

Data Sources, International Trade and the Highway Trust Fund Formula

Understanding the
Usefulness and Limits

Additional Sources

- 1 The seminar has already heard about several data systems
- 1 This presentation focuses on those not yet reviewed

Four Systems of Data

1 Highway Freight Data

- Transborder Surface Freight Data
- PIERS Port Import and Export Reporting

1 Other useful data

- Railway Weigh Bills
- Waterborne

Trade and Transportation Indicators

1 Trade

- Based on transactions
- Used to monitor the volume and characteristics of trade
- Focused on custom's clearance
- Emphasis on commodities and balance of trade

1 Transportation

- Point to point indicators
- Actual origins and destination
- Route traveled
- Emphasis on impact on traffic and highways

Limits of Using Trade Data to Infer Transportation Flows

- Origins may be at inland customs house
 - For example, goods shipped from Canada might be shown as entering the country at Dallas
- Destinations may be office of clearance agent rather than physical address where the goods are delivered.
- Routes need to be inferred
- No sub-state detail

Key information

- 1 Models estimate the route trucks take
- 1 Two kinds of models
 - Probabilistic
 - Assignment to the most cost effective route
- 1 Estimates depend on accurate origin and destination data for truck shipments

Port Import Export Reporting Service [PIERS]

- 1 Private reporting service by the *Journal of Commerce*
- 1 Abstracted from Customs records—
 - automated Bills of Lading
 - Actual bills of Lading
 - Vessel Manifests
- 1 Includes address of importers and exporters

Issues Related to PIERS

- 1 Importers and exporters may not actually be at the point of origin or destination within the US
- 1 Includes all goods shipped by sea from or to the US
 - How many of these are transported by truck, from where to where?
- 1 There may be substantial missing data for origins and destinations

Piers issues –continued

- 1 Missing data problems—records sometimes lack state of origin or destination because it may not be on the manifest
- 1 Must net out goods shipped by rail or boat within the US.
- 1 Were the goods transported to the train on a truck? No good way of knowing this.

Transborder Surface Freight Dataset

- ┆ Extracted from Census Foreign Trade Statistics Program data.
- ┆ Based on customs clearance documents
- ┆ Covers truck and rail traffic from Canada and Mexico
- ┆ Includes the state of destination
- ┆ Port of entry

Issues—Transborder Surface Freight Dataset

- 1 Destination—may not be the same as where the goods are going because this is the address of the importer rather than the recipient
- 1 Port of entry—could be an inland port and therefore is not the true origin of the truck trip in the US.

Issues Transborder Dataset— continued

- ⌊ Need to net out rail traffic, pipeline and other data
 - Mode information may be approximate
- ⌊ Emphasis on commodity flows and value
 - Needed for trade statistics
 - Not critical to transportation models

Rail Weigh Bills

1 Importance

- Can be used to net out rail traffic from truck traffic
- As an example of a more regulated system

1 Differences in Data collection

- Only a few railroads, many trucking companies
- Railroads are more used to reporting due to the regulatory environment

Weigh bill characteristics

- ┃ Almost universal reporting by railroads
- ┃ Uses a sample so that large shipments are more likely to be covered
 - 1-5 cars 1%
 - 6-50 cars 30%
 - 50+ cars 50%

Weigh bills continued

- 1 Large file 600,000 records per year
- 1 Does not include information about goods that are shipped by truck from the rail head
- 1 Must assume that all goods on rail are not trucked—which is not correct
- 1 Drayage not measured

Waterborne

- ┆ Also needed to net out goods carried from the port of entry by water
- ┆ The inland waterborne data are based on reports filed with the Corps of Engineers by vessels
- ┆ Problems:
 - Splitting out the exports and imports
 - Subsequent truck transport

Waterborne issues

- 1 There is no direct link between information about goods arriving from overseas or leaving and their transportation to the dock
- 1 The foreign trade estimates are based on data from Census Trade statistics
- 1 These have the same problems as other data based on customs clearance and ship manifests.

Assessment

- 1 Panel needs to consider the impact of these problems
- 1 What is the likely impact on the accuracy of estimates of ton miles and value miles?

Funding Formulas

- 1 Contest of the consideration
- 1 May be considerable missing information, but what effect does it have on a funding formula?
 - Distributional Characteristics
 - Year to year reliability of results