

2009

## **Special Report: Trade and Travel Patterns at the Canada-US Border: Policy Implications**

Border Policy Research Institute

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### **Recommended Citation**

Border Policy Research Institute, "Special Report: Trade and Travel Patterns at the Canada-US Border: Policy Implications" (2009). *Border Policy Research Institute Publications*. 32.  
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# Trade & Travel Patterns at the Canada – U.S. Border: Policy Implications

Volume 4, No. 1 Winter 2009

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The Border Policy Research Institute (BPRI) was established in 2005 in order to examine processes and policies related to the Canada – U.S. border. The motivating factor was widespread awareness that the border was impacting commerce and society to an increased extent in the post-9/11 era. The BPRI has sought to understand and analyze border-related processes, to explain policy implications, and to assist in the development of new policy. The body of research we have undertaken since 2005 has pointed to significant problems in the efficient and secure management of cross-border flows of trade and travel.

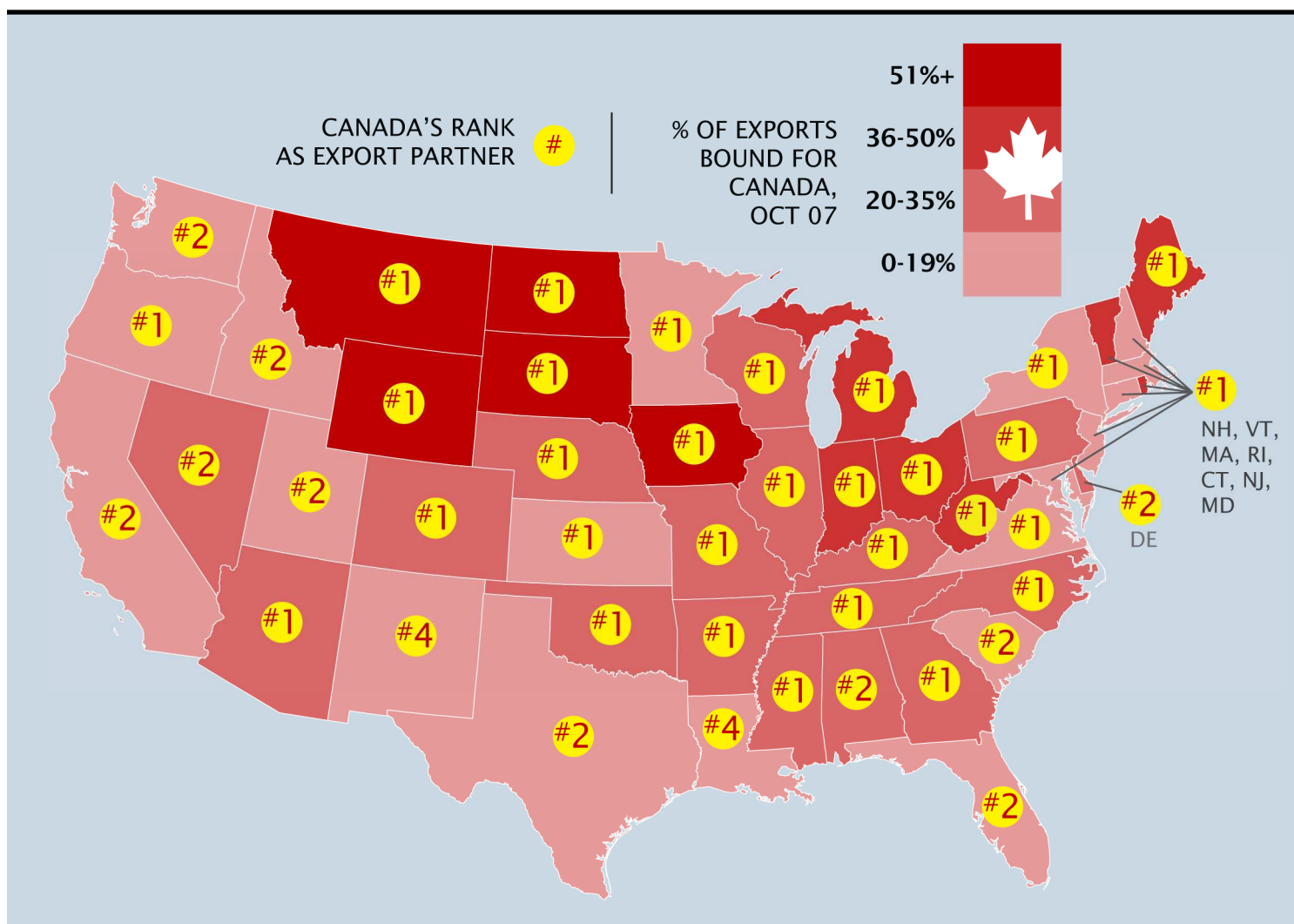
Although border management processes relate to a range of policy areas, those related to cross-border trade and travel flows are particularly significant in the context of the recent economic crisis and the new post-election momentum to rethink Canada – U.S. policy options. Our nations must aim to ensure adequate security while not compromising our shared economic future nor accepting cultural degradation in our borderlands.

This evidence-based report focuses on trade and travel patterns at the border, how such activity has been affected by security policy changes, and policy implications that could inform business, governments, and other stakeholders charged with developing the next generation of management of the Canada – U.S. border.

Certain policy paradigms emerge when reviewing this report's contents: the efficacy of harmonized bilateral processes, as opposed to unilateral solutions; the inappropriateness of rigid "top down" policies in light of varied regional realities; the ephemeral goal of absolute control of the border, as contrasted with a risk-management approach.

The research products summarized within this report are accessible via our website—see the URL in the masthead. The research itself would not have been possible without financial support from the Washington State Legislature, the U.S. Department of Transportation (Office of the Secretary, grant # DTOS59-05-G-00016), and the BorderNet Initiative of the Canadian government.

**Canada is the most important export market for the United States, and vice versa.**

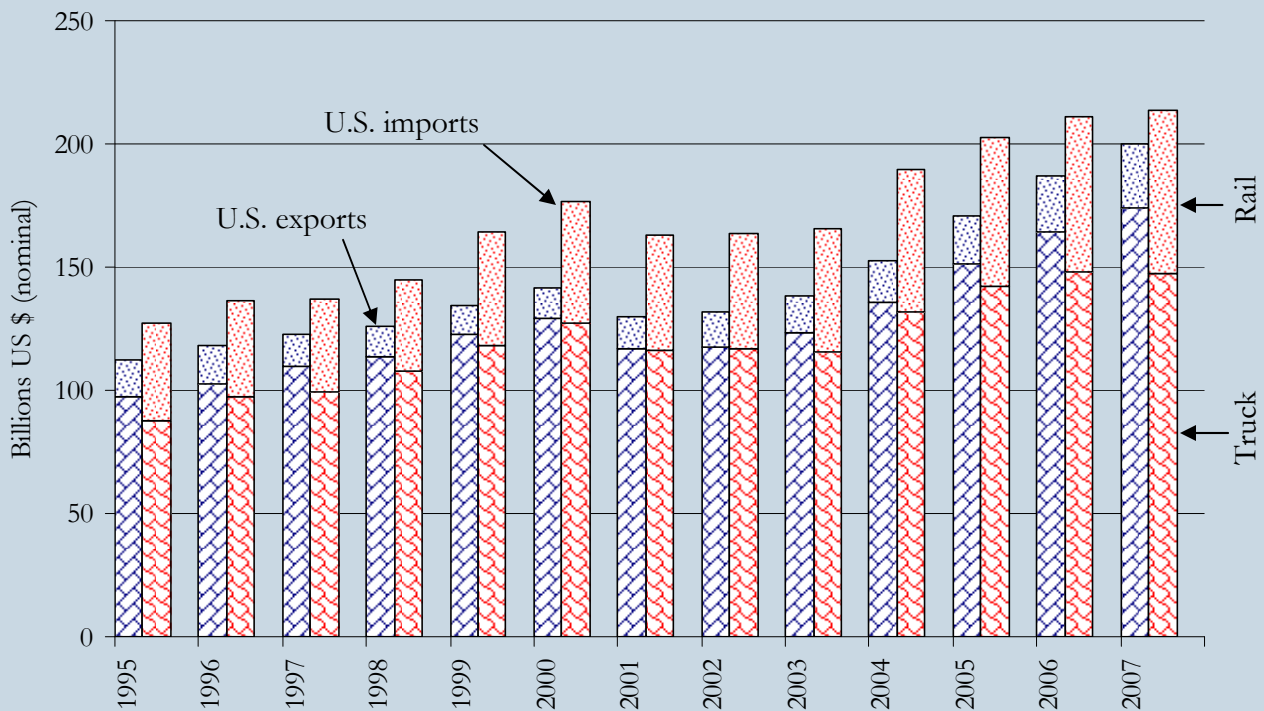


Canada is the primary foreign export market for 36 of the lower-48 states, and the second-ranked market for all the others except New Mexico and Louisiana. For states in the northern Great Plains, over 50 percent of their exports are destined for Canada, and in general, from one-fifth to one-half of exports from the Midwest industrial states are Canada-bound. Canada is the largest foreign supplier of energy (oil, natural gas) to the U.S.

## POLICY IMPLICATIONS:

- The economies of Canada and the U.S. are highly integrated. Any inefficiencies associated with cross-border commerce hamper our integrated economy and reduce our global competitiveness.
- A renewed effort to reduce border-related inefficiencies is important during the current economic crisis.
- From a viewpoint of economic self-interest, the U.S. – Canadian relationship should be of paramount importance to both countries' governments and citizenry.

# The volume of cross-border trade is dictated primarily by macro-economic factors and policies.



**Value of U.S. Exports to and Imports from Canada:  
Goods Crossing the Land Border via Truck and Rail**

In the mid- to late-1990s, with NAFTA in effect and with a robust North American economy, two-way trade grew steadily. The progressive weakening of the Canadian dollar throughout that period led to greater growth of U.S imports than of exports, as the relative cost of Canadian goods fell. In the early 2000s, in the aftermath of 9/11 and the ruptured “dot-com bubble,” trade was stagnant for three years. With a resurgent economy in the late 2000s, two-way trade again grew steadily. In that period, though, a strengthening Canadian dollar resulted in a narrowing of trade imbalances, with U.S. exports almost equal to imports by 2007. Trucks have always carried the vast majority of the trade.

## POLICY IMPLICATIONS:

- Each nation must create policies that are facilitative both of imports and of exports. The balance of trade will differ over time.
- Policies aimed at *overall North American economic growth* are of the greatest importance (e.g., the NAFTA framework).
- Other policies that influence the trading relationship, such as border-related processes, are also important. At times, such policies can have greater impact than the macro-economic policies.

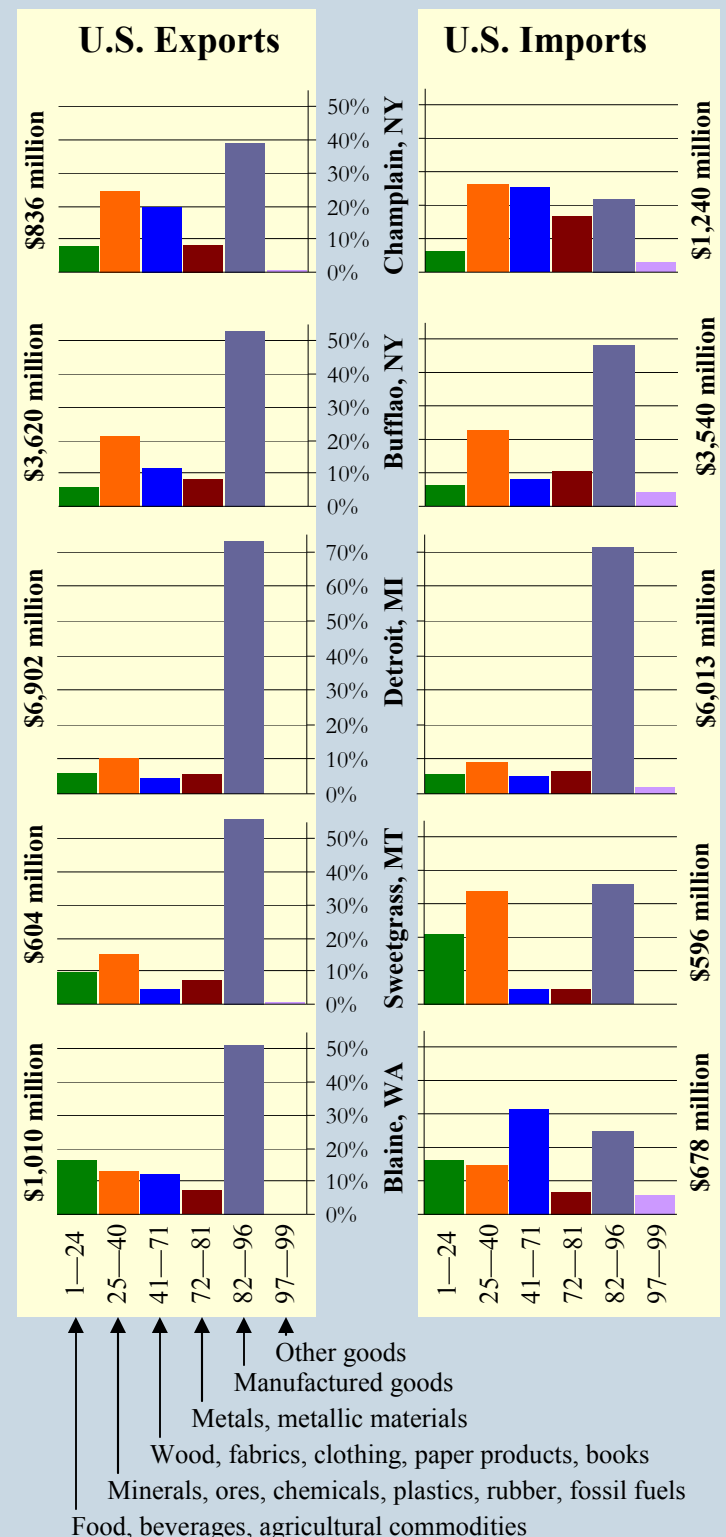
# Cross-border trade varies regionally, and north-bound flows can differ from south-bound. Trade funnels through a small number of major ports.

U.S. exports to Canada (carried by truck and train) amounted to \$19,051 million of goods in October 2007. 68 percent of the goods passed through the five ports shown to the right, with Detroit single-handedly responsible for 36 percent of the goods (\$6,902 million). In general, manufactured goods (commodity codes 82 through 96) comprise the greatest fraction of U.S. exports to Canada. At Detroit, such goods account for over 70 percent of two-way trade, a much higher proportion than exhibited at any other port. In contrast, U.S. imports from Canada include relatively greater proportions of resource-based commodities (agricultural products, minerals/ores, refined metals, wood). Manufactured goods are the dominant fraction of *imports* only in the Midwest industrial region. The cross-border economic integration in that region is evident, with the commodity profile of exports in that region (i.e., at Buffalo and Detroit) almost identical to the profile of imports. At Eastern and Western ports, profiles of exports differ from those of imports, and the balance of trade is not as equal.

## POLICY IMPLICATIONS:

- The kinds of goods crossing the border are significantly different from port to port. A security regime optimized for facilitation of one group of commodities (e.g., manufactured goods) will thus be more effective at some ports than others.
- Accomplishing secure bidirectional trade facilitation at a fairly small number of ports can lead to reduced cost-of-goods for a disproportionately large segment of the integrated Canada – U.S. economy.

## Value and Composition of Trade at 5 Major Ports (October 2007)



# Trade is affected by border-security regimes. Cross-border trade slowed after 9/11, with greatest impact upon U.S. imports from Canada.

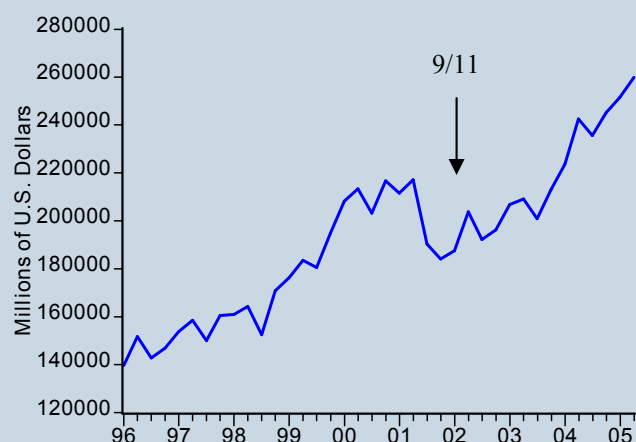


Figure 1: Aggregate U.S. Imports from Canada (annualized)

## Estimated Shortfall in U.S. Imports

Time Period	Percentage Shortfall	Dollar Amount Shortfall (billions of US \$)
2001 Q3	8.6%	\$5.2 Billion
2001 Q4	21.4%	\$10.8 Billion
2002	19.4%	\$10.3 Billion
2003	25.8%	\$13.7 Billion
2004	17.5%	\$10.4 Billion
2005 Q1 & Q2	12.2%	\$11.4 Billion

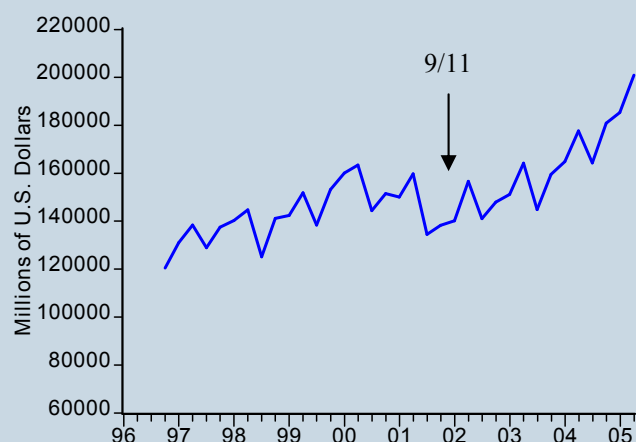


Figure 2: Aggregate U.S. Exports to Canada (annualized)

## Estimated Shortfall in U.S. Exports

Time Period	Percentage Shortfall	Dollar Amount Shortfall (billions of US \$)
2001 Q3	18.0%	\$5.5 Billion
2001 Q4	22.8%	\$8.2 Billion
2002	19.8%	\$6.8 Billion
2003	15.8%	\$7.3 Billion
2004	3.9%	\$1.4 Billion
2005 Q1 & Q2	(5.8% increase)	(\$2.5 Billion increase)

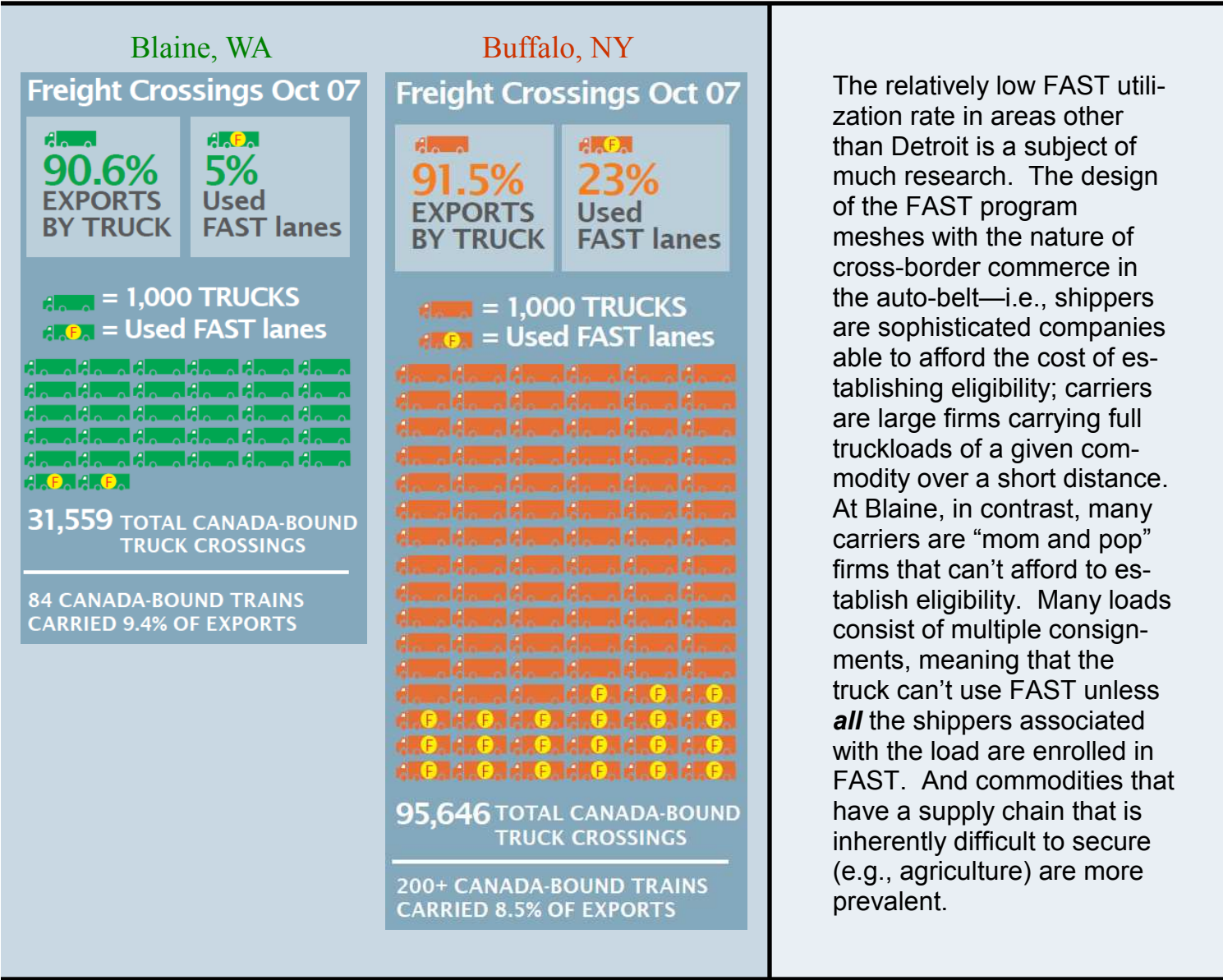
Econometric analysis of trade data has shown that significant trade shortfalls developed in the period immediately following 9/11—shortfalls that can't be explained by typical factors such as the overall trend of the GDP, the exchange rate, etc. While the shortfall in U.S. exports to Canada was largely resolved by 2005 (as seen in the lower table), the shortfall in U.S. imports persisted, with impacts more evident at certain ports. The increased **cost** of cross-border trade, likely associated with higher costs of security compliance, is thought to be the problem.

## POLICY IMPLICATIONS:

- The ideal border inspection regime delivers heightened security, while imposing little or no added burden (in terms of delay or cost). Post-9/11 security regimes are not yet close to the ideal, with negative economic impacts persisting for the integrated Canada – U.S. economy.
- Harmonized security regimes could help address the issue of larger impacts upon imports than upon exports.



The FAST program is intended to minimize the impact of border-security processes upon truck-borne trade. In Detroit, 44 percent of shipments enter the U.S. via FAST lanes. Outside of the Detroit region, FAST receives less use.



POLICY IMPLICATIONS:

- A FAST port has valuable infrastructure (a road lane and inspection booth) dedicated to the program, so proof should exist that FAST enhances a port’s efficiency. Alternative infrastructure use should be evaluated in instances where efficiency gains are not evident.
- Alternative program designs should be evaluated, aiming to lower the costs of entry.

**NAFTA tariff rules are a source of border-related cost. Most tariff revenue derives from just a few of the 100 “chapter-level” tariff categories. But companies must verify compliance with NAFTA rules-of-origin for *all* shipments, resulting in private-sector costs that yield no real public benefit.**

Tariff Category (Top 10, Descending Order)	Revenue from Given Category	Category's Share of Total Revenue	Cumulative Share of Total Revenue
62 - Apparel and clothing accessories (not knitted)	\$4,389,441,874	17.4%	17.4%
61 - Apparel and clothing accessories (knitted)	\$4,285,014,712	17.0%	34.5%
87 - Vehicles, parts, and accessories (other than rail)	\$2,883,414,732	11.5%	45.9%
64 - Footwear and related goods	\$1,873,663,256	7.4%	53.4%
85 - Electrical machinery, consumer electronics	\$1,681,935,892	6.7%	60.1%
84 - Machinery, mechanical appliances, boilers	\$1,161,471,270	4.6%	64.7%
42 - Leather goods, handbags, suitcases, saddlery	\$997,761,085	4.0%	68.7%
39 - Plastics and plastic articles	\$769,535,433	3.1%	71.7%
63 - Textile goods other than clothing and apparel	\$678,851,851	2.7%	74.4%
94 - Furniture, lamps, mattresses, cushions, etc.	\$407,576,790	1.6%	76.0%

**Value of Duties Collected, by Tariff Category, upon Imports in 2006  
(Total for All 100 Categories Combined = \$25,159,011,720)**

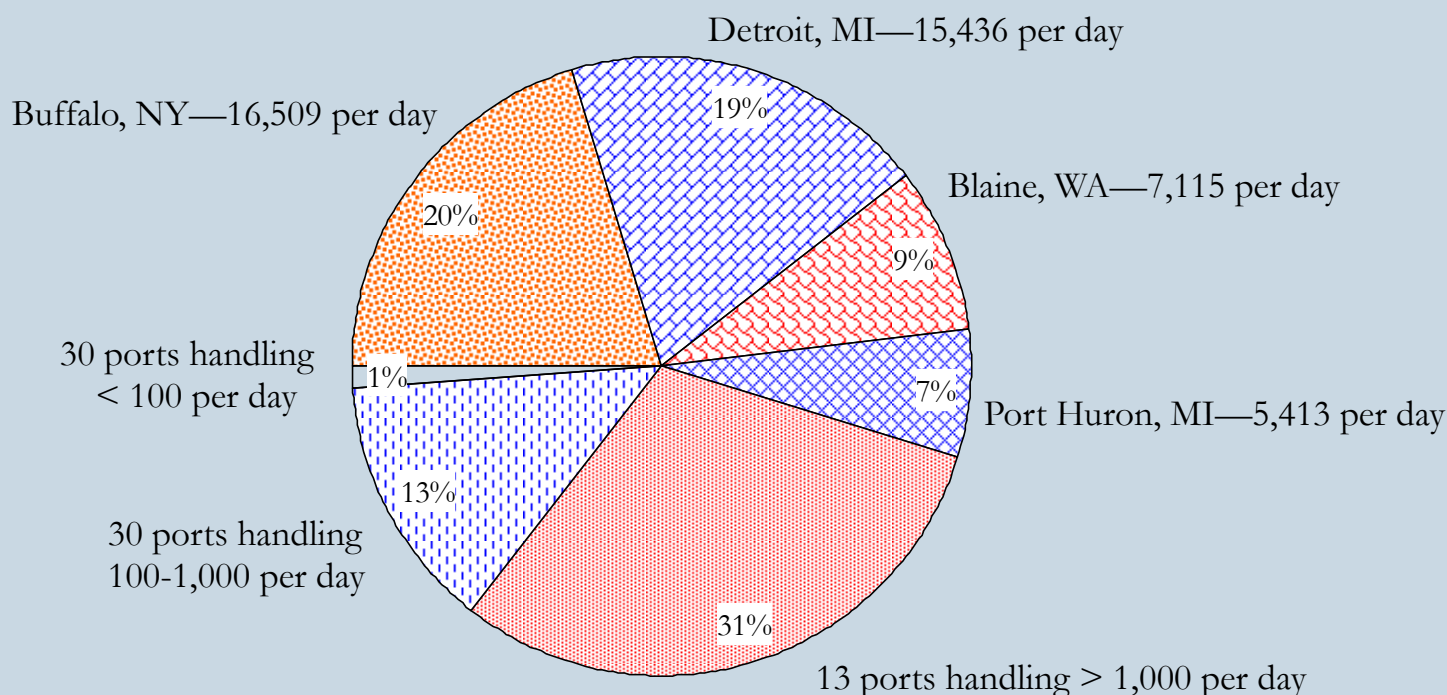
The great majority of tariff revenue is generated within a small number of tariff categories (HTS chapters)—e.g., the 10 categories listed above account for 76 percent of the tariff revenue that is collected. Many categories account for little or **no** revenue (i.e., there is no tariff imposed within the given category). Yet the paperwork to verify compliance with NAFTA rules-of-origin for a zero-tariff shipment can cost as much as two percent of the value of the shipment. One study examined exports from Washington State to Canada, estimating the compliance costs associated with tariff categories for which **both** Canada and the U.S. impose a zero tariff. The study found that the costs amounted to as much as \$40.8 million per year. Eliminating the need for shippers to demonstrate compliance with these “zero-zero” tariff categories would result in no reduction in tariff revenue for either nation, yet provide significant benefit to shippers.

## **POLICY IMPLICATIONS:**

- Significant net economic benefit can be realized by reworking NAFTA tariff rules.
- For zero-tariff categories, waiving NAFTA rules-of-origin would have no effect on tariff revenue. For many other categories, the tariff is so small that the revenue lost by eliminating tariffs and waiving rules-of-origin would be far outweighed by the savings in private-sector compliance costs.



**Automobile traffic is heavily concentrated at a small number of the 77 ports-of-entry (POEs). Sophisticated security technology is likewise concentrated at the larger POEs.**



**Number of Vehicles Entering the U.S. Daily via Various POEs, 2006  
(Average Daily Total of 62,092 Vehicles)**

As shown above, 86 percent of the cross-border auto traffic is accommodated by the 17 largest POEs (those handling > 1,000 cars per day), with the remaining traffic dispersed among the 60 smaller POEs. The 77 POEs actually represent 121 separate roads, because a given POE might consist of several nearby roads (e.g., the Buffalo POE consists of four bridges). Following the principles of risk management (and cost containment), security technology (such as Radiation Portal Monitors and License Plate Readers) has been deployed at the POEs that handle over 80 percent of the traffic. This means, though, that such technology is absent at a large majority of the actual road crossings.

## **POLICY IMPLICATIONS:**

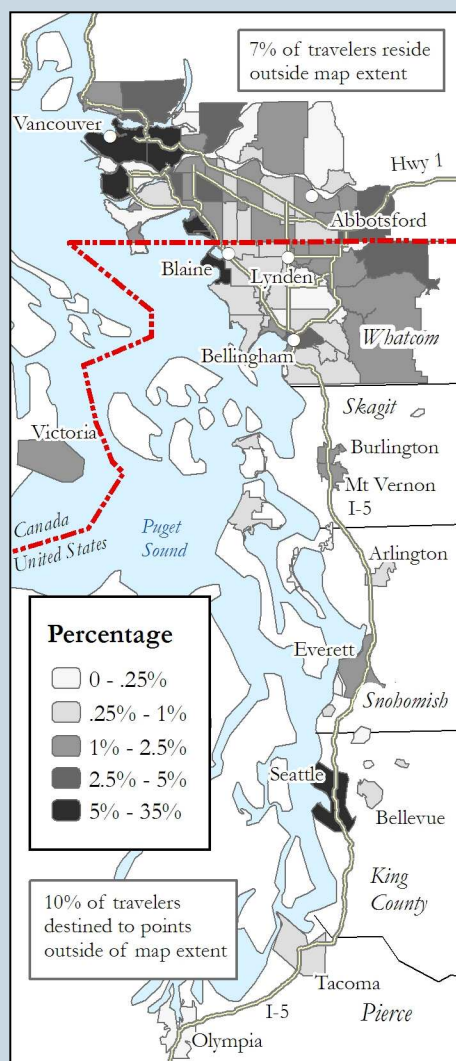
- Deployment of a full suite of technology at all 121 road crossings requires a budget several times larger than past budgets. Absent such an investment, certain technologies can be defeated simply by crossing at a smaller POE.
- Confirmation should exist that the current pattern of technology deployment is optimal. From a risk-management perspective, would technology be better employed at the continental perimeter? At random, varying locations on the internal highway grid?

# At the busiest POEs, most travel is discretionary and most trips occur within a short distance of the border. A borderland culture is evident.

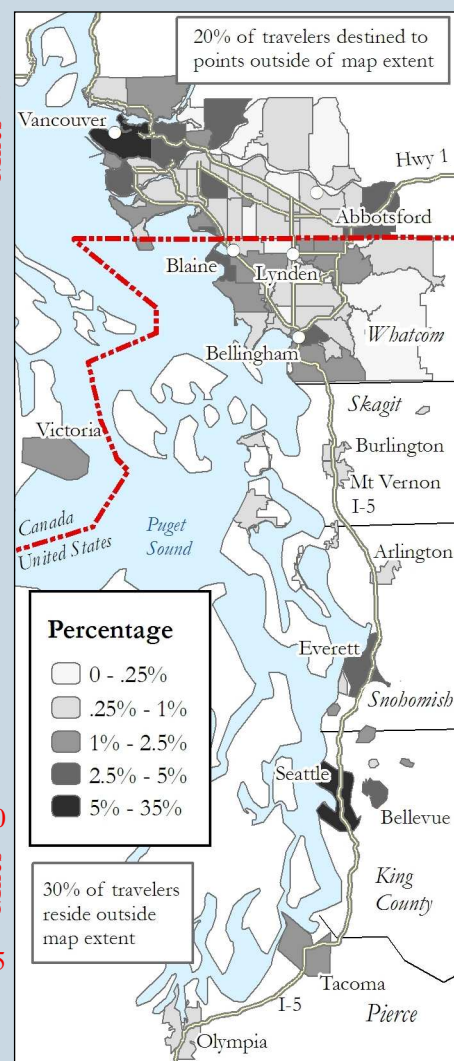
In a 2007 study, 15,000 people were interviewed to fathom travelers' behavior in the Cascade Gateway. On average, 91 percent of their travel (combined weekend/weekday) is discretionary. Shopping, vacations, recreation, and friend/family visits are the dominant trip purposes. About two-thirds of the trips begin and end within 30 miles of the border (as the crow flies). Despite the fact that long border queues are common, many travelers who cross frequently (i.e., once per month) are not enrolled in NEXUS. At the Cascade Gateway, the majority of travelers are Canadians. A similar study in the Buffalo-Niagara region reveals the same basic pattern—a predominance of discretionary travel and near-border trips—although Americans comprise the majority of travelers in that region.

## Origins and Destinations of Cross-border Trips at the Cascade Gateway (I-5 Corridor)

Canadian Residents — Trip origins north of the border, destinations south



U.S. Residents — Trip origins south of the border, destinations north

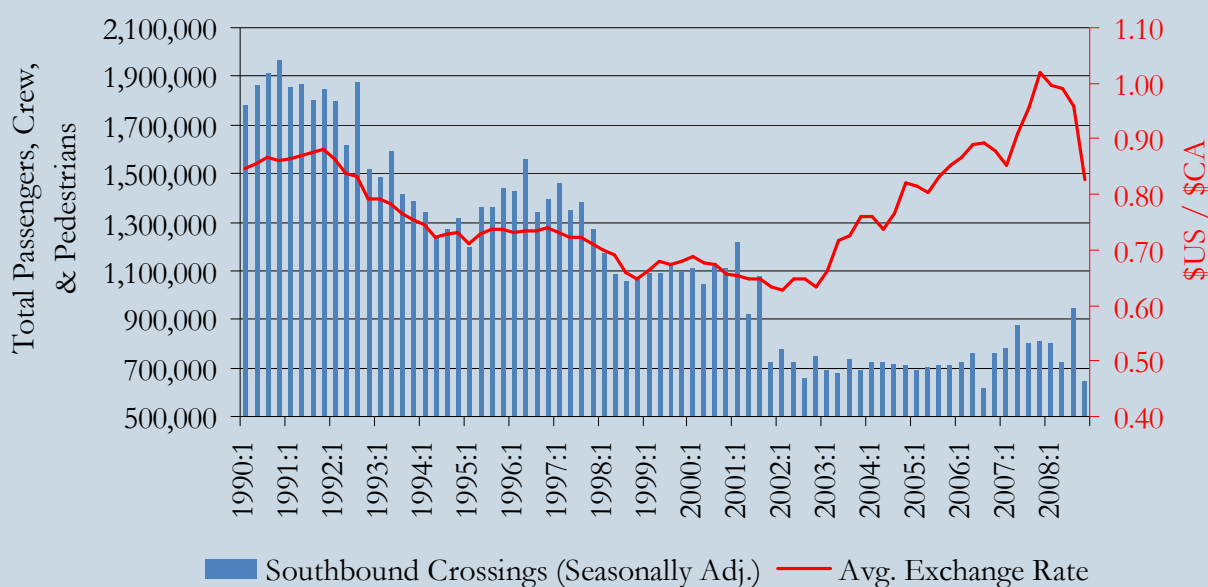


## POLICY IMPLICATIONS:

- Significant reductions in border congestion can be achieved if more of the frequent border-crossers can be persuaded to enroll in NEXUS.
- Marketing of NEXUS should be targeted at population centers close to the border and at leisure travelers, rather than business travelers.

**Passenger travel across the border is affected both by security processes and by macro-economics. At the POEs serving the I-5 corridor (Blaine, Lynden, Sumas), the historic relationship between the exchange rate and the volume of travel was disrupted in the aftermath of 9/11.**

**Exchange Rate vs. Southbound Travelers at the Cascade Gateway  
(Quarterly totals, seasonally adjusted)**

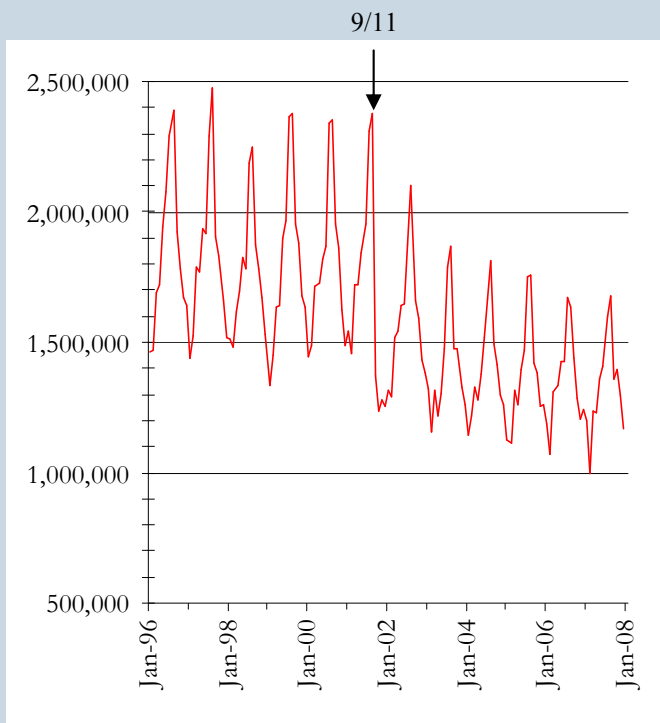


For a 16-year period (1985 – 2001), the exchange rate correlated well with the number of people (both Americans and Canadians) entering the U.S. at the I-5 corridor. An econometric analysis was performed in an attempt to explain the disruption of that relationship in the aftermath of 9/11. Several explanatory variables were analyzed, including the relative price of various goods and services (gasoline, cigarettes, clothing, consumer electronics, health care), the relative wage levels in Canada, and the growing penetration of the Canadian market by “big box” retail chains. No combination of variables was able to explain post-9/11 travel volumes. A structural break in the relationship between economic conditions and travel volumes occurred in 2001 and has since persisted. People’s discomfort with new inspection processes at the border is the likely cause of low travel volumes.

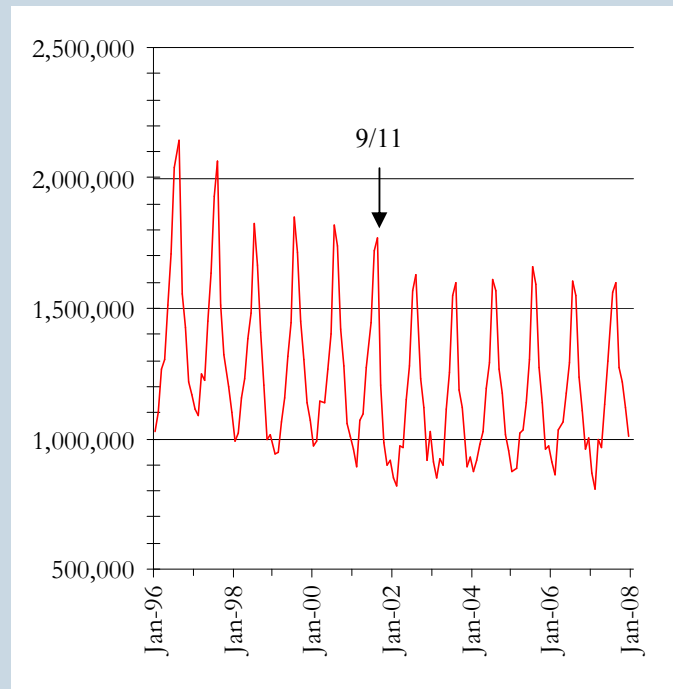
## **POLICY IMPLICATIONS:**

- The border processes established in the aftermath of 9/11 have disrupted the social/economic fabric of borderlands.
- Borderlands have borne the brunt of the impact of heightened border security. Impacts include a persistent reduction in economic activity, and an undue budgetary burden as local jurisdictions handle the increased number of criminals arrested at the border.

# The post-9/11 traffic pattern at the four largest POEs (Detroit, Buffalo, Blaine, Port Huron) has been different from the pattern exhibited at the border as a whole.



**Buffalo, Detroit, Blaine, & Pt. Huron**



**73 POEs Other Than "Big 4"**

## Monthly Volume of Autos Entering the U.S. at Various POEs

In the period following 9/11, the "Big 4" ports exhibited different behavior than the aggregate of the remaining ports. Traffic declined sharply at the "Big 4," whereas the overall pattern elsewhere is more in keeping with macro-economic factors. At the "Big 4" there are large population centers adjacent to the border, and discretionary travel (i.e., shopping, recreation, social visits) has historically been dominant. It seems likely that discretionary travel was disproportionately impacted by either the harsher nature of the post-9/11 inspection processes, or by the congestion resulting from the new processes. Meanwhile, at small ports it is more likely that the border-crossing experience differs little from that of the past.

## POLICY IMPLICATIONS:

- Inspection processes (and/or the associated congestion) continue to impact the amount of cross-border traffic at the largest POEs—Buffalo, Detroit, Blaine, and Port Huron. The programs thus far developed to address the problem (e.g., NEXUS) are only partially successful.
- New initiatives designed to restore borderland vitality should be contemplated. Initiatives should be targeted at congestion relief and/or inspection-process modifications.

## SUMMARY OF POLICY CONCLUSIONS:

- The economies of Canada and the U.S. are highly integrated. Any inefficiencies associated with cross-border commerce hamper our integrated economy and reduce our global competitiveness.
- The ideal freight-inspection regime delivers heightened security, while imposing little or no added burden (in terms of delay or cost). Post-9/11 security regimes are not yet close to the ideal, with negative economic impacts persisting for the integrated Canada – U.S. economy.
- A renewed effort to reduce border-related inefficiencies is important during the economic crisis.
- The kinds of goods crossing the border are significantly different from port to port. A security regime optimized for facilitation of one group of commodities (e.g., manufactured goods) will thus be more effective at some ports than others.
- A FAST port has valuable infrastructure (a road lane and inspection booth) dedicated to the program, so proof should exist that FAST enhances a port's efficiency. Alternative infrastructure use should be evaluated in instances where efficiency gains are not evident.
- Alternative program designs should be evaluated, aiming to lower the costs of entry to FAST.
- Significant net economic benefit can be realized by reworking NAFTA tariff schedules.
- The travel-related inspection processes established in the aftermath of 9/11 have disrupted the social/economic fabric of borderlands.
- Inspection processes (and/or the associated congestion) continue to impact the amount of cross-border passenger travel at the largest POEs—Buffalo, Detroit, Blaine, and Port Huron. The programs thus far developed to address the problem (e.g., NEXUS) are only partially successful.
- New initiatives designed to restore borderland vitality should be contemplated. Initiatives should be targeted at congestion relief and/or inspection-process modifications.
- Significant reductions in border congestion can be achieved if more of the frequent border-crossers can be persuaded to enroll in NEXUS.
- Marketing of NEXUS should be targeted at population centers close to the border and at leisure travelers, rather than business travelers.
- Deployment of a full suite of inspection technology at all 121 auto crossings requires a budget several times larger than past budgets. Absent such an investment, certain technologies can be defeated simply by crossing at a small port-of-entry.

## DATA SOURCES & PERTINENT BPRI PUBLICATIONS:

pp. 2, 6	Border Policy Brief, Vol. 3, No. 5: <i>Adapting the Border to Regional Realities</i>
pp. 3, 4	USDOT Bureau of Transportation Statistics, Transborder Surface Freight Data
p. 5	Research Report No. 1: <i>The Impact of 9/11 on Canada-U.S. Trade</i>
p. 6	Research Report No. 6: <i>Cross-Border Transportation Patterns at the Cascade Gateway: Implications for Mitigating the Impact of Delay on Regional Supply Chains</i>
p. 7	Working Paper No. 3: <i>Streamlining of NAFTA Tariffs: Benefits for WA State</i>
pp. 8, 11	Border Policy Brief, Vol. 2, No. 5: <i>Diversity of the Ports-of-Entry on the 49th Parallel</i>
p. 9	Border Policy Brief, Vol. 3, No. 3: <i>Cross-Border Travel Through the Cascade Gateway</i>
p. 10	Research Note No. 2: <i>Explaining the Decline in Border Crossings Since 1990</i>

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