PROJECT EVALUATION (1.011)

Spring 2011
Lecture 14
HSR (Cont'd from Lecture 10)

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HSR around the Globe

• Why has HSR been developed at so many places around the Globe but not in the U.S.?
VISION for HIGH-SPEED RAIL in AMERICA

Source: United States Federal Government.
Reference: *HSR in America*, by America2050

- America2050 is an advocacy group
- That is in contrast with scholarly literature
  - Givoni
  - Albalate and Bel
Findings from *HSR in America*, by America2050

- Where HSR can work
  - Corridors of 100-600 miles
  - Major employment and population centers
  - In the US, 11 megaregions, with 70% of US population and regional GDP is located
Findings from *HSR in America*, by America2050 II

- Where HSR can work
  - Promising short corridors, possible as part of a longer corridor
    - New York- Philadelphia
    - Los Angeles- San Diego
    - Chicago- Milwaukee
Findings from *HSR in America*, by America2050 III

• Where HSR can work
  • Very large city (or cities) are “powerful” generators of rail traffic on a corridor with medium and smaller cities -- the anchor tenant idea
  • Likely to generate more traffic than corridors of the same overall population with just medium cities
Findings from *HSR in America*, by America2050 IV

- Where HSR can work
  - Workforce composition is important
    - “Knowledge workers” more likely to travel
    - Industrial areas generate less passenger traffic than “knowledge industries” such as finance
HSR in the U.S.

- Federal funds
- Spread out over a number of states
- The hope: the states and the private sector will partner
  - California
  - Wisconsin
  - Ohio
  - Florida
HSR in the U.S. II

• The reality: a lot of uncertainty
  • Costs--these are BIG projects
  • Benefits-- depends on uncertain ridership
  • Can the financing be cobbled together?
HSR in the U.S. III

• A key question: Is this a set of projects or a program?
HSR in the U.S. IV

• Cost Effectiveness Questions at 3 levels
  • If you want to build HSR, what system do you build?
  • If you want to improve intercity transportation, is this the best use of the money?
  • If you want to make the U.S. a better country, is this the best use of the money?
HSR in the U.S. V

• Compare and contrast with the U.S. Interstate System
RIDERSHIP DRIVES BENEFITS

- Service Quality Drives Ridership
- What Determines Service Quality

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Service Quality – How to measure

Travel Time (Station to Station)
Travel Time (Door to Door)
Service Frequency
Service Reliability
Fares = f(costs, subsidies)
Comfort aboard
  Wi-fi
  Seats
  Food
Safety

All these are fundamental to mode choice, demand and financial viability

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HSR in the U.S.

Florida
  • Jump-start the program
  • Tampa-Orlando
    • What’s right with this route?
    • What's wrong with this route?
    • What actually happened?

HSR in the U.S.

Who are the stakeholders?
HSR in the U.S.

Who are the stakeholders (I)?
The traveling public
The freight railroads and freight shippers
The airlines
The intercity bus industry
Automobile manufacturers
Highway advocates
Urban transportation operators (buses, rail)
Trucking companies
HSR in the U.S.

Who are the stakeholders (2)?
- Electric utilities
- Environmental/ Energy “activists”
- Urban states/ rural states
- Construction industry
- Economic growth advocates
- Social equity advocates
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Applications in Spain m(3/5)

High speed rail - AVE


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Japanese HSR network

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1.011 Project Evaluation
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