

Ontario's cross-border economy

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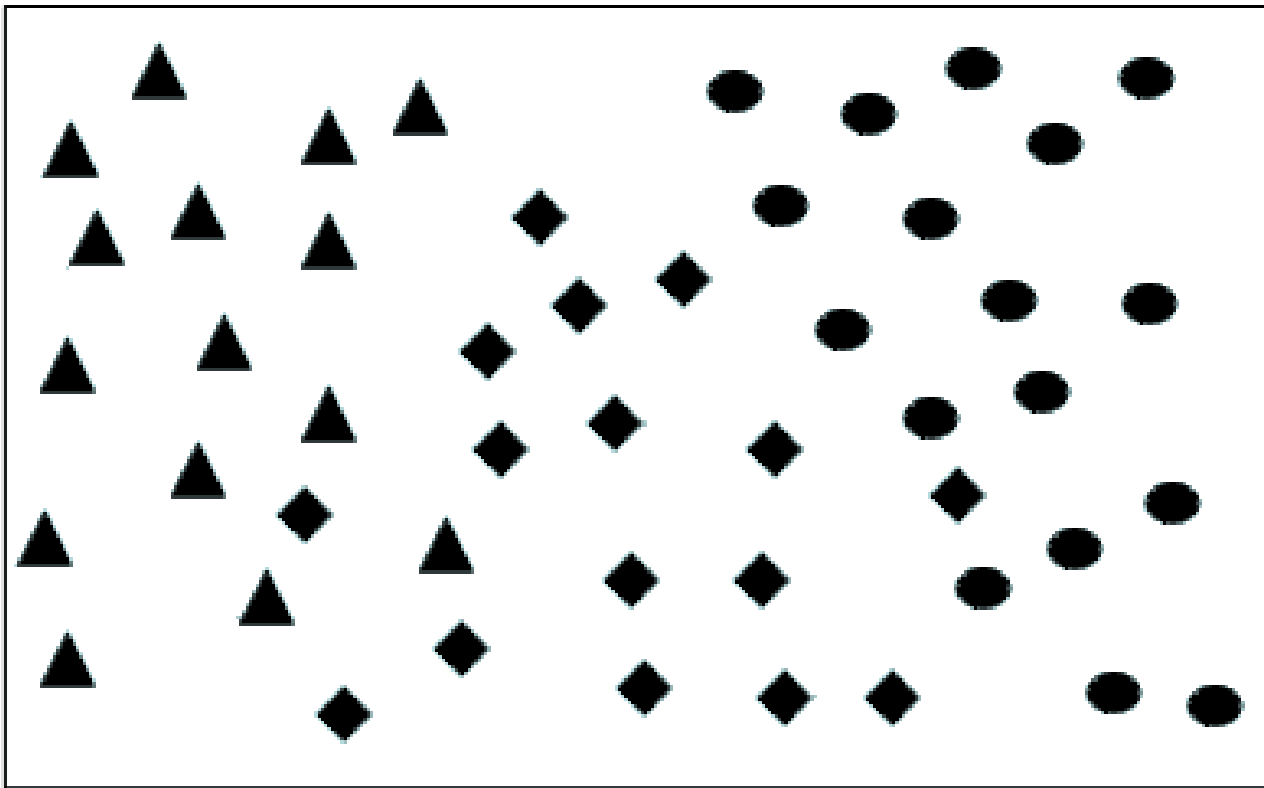
Ottawa, November 2012

Borders and Regions

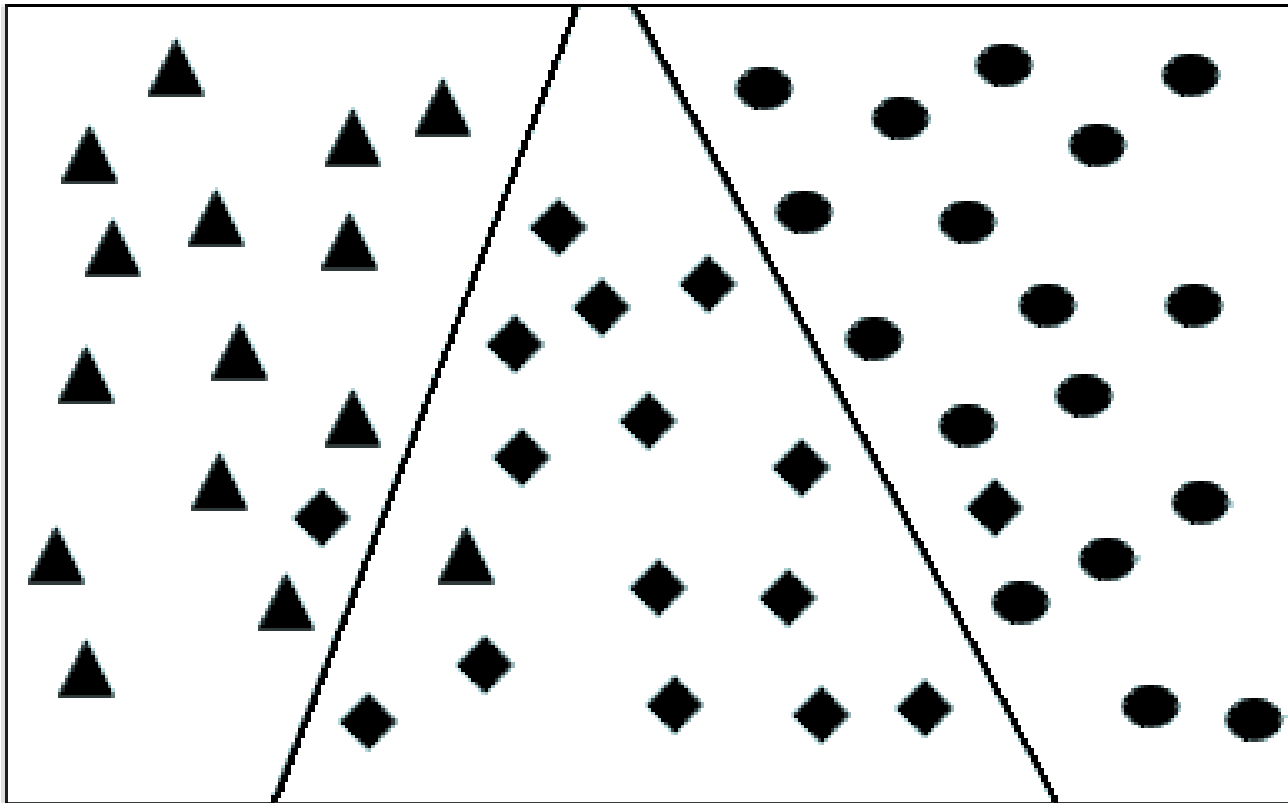
Preliminaries

- Boundaries vs. Borders
 - ▣ Lines of impedance
 - ▣ Discrete change in areal characteristics
- Border Functions
 - ▣ Customs, immigration, security
 - ▣ Tariffs declining
 - ▣ *Clandestine Transnational Actors*
- Border placement seldom makes economic sense
- Geography 101: formal and functional regions

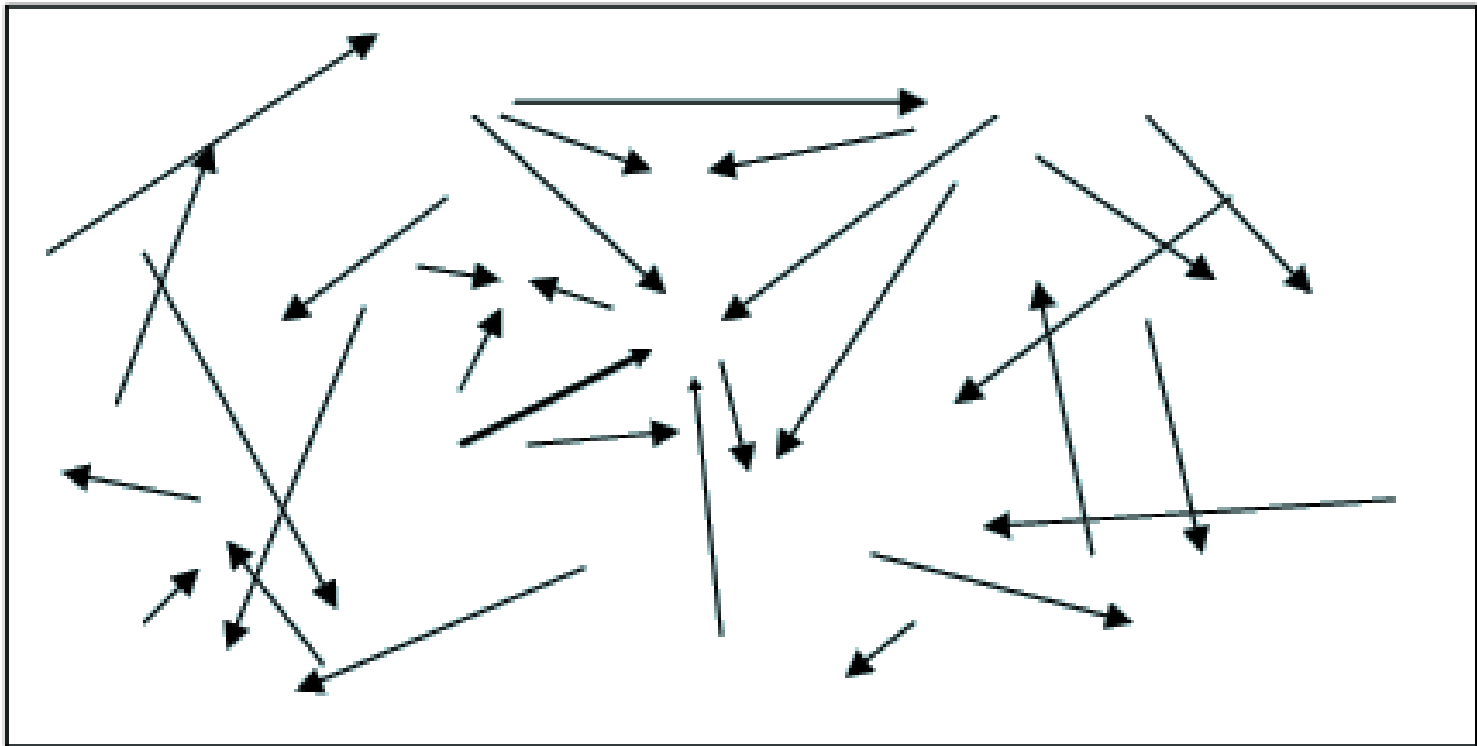
Formal region



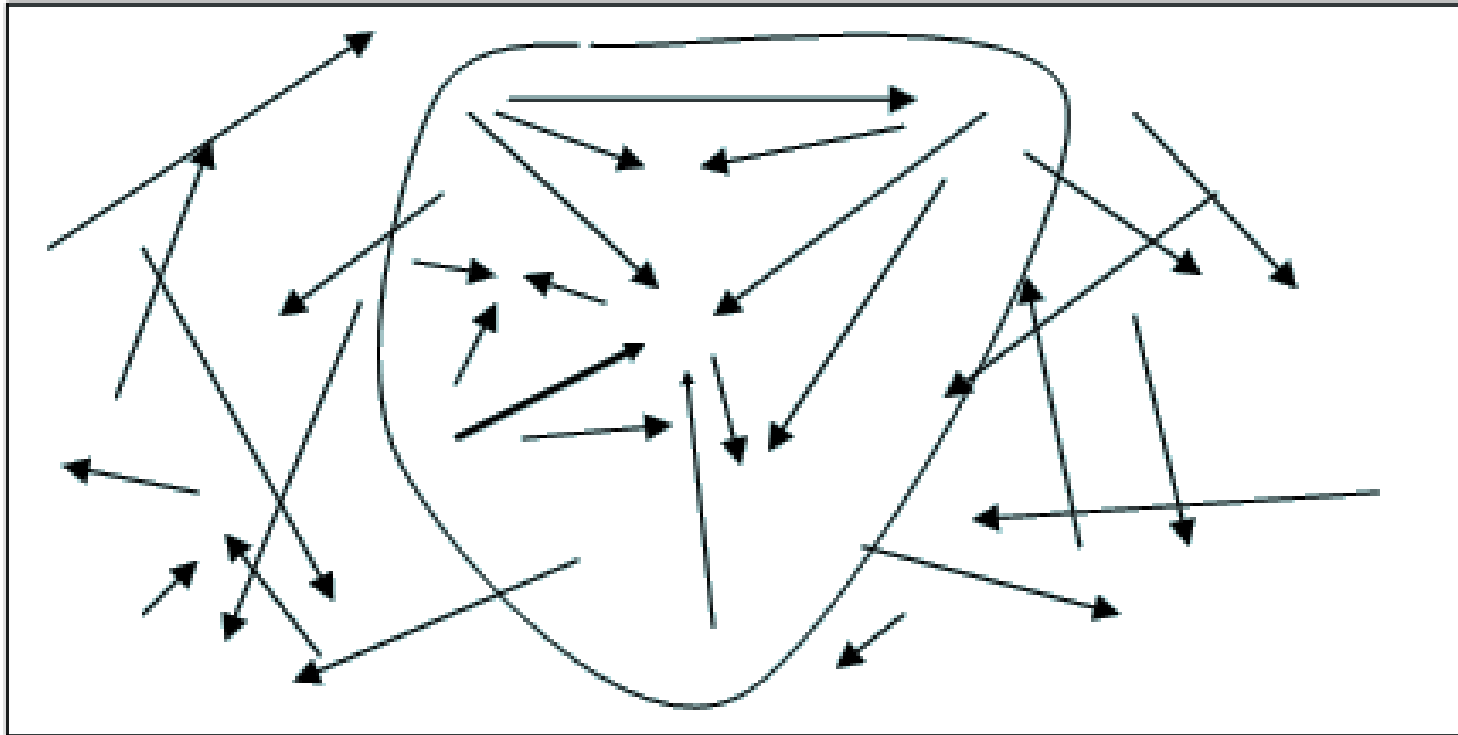
Formal region



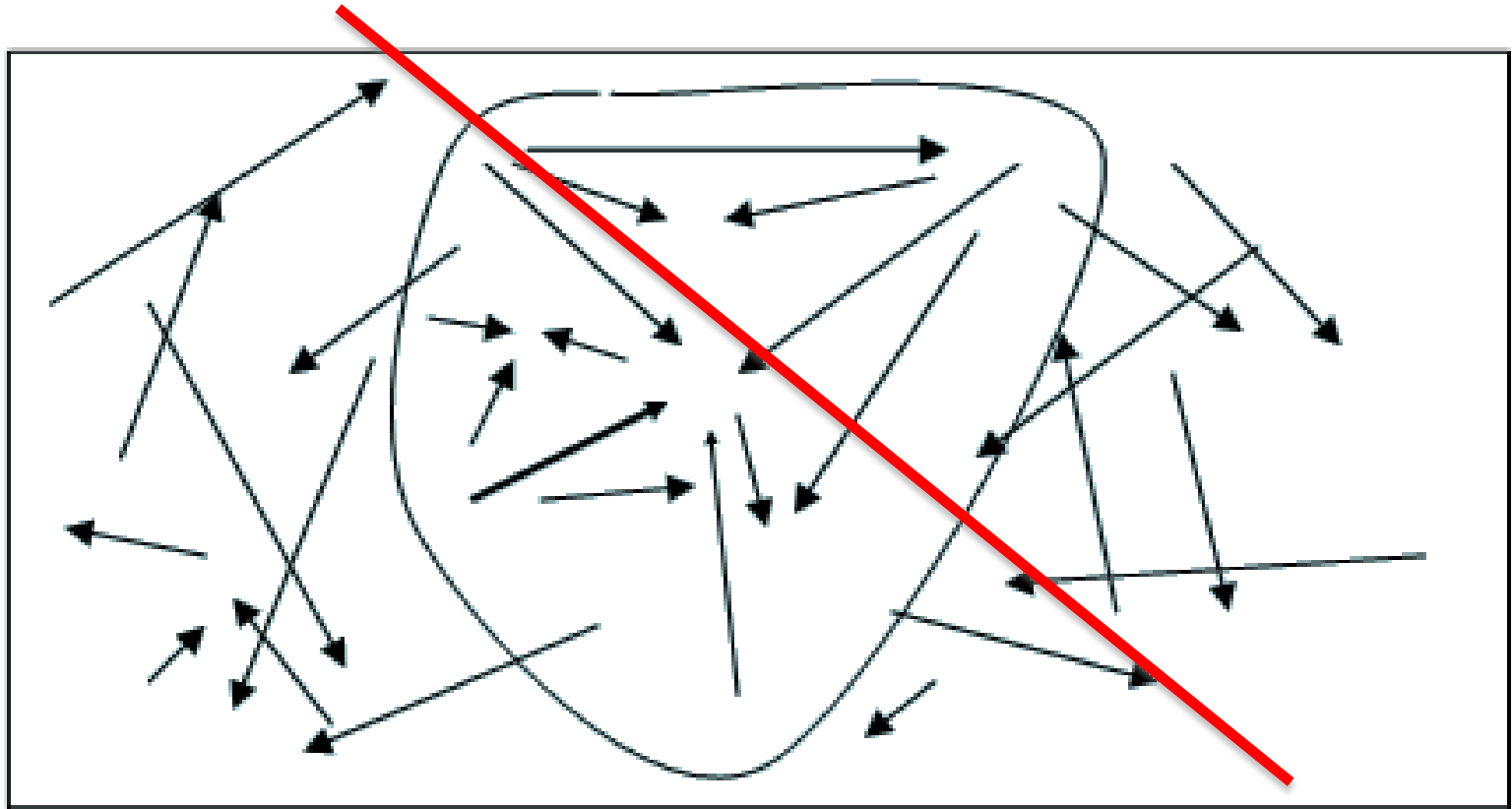
Functional region



Functional region



Border that does not make economic sense



How might this happen?

- Rivers and lakes are natural highways
- Functional regions develop around them
 - ▣ Indus and Nile Valleys
 - ▣ The Ruhr
- Rivers and lakes provide convenient boundary locations
- Functional regions are divided
 - ▣ Congo River
 - ▣ Great Lakes

Dem. Republic of the Congo

(source: CIA World Factbook)



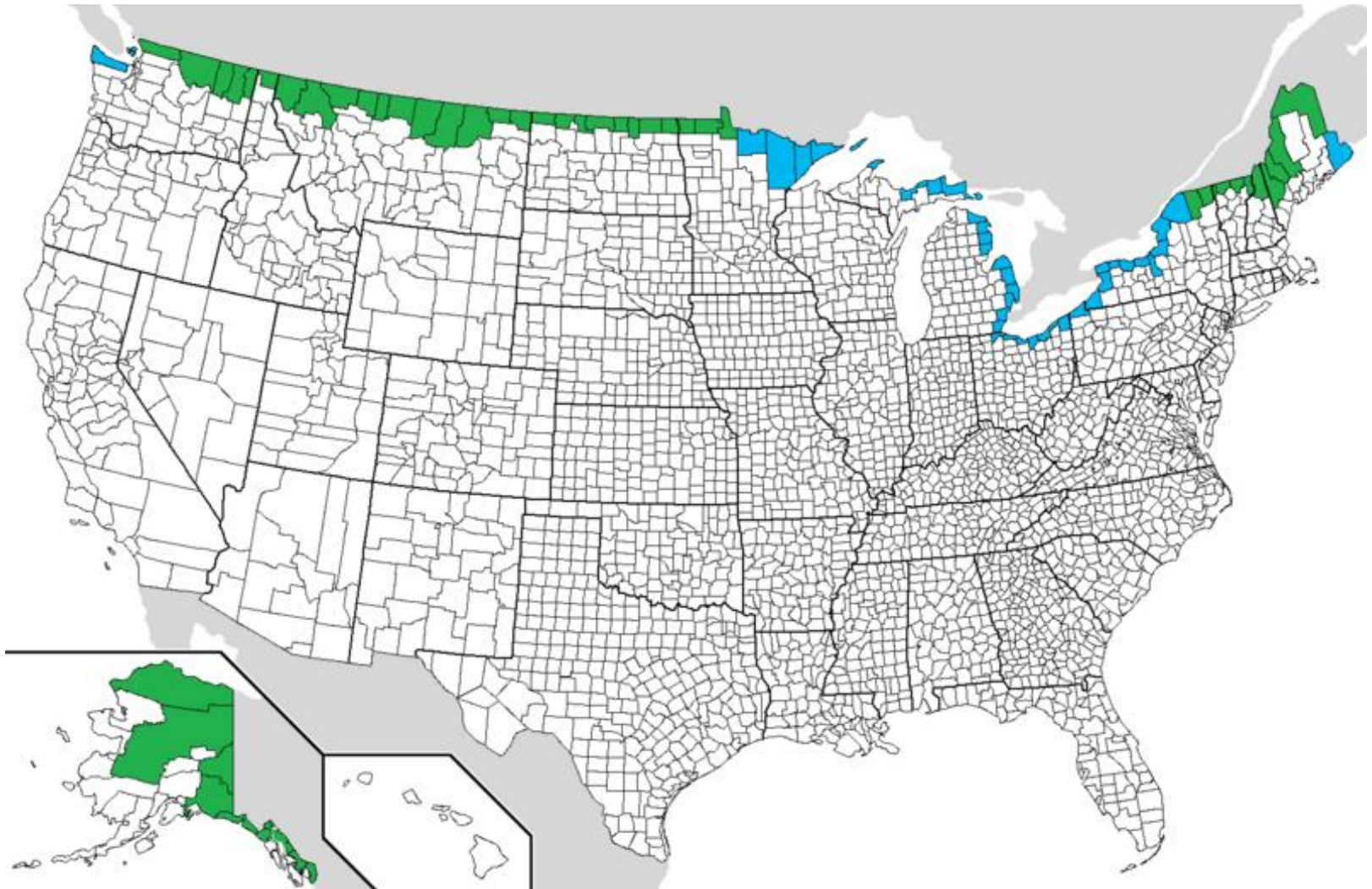
Ontario's Cross-Border Economy

History

- Great Lakes avenue of continental penetration
- Eastern border created by 1783 Treaty of Paris
- 1879 MacDonalD's National Policy (tariffs)
- Parallel industrial development in Great Lakes States and Southern Ontario
- Gradual integration
- Auto Pact (1965), CUSFTA (1988), NAFTA (1994)

Canada-US Border

(Source: Wikipedia Commons)

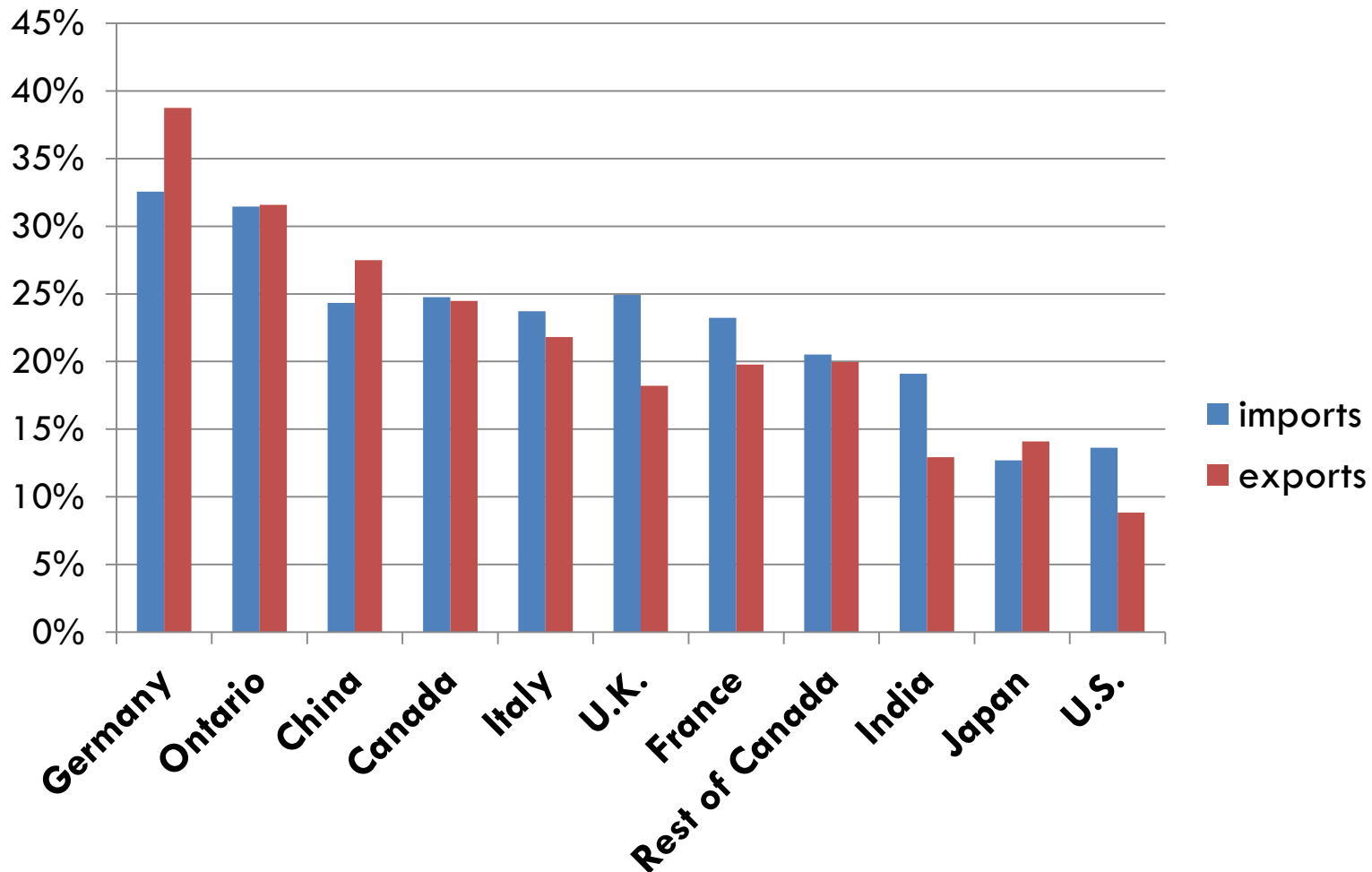


Canada-US Trade

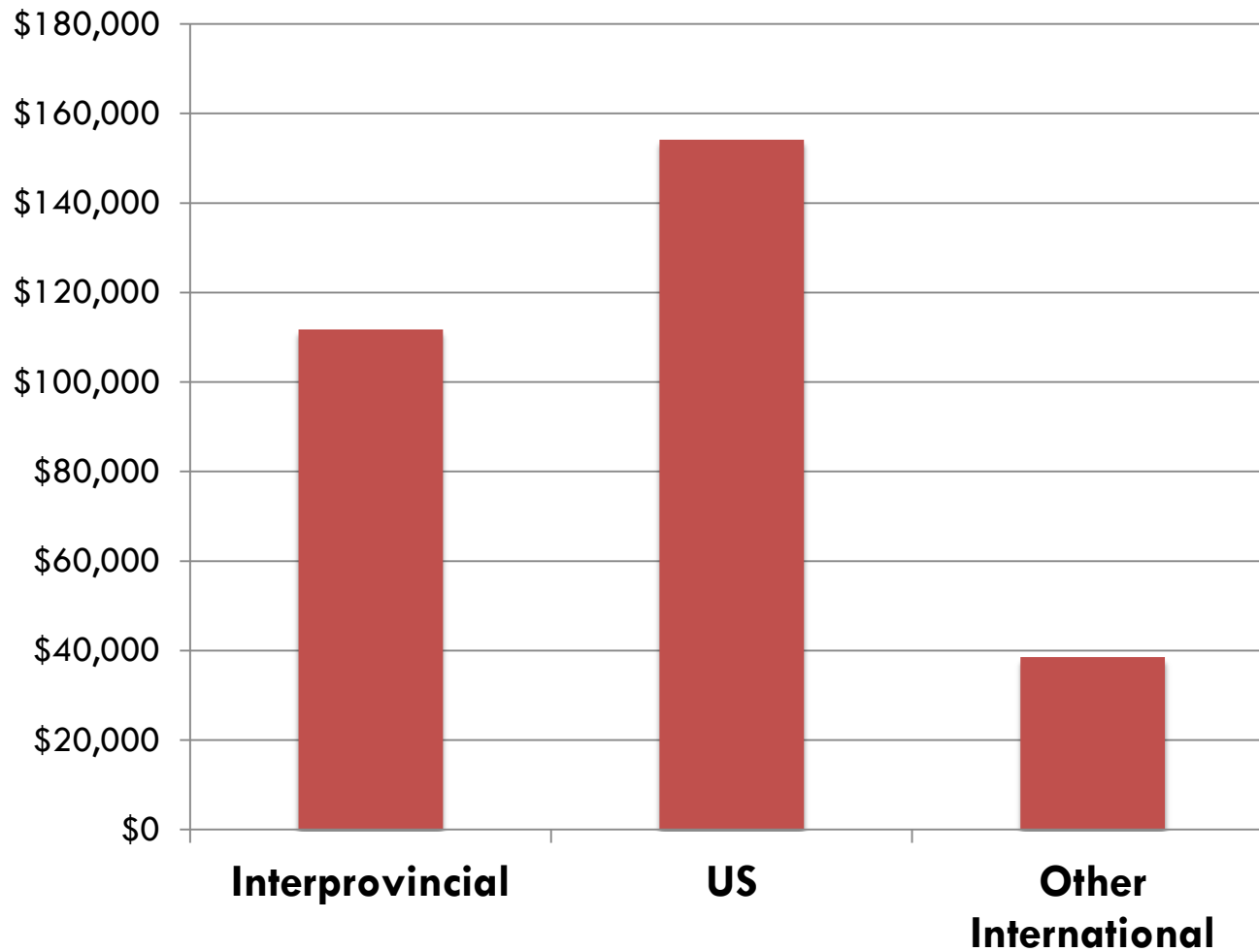
- World's largest bilateral trade relationship
- About 50% in Ontario

- **Cross-border economy:** systems of production and consumption are highly dependent on cross-border movements of goods, people, information, funds.

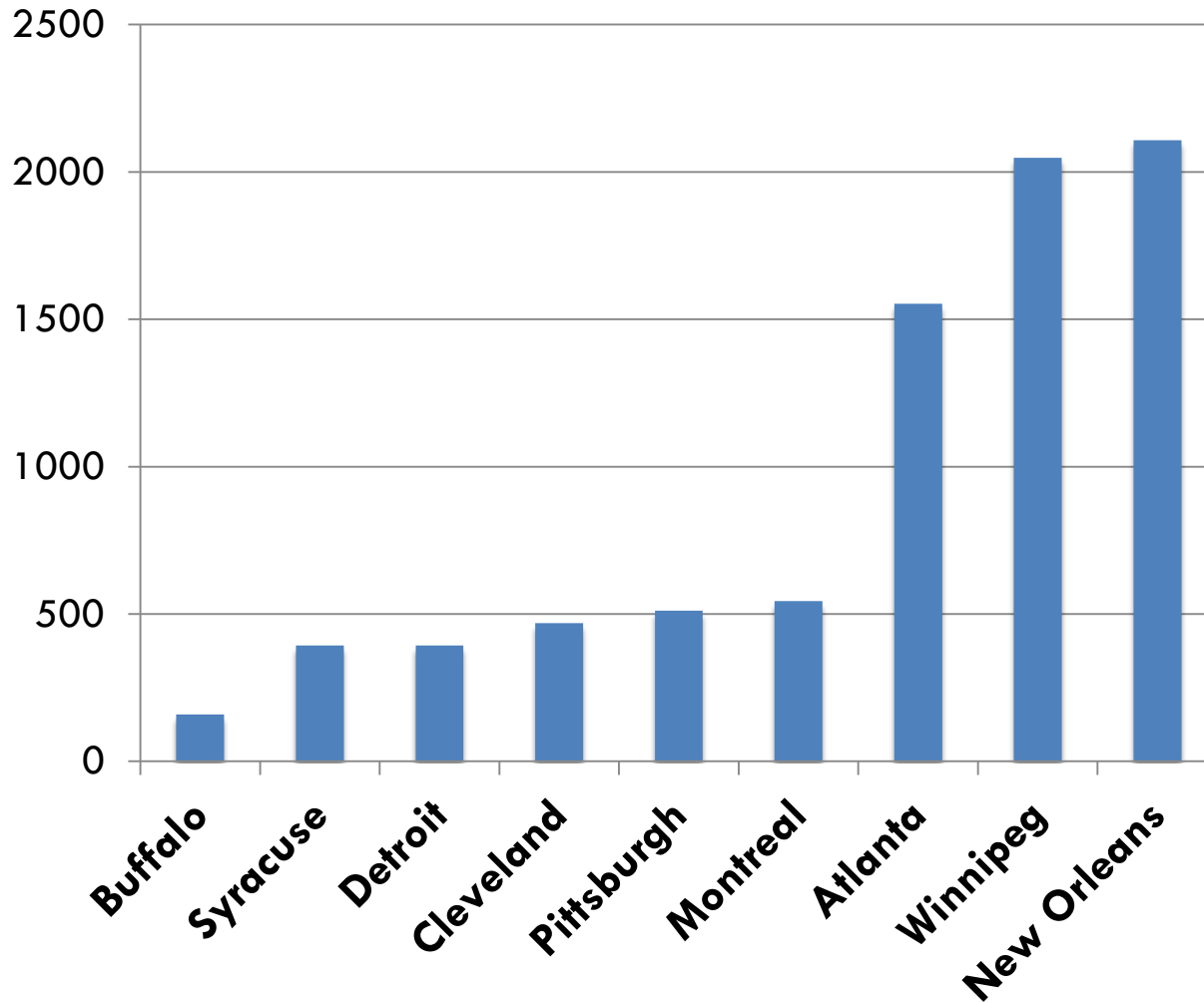
Foreign Imports and exports as % of GDP, 2010



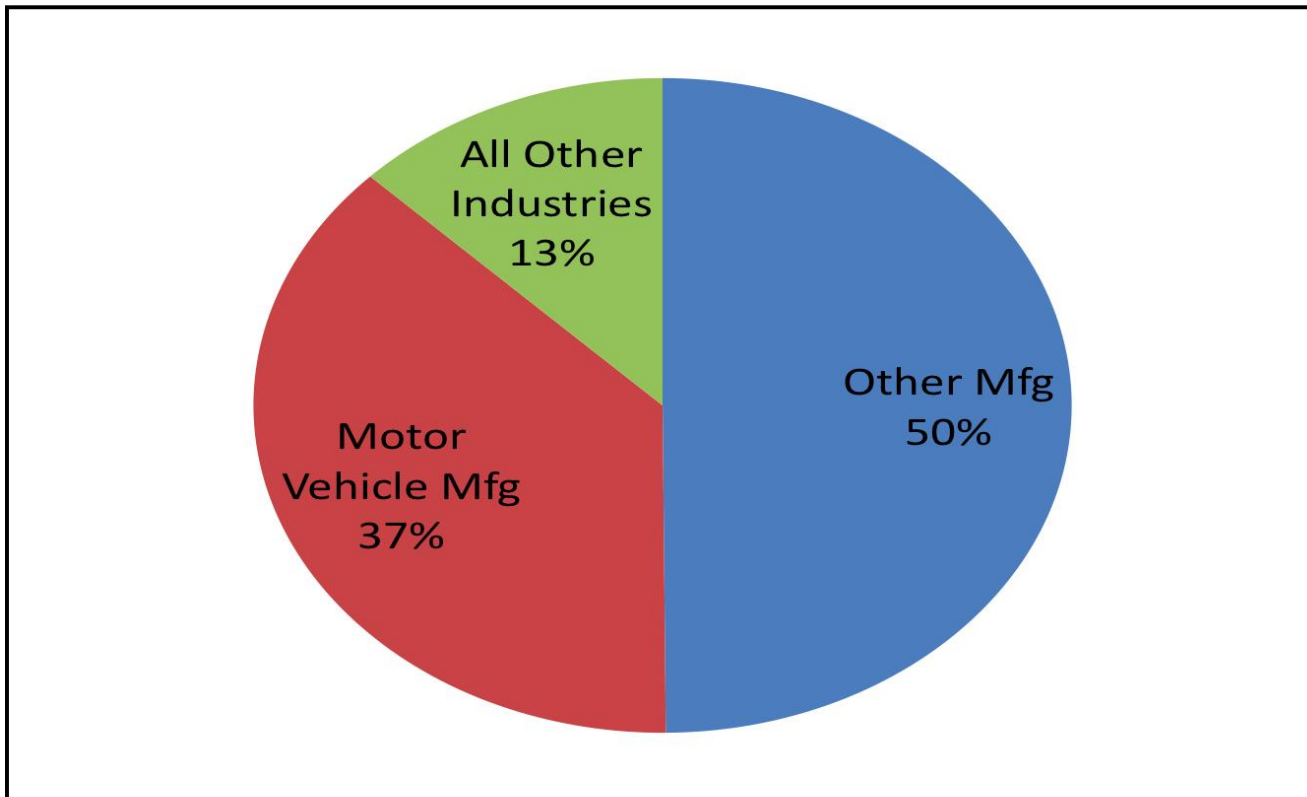
Ontario's total exports 2010 (\$mil)



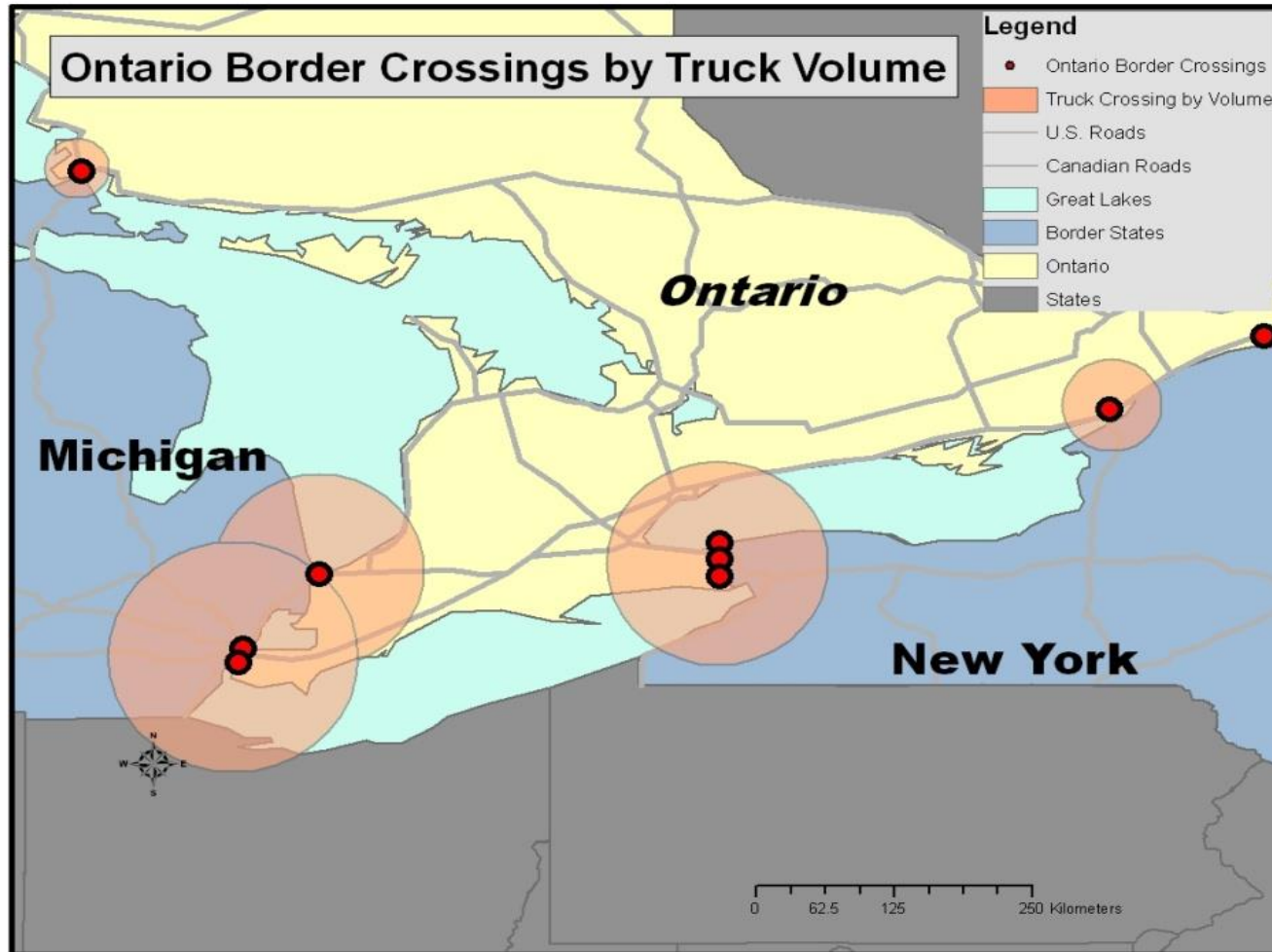
Highway distance from Toronto (km)



Ontario merchandise exports by industry, 2010



Ontario-US Truck Crossings



Cross-Border Supply Chains

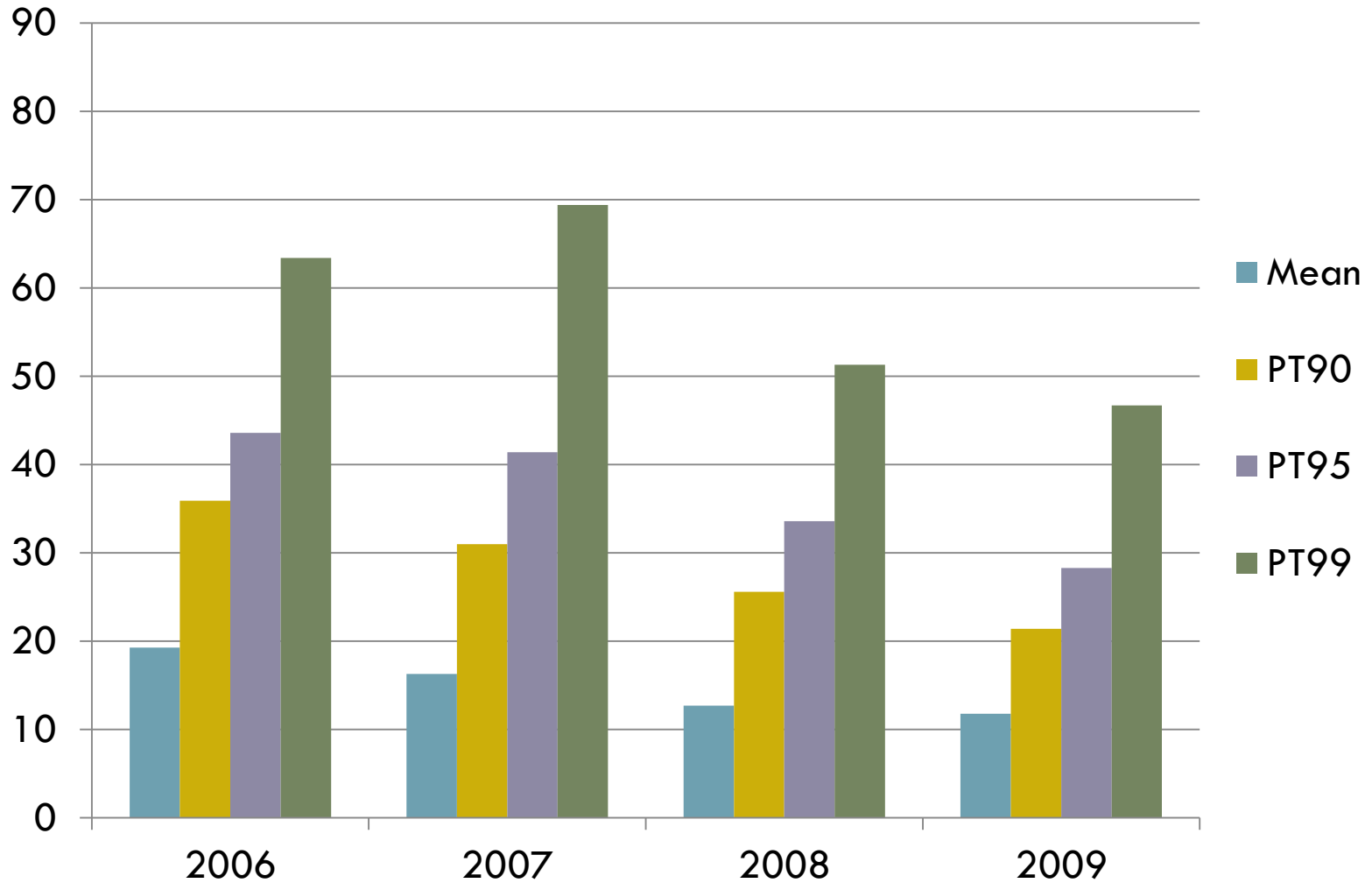
- More than just exchange of finished goods, an intermingling of production systems
- Windsor, Ontario's largest automotive plants
 - ▣ Vans assembled from US parts
 - ▣ Engines for US-assembled trucks and cars
- Just-in-Time: little tolerance for delays, disruptions (down time valued up to \$13,000 per minute.)
- Border costs make firms engaging in cross-border supply chains less efficient and competitive

Cost of the Border

Border crossing costs for goods

- Duties, fees, tolls
- Customs administration, other document prep
- Empty backhauls
- Average Delay
- Delay Uncertainty
- Compliance with “trusted trader” programs
- Cross-border business trips

Ambassador Bridge to US Planning Time (minutes)

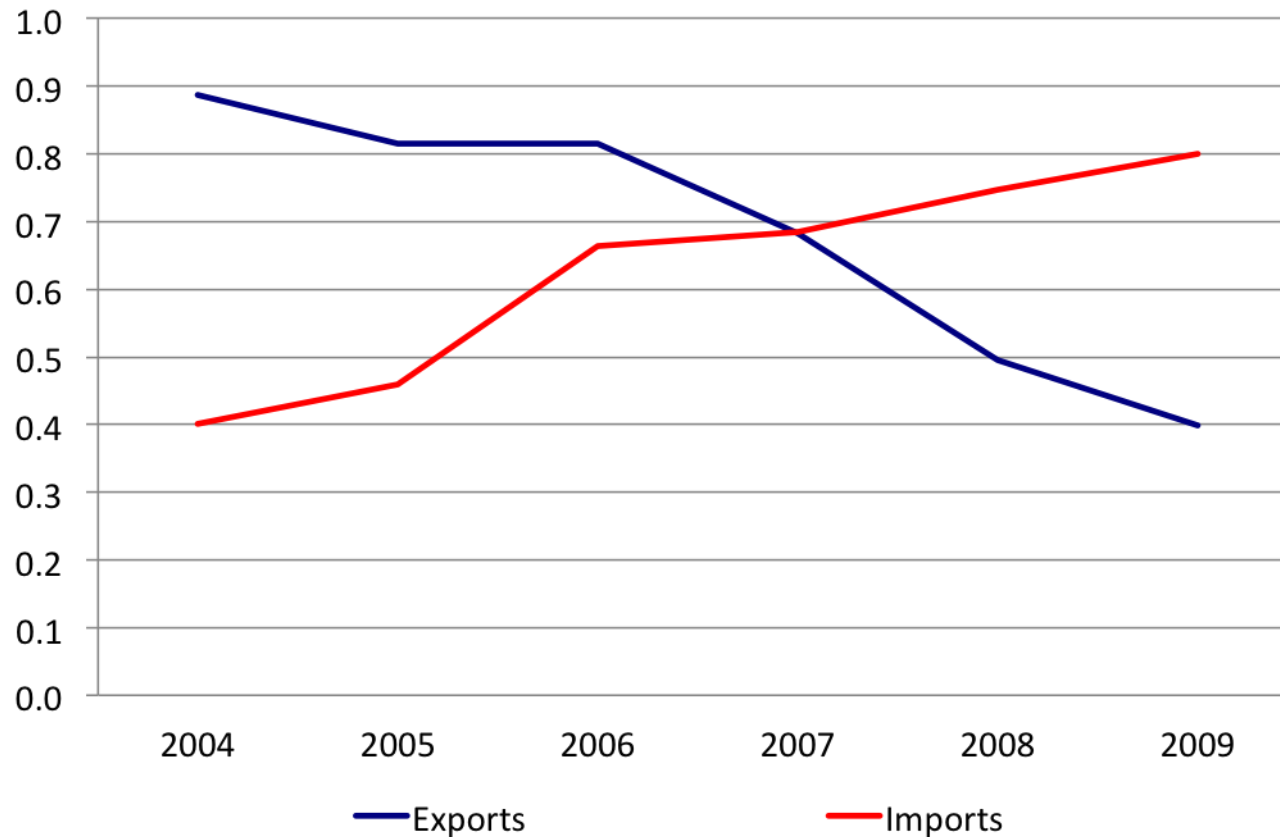


Bottom-up assessments of border crossing costs for freight

- Taylor et al (2004) study found that border costs are equivalent to 2.7% *ad valorem* tariff (4% for trucks)
 - ▣ Carrier costs only about 25% of total
 - ▣ Customs administration is a major component
- Statistics Canada (Brown and Anderson, 2012) study, estimating border increment for trucks
 - ▣ Increment is 20% to 40% of domestic cost
 - ▣ .4 to .9% tariff equivalent

Border increment on trucking costs as *ad valorem* tariff equivalent

Percent



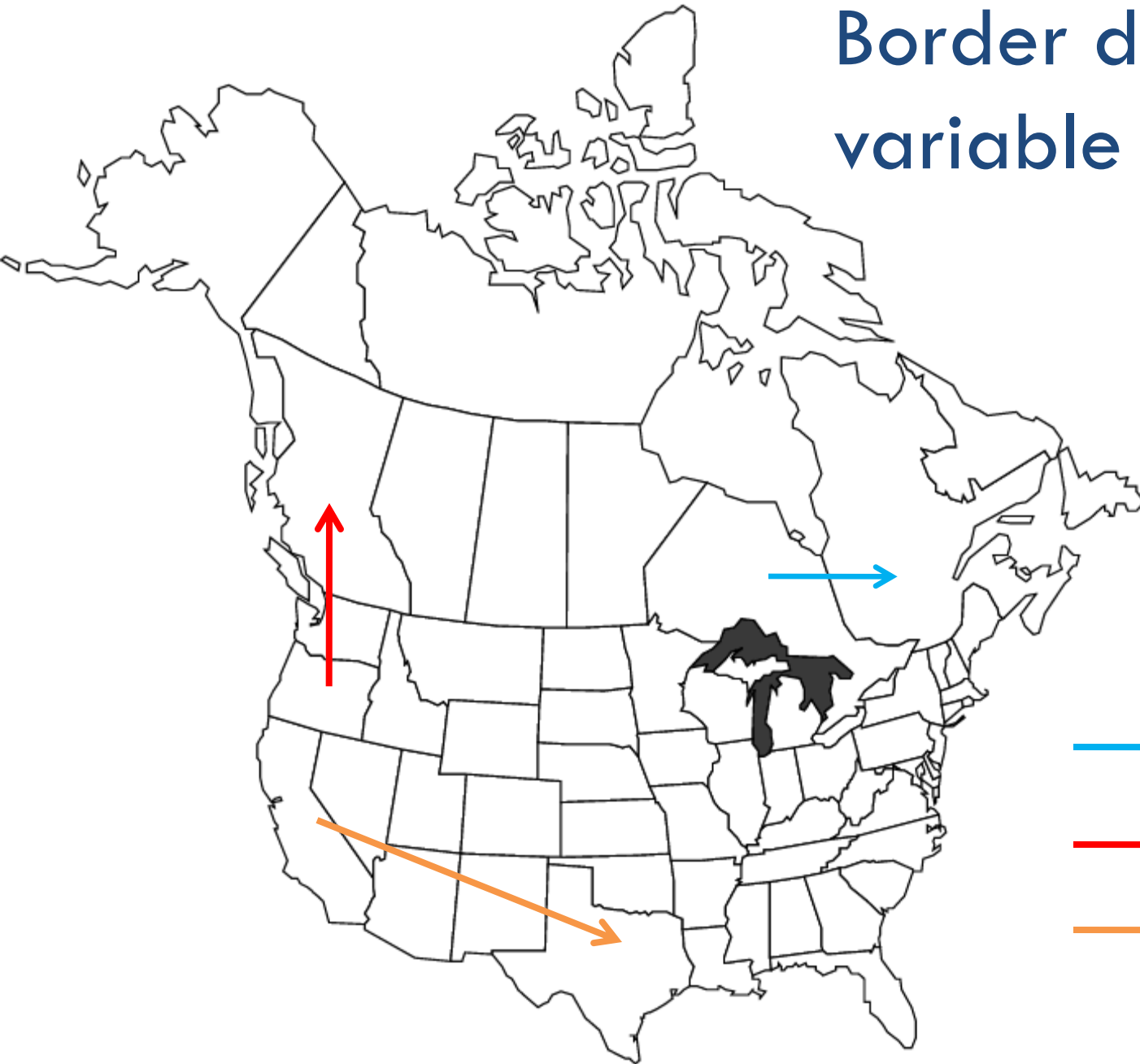
Source: Statistics Canada, Trucking Commodity Origin Destination Survey, 2004 to 2009; Bureau of Transportation Statistics, TransBorder Freight Database, 2004 to 2009; and Bureau of Transportation Statistics, Commodity Flow Survey, 2007.

Top-down estimates of border cost

- Gravity model of trade among provinces and states

$$X_{ij} = \mu \frac{Y_i Y_j}{d_{ij}^\beta} \exp(\lambda b_{ij})$$

Border dummy variable



Results

- Early studies (McCallum, 1995; Helliwell, 1997) found very high border effects
- Anderson and van Wincoop (2003), interprovincial trade is 10 times state provincial trade after controlling for income and distance
- Tariff equivalent range around 20% (depends on assumed elasticity of substitution)
- Brown and Anderson (2002): much lower border effects with a different specification

Why the gap in estimates of tariff equivalent border costs?

- Border crossing costs are only part of the “border effect.”
- Other factors
 - ▣ Inconsistent regulations
 - ▣ Variations in tastes, brand recognition
 - ▣ Exceptions to “free trade”
 - ▣ Sparse cross-border interpersonal networks

General equilibrium effect

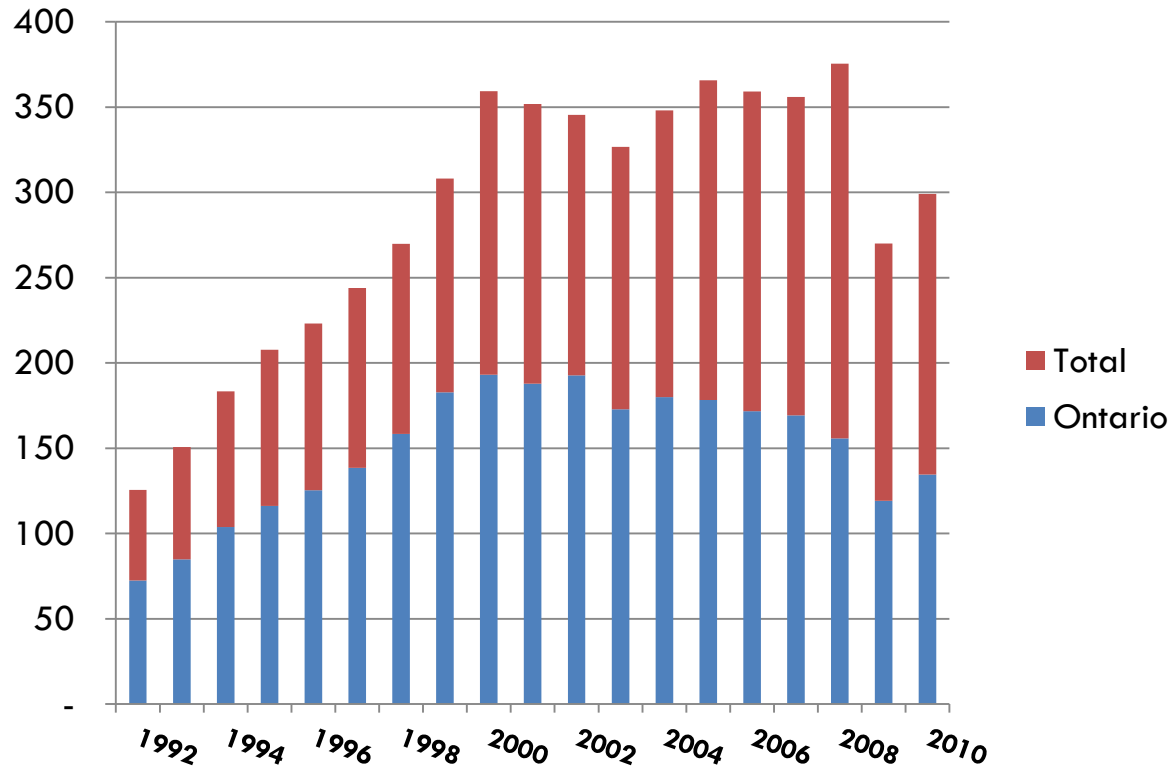
- Nguyen and Wigle (2011) CGE model of Canada at provincial level with links to US
- 1% increase in border costs results in a 1.3% decrease in welfare for Ontario (1% for Canada)
- Decreased Canada-US trade results in a *decrease* in interprovincial trade

Trends and effect of 9/11

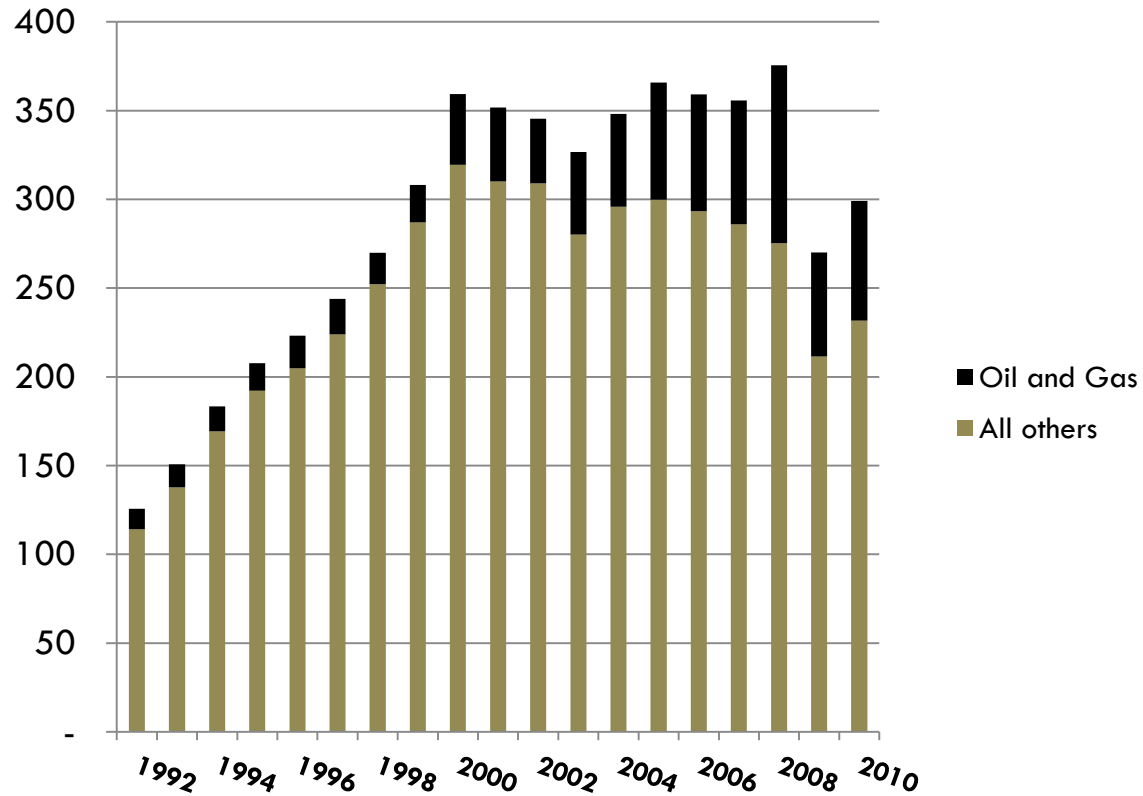
Impact of 9/11

- Enhanced security regime (“thickening”)
 - ▣ More rigorous inspections (delays, uncertainty, fees)
 - ▣ Increased documentation requirements
 - ▣ “trusted trader” programs
- Contemporaneous factors
 - ▣ High and unstable Canadian dollar
 - ▣ Trends in automotive sector
 - ▣ Global competition

Exports to the US



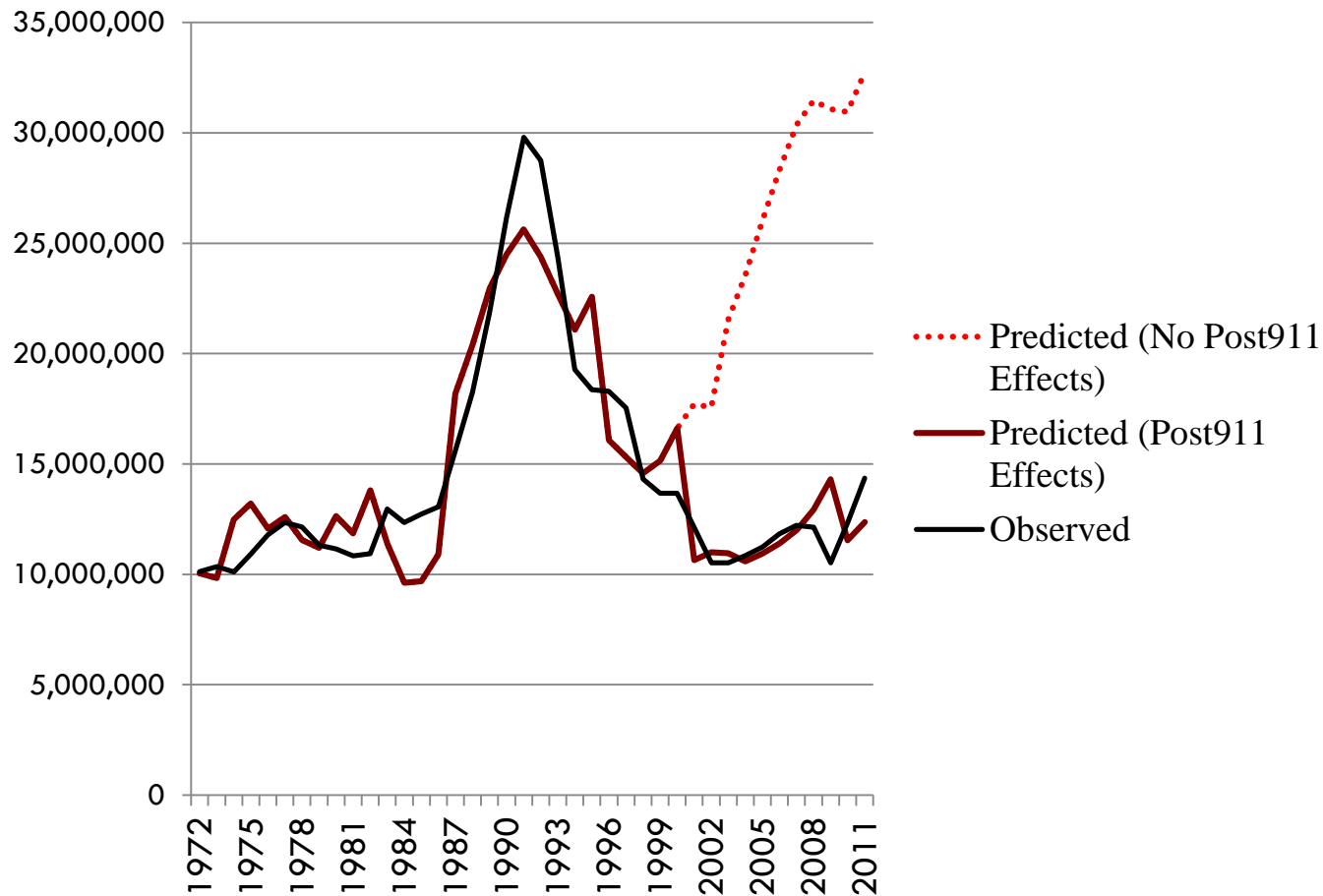
Exports to the US



Evidence of 9/11 effect on Canadian exports

- Gliberman and Storer (2009): 9/11 reduced Canada – US exports by 10% short term, 37% long term.
- Burt (2009) found modest impacts of 9/11 on exports
- Evidence on personal vehicle crossings is more clear cut

Estimates of 9/11 effect on same personal vehicle crossings from Canada to US (Anderson, Maoh and Burke, 2012)



Policy

Three types of policy

- 1. Making the border crossing more efficient
 - ▣ Infrastructure, staffing
 - ▣ technology
- 2. Moving functions (customs, security, immigration) away from the border
- 3. Policy harmonization to make border functions unnecessary (perimeter approach)
- Overarching strategy: **risk assessment**

Research Directions

Topics for regional scientists

- More work on gravity and CGE
- More focused work on mechanisms behind the border effect
 - ▣ Supply chain perspective
 - ▣ Cross border social networks
- Cross-border infrastructure
- Consequences of border disruption
- Attitude toward border