

CANADA'S RAILWAYS

A Review of Canadian Rail Activity in the North American Free Trade Agreement Era

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Methodology & Data Sources

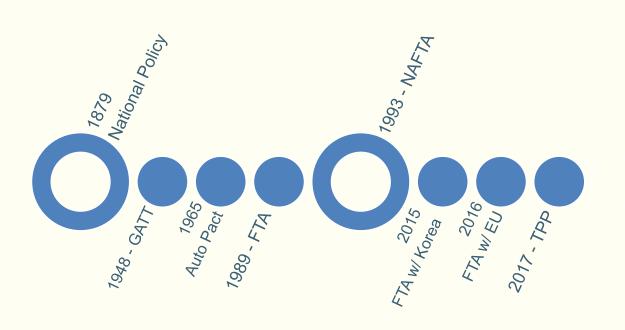
Study question: How can NAFTA decertification effect Canadian railways?

Methodology:

- 1. Complete literature review of trade policy in Canada
- 2. Inventory trade flow data between Canada and the United States before and after NAFTA
- 3. Analyze inventory and determine bi-directional trade facilitated by rail;
- 4. Develop hypothetical model to characterize impacts to rail traffic from decertification



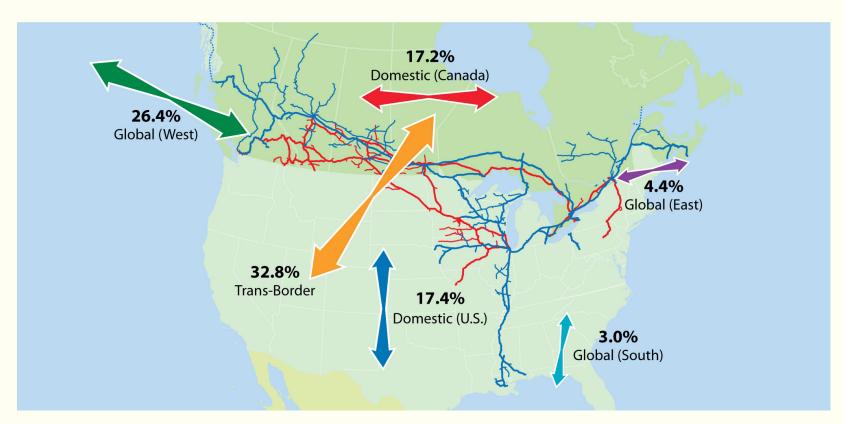
Results from literature review



- Protectionist based policies stagnate growth
- Transition towards trade
 liberalization has stimulated
 GDP growth
- NAFTA has unlocked an era of free trade agreements

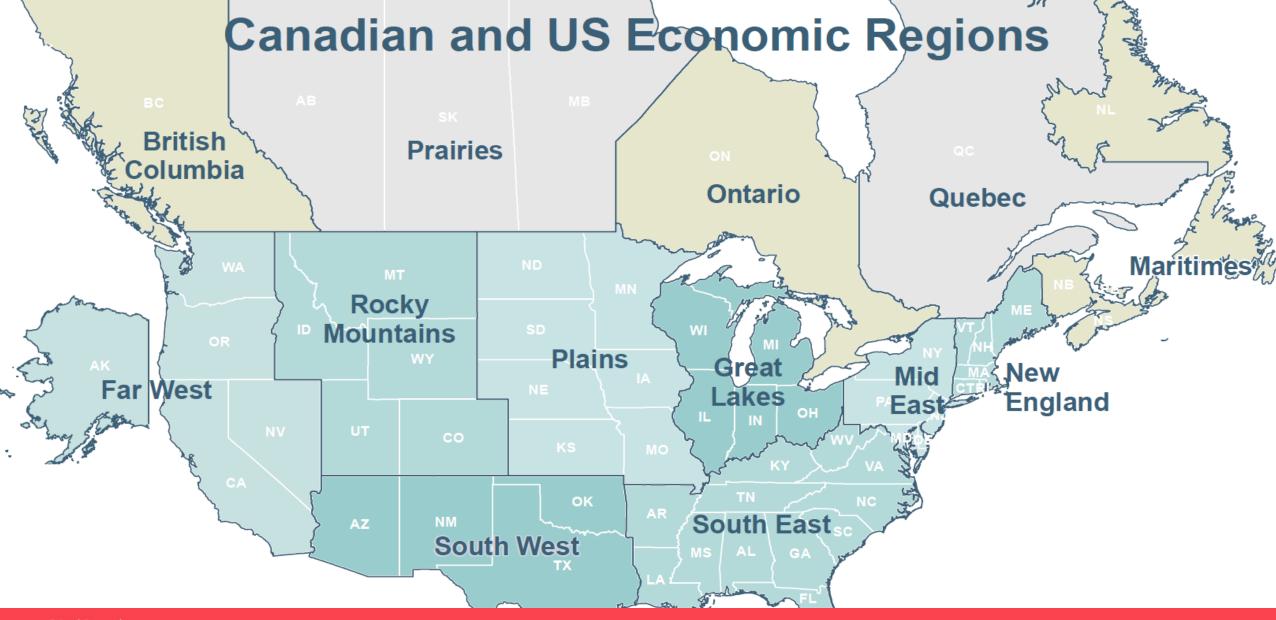


Rail trade profile



\$280 B	Value of goods		
50%	Canadian exports		
75%	Canadian rail traffic is exported		
Top Rail Exports	 Agriculture and food Grain Forest products Coal Fertilizer materials 		
65%	Rail revenues generated by trade		









Overall Trading Profile – Canada/U.S.

Canada-US Trade Summary Table					
In Billion 2017 Canadian dollars					
	1990-1993 Average	2014-2017 Average			
Total Annual Bi-directional Average Trade Flow					
Maritimes	\$10.2 B	\$30.1 B			
Quebec	\$50.2 B	\$83.8 B			
Ontario \$209.6 B		\$356.7 B			
Prairies	\$40.9 B	\$159.7 B			
ВС	\$23.1 B	\$40.4 B			
North	\$47.1 Million	\$242.0 Million			



Trading Profile – Ontario

2014-2017 By-directional Trade Flows, in 2017 (\$CND)

Average Annual Value of Trade Flow	\$356.7 Billion			
Top-3 Regions of Trade	 Great Lakes Southeast Mideast 73.0% of all trade with US 			
Top-3 Commodity Groupings	 Machinery and Transportation Related Goods Electronics Chemical Products 61.7 % of all trade with US 			
% of value of goods moved by rail	17.6 %			



Trading Profile – Prairies

2014-2017 By-directional Trade Flows, in 2017 (\$CND)

Average Annual Value of Trade Flow	\$159.7 Billion
Top-3 Regions of Trade	 Great Lakes Plains Southwest66.1% of all trade with US
Top-3 Commodity Groupings	 Minerals Chemical Products Electronics 61.7 % of all trade with US
% of value of goods moved by rail	17.9 %



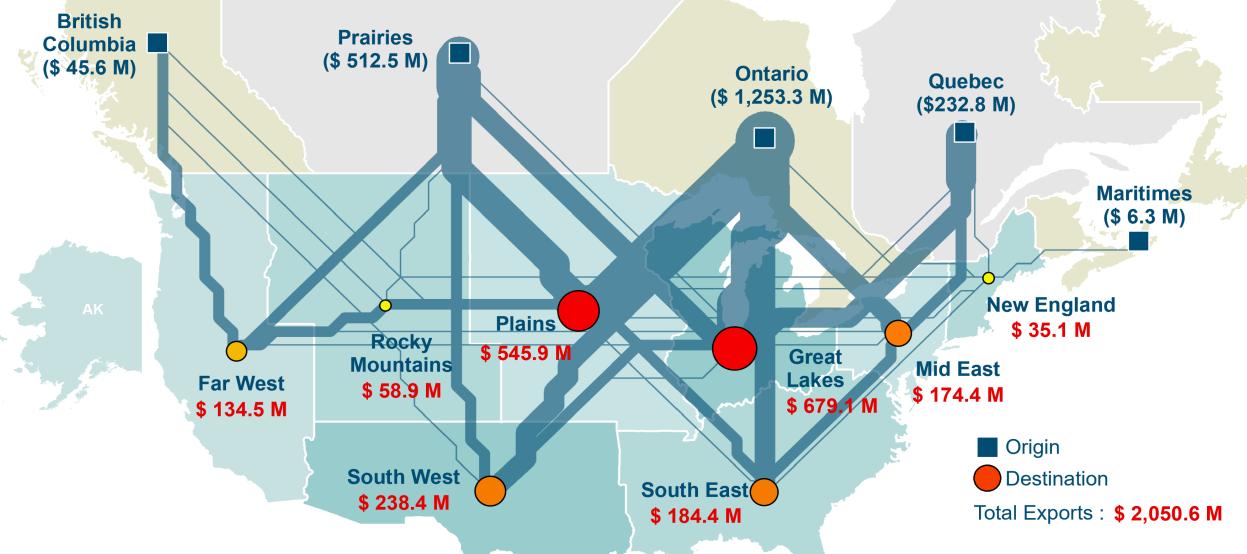
US-Canada Trade by Rail

Percentages	
% of tonnage traded moved by rail – 2017	20.2%
% of value traded moved by rail – 2017	16.2%
Top-3 Commodity Groupings moved across the border by rail (2012-2016 average)	 Lumber & Wood Products (47.8%) Chemical Products (32.7%) Paper Products (27.6%)

Canada-US Trade by Rail - Breakdown of Regional Links								
Bi-directional Trade Flows in current CAD, 5-Year Average, 2012-2016								
	BEA Regions							
Canadian Regions	New England	Mideast	Great Lakes	Plains	Southeast	Southwest	Rocky Mountains	Far West
Maritimes	\$ 239,500,684	\$ 416,869,660	\$ 293,803,553	\$ 160,573,050	\$ 457,107,964	\$ 306,533,114	\$ 32,219,800	\$ 108,172,463
Quebec	\$ 773,294,857	\$ 1,702,751,242	\$ 2,420,158,984	\$1,009,323,213	\$4,968,758,485	\$ 1,034,562,966	\$ 272,106,614	\$ 684,384,764
Ontario	\$ 453,830,758	\$ 2,129,872,784	\$ 26,236,621,007	\$ 2,579,699,894	\$ 9,117,551,532	\$ 3,879,966,786	\$ 360,933,009	\$ 16,780,537,764
Prairies	\$ 394,756,414	\$ 2,459,932,155	\$ 6,941,636,985	\$ 5,033,155,276	\$ 5,898,415,921	\$ 3,912,447,123	\$ 1,422,293,964	\$ 3,868,405,685
British Columbia	\$ 188,298,385	\$ 484,691,094	\$ 1,409,164,940	\$ 853,257,170	\$1,226,949,820	\$ 729,998,762	\$ 249,592,128	\$ 1,327,012,699
North	\$ 14,761	\$ 59,011	\$ -	\$ 40,629	\$ 174,853	\$ -	- \$	\$ 113,679



Canadian Exports of Iron and Steel by Rail

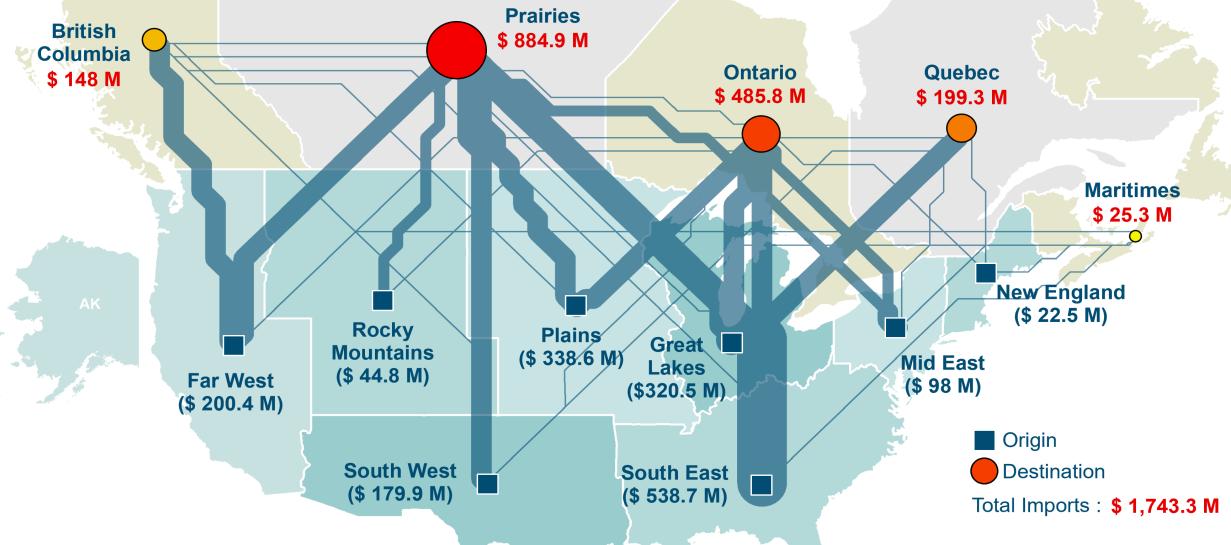




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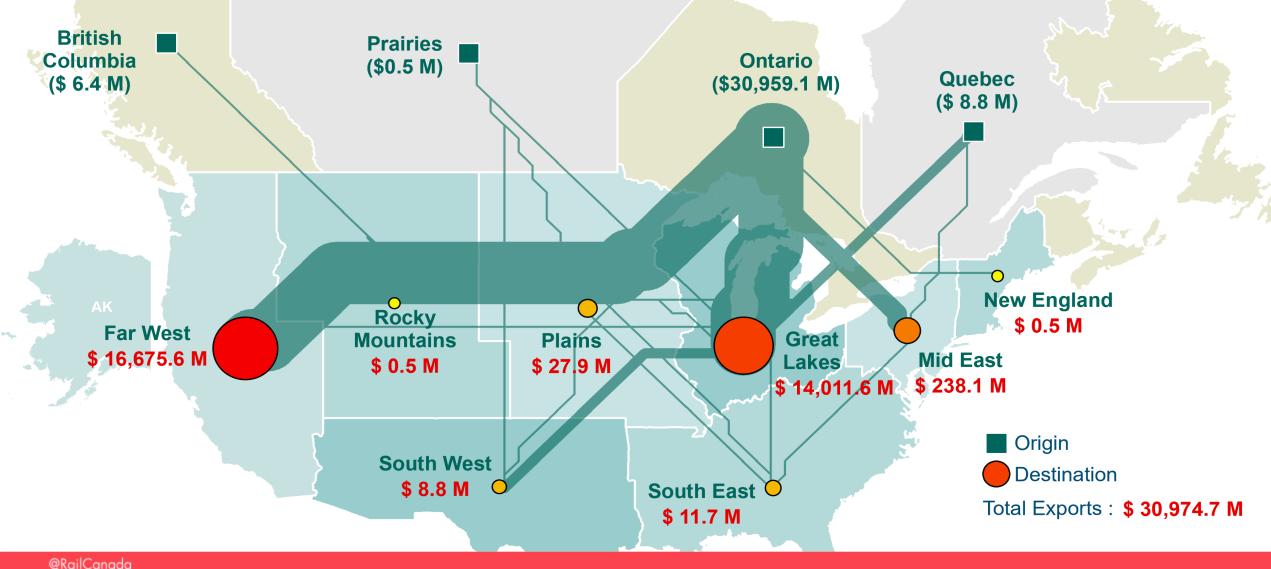
Canadian Imports of Iron and Steel by Rail





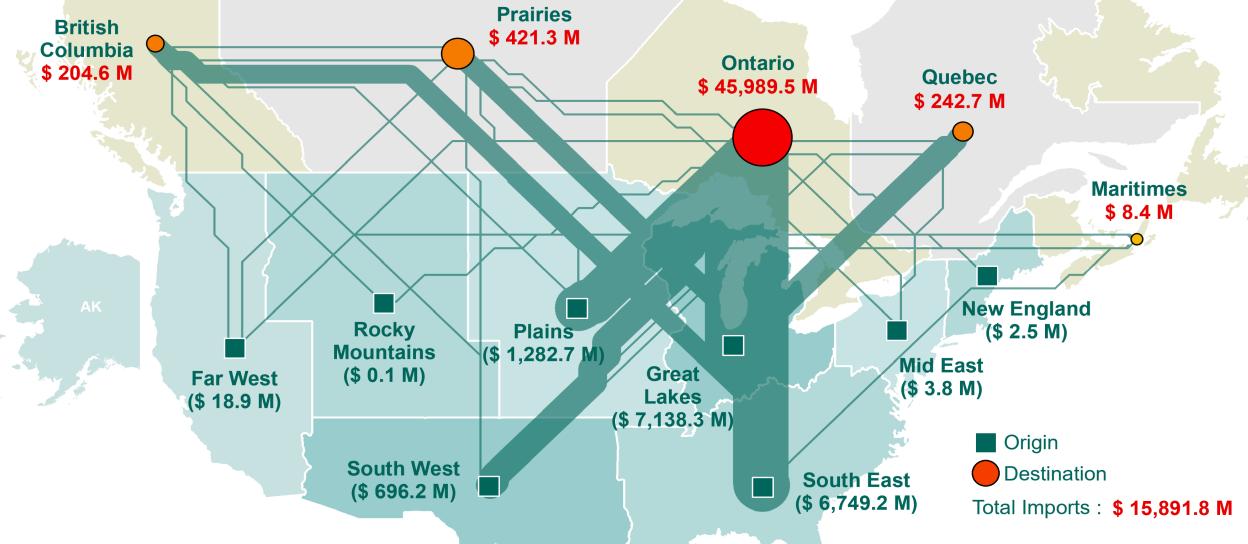


Canadian Exports of Automotive Goods by Rail





Canadian Imports of Automotive Goods by Rail





Impact of Decertification on Canadian Class 1 Revenues

In Million Current CAD, Based on Average 2014-2017 Trade					
% of Trade Moved by Rail 19.5%					
Possible Loss in millions (\$CAD) of Rail Revenues (iron, steel and automotive goods):					
5%	\$19.8	\$94.7			
15%	\$59.3	\$284.2			



Conclusion

- The methodology provides a preliminary approach to measuring the impact of trade policy on railways in Canada and the U.S
- NAFTA has supported trade and growth for railways and should continue
- A return to a protectionist-based trade policy would have an adverse effect on railway tonnage and revenues
- A more fulsome analysis is required on commodities effected by NAFTA and carried by rail

