

**Did September 11 Affect Freight Travel Times &  
Mode Split Between Canada and the United States?  
A Case Study of Freight Movements Between  
Quebec and New York**

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**SALUTE** systematic analysis of land-  
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**Introduction**

- Quebec – New York Trade
- Rail vs. Road and September 11
- Information/Data
- Methodology
- Results
- Conclusions/Next Steps

## Quebec – New York Trade

- The main Quebec-New York border crossing is the 6th busiest in Canada (Lacolle)
- Trade between Quebec and New York accounts for around 4% of Quebecois GDP
- But much smaller share of New York Gross State Product

## Rail vs. Road and September 11

- Claimed that rail has advantage in international freight movements
- Particularly after September 11
- ...and that rail's transactional times at border crossings are minimal. This has been particularly true in the wake of the September 11th attacks when commercial trucking sustained massive wait times at crossings (Jones 2003).

## Objective of Paper

- Establish whether September 11 resulted in longer border wait times for trucks relative to trains between QC and NY
- Investigate whether there have been changes in freight mode split in this trade corridor

## Border Wait Time Information and Methods

- Border wait times data:
  - CCRA
  - DHS
- Other border wait time information:
  - Secondary research (Transport Canada paper)
  - Interviews with relevant experts
    - Transport Canada, Chambers of Commerce of NY and QC, railway representatives, QC trucking association

## Freight Data

- Bureau of Transportation Statistics Transborder Surface Freight Data
- Level of precision: HS 2-digit Code
- Regional scope: movement of freight between US states and CDN provinces
- Unit of Analysis:
  - QC to NY (Imports) – by weight and value
  - NY to QC (Exports) – by value only
- Time Period: January 1997-September 2003

## Methodology – Border Wait Times

- No available data pre- September 11
- Interviews
- Secondary research

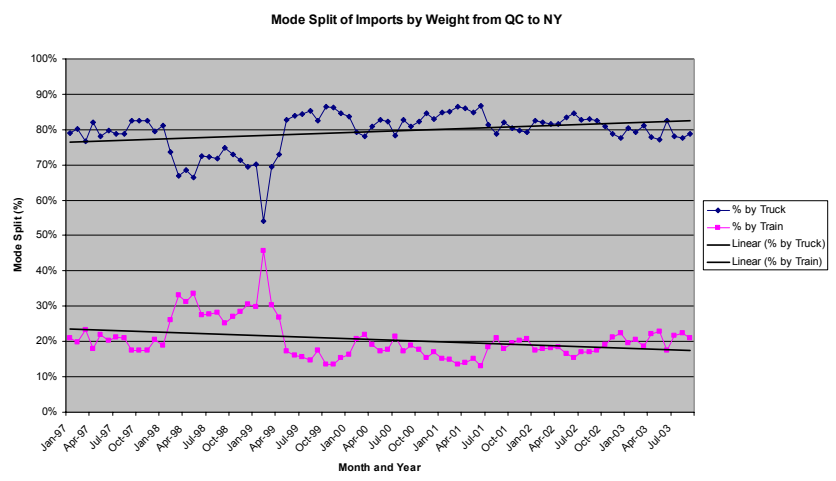
## Freight Data Methodology

- Several hypotheses are implied and were tested
- If rail mode split had changed as a result of September 11, we would expect one or all of the following:
  1. non-traditional freight being carried by rail
  2. reversal of declining rail mode share
  3. slowing rate of decline in rail mode share
  4. increasing rate of increase in rail mode share

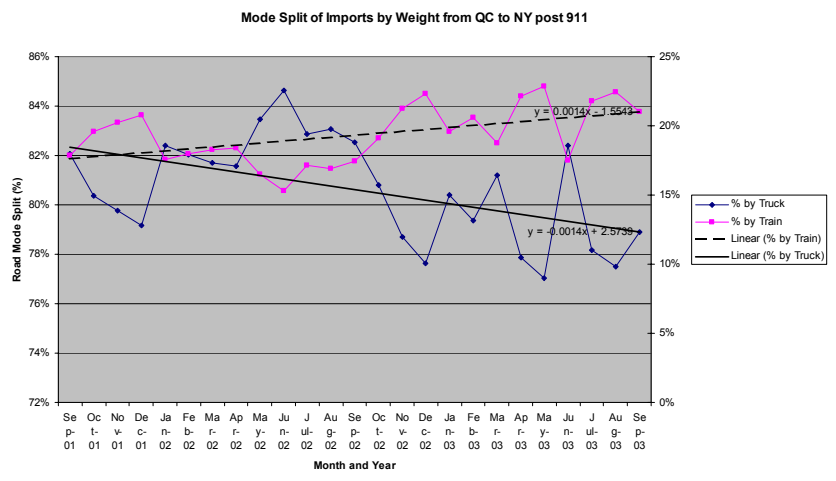
## Freight Data Methodology ctn.

- Expert interviews
- Data Analysis
  - Isolation of key commodity groups (by HS 2-digit code) that:
    - have begun to be carried since September 11
    - are carried commonly and consistently by rail
  - Calculation of mode split by weight and value for ‘imports’ and by value for ‘exports’
  - Graphical analysis comparing entire period and post September 11 period

## Example of Analysis - I



## Example of Analysis - II



## Findings and Results

- Interviews:
  - Consensus: unlikely that September 11 had meaningful affect on freight mode split in this corridor
- Data Analysis:
  1. No evidence of increase in rail traffic of non-traditional commodities
  2. Of the 24 cases examined, only 1 is unambiguously consistent with any of the hypotheses
  3. 4 cases appeared initially to be consistent but subsequently ruled out
  4. Little evidence to suggest September 11 had positive affect on rail mode split

## Example of Analysis

Imports by Value	Whole Period Trend	Post 9/11	Start Date of Last Trend	Consistent with Hypothesis?
All Imports	Negative	Reversed	March-01	No
Salt & Sulfur	Extremely Positive	Less pronounced	Jan-01	No
Inorganic Chemicals	Strongly Positive	Less pronounced	July-01	No
Wood	Negative**	More pronounced	Mar-02	No
Pulp of Wood	Strongly Negative	Reversed	Apr-01	No
Paper and Paperboard	Slightly Negative	Reversed	Apr-01	No
Copper	Extremely Negative	Reversed (?)	Oct-00 – Mar-03	(?)
Aluminum	Negative	Reversed	May-01	No
Zinc	Slightly Positive	Reversed	Feb-01	No
Railway Parts	Negative***	Reversed	Nov-01	Yes

## Findings and Results ctn.

- Surprising finding:
  - Over entire period, rail mode split declining for imports
  - But, rail mode split for imports appears on the rise in all but one of the important rail freight categories towards end of period
  - The turnaround generally takes place in first or second quarter of 2001
- Explanation:
  - Rail and road both peak in August-September 2000
  - Road drops more precipitously
  - Rail recovers earlier
  - Reasons for these patterns unclear

## Conclusions

- Little evidence that September 11 affected freight mode split between Quebec and New York
- Although more rigorous econometric analysis needed to solidify conclusion
- Declining rail mode split over entire period
- Reversal of this trend for imports at beginning of 2001
- Unclear what causes are or how robust this reversal is.



## Next Steps

- More rigorous econometric analysis:
  - traditional mode split regressions (but lacking key data)
  - ARIMA or ARIMEX modeling
- More research into explanation for underlying trends
- Development of freight mode choice model for the Montreal-Toronto corridor