

Do We Need A Conference on Multimodal Freight Externalities?

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Setting the Stage

- Recognition that freight projects must fit into a broader, regional (global) view
- Frameworks for prioritizing and developing freight facilities inadequate
 - ❖ No dedicated funding
 - ❖ No strategic vision or authorization
- Ad Hoc National policy and direction related to freight operational improvements

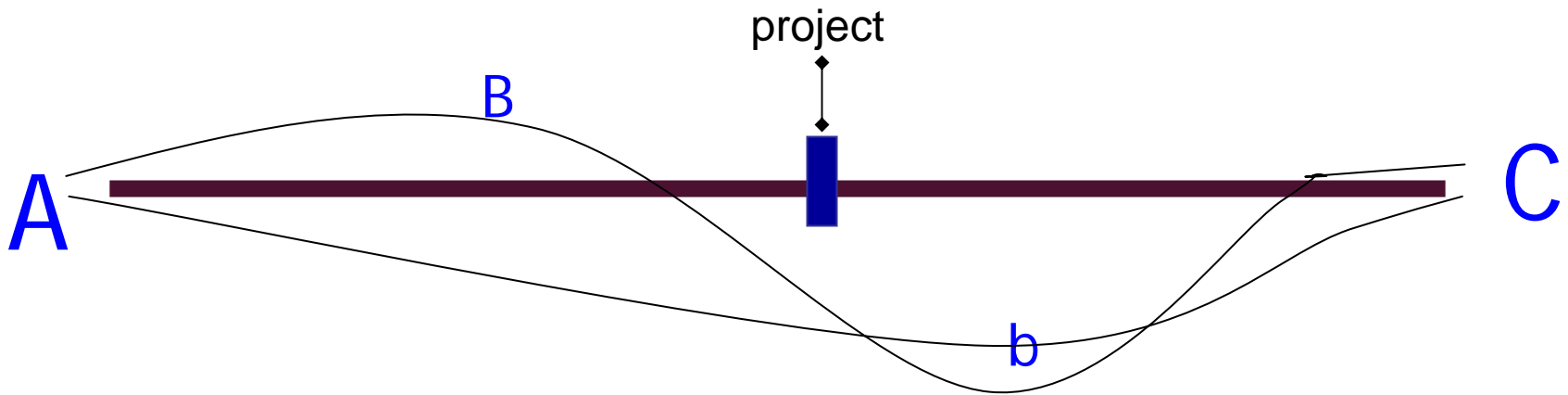
Communicating the Value Freight Projects

- Interstate corridors tend to value through movements not the local activity across different segments on same roadway
- Multimodal operations and planning not as seamless as envisioned
- Difficult to convey Importance of freight when compared to other investments
- Varies timeframes of decision makers
- Subject to External Fluctuations
- Lack of “Too Few” or “Too Many” Champions
- Perception of Corporate Welfare
- Do make me repay for what I already bought!

Problem Statement

- Can we effectively make statements on broad benefits and externalities related to multimodal projects?
- Do we have the right tools (data, model, etc.) to develop these tools?
- Does the right guidance exist to allow for these benefits to be considered?

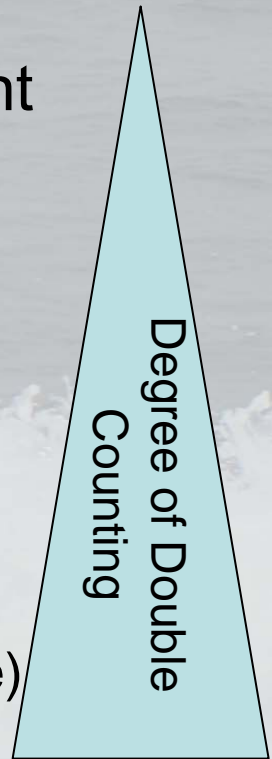
Example - Investment In Corridor A-C



Choice - Mode, Route, Operational Patterns, Risk, System Preservation, Pricing, Safety, Environment, Security, National Defense, ...

What Effects Are Considered?

- First Order Effects - Improved Operations (no change in equipment or routing, but per movement costs decline and/or reliability improves), Noise, Dust
- Second Order Effects - Change in Routings (realignment of services with existing equipment already in trade),
- Third Order Effects –
 - ❖ Change in the Capacity and Economies or Scale of Services (larger vessels, trucks, etc.)
 - ❖ Induced Service or Calls (new equipment enters service)
- Social Political Effects – non monetary
 - ❖ Reduce emissions, environmental restoration, health risks and exposure, risk management/ mitigation, etc.



Some Potential Effects of Inland River Closures

- ❖ Reliability - Closure Impact Avoidance
- ❖ Plant Closure/Idling
 - Jobs/Earnings
 - Lost Output
- ❖ Water Supply Disruption
 - Industrial/Hydropower
 - Municipal
- ❖ Road Closures
- ❖ Recreational Losses
- ❖ Environmental Losses

Recent Cross Modal Externalities

- Black Warrior Tenn-Tom
- Minnesota Bridge Collapse
- Business Realignment Estimates - FHWA
- (NCHRP) Report 586: Rail Freight Solutions to Roadway Congestion
- Lock and Dam Closures
 - ❖ Chickamauga Locks
 - ❖ Emsworth, Dashields, and Montgomery

Traditional B/C Ratio Formula

- Shaped by demands to compare projects within a given budget (mode) or geography
- Differ by agency regarding what can be considered
 - ❖ Public Benefits and Costs
 - ❖ Externalities – treated and calculated
- Forecasting and Scenario profiles
 - ❖ Project justification/review are coming under criticism
 - ❖ Certainty of answers often exceed analytical capacity
 - ❖ Network effects not included
 - ❖ No pre – post study analysis done on routine basis

What Models/Data Exist

- Guidance Exists –
 - ❖ FHWA, AASHTO – Highways
 - ❖ USACE – P&G
- Emission Models
- Pavement Models for Highways
- Asset Management Models for Highways
- Regional forecasts for traffic exist
- No consistent valuation for external benefits/costs but rules of thumb exists

Challenges

- No analytical framework to do cross modal comparisons with existing traffic models
 - ❖ Modal diversion
 - ❖ Stepwise facility increases, etc.
- No clear federal role regarding freight
 - ❖ What are first principles?
 - ❖ Institutional and Legal Inflexibility
- State and local role fragmented
 - ❖ Staffing, funding constraints, legislative directions

Some Questions?

- Are some externalities only negative, or can they be viewed in a different context as positive, ie., can rationalize second order benefits in a study?
- What data, modeling gaps exists?
- Do we need this approach or some other optimal strategy for network improvements?
- Do we want some framework for developing a systems perspective for corridor investment?
- What is the balance between local, regional, national participation in project planning and operations?

Some Basic Research Questions

- Evaluation of Externalities in current project approval process
- Need for Multimodal trade off analysis
- Data and planning guidelines
- Spatial markets and realignment in response to transportation projects
- Externalities related to non-monetary public goals (risks, health, etc.)

Thoughts on Conference

- Problem – Perceived analytical gap in considering Multimodal Corridors
- Conference goal is to assisting the on-going dialogue on multimodal freight corridor analysis
 - ❖ Tentative Date - Spring 2009
 - ❖ Hosted by Center for Transportation Research, University of Tennessee
 - ❖ Develop preconference materials, read ahead's, etc. and post conference report
 - ❖ Looking for participants to work on steering committee