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# Proceedings of the Transportation Research Forum

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**32nd TRF Annual Forum  
Long Beach, California  
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- ***Service Levels, Operating Cost, and Train Crew Size in the U.S. Rail Industry***  
by Mark H. Keaton,  
Michigan Technological Univ.

Reductions in train crew cost could make it economical for U.S. railroads to provide improved service. This paper quantifies the cost to provide a range of service levels for a hypothetical rail system. Average transit time is the measure of service level. Higher

levels of service are achieved by increasing the number and frequency of direct train connections, permitting cars to bypass intermediate yards. If train crew cost could be cut to about one-half its current level of \$8 per train mile, reductions of 14 hours, or 15 percent, in average transit time could be achieved without an increase in total operating expenses. Moreover, employment in train and engine service will actually increase, even if trains are operated with two-person crews in place of the existing four-person crews.

## **Railroad Competitiveness**

### ***Panel Session Organizer and Moderator: Frank Mulvey, U.S. General Accounting Office***

#### **Panelists:**

- **Michael Haverty, President**  
The Atchison, Topeka and Santa Fe  
Railway Co.
- **James Kennedy, Exec. Secretary  
and Treasurer**  
Railway Labor Executives Assoc.
- **Robert L. Banks**  
R.L. Banks Associates
- **W.G. "Bill" Waters**  
University of British Columbia

## **The Impact of the U.S.-Canada Free Trade Act**

### ***Session Organizer and Moderator: L. Milton Glisson, North Carolina A & T State University***

- ***Motor Carrier Perspective***  
by Garland Chow,  
University of British Columbia

While transportation services were left out of the United States - Canada Free Trade Agreement, the F.T.A. has very important implications for the transport sector. Commodity flows are predicted to shift from predominantly east-west flow to a more north-south flow. Motor carriers will play a large part in transporting these commodities and the issue arises as to whether motor

carriers domiciled in Canada or motor carriers domiciled in the United States have the competitive advantage. Is there a level playing field between Canadian and U.S. carriers? If there are advantages, are these advantages due to natural market and economic conditions, or are they due to artificial influences including discriminatory government policy? These are important issues for both policy-makers and carriers in considering strategic plans for competing in the Canada - United States transborder trucking market.

- *Air Carrier Perspective*  
by Martin Dregner,  
University of Maryland

Although transborder air transport was not included in the Canada-United States Free Trade Agreement, it does not follow that the agreement will have no impact on air transport. Three possible impacts have been identified.

First, to the extent that barriers have been removed from other industry sectors, the pressure has increased on air transport bilateral negotiators to fall into line. Air transport is a visible industry and the protectionist transborder bilateral agreement currently in place does not look well from a political perspective. Pressure from industry and consumer groups could lead to a major liberalization in the terms of the Canada - United States Air Transport Bilateral Agreement. Liberalization would allow travellers a greater choice of transborder routes and carriers.

Second, to the extent that the Free Trade Agreement increases transborder trade, there will be increased incentives to remove restrictions on the transport of air freight and packages. Major U.S. freight carriers, such as Federal Express, are currently upgrading their Canadian presence, and they will look to the U.S. and Canadian governments to ease restrictions on the transborder flow of air freight.

Third, given that the Free Trade Agreement has reduced nationalistic barriers to cross-border investment in other industrial sectors, there could be a move to weaken the barriers to foreign investment in the air transport industry. Major carriers in both the U.S. and Canada would like to strengthen their transborder positions by investing in commuter carriers on the other side of the border. Given that the end of the cold war has reduced the need to protect the civil air fleets from foreign investment, and given the example of the reduction of investment

restrictions in other industrial sectors, there could be an easing of foreign investment restrictions in air transport.

- *Rail Carrier Perspective*  
by Tenpao Lee, Joel Rudin, and  
Kenneth Stewart,  
Niagara University

The demand for transportation services is virtually a derived demand of commodity demand. Under the Free Trade Agreement (F.T.A.), overall commodity movement is expected to grow and, hence, the demand for overall transportation services. However, the impact of F.T.A. on each of the transportation modes would vary due to: 1) transportation characteristics are different among commodities, 2) transportation services are different among transportation modes, and 3) growth rates of individual commodities are expected to vary under F.T.A. Therefore, significant adjustments of current commodity flow networks are expected in the longer term.

As empirical data is not available for a thorough evaluation of the impact of the U.S. - Canada Free Trade Agreement the objective of the paper is to provide a tentative overview of the Free Trade Agreement's impact on the U.S. railroad industry.

In the first part of this paper, we will describe the current commodity structure of the U.S. railroad industry. In the second part, we will identify major competitive and non-competitive U.S. commodities based on forecasts of other studies. By combining parts one and two, preliminary conclusions will then be drawn for expected changes of major commodities carried by U.S. railroads.

Moreover, the impact of the Free Trade Agreement on the efficiency of the U.S. railroad operations and hence the competitiveness of U.S. commodities will also be addressed in the final part of the paper.