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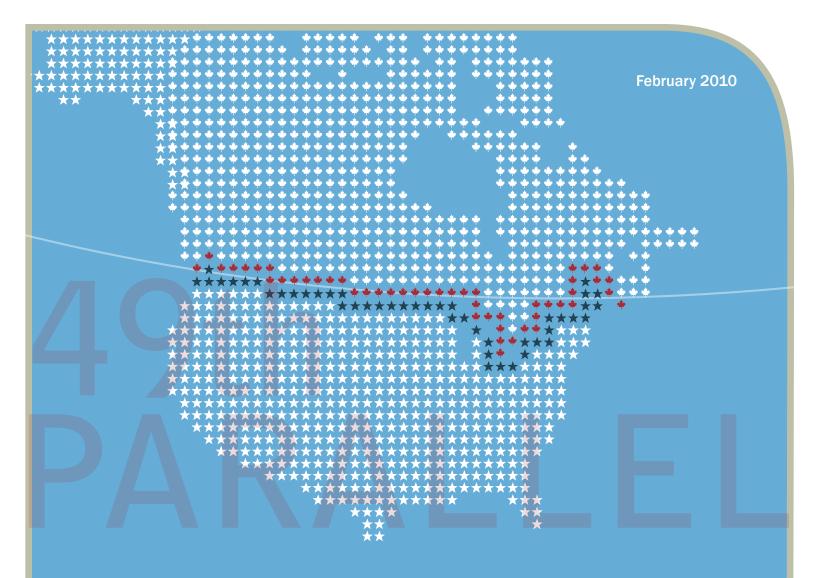
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A project of the Border Policy Research Institute at Western Washington University and the University at Buffalo Regional Institute



BRegional Institute University at Buffalo The State University of New York

For the eight northern border ports featured in this brief, 2008's perfect storm of economic recession, stricter border controls and industry churn, particularly in the auto sector, yielded a decline in cross-border auto and truck traffic of 4.8 percent and a drop in the value of U.S.-Canadian trade of 9 percent. Not all ports fared similarly, however, revealing important regional variation. Although this edition of the Border Barometer provides a good foundation for informing policy, further data gathering and analysis are important future steps for border policymaking.



The international border that binds Canada and the United States is the subject of debate among policymakers and stakeholders in binational regions and beyond. Much of this focus is on security, but understanding how border performance relates to the economic competitiveness of Canada and the United States – and crafting policies that enhance their collective position in the global economy – also is critical, particularly in the current economic environment. Developed through a partnership of the Border Policy Research Institute of Western Washington University and University at Buffalo Regional Institute, the Border Barometer is a tool that provides a U.S. perspective on northern border performance. It seeks to provide researchers, policymakers and other interested parties with a better understanding of economic conditions and trends along the entire border and at individual ports of entry. This publication serves as the second edition of the Border Barometer, with the inaugural issue released in February 2009. The Border Barometer has been funded by the BORDERNET initiative of the Canadian Department of Foreign Affairs and International Trade.



The Border Barometer uses publicly available data to measure performance in terms of porosity (economic flows of goods and people across the border), and infrastructure (the capacity to support flows) according to the following indicators:

INDICATORS

POROSITY: TRUCK AND RAIL TRADE FLOWS, 1995-2008, IN BILLIONS^{1,2}

COMMODITY COMPOSITION, 2008, WITH EXPORT SPECIALIZATION ANALYSIS ^{1,3,4} $\,$

TRAFFIC BY MONTH, 2007-2008, WITH SEASONAL VARIATION ANALYSIS⁵

BORDER INFRASTRUCTURE: BOOTH DISTRIBUTION, 2008

In addition to expanding coverage to eight ports of entry, this edition of the Border Barometer offers three features:

NORTHERN BORDER TRENDS

a section that highlights northern border trends and individual port variation from these trends.



COMPARATIVE PERSPECTIVES

a tool to compare and rank performance of each port according to specific metrics.



PORT HURON, MI

DETROIT, MI

INDIVIDUAL PORT SNAPSHOTS

CHAMPLAIN, NY

NIAGARA FALLS, NY

BUFFALO-

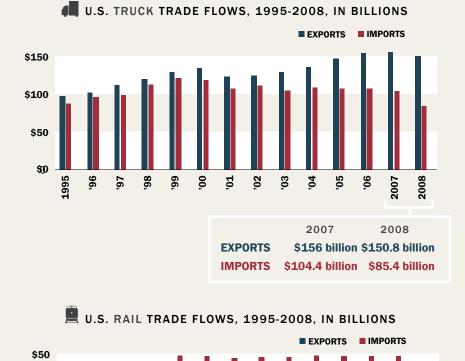
one-page detailed summaries of performance for each port.





NORTHERN BORDER TRENDS

To provide a comprehensive border-wide perspective of porosity, this section examines border-wide truck and rail two-way trade flows from 1995-2008, commodity composition in 2008 and 2007-2008 monthly traffic flows.



\$0

1995

96

97

98

66

8

8

EXPORTS

IMPORTS

63

5

05

8

2007

90

\$22.8 billion \$24.9 billion

\$45.8 billion \$38.5 billion

2007

2008

2008

TRADE FLOWS

Trucking dominates commercial exchange between Canada and the United States and serves as a critical lifeline for these economies. Borderwide trend data suggest that the value of truck exports declined slightly from \$156 billion to \$150.8 billion between 2007 and 2008. A closer look at individual port performance, however, indicates that truck exports actually rose at six of the eight ports examined, with only Detroit and Buffalo - the largest ports of entry on the northern border -- experiencing declines during this period. These drops are most likely attributed to fallout from the recession, particularly in the hard-hit auto industry.

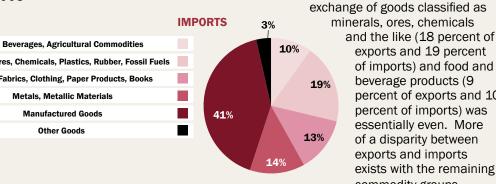
With regard to rail trends in crossborder trade, imports are far greater than exports – a pattern in place since 1995. Exports continued a seven-year trend, increasing border-wide between 2007-2008. This trend is reflected at each port of entry except for Detroit. In the recent past, rail flows into the United States increased border-wide, however, 2007-2008 witnessed a decrease, which is reinforced by activity at each port of entry except for Pembina and Portal.



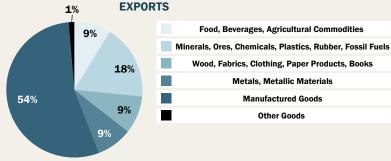
NORTHERN BORDER TRENDS

COMMODITY COMPOSITION

Taking a look at what flows over the border is as important as understanding how goods move between Canada and the United States. In 2008 manufactured goods dominated trade flows in terms of exports (55 percent) and imports (41 percent), thus serving as the foundation of our interdependent economies. Two-way



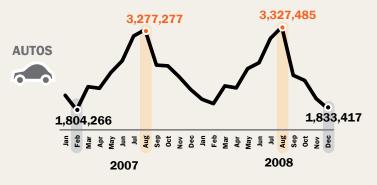
U.S. COMMODITY COMPOSITION, 2008



TRUCK TRAFFIC ENTERING U.S. BY MONTH, 2007-2008



AUTO TRAFFIC ENTERING U.S BY MONTH, 2007-2008



MONTHLY TRAFFIC ENTERING U.S. - TRUCK AND AUTO

exports and 19 percent

beverage products (9

of imports) and food and

percent of exports and 10

percent of imports) was

essentially even. More

of a disparity between

exists with the remaining commodity groups.

exports and imports

There is generally less seasonal variation in truck traffic when compared to car flows across the border. Nonetheless, truck flows experienced a steep decline in late 2007, picking up slightly in early 2008 only to drop steadily - and significantly -- during the last guarter. This trend is consistent at each port of entry.

Summer is high season for cars crossing the border. with peak periods occurring in July and August at most ports of entry. August 2008 auto traffic peaked higher when compared to 2007 (3,277,277 versus 3,327,485), but underperformed in each month thereafter when compared to 2007 levels.

COMPARATIVE PERSPECTIVES

Four metrics are used to provide a comparative perspective on border performance:

- Percentage Change in Total Trade Value, 2007-2008
- Dependency on Manufacturing Commodities, 2008
- Degree of Seasonal Variation in Car Traffic, 2008
- Percentage Decrease in July through December Car Traffic, 2007 to 2008

For each metric, a ranking system was developed, with #1 representing the most desirable position and #8 representing the least desirable position vis-à-vis other ports.

PERCENTAGE CHANGE IN TOTAL TRADE VALUE, 2007-2008

Not surprisingly, Detroit, with a 19.5 percent decline in total trade value, experienced the most significant decrease between 2007 and 2008, followed by Buffalo at 10.8 percent. On the other hand, Portal came in with a 13.3 percent increase in trade value for the same period – an unparalleled increase not seen at any other port and well above the northern border average of a 9-percent decline.

DEPENDENCY ON MANUFACTURING COMMODITIES, 2008

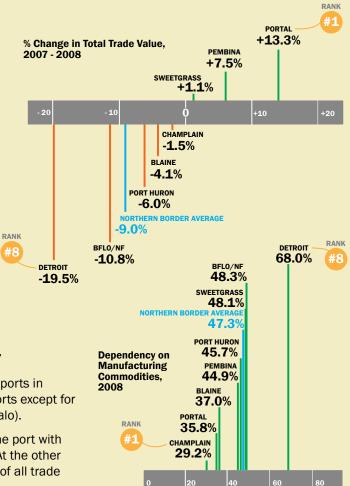
A heavy reliance on manufacturing commodities is less desirable, reflecting a more vulnerable position when the economy takes a downturn. Manufactured goods dominated both truck and rail exports in 2008. Yet imports for these modes were far more varied at all ports except for those located in Great Lakes states (Port Huron, Detroit and Buffalo).

When exports and imports are analyzed together, Champlain is the port with the least dependence on manufactured goods, at 29.2 percent. At the other end of the spectrum, Detroit is most dependent, with 68 percent of all trade drawn from manufactured commodities.

DEGREE OF SEASONAL VARIATION IN CAR TRAFFIC, 2008⁵

According to the ranking system, a **Degree of Seasonal** higher degree of seasonal variation Variation in Car is desirable, as these peaks Traffic, 2008 provide an added boost to regional CHAMPLAIN economies dependent upon seasonal industries. Five of the PEMBINA #1 eight ports experienced double-19.8% RANK digit seasonal variation, ranging PORTAL 16.0% from 11.2 percent (Port Huron) to 22.4 percent BFLO/NF 15.1% (Champlain). **NORTHERN BORDER** Detroit and 12.0% Sweetgrass were on PORT HURON the lower end of 11.2% the spectrum, BLAINE RANK 8.5% with relatively SWEETGRASS modest 6.4% DETROIT seasonal 3.5% fluctuation. 10 20

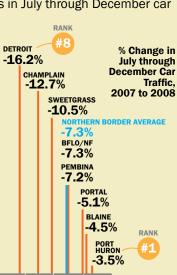
Find COMPARATIVE PERSPECTIVES on each Port Snapshot page



PERCENTAGE DECREASE IN JULY THROUGH DECEMBER CAR TRAFFIC, 2007 TO 2008

In 2008, all ports saw declines in July through December car traffic compared to the

same period in 2007. Detroit experienced a 16.2 percent decrease in car traffic during the latter half of 2008. Five of the remaining ports came in at or below the northern border average of 7.3 percent.

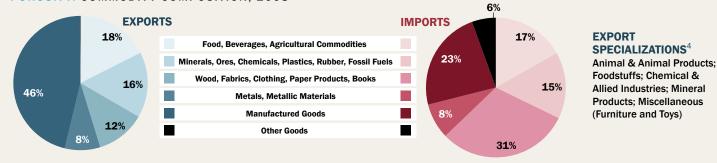


PORT : BLAINE, WASHINGTON

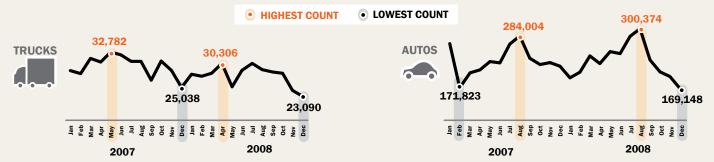
POROSITY: TRADE FLOWS, 1995-2008, IN BILLIONS



POROSITY: COMMODITY COMPOSITION, 2008



POROSITY: TRAFFIC ENTERING U.S BY MONTH, 2007-2008



>> The recent decline in U.S. housing construction contributed to a drop in imports at Blaine, which is a major import gateway for wood products.

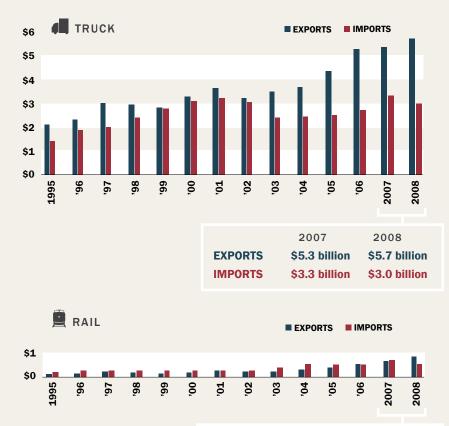
COMPARATIVE PERSPECTIVES

		RANK
% Change in Total Trade Value, 2007 to 2008	-4.1 %	#5
Dependency on Manufacturing Commodities in 2008	37.0%	#3
Degree of Seasonal Variation in Car Traffic, 2008	8.5%	#6
% Decrease in July through December Car Traffic, 2007 to 2008	-4.5%	#2

	COMMERCIAL		AUTO	
	STANDARD	FAST	STANDARD	NEXUS OR FLEXIBLE
🛨 Peace Arch	-		8	~
🕈 Peace Arch	-	-	10	~
★ Pacific Highway	3	~	6	~
Pacific Highway	3	~	7	~

PORT : SWEETGRASS, MONTANA

POROSITY: TRADE FLOWS, 1995-2008, IN BILLIONS

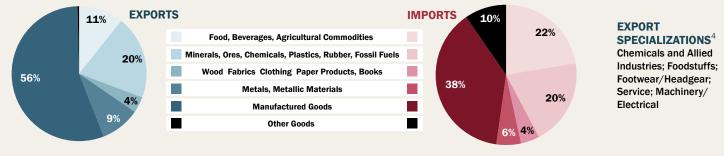


 2007
 2008

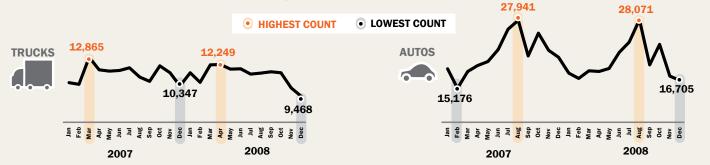
 EXPORTS
 \$654 million
 \$876 million

 IMPORTS
 \$701 million
 \$552 million

POROSITY: COMMODITY COMPOSITION, 2008



POROSITY: TRAFFIC ENTERING U.S BY MONTH, 2007-2008



>> This port surged to a large trade surplus in recent years. High value exports (manufactured goods) were countered by commodities of lower value (agriculture, ores).

COMPARATIVE PERSPECTIVES

		RANK
% Change in Total Trade Value, 2007 to 2008	1.1%	#3
Dependency on Manufacturing Commodities in 2008	48.1%	#6
Degree of Seasonal Variation in Car Traffic	6.4 %	#7
% Decrease in July through December Car Traffic, 2007 to 2008	- 10.5 %	#6

			AUTO	
	STANDARD	FAST	STANDARD	NEXUS OR FLEXIBLE
★ Sweetgrass	2	~	3	~
* Sweetgrass	3	~	3	¥

PORT : PORTAL, NORTH DAKOTA

POROSITY: TRADE FLOWS, 1995-2008, IN BILLIONS TRUCK EXPORTS IMPORTS \$5 \$4 \$3 **\$2** \$1 \$0 1995 2007 2008 96 98 66 8 5 8 03 8 02 90 97

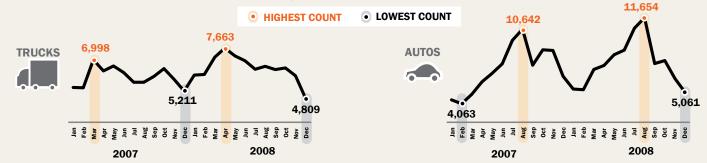




POROSITY: COMMODITY COMPOSITION, 2008



POROSITY: TRAFFIC ENTERING U.S BY MONTH, 2007-2008



>> This port boasts the busiest rail crossing between the Rockies and the Great Lakes, with rail-borne imports exceeding truck-borne imports.

COMPARATIVE PERSPECTIVES

		RANK
% Change in Total Trade Value, 2007 to 2008	13.3%	#1
Dependency on Manufacturing Commodities in 2008	35.8%	#2
Degree of Seasonal Variation in Car Traffic, 2008	16.0 %	#3
% Decrease in July through December Car Traffic, 2007 to 2008	- 5.1 %	#3

BORDER INFRASTRUCTURE: BOOTH DISTRIBUTION, 2008

	COMMER	CIAL	AU	то
	STANDARD	FAST	STANDARD	NEXUS OR FLEXIBLE
+ Portal	3	~	1	-
🔶 Portal	1	V	1	-

8

PORT : PEMBINA, NORTH DAKOTA

POROSITY: TRADE FLOWS, 1995-2008, IN BILLIONS \$10 TRUCK EXPORTS IMPORTS 4 \$8 \$6 \$4 **\$2 \$**0 2008 1995 96 8 8 05 90, 2007 797 98 66 5 ဗ 6 2007 2008 **EXPORTS** \$7.9 billion \$8.7 billion **IMPORTS** \$3.8 billion \$3.4 billion 🖳 RAIL EXPORTS IMPORTS \$2 \$0 1995 66, 8 2007 2008 96 97 98 8 5 03 8 05 00

2007 2008 **EXPORTS** \$451 million \$757 million **IMPORTS** \$1.2 billion \$1.5 billion

POROSITY: COMMODITY COMPOSITION, 2008

EXPORTS IMPORTS 7% **EXPORT** Food, Beverages, Agricultural Commodities 28% 17% SPECIALIZATIONS⁴ Minerals, Ores, Chemicals, Plastics, Rubber, Fossil Fuels 28% Vegetable Products; Wood, Fabrics, Clothing, Paper Products, Books Machinery/Electrical; 57% Textiles: Chemicals Metals, Metallic Materials 9% & Allied Industries; Manufactured Goods 10% Metals 6% Other Goods 21% 10%

45,463 LOWEST COUNT HIGHEST COUNT 21.295 TRUCKS AUTOS 20,594 17,394 17,577

15,481

Jan Mar Mar Jun May Jun Jun Jun Nov Sep Dec Jun May Mar Mar Sep Oct Nov Nov 2008 2007

POROSITY: TRAFFIC ENTERING U.S BY MONTH, 2007-2008



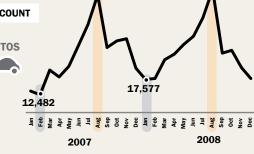
COMPARATIVE PERSPECTIVES

		RANK
% Change in Total Trade Value, 2007 to 2008	7.5%	#2
Dependency on Manufacturing Commodities in 2008	44.9 %	#4
Degree of Seasonal Variation in Car Traffic, 2008	19.8 %	#2
% Decrease in July through December Car Traffic, 2007 to 2008	- 7.2 %	#4

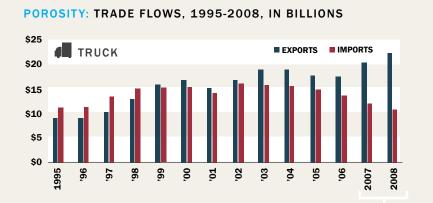
BORDER INFRASTRUCTURE: BOOTH DISTRIBUTION, 2008

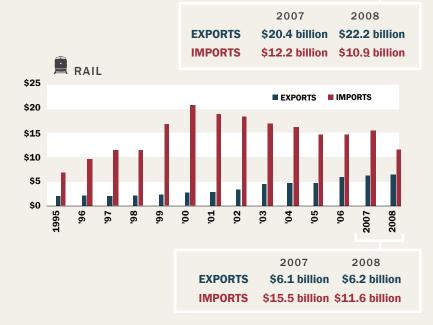
	COMMER	CIAL	AU	то
	STANDARD	FAST	STANDARD	NEXUS OR FLEXIBLE
🛨 Pembina	3	~	4	~
🍁 Pembina	2	~	3	~

47.283



🖈 🔹 PORT : PORT HURON, MICHIGAN

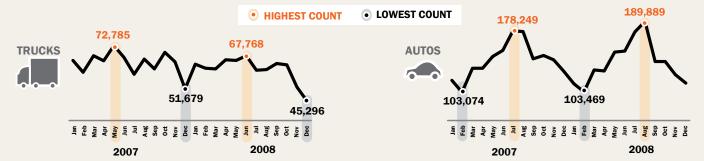




POROSITY: COMMODITY COMPOSITION, 2008

3% **EXPORTS IMPORTS** 1% 11% **Food Beverages Agricultural Commodities** 19% Minerals, Ores, Chemicals, Plastics, Rubber, Fossil Fuels Wood, Fabrics Clothing, Paper Products, Books 45% 27% 8% 46% Metals. Metallic Materials Manufactured Goods Other Goods 8% 20% 9%

POROSITY: TRAFFIC ENTERING U.S BY MONTH, 2007-2008



>> The rail-borne trade flows at Port Huron are the greatest of any port, and as at most rail gateways, trains carry more goods into the U.S. than out.

COMPARATIVE PERSPECTIVES

		RANK
% Change in Total Trade Value, 2007 to 2008	-6.0%	#6
Dependency on Manufacturing Commodities in 2008	45.7%	#5
Degree of Seasonal Variation in Car Traffic, 2008	11.2 %	#5
% Decrease in July through December Car Traffic, 2007 to 2008	-3.5%	#1

BORDER INFRASTRUCTURE: BOOTH DISTRIBUTION, 2008

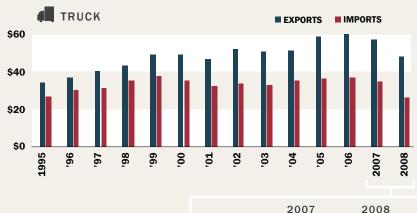
	COMMER	CIAL	AU	то
	STANDARD	FAST	STANDARD	NEXUS OR FLEXIBLE
🛨 Port Huron	7	~	7	~
Port Huron	5	~	11	¥

EXPORT SPECIALIZATIONS⁴

Chemicals and Allied Industries; Plastics/ Rubbers; Raw Hides, Skins, Leathers & Furs; Mineral Products; Textiles

PORT : DETROIT, MICHIGAN

POROSITY: TRADE FLOWS, 1995-2008, IN BILLIONS



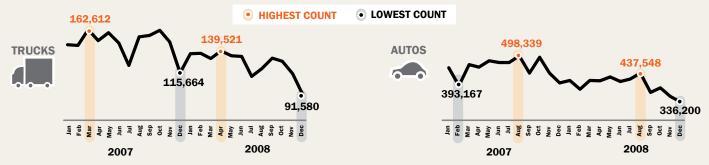




POROSITY: COMMODITY COMPOSITION, 2008



POROSITY: TRAFFIC ENTERING U.S BY MONTH, 2007-2008



>> With a less diversified commodity structure than other ports, Detroit took the biggest hit in terms of truck, rail and auto flows from 2007 to 2008.

COMPARATIVE PERSPECTIVES

		RAINE
% Change in Total Trade Value, 2007 to 2008	-19.5%	#8
Dependency on Manufacturing Commodities in 2008	68.0 %	#8
Degree of Seasonal Variation in Car Traffic, 2008	3.5%	#8
% Decrease in July through December Car Traffic, 2007 to 2008	- 16.2 %	#8

DANK

BORDER INFRASTRUCTURE: BOOTH DISTRIBUTION, 2008

			AUTO	
	STANDARD	FAST	STANDARD	NEXUS OR FLEXIBLE
🛨 Ambassador Bridge	13	~	19	~
🔶 Ambassador Bridge	18	~	11	~
+ Detroit-Windsor Tunnel	2	~	9	~
Detroit-Windsor Tunnel	3	 Image: A second s	9	~

EXPORT

Products

SPECIALIZATIONS⁴

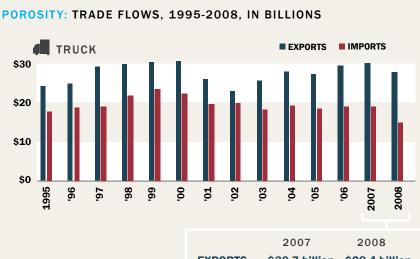
Machinery/Electrical;

Transportation;

Service; Animal &

Animal Products;

Wood and Wood







POROSITY: COMMODITY COMPOSITION, 2008



POROSITY: TRAFFIC ENTERING U.S BY MONTH, 2007-2008



>> With vacations and tourism in high gear during summer, the four border crossings at Buffalo-Niagara Falls manage the highest levels of auto traffic.

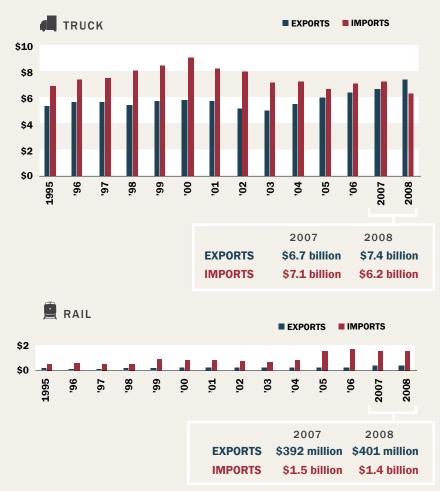
COMPARATIVE PERSPECTIVES RANK

% Change in Total Trade Value, 2007 to 2008	-10.8 %	#7
Dependency on Manufacturing Commodities in 2008	48.3%	#7
Degree of Seasonal Variation in Car Traffic, 2008	15.1%	#4
% Decrease in July through December Car Traffic, 2007 to 2008	-7.3%	#5

		AUTO	
STANDARD	FAST	STANDARD	NEXUS OR FLEXIBLE
7	~	11	~
4	~	14	~
-	-	15	~
-	-	14	~
-	-	2	~
-	-	1	v
4	~	6	-
3	¥	6	-
	STANDARD 7 4 - - - - 4	STANDARD FAST 7 • 4 • - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -	STANDARD FAST STANDARD 7 V 11 4 V 14 - - 15 - - 14 - - 14 - - 14 - - 14 - - 2 - - 1 4 V 6

PORT : CHAMPLAIN, NEW YORK

POROSITY: TRADE FLOWS, 1995-2008, IN BILLIONS



POROSITY: COMMODITY COMPOSITION, 2008



POROSITY: TRAFFIC ENTERING U.S BY MONTH, 2007-2008



>> Distant from the industrial Midwest and close to timber resources, this port accommodates a relatively small flow of manufactured goods.

COMPARATIVE PERSPECTIVES

		RANK
% Change in Total Trade Value, 2007 to 2008	-1.5%	#4
Dependency on Manufacturing Commodities in 2008	29.2%	#1
Degree of Seasonal Variation in Car Traffic, 2008	22.4%	#1
% Decrease in July through December Car Traffic, 2007 to 2008	-12.7%	#7

	COMMERCIAL		AUTO	
	STANDARD	FAST	STANDARD	NEXUS OR FLEXIBLE
+ Champlain	9	`	10	~
🕈 Champlain	3	× .	1	 Image: A set of the set of the

A NORTHERN BORDER RESEARCH AGENDA

*

This edition of the Border Barometer underscores several key themes in Canada-U.S. engagement. Metrics generally reveal that regional variation exists among ports, most evident in commodity flows.

Data also suggest that rail exports are up at most ports, pointing to the potential of this transportation mode to future commercial exchange. Yet the Border Barometer highlights that declines in social interaction and steep drops in truck traffic continue to affect economic exchange between actors on both sides of the border. Across the border, imports have taken a hit as well, although it is unclear how much of this drop is due to the economy, changes in the rules of the game or other factors.

These findings, coupled with the significance of the northern border to the economies of the United States and Canada, point to the need for policies that better enhance economic competitiveness. The Border Barometer is a



good start, providing a solid foundation for analysis. Crafting better policy will depend upon a clear understanding of challenges, new ways of thinking about these challenges and a forum for actors to exercise creative, enlightened leadership and brainstorm about strategy and action steps. Ultimately, stakeholders must become better at telling the story of the border, demonstrating with objective analysis that border policies that strengthen or weaken the Canada-U.S. relationship are the lifeline for continued prosperity.

Going forward, a research agenda with buy-in from the academic, public, private and nonprofit sectors is essential to crafting policies that work. An agenda that posits important yet unanswered questions could include the following:

What if border flows decline at a rate of five percent per year over the next ten years? What if flows increase five percent per year for the next five years?

How should the northern border be governed?

How does border policy impact the competitiveness of Canada and the US in the global economy?

How does the northern border differ from the southern border?

At the end of the day, the hazards of uninformed decision-making are real. Asking and answering the right questions will lay the foundation for the future of these two neighbors and allow policymakers to best address both common and extraordinary challenges presented by the border.

DATA NOTES

- ¹**TRADE FLOWS AND COMMODITY COMPOSITION DATA:** Given the Border Barometer's focus on structured border crossings, data pertain only to land transport (rail and truck), with trade involving energy (pipeline) excluded.
- ²TRUCK AND RAIL TRADE FLOWS: Truck and rail trade flows calculated for 1995-2008 were adjusted to 1995 values using import and export price index factors obtained from the Bureau of Labor Statistics.
- ³**COMMODITY COMPOSITION:** Based on the two-digit Harmonized System Codes classification system, the commodity categories used in this report are as follows: Food, beverages, agricultural commodities (1 - 24); Minerals, ores, chemicals plastics, rubber, fossil fuels (25 – 40); Wood, fabrics, clothing, paper products, books (41 – 71); Metals, metallic materials (72 – 83); Manufactured goods (84 – 96); and Other goods (97 – 99). In addition, percentages for the commodity composition pie charts may not add up to 100 because of rounding calculations.

⁴**EXPORT SPECIALIZATIONS:** In order to identify sub-sector export specializations, a more detailed sixteen category classification than in Commodity Composition was used. Specializations were determined using a Location Quotient analysis. A statistical measure of concentration, the location quotient indicates the geographical concentration of an activity (in this case, trade by commodity), as a function of the expected concentration based on the average occurring at the eight port universe. For example, 'Footwear / Headgear' is a specialization at Buffalo-Niagara Falls because it represents 7% of all trade at the port, but average trade is 4% for all ports.

⁵SEASONAL VARIATION: This measures the degree to which a port's automobile traffic is evenly distributed over a year. Based on the assumption that an equal distribution of automobile traffic (25% of car traffic occurring in each quarter) reflects no seasonal variation, this metric calculates the sum of quarterly absolute deviations from equal distribution. For example, the Blaine crossing's quarterly car traffic breakdown was 23.3% / 25.2% /29.5% /22.5%. The sum of each quarterly deviation from 25% is 8.5%.

DATA SOURCES

TRADE FLOWS AND COMMODITY COMPOSITION: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, North American Transborder Freight Data.

TRAFIC BY MONTH: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Border Crossing/Entry Data; based on data from U.S. Department of Homeland Security, Customs and Border Protection, OMR database.

BORDER INFRASTRUCTURE: Booth distributions represent estimates based on a compilation of sources and methodologies including: published information on the U.S. Customs and Border Patrol and Canadian Border Services Agency Web sites; the Canada-United States Transportation Border Working Group Online Border Infrastructure Compendium; and visual counts obtained from online aerial map sites.





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