conclusion that RFAs account for only a small proportion of regionally-relevant Government spending, and the potential for ‘joined-up’ action is limited both by this and by the fact that only three out of nine Government programme areas are involved, representing less than 10% of regionally-relevant capital spending (HMT, 2005, Table D2).

A revised Theory of Change

- 4.5 There was a strong consensus from all those consulted that better local transport connections would help to spread any benefit more widely than would otherwise be the case, and a general agreement that current regional policy instruments (RFAs, RES, RSS, etc) could perform a useful supporting role. However, even on an optimistic view it was clear that such measures, on their own, would do little to close the regional prosperity gap.
- 4.6 The implications of recent developments in thinking about the connections between transport and regional economic geography (see paras 2.6-2.8) is that a significant regional benefit (beyond GSE) depends on decisively changing the North-South balance. HSR could form an important part of such a shift, *but on its own could simply work to increase the dominance of the South.*
- 4.7 Experience, theory and the interviews reported in Chapter 3, all suggest that (although providing a helpful framework for discussion) the initial bottom-up ToC is inadequate as means of understanding the most important potential effects of HSR. An alternative ToC, taking account of these factors, is therefore proposed in Figure 4.2 (note that this, like the initial ToC is a chain of reasoning, not a proposal for the phasing of action).

Figure 4.2: Revised Theory of Change (ToC)

- ***HSR planning process:*** plans for the development of a national HSR network evolve over the next few years, building from National Policy Statements under the 2008 Planning Act into a strategic infrastructure perspective;
- ***National governance:*** central government plays a stronger role in articulating and implementing a national strategic policy for correcting the imbalance between North and South, with HSR an integral part; allied to this, ***National expenditure planning*** acquires a stronger subnational dimension with RFAs overtaken by broader processes;
- ***Local governance:*** current tentative moves towards greater subnational autonomy continue within a more clearly defined framework of subsidiarity, allowing more effective coordination of complementary local measures with HSR development;
- ***Market responses:*** increasing confidence in the implementation of HSR and complementary measures encourages private investment that takes advantage of the changed pattern of accessibility, in a ‘virtuous circle’ that further improves the commercial viability of HSR;
- ***Regional productivity and income growth:*** enabled by HSR, better links to national and international supply chains and markets, and wider and deeper regional labour markets foster economic agglomeration and clustering; together with complementary local measures to create integrated local transport networks, specialist knowledge and training capabilities and relevant local development opportunities this increases the pace of innovation and the growth of regional productivity and income.

²² HMT (July 2008), ‘Regional Funding Allocations: guidance on preparing advice’

5 Issues and conclusions

Introduction

5.1 The definition given earlier (para 2.1) of ‘complementary measures’ to generate regional benefits from an HSR network stressed the need to focus on actions beyond those dictated purely by transport considerations, and on benefits beyond those already accounted for in transport appraisals. The desk studies and interviews reported in chapters 2 and 3 raise issues for complementary measures under each of the headings set out in Chapter 2 (para 2.1), and these issues are reviewed in this chapter in the light of the revised ToC set out in Chapter 4:

1. HSR configuration – the location of stations, the balance between inter-regional and region-London connectivity, and the role of this in generating a ‘new economic geography’;
2. Related transport actions – the significance of integration with local public transport, and of the use made of conventional rail capacity that is released;
3. Non transport actions – economic differentiation within and between regions, changes to governance to improve links between transport and other actions, and means of appraising complementary measures.

1. Issues for HSR configuration

Edge (‘Parkway’) vs city centre locations

5.2 The overwhelming weight of both theory and experience points to the need for HSR stations to be located in city centre locations to generate the connectivity into regional economies that is the necessary starting point for regional economic benefit. There is likely to be a high cost penalty compared with serving centres indirectly via Parkway locations²³, and it is quite possible that the extra cost would be difficult to justify on purely transport grounds (even allowing for WEBs under the latest appraisal procedures). The issues arising for HSR include:

- a) Identifying feasible options and quantifying their costs, including supporting local connectivity (see paras 3.8-3.11);
- b) Whether splitting services between ‘through’ Parkways and city centre spurs offers a balance of economic and transport advantages;
- c) Whether there are particular centres for which direct access is a ‘must’ in terms of regional economic benefit;
- d) Other sources of funding for city centre stations and HSR access routes in the light of the above.

Inter-regional vs region-London links

5.3 Current business demand for high speed inter-city transport links (rail or air) is dominated by direct links from the regional centres to London. Other things being equal, this pattern might be expected to continue in the future, and indeed would be reinforced by a configuration of HSR that responded to this pattern in ‘predict and provide’ mode. This would in turn be likely to reinforce the economic dominance of London, with potentially negative consequences for the regions and for the UK economy as a whole.

5.4 A greater emphasis on inter-regional linkages (including links to Manchester airport) would be necessary to the ‘new economic geography’ favoured by many respondents. This would incur a revenue penalty unless and until a different pattern of demand evolved. In addition to

²³ even allowing for the limited potential compared with city centres for relevant development to contribute to Parkway costs

identifying and evaluating the non-transport complementary measures (see later, para 5.7 - 5.17), the issues this raises for HSR include:

- a) Identifying which regional centres it is most important to connect to each other by HSR in order to generate regional economic benefits. The clear indication from this study is that within England the Leeds-Manchester-Birmingham 'constellation' (including Manchester Airport) should be the priority, and that this should be linked to central London, Heathrow and CTRL;
- b) Identifying the optimal configuration of main HSR routes and nodes to achieve this connectivity in terms of relative costs and benefits.

2. Other related transport issues

Integration with local transport

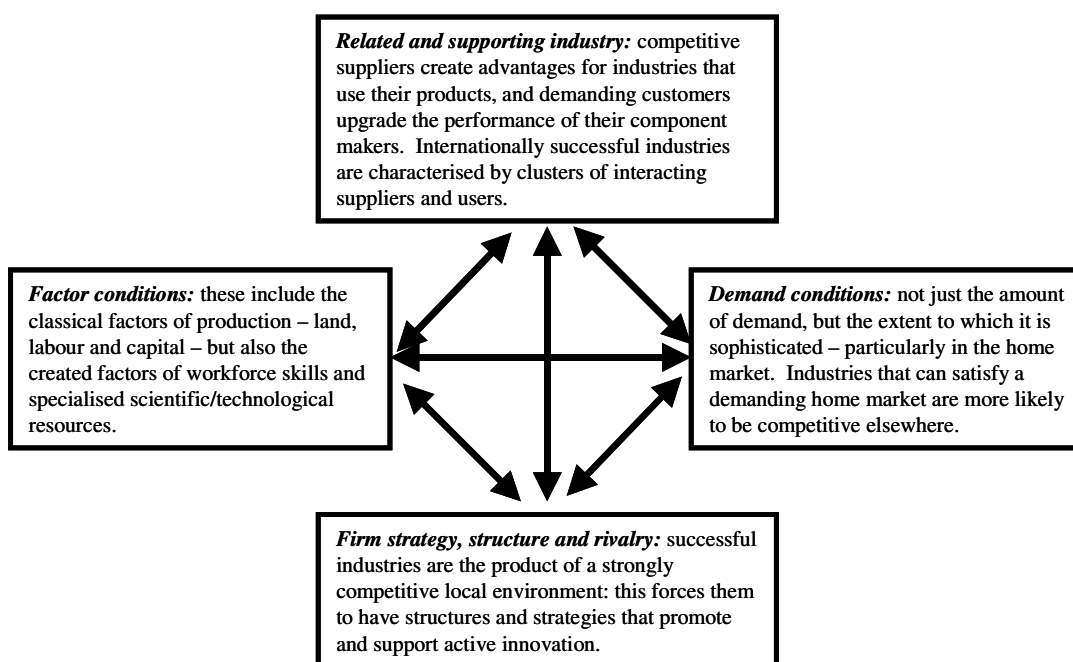
- 5.5 The direct 'walk in' catchment of a main HSR station, though crucial because of its nature, will be limited (even in a major city centre). Much of the regional economic benefit depends upon extending the catchment both within the city and to the wider subregion. This will help to create a wider and deeper labour market both through improved access, and by creating a 'compact, liveable city', attractive to knowledge workers with a national or global choice of where they live and work. On continental European evidence, these qualities are central to attracting allied higher level businesses and building economic critical mass.
- 5.6 The benefits of local transport integration in terms of modal shift, greenhouse gas reductions and transport-related agglomeration will be accounted for in transport appraisals. However, the more subtle (but perhaps in the medium and longer term more significant) effects on the will be on the *quality* of the conurbation economy. In addition to such effects attributable to *new* local transport schemes, there will also be a component arising from the use of conventional rail capacity released by removal of some longer-distance express traffic to HSR. As with other local transport changes, only part would be counted in existing transport appraisals. Issues arising include:
- a) Identifying which business and labour market segments likely to benefit, and how the benefit is related to local changes in accessibility to HSR services;
 - b) Understanding how the effects on the centre as a whole amplify the impacts on individual businesses, and converting this into a useful evaluation tool.

3. Issues relating to non-transport actions

Economic specialisation

- 5.7 The new economic geography suggests that countering the 'two-way road' effect requires a degree of economic specialisation *within the nation* that protects the weaker region from the full force of competition with a stronger region. This makes local economic development strategies a crucial part of securing a regional benefit from HSR. A similar argument relates to specialisation *within a region* in a polycentric arrangement of functions. To be worthwhile, of course, any such specialisation would need to be founded on real locational advantages – such as a relevant local skill base or institutional bases of specialised knowledge.
- 5.8 As markets have become increasingly global and consumer-led, *innovation* rather than price has become the key to maintaining competitiveness. Michael Porter²⁴ has suggested that innovation is created and sustained through four sets of factors, which interact and reinforce each other, as set out in Figure 5.1 (the 'Porter diamond'):

²⁴ M Porter (1990), *The Competitive Advantage of Nations*, Free Press

Figure 5.1: Determinants of competitive advantage (after Porter)

- 5.9 Porter's research suggested that local concentration intensifies the interactions between these sets of factors, thus fostering innovation and the competitive advantages that flow from it. He described a number of such concentrations, which he called 'clusters'²⁵. Porter defined an industrial cluster as *"a geographic concentration of interconnected companies, specialised suppliers, service providers, firms in related industries and associated institutions (for example, universities, standards agencies and trade associations) in particular fields that compete but also cooperate."*
- 5.10 To maximise regional benefits from HSR would therefore appear to require the regional specialisation(s) to be spread subregionally in such a way as to take advantage of local capabilities. The crucial point here is that in a modern economy the local characteristics that confer advantage are no longer access to crude factors of production such as raw materials, labour, and markets, but to the capacity to innovate. With a well-directed local economic development strategy, a local economy can to some extent at least 'grow its own' relevant capacities. Key issues arising include:
- Identifying those sectors for which local advantage exists or could be created through feasible economic development measures;
 - Identifying the potential for mutually reinforcing relationships between specialisations within subregions, and the extent to which transport links will help foster these.
- 5.11 A traditional form of regional policy which could be given added impetus by HSR is the relocation of Government offices, and this would be of regional benefit. However, the extent of this would be limited by the following factors:
- The 2004 Lyons report on relocation of government offices²⁶ identified 20,000 jobs that should be relocated out of London and the South East an *"urgent first tranche"* (out of a total of 27,000). However, little action has followed, and the traditional resistance of the civil service itself might be expected to be reinforced by concerns about the effect on the exporting regions of the combination with a weakened financial services sector;

²⁵ eg the Italian leather and jewellery industries

²⁶ HMT (2004) *'Independent review of public sector relocation'*

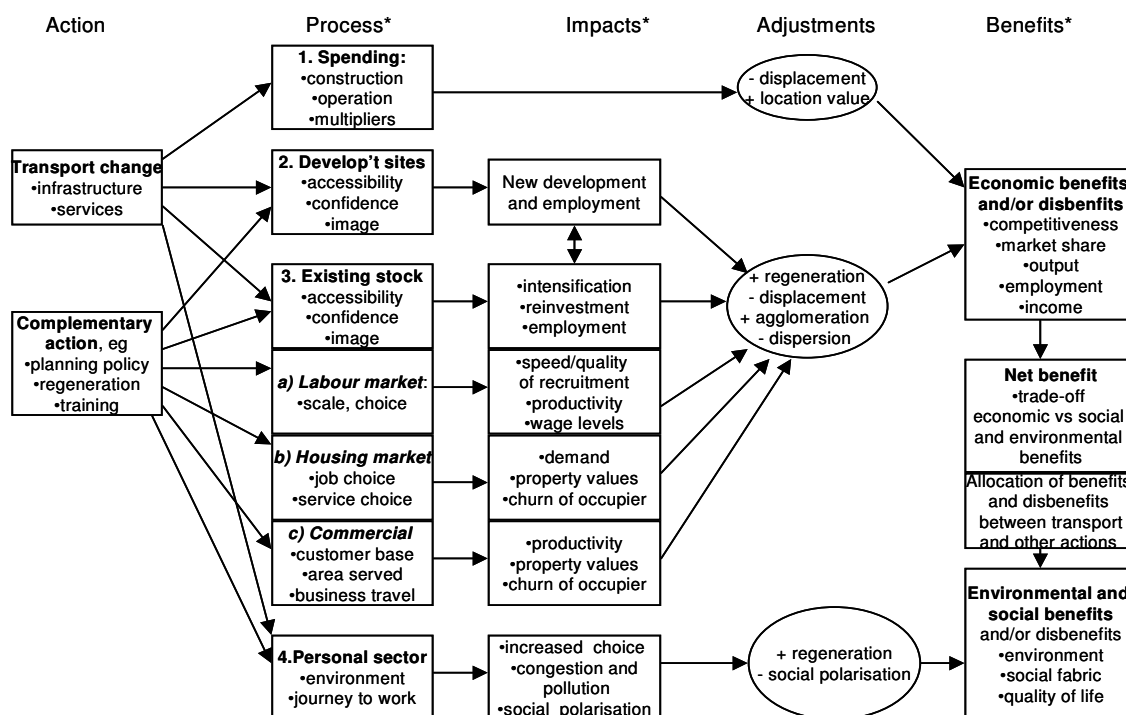
- b) Structural change in the growth capabilities of the regions beyond the GSE depends primarily on fostering their endogenous capacity to innovate. Migrating Government support services is unlikely to make a significant contribution to this.

Governance

- 5.12 Realisation of the potential of HSR will put strains on relationships between localities within regions, including overcoming in some cases long-standing local rivalries. It would also stretch the capacity of national government to seek to actively promote an efficient and productive pattern of economic activity across the nation, after a period of several decades in which no such attempts have seriously been made.
- 5.13 At both national and subnational levels any such attempt would require a step change in the capacity to join-up action across functions. This in turn requires both devolution of governance capabilities from central to local government, and greater ability on the part of central government to act strategically and corporately.
- 5.14 Such significant steps are clearly not justified merely to make HSR more feasible. On the contrary, the central reason would be that stated in the 1997 RDAs White Paper: *“The regional economies are the building blocks of a prosperous economy, affecting the performance of the UK as a whole. Wide variations in levels of economic activity - reflected in wage pressures, levels of unemployment and movements in house prices - make the task of providing a stable macroeconomic climate more difficult. In particular, setting a national interest rate which suits each region is more difficult when the regions themselves are widely divergent. The risk is lower overall growth and employment rates for the country as a whole.”* This remains the case.
- 5.15 The economic fall-out of the credit crunch may represent a turning point, in which the role of a national economic strategy with a regional dimension is once more seen as relevant. If so a national HSR network could be seen as part of the sustaining infrastructure of such a strategy. Issues arising include:
 - a) Whether the Government is prepared to produce a national economic strategy with a regional spatial component;
 - b) Whether the level and nature of devolution to subnational bodies will be sufficient to secure joined up action.

Appraisal

- 5.16 It has already been pointed out that even with recent advances in the consideration of WEBs, transport appraisal does not include significant dynamic elements that are relevant to a appraisal of a national HSR system. In addition to this, there is currently no framework at all for appraising complementary measures undertaken alongside transport in a manner that allows for the potential for synergy. Figure 5.2 reproduces a suggestion made by the author to SACTRA in the course of their 1999 investigation of ‘Transport and the Economy’.

Figure 5.2: Theories of change applied to evaluation of complementary actions

* 'Processes' and 'Impacts' are dynamic effects over time, whilst 'Benefits' are comparisons at a specific future point in time between outcomes with alternative courses of action, or without action ('baseline')

5.17 The issue arising here is a commonplace in most fields of public policy – the uncertainty affecting any projections of future events and outcomes. Transport appraisal practice has been protected from this for several decades by the use of the outputs of transport models as inputs to appraisal. The apparent precision of this procedure has come under increasing pressure as the transitory nature of the transport changes (and the imperfections of the market processes that turn transport benefits into economic benefits) have become more apparent, and as the focus of interest has shifted from effects within transport to wider effects on the economy, society and the environment.

5.18 Over the 60 year term required by current appraisal guidance we can observe as a matter of fact the major effects of transport on the whole shape of the nation (urban form, settlement pattern and regional balance). However, though we have at present no methods for appraising these effects, the rationale for doing so is overwhelming, for example:

- a) As pointed out by the RDAs White Paper (1997), quoted above (para 5.14), the regional economies are the building blocks of a prosperous national economy, and their disparities incur major national economic costs – not at present quantified;
- b) The continued shift in the balance of population from North to South²⁷ implied by current CLG policy also incurs major additional costs associated with extra provision in regions where infrastructure and services are already stretched.

Transport is not the only causative factor, but it is an important one, and (with appropriate complementary measures) HSR offers the opportunity to reverse these damaging trends.

• ²⁷ a further shift of 0.5-1 million people over the period 2007-2026 is implied by the guidance produced by the National Housing and Planning Advice Unit, and has been accepted by CLG

Conclusions about complementary measures

Broad national strategy

- 5.19 A significant regional benefit from HSR (beyond GSE) depends on decisively changing the North-South balance. HSR could form an important part of such a shift, *but on its own could simply work to increase the dominance of the South*. Disparities that lead to overheating of the South East are bad for the UK as a whole as well as for the South East itself, as the RDA White Paper made clear (para 5.14). To avoid this outcome will require very broad ranging action, of two sorts:
- a) Top down: changes in the pattern of governance with central government taking a stronger, more directive responsibility for the pattern of *all* 'regionally relevant'²⁸ expenditures as a major means of implementing a national economic and spatial strategy;
 - b) Bottom up: the other side of the coin is the need to devolve more decision-making to subnational levels (including regions), in recognition of two factors
 - The inherently bottom-up nature of innovation in both business and government (paras 5.7-5.11 above); and
 - The potential for mutual reinforcement between measures that local communication, coordination and competition between local entities brings²⁹.
- 5.20 In terms of *what* complementary action is needed, it is apparent that half measures risk being worse than useless. The ruling requirement is for the North to develop an economic counter-balance to the GSE. It was apparent from the discussions held that the only area with the potential to fulfill this role is what Cecilia Wong has called the 'Central Constellation': the Birmingham-Leeds-Manchester conglomeration (Figure 3.1). The implications of this for complementary actions are:
- a) The development of transport linkages (including HSR) between these centres, improving business-to-business contact and the overlap of labour markets (particularly for higher level skills);
 - b) While bearing in mind that the Government is not directly responsible for the development of Manchester airport, it could do more to support its development as a common resource for this whole area, by (for example) making use of national resources to increase its catchment with improved access, and using national investment and planning regimes to counteract the damaging over-development of London's airports³⁰;
 - c) Including an explicitly regional component in national research and R&D funding regimes, linking these to differentiated local and regional industrial bases. Climate change and the credit crunch have created the need for industrial restructuring (indeed, its inevitability): government should give this process a clear regional dimension.

Summary of complementary measures

- 5.21 Figure 5.3 sets out in summary form the conclusions regarding the three main categories of complementary measures (as defined in para 2.1). In accordance with the revised ToC (Figure 4.2) it distinguishes primarily 'top down' (ie Government) from primarily 'bottom up' (ie subnational) actions and responsibilities. These kinds of action would be mutually supportive and therefore best seen as a package (which would need to be designed to fit the regional/subregional context).

²⁸ 'regionally relevant' is defined in the McLean Report as spending that is both *in* and *for* the region in question

²⁹ the Lyons Report (2007) covers the same issues from a governance standpoint

³⁰ Shifting this balance is a significant challenge: in general, the greater the range and frequency of destinations an airport offers, the keener airlines are to use it – thus tending to reinforce the existing pecking order. However, there is an underlying connection in commercial logic to the scale and dynamism of the economies being served, and this could be capitalised upon by smarter national spatial policy, as well more purposeful use of the levers offered by funding and consent regimes. Past airports policy has tended to be on the 'predict and provide' model

Figure 5.3: Summary of complementary measures

	Top down (national)	Bottom up (subnational)
1. HSR configuration		
1.1 Parkway vs Centre HSR stations	<ul style="list-style-type: none"> Identify centres for which direct access is a 'must' in terms of regional economic benefit 	<ul style="list-style-type: none"> identify feasible options, costs, sources of finance and balance of economic and transport advantages
1.2 Inter-regional vs region-London links	<ul style="list-style-type: none"> Prioritise 'Central constellation' (Leeds-Manchester-M/c Airport-Birmingham) links to each other and to London/CTRL 	
2. Other related transport		
2.1 Extending benefits through local links to HSR	<ul style="list-style-type: none"> Developing evaluation/appraisal tool for local transport investment Developing Manchester Airport 	<ul style="list-style-type: none"> Identify business and labour market segments likely to benefit, and how
3. Non-transport actions		
3.1 Economic specialisation	<ul style="list-style-type: none"> Develop the role of the 'Central constellation' as a counter-balance to Greater South East and core of a revitalised 'North' 	<ul style="list-style-type: none"> Identify sectors within regions for which advantage through HSR exists or could be created Identify potential for beneficial relationships between sectors in subregions, and means for amplifying accessibility benefit
3.2 Governance	<ul style="list-style-type: none"> National responsibility for strategic economic and spatial context Devolution to subnational bodies 	<ul style="list-style-type: none"> More joined up local action, taking advantage of devolution
3.3 Appraisal	<ul style="list-style-type: none"> Transport appraisal to include national value of longer-term changes in regional economic disparities and population shift Combine appraisal of HSR and complementary measures 	

Issues for further work

- 5.22 We believe that the major conclusions reached here are cogent and justifiable, particularly those concerning the need for complementary action, the need for a clear national spatial policy context supported by a changed pattern of governance, and new approaches to the appraisal of spending priorities. However, the issues discussed in this study are broad-ranging, many of the key relationships are little understood, and there are many serious uncertainties about the course of surrounding events over the relevant period of time. At the same time the timescale and resources for the work have both been limited, and at a number of points in this report we have drawn attention to the need for further work.
- 5.23 In addition to the work implied by the main recommendations earlier in this Chapter, a number of other matters include:
- Examining how complementary measures may need to be differentiated between regions, depending on their local economic structures and geographies (refer paras 3.24
 - Consideration of appropriate economic specialisations, that would benefit from HSR and build on inherent potential advantages at regional and subregional levels;
 - Consideration of how the phasing of HSR and complementary actions could affect regional outcomes;
 - Identification of sectors in regional and subregional economies likely to benefit particularly from HSR availability (ref para 2.5 and Footnote 9).

Appendix 1: Reports consulted

(a) Academic and appraisal literature

- A1.1 C Wong (2006), 'Uniting Britain: the evidence base – spatial structure and key drivers', Report for RTPI National Spatial Planning Framework Task Group
- A1.2 DfT (2006), 'Transport, Wider Economic Benefits and Impacts on GDP' Discussion Paper
- A1.3 M Lafourcade & J-F Thisse (Jan 2008), 'New economic geography: A guide to transport analysis', Paris School of Economics Working Paper 2-2008

(b) Consultancy and policy reports

- A1.4 CfIT (2001), 'European Best Practice in Delivering Integrated Transport'
- A1.5 Roger Tym (2002) 'Economic performance and the High Speed Line: ex-ante appraisal of the distributional effects', report for the Strategic Rail Authority
- A1.6 York Aviation (2003) 'Aviation and airport strategy study: Addendum report', Report for English RDAs
- A1.7 M Parkinson, et al (2006), 'The State of UK cities', report for ODPM
- A1.8 Steer, Davies & Gleave (2007), 'Northern Way: North-South Connections', Report for Northern Way Consortium
- A1.9 Centre for Urban Policy Studies, Manchester University (Jan 2008) 'Connecting the North: interdependence and barriers: rail, road, air and maritime links', Report to Northern Way
- A1.10 Greengauge 21 (June 2007), 'High Speed Two: a Greengauge 21 proposition'
- A1.11 Atkins (2008), 'North-South High Speed Line Study: 2008 Update'
- A1.12 Steer, Davies & Gleave (May 2008), 'High Speed 2: economic and regeneration impacts for Birmingham', Report for Greengauge 21 and Birmingham City Council
- A1.13 DfT (2009) 'Britain's transport infrastructure: High Speed Two', Discussion Paper
- A1.14 Conservative Party (Feb 2009), '*Control shift: returning power to local communities*', Responsibility Agenda, Policy Green Paper No 9
- A1.15 HM Treasury (2004), '*Review of Statistics for economic policy making*', Report by Christopher Allsopp
- A1.16 ODPM (2003), '*Identifying the flow of domestic and European expenditure into the English regions*', Report by Prof Iain McLean, Nuffield College, Oxford
- A1.17 J Adams et al (2003), '*A new regional policy for the UK*', IPPR
- A1.18 HMT (July 2005), '*Regional Funding Allocations: guidance on preparing advice*'
- A1.19 HMT (July 2008), '*Regional Funding Allocations: guidance on preparing advice*' the broad position has not changed in any notable way from 2005, but the comparable national totals are no longer given

Appendix 2: Interviews

(a) Interviewees

Name/Position	Organisation	Method/Date of interview
Corinne Swain	Hon Fellow, Arup; and CfIT Board member,	2 February 2009, telephone
Nigel Hugill, formerly CEO Retail & Communities (Europe)	Lend Lease Europe Ltd	9 February 2009, face to face
Brian Hackland, Transformation Director and Head of the Regional Co-ordination Unit, GO network	Department for Communities & Local Government	9 February 2009, face to face
Heather Crocker, Head of Transport	Advantage West Midlands	10 February 2009, face to face
John Jarvis, Transport Director, Jonathan Brown, Senior Transport Manager	The Northern Way	12 February 2009, face to face
Prof Cecilia Wong, Professor Spatial Planning, and Prof Brian Robson, Director	Centre for Urban Policy Studies, University of Manchester	12 February 2009, face to face
Bronwyn Hill, DG City & Regional Networks, Timothy Welburn, Head of Rail Network Strategy, and Mark Ledbury (Economist)	Department for Transport	17 February 2009, face to face
Andrew Lewis, Director,	The Northern Way	25 February 2009, telephone
Sir Michael Lyons	Author, Lyons Report	2 March, 2009, face to face

(b) Briefing note for interviews

Facilitating regional benefits from High Speed Rail (HSR)

1 Introduction

Purpose

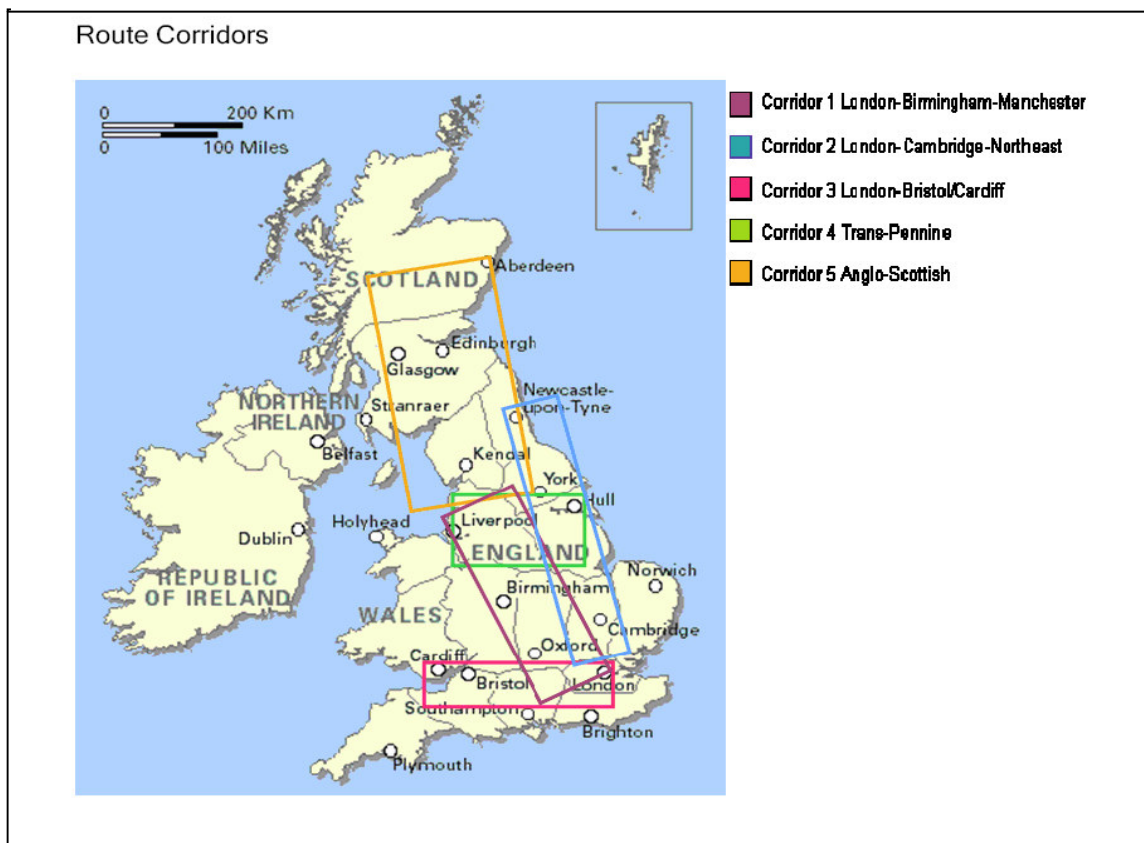
- 1.1 The aim of the project is to identify actions or policies which could be implemented *alongside* provision of an HSR network, and which would help secure advantages to other regions of the UK as well as the Greater South East (GSE – London, South East and East GO regions).

Background

- 1.2 The study postulates the existence of an HSR network comprising lines in each of the five corridors identified in the diagram below, some 20 years from now. At present the connectivity within this network, or with other existing or projected transport and development projects, cannot be specified. There may, however, be factors affecting such network design issues arising out of the present study.
- 1.3 Great uncertainties surround the economic, climate and energy resource context in which an HSR network would operate. For the purpose of this study, it seems appropriate to assume that supplies of oil will become relatively more expensive, scarce and insecure.

Theoretical context

- 1.4 Conventional economic theory predicts that better transport between two regions will tend to work to the competitive advantage of the stronger region, and to the disadvantage of the weaker region. An example of this ‘two way road’ effect is the relative decline suffered by Cornwall following the upgrading of the A30.



- 1.5 The processes involved are complex, and extend well beyond the field of transport, and better links need not necessarily produce such a result. There are the questions of agglomeration benefits to consider and the potential existence of spillover effects when a major city-region economy impacts on a wider surrounding area. It is characteristic of rail (and especially HSR) to *concentrate* rather than (like roads) *spread* accessibility; and second, a broader approach, integrating transport provision with complementary economic, social and environmental measures could exploit this feature to the advantage of the ‘weaker’ regions.
- 1.6 In any event, the significant economic changes being wrought following the credit crunch are likely to have an as yet unknown set of consequences for the relative attractions and performance of the regional economies.

2 Purpose of discussion

- 2.1 The purpose of our discussions is to generate ideas about how complementary actions could help secure regional benefits from HSR. The starting point is an initial ‘theory of change’, which we want to test, refine and if possible validate with knowledgeable people who are engaged with the issues in a range of different ways. An initial hypothesis has been developed in consultation with Greengauge21, as follows:

1. **Direct benefit of HSR connectivity:** HSR confers advantages to businesses locating in the centres it serves, including better links to other city regions, to London and to gateways to other world and European centres. These advantages will reinforce agglomeration benefits arising from scale and will promote their further growth;

2. **Indirect benefit of HSR connectivity:** The effect on centres served (directly or indirectly) in turn generates a set of benefits visible across the regional/city-region catchment, with increased demand in the residential and service sectors. Development patterns could be both more productive and more sustainable than the counter-factual ‘market-led’ SE-dominated pattern. A national economic gain from a less disparate pattern of regional productivity was envisaged when present policies were conceived³¹;
 3. **Increasing regional connectivity:** Relieved of some inter-city traffic by HSR, complementary actions to remodel services and stations on the conventional rail network could exploit the capacity released to increase labour market accessibility in both London and regional centres. The wider regional benefit would be increased by further complementary actions through urban regeneration, public transport network integration, and the spatial planning system to upgrade the quantity and quality of housing accessible on these networks;
 4. **Complementary subregional action:** to improve public transport networks, city centre development capacity, environment and cultural attractions in the regional centres would help redress the imbalance between London and other regions in the ability to attract (and retain) nationally and internationally mobile talent;
 5. **Complementary national policy:** Since the mid-1980s the underlying rationale of regional policy has been essentially social: to mitigate the social effects of structural economic change rather than to try and influence its direction. To complement HSR, national spatial policy may need to look at addressing regional disparities in a different way, with a more active stance on differentiating and supporting distinct regional economic roles³².
- 2.2 The thrust is that with sufficiently joined-up and vigorous action on complementary measures, the advantages of an HSR network to regional centres (and to the regions they serve) could be sufficient to outweigh the ‘two way road’ advantages to London of easier access to regional markets.
- 2.3 The agenda for the meetings is summarised below. This is not a questionnaire, and the aspects to focus upon will be specific to the interests of the interviewee.

3 Agenda

3.1 Direct connectivity:

1. Are there direct benefits to business from HSR connectivity?
2. What kinds of business?
3. Evidence?

3.2 Indirect connectivity:

1. Are there potential indirect (knock-on) benefits to other types of business from this?
2. What processes are involved?
3. Evidence?

³¹ RDAs White Paper (1997): “*The regional economies are the building blocks of a prosperous economy, affecting the performance of the UK as a whole. Wide variations in levels of economic activity - reflected in wage pressures, levels of unemployment and movements in house prices - make the task of providing a stable macroeconomic climate more difficult. In particular, setting a national interest rate which suits each region is more difficult when the regions themselves are widely divergent. The risk is lower overall growth and employment rates for the country as a whole.*”

³² The Infrastructure Planning Commission set up by the 2008 Planning Act requires National Policy Statements for its operation, and these may provide a suitable platform.

- 3.3 Regional connectivity:
1. Could HSR improve regional connectivity?
 2. How important to regional benefit is it that HSR stations are located in major city centres?
 3. Would there be any negative effects from out-of-town or 'Parkway' type locations?
 4. If so, what measures would be necessary to minimise such effects?
 5. Evidence?
- 3.4 Complementary regional and local actions:
1. What complementary local transport changes would be most beneficial?
 2. What kinds of complementary development would be most beneficial? At stations? Elsewhere?
 3. Would connection to regional airports help or hinder regional development?
 4. Are any other types of connectivity important?
 5. Evidence?
- 3.5 Complementary national measures:
1. What are the implications of HSR connection to Heathrow (with/without expansion)?
 2. What requirements will maximising regional benefit place on governance – at local, regional and national levels?
 3. What kinds of changes to the national regional policy framework would most help exploit regional advantages of an HSR network?
 4. Evidence?

(c) Focus of interviews

The table below sets out the focus that was planned for the discussion with each of the interviewees.

Table 1: Issues for discussion (✓✓✓= main focus; ✓✓= major topic; ✓= minor topic)

Issues	Academic	CLG	DfT	Inspector	RDA	Dev't	Lyons
1 Direct connectivity:	✓✓	✓✓	✓	✓	✓✓	✓✓✓	
2 Indirect connectivity:	✓✓	✓	✓	✓	✓	✓✓✓	
3 Regional connectivity:	✓	✓	✓✓✓	✓✓	✓✓	✓✓	
4 Complementary regional and local actions:	✓	✓✓	✓		✓	✓	✓✓
5 Complementary national measures:	✓✓	✓✓	✓	✓	✓✓	✓	✓✓✓

Appendix 3: Evolution of DfT transport appraisal

- A3.1 From the early 1960s until the SACTRA Report '*Transport and the Economy*' (1999) the overwhelming bulk of economic benefits of transport were considered to derive from direct benefits to users – primarily user time-savings from increased speed and reduced congestion. Though these time savings could (and would) be transmuted into changed patterns of activity (and so far as these take advantage of increased accessibility, congestion benefits would be lost in the process), in a perfect market the benefits would be equivalent to the original user benefits, however long and tortuous the route between.
- A3.2 The SACTRA Report allowed that in imperfect markets, such as are generally found in the real world, there may also be 'wider economic benefits' (WEBs), and that these might be either positive or negative. It did not offer means for identification or quantification of these.
- A3.3 Formal current DfT guidance is contained in WebTAG Unit 3.5.8 (2003). This requires an Economic Impact Report on major transport schemes, based upon an explanation of the working of the local economy of the area affected, and the role of transport in this. It allows the redistribution of a fixed total of jobs in favour of Regeneration Areas (RAs) to be counted as an economic benefit of the scheme (even though relocating a job from outside to within an RA is a social rather than economic gain, and not within the scope of WEBs as discussed by SACTRA). WebTAG 3.5.8 does offer non-modelled means of quantification³³ of this benefit, but warns that the amounts may be small or even negative.
- A3.4 A 'Discussion Paper' issued by DfT in 2005 picked up the broader economic issues raised in the SACTRA Report, was reissued alongside TIF bidding guidance in Jan 2006, and is likely to be incorporated into WebTAG as part of the NATA refresh. It argues that in addition to effects derived from user time savings in a perfect market, WEBs arise from agglomeration, competition and labour market effects in an imperfect market. These benefits can affect social welfare, or GDP, or both – the agglomeration element could be either positive or negative³⁴, and could be on a significant scale³⁵. Such benefits add to GDP, but could nevertheless arise within a fixed regional total of jobs³⁶.
- A3.5 A further level of WEB could be postulated, in which the productivity gains from agglomeration translate into improved regional competitiveness, leading to relocation of employment into the region as a whole from the rest of the UK or internationally. This is implicit in the Eddington recommendations, but is not (yet) part of DfT appraisal guidance. No single scheme, on its own, is likely to have such an impact, but a strategic programme such as HST could well do.

³³ According to WebTAG 3.5.8 the main means by which these benefits arise are through improved access by employers to labour markets, customers and suppliers, within a fixed 'land-use' (ie physical distribution of homes and businesses). Such benefits clearly compromise user time-savings, but to the extent that origin and destination pairs can change within the fixed totals this should already be accounted for in conventional modelling and appraisal (see DfT (2005), para 8(b))

³⁴ though positive effects are considered more likely (DfT (2005) para 8(d))

³⁵ In the CrossRail example discussed in the paper the labour market effects (from relocation of jobs to high productivity from low productivity areas) are very large, accounting for over half the GDP benefit (though not apparently contributing to social welfare).

³⁶ There is also the potential of a 'more people in work' effect (implying more filled jobs, and which could arise from lower unemployment and/or higher economic activity rate within a given population), but no suggestions are made as to how this might be estimated.