HS2: IRRIGATING THE REGIONS

Professor Sir Peter Hall
Symposium *Transport Choices and West Midlands Regeneration: HS2 or what?*
University of Birmingham
8 November 2013
UK: Low-Speed High Speed, High-Speed High Speed - and all the rest…

- Since late 1970s: UK has had a low-speed high-speed rail service (200km/hr) on a 180-year-old rail infrastructure
- Completed by West Coast Main Line upgrade (2008)
- High Speed One (2007): first high-speed high-speed line (300km/hr)
- Now: High Speed Two (2 stages, 2026 and 2032: a high-speed high-speed network
- What about all the rest?
HS2: Key Features

- Very high speed: 400k/hr
- Self-contained “new line”
- Plus long-distance links classical track
- Serves (major) city centres – which are performing well anyway!
- Fails to connect with regional networks to (problematic) towns
- So: need to integrate to “irrigate the regions”
Birmingham: Curzon Street/Moor Street/New Street

Distance, Curzon Street-New Street: 950 metres
Behind the North-South Divide: Sub-Regional Change

- N-S Divide dominates the picture
- But – within the North/Midlands – a more subtle picture
- Core cities (Manchester, Leeds, Newcastle) OK
- Outside, much weaker
- And: very poorly-performing pockets
Manchester: Metrolink

2013: 47.7 miles (76.8 km.)
2016: 60 miles (97 km.)
Where the (Manchester) Tramway ends: Cities unlinked

**Chart 8. Greater South East – Commuting between London and Selected Cities**

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Hastings</td>
<td>2.1%</td>
<td>0.6%</td>
<td>01.55</td>
</tr>
<tr>
<td>Brighton</td>
<td>4.4%</td>
<td>0.8%</td>
<td>01.15</td>
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<tr>
<td>Cambridge</td>
<td>2.8%</td>
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<td>01.15</td>
</tr>
<tr>
<td>Oxford</td>
<td>2.9%</td>
<td>2.6%</td>
<td>01.05</td>
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<tr>
<td>MKeynes</td>
<td>6.0%</td>
<td>2.6%</td>
<td>00.50</td>
</tr>
<tr>
<td>Luton</td>
<td>12.8%</td>
<td>6.9%</td>
<td>00.30</td>
</tr>
<tr>
<td>Reading</td>
<td>10.1%</td>
<td>5.1%</td>
<td>00.30</td>
</tr>
</tbody>
</table>

Source: ONS, Annual Population Survey and National Rail. See Appendix A for more details.

**Chart 9. North West – Commuting between Manchester and Selected Cities (2004)**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Blackpool</td>
<td>1.0%</td>
<td>0.4%</td>
<td>01.20</td>
</tr>
<tr>
<td>Burnley</td>
<td>2.6%</td>
<td>0.8%</td>
<td>01.20</td>
</tr>
<tr>
<td>Blackburn</td>
<td>3.6%</td>
<td>3.2%</td>
<td>00.50</td>
</tr>
<tr>
<td>Preston</td>
<td>2.2%</td>
<td>1.5%</td>
<td>00.45</td>
</tr>
<tr>
<td>Warrington</td>
<td>12.5%</td>
<td>8.2%</td>
<td>00.35</td>
</tr>
<tr>
<td>Rochdale</td>
<td>30.3%</td>
<td>20.2%</td>
<td>00.30</td>
</tr>
<tr>
<td>Bolton</td>
<td>20.3%</td>
<td>11.7%</td>
<td>00.20</td>
</tr>
</tbody>
</table>

Source: ONS, Annual Population Survey and National Rail. See Appendix A for more details.

**Sources:** Lucci and Hildreth 2008; Centre for Cities, Cities Outlook 2009
The HST Saga: Appraisal Criteria

- Originally: case based on speed
- Cost escalation: now £42.6 billion: project threatened
- Now: case based on capacity
- But also on *indirect impacts*: development, regeneration
- Relevant for local transport too!
Reappraising HS2: The Value of Time

• 56% of HS2 benefits (£24.6 billion/ £44.1 billion) are time savings to passengers.
• Many are business travellers whose value of time is derived from their salary.
• But opponents argue that business time on modern trains is spent productively – in reading, telephoning and preparing for meetings – so should not be counted.
• But could free time for business at destination.
Reappraising HS2: Indirect Benefits

• UK DfT: ‘HS2 is about far more than just a new railway, it provides a once in a generation opportunity to drive growth, generate jobs, and secure our country’s future prosperity’

• Different studies have reached contrary conclusions:
  • John Tomaney: HSL may damage the economies of provincial cities by exposing them to competition
  • Chia-Lin Chen: provincial cities in UK and France benefitted economically from HSL connection

• But: what about the rest of their regions?

• Introducing SINTROPERHER and SYNAPTIC
NW England: “Low-Speed High Speed”: Spatial Impacts

- Places served by HSR have stronger economies...
- And perform more resiliently through 2007 crisis
- More remote places (West Coast Lancashire, Pennine Lancashire) do notably worse

Lille: Exploiting the TGV Advantage
HST Impact: Nord-Pas-de-Calais


Fig. 3. The railway network, main stations, and sub-regions in Nord-Pas-de-Calais. Note: The motorway network is supplementary in this diagram.
Impacts of High-Speed Rail: UK (NW England) and France (NPDC)

North West England

- Halton & Warrington
- Greater Manchester South
- Cheshire CC
- Liverpool
- North West = 100
- Lancashire CC
- Blackburn with Darwen
- Merseyside
- Greater Manchester North
- Blackpool

Source: ONS

Nord-Pas-de-Calais

- Berck-Montreuil
- Sambre-Avesnois
- Cambresis
- Béthune-Bruay
- Douaisis
- Lens-Henin
- Valenciennes
- Saint-Omer
- Flandre-Lys
- Artois-Ternois
- Boulognais
- Calais
- Dunkerque

Source: INSEE
North West England electrification: A partial revolution

- Rail network: Electrification 2016
- Key Network: Manchester-Liverpool-Preston
- Linking to West Coast Main Line
- But other parts not reached: “Third Circle”
- And these are deprived areas
S-Map 2030 North West: 2020 and 2032

Stage One 2020
A. Ashton, Oldham and Rochdale Centres, Wythenshawe/ Airport
B. North Pier-Blackpool North tram extension
C. Liverpool-Manchester-Leeds electrification and Ordsall Curve
D. Liverpool-Wigan electrification
E. Manchester-Preston-Blackpool North electrification

Stage Two 2032
1. Trafford Centre-Port Salford tram extension
2. East Didsbury-Stockport tram extension
3. Manchester-Marple tram-train
4. Kirkby-Skelmersdale electrification
5. Squires Gate-St Anne’s tram extension and St Anne’s-Kirkham & Wesham electrification
6. Poulton-Fleetwood tram
7. Yeading Way BRT
8. Preston BRT
9. High Speed 1.5: Pendolino Liverpool-Manchester-Leeds
10. Blackpool-Preston tram-train
11. Altrincham-Chester electrification
12. Manchester-Wigan-Southport and Preston-Ormskirk electrification, with Lancashire Coast tram-train
13. Manchester-Blackburn-Burnley-Colne electrification
14. Preston-Blackburn-Burnley-Todmorden electrification
15. High Speed 2
Key Research Conclusions

- *In both NW England and NPDC:*
  - HST strengthened economy of regional Core City – but not necessarily all sub-regions
- *In NPDC:*
  - Regional policy “irrigated the region”
  - *But:* transforming regional economies needs more than a HST connection
- **Linkages** HST-regional networks are key: HST extensions, tram links
- **Needs:** S-Map 2030 West Midlands!