

CROSS-BORDER AND NORTH AMERICAN COOPERATION ON BORDER AND TRANS-BORDER INFRASTRUCTURE

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The continued growth of trade and integrated supply chains within North America is heavily dependent on ongoing improvements in transportation systems and other forms of critical infrastructure linking the three countries and facilitating greater efficiencies and environmental sustainability in managing sectoral and regional interdependence in each country.

Many industries operate on a North American or broader international scale that fosters varying degrees of interdependence and inter-vulnerability - the mutual vulnerability of interests in each country to political, economic, and natural/environmental shocks in neighboring jurisdictions.² The notion of “protecting critical infrastructure” is merely one dimension of the effective operation of interrelated physical, technological, and administrative systems necessary to enable secure and efficient flows of trade and travel across national borders. However, these systems function in a context of extensive sectoral diversity, multiple and often asymmetrical (federal / state / provincial) jurisdictions in each country with corresponding differences in legal and regulatory requirements *between and within* the nations of North America.

This paper addresses the conference organizers’ question: “how can we continue to ensure that we effectively process and promote the flow of legitimate travel and trade across the borders while safeguarding and maintaining our individual and shared infrastructure, assets and facilities?”

Defining Critical Infrastructure

The U.S. Department of Homeland Security (DHS) defines critical infrastructure as “the assets, systems, and networks, whether physical or virtual, so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, natural economic security, public health and safety, or any combination thereof.”³ Canada’s *National Strategy for Critical Infrastructure*, released in 2009, defines “CI” as “those physical and information technology facilities, networks, services and

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² Charles Doran Fin (1984), *Forgotten Partnership: Canada-US Relations Today* (Baltimore: Johns Hopkins University Press), 8, 53-66; Geoffrey Hale (2011), “Nobody’s Partner: Canada and Congress,” in Greg Anderson and Christopher Sands, eds., *Forgotten Partnership Redux: Canada-US Relations in the 21st Century* (Amherst, NY: Cambria Press), 269-301.

³ U.S. Department of Homeland Security (2012), “Critical Infrastructure Protection and Resilience Month,” (Washington, DC: December); online at: www.dhs.gov/cipr-month-2012; accessed 8 January 2013.

assets, which, if disrupted or destroyed, would have a serious impact on the health, safety, security or economic well-being of Canadians or the effective functioning of governments in Canada.”⁴

Presidential directives have established 18 sectoral policy councils in the United States, most of which draw upon private sector as well as relevant governmental expertise. Comparable policies in Canada have established 10 sectoral policy councils – several of which are heavily dependent on the consensual negotiation of policy frameworks with provincial and territorial governments with varying degrees of policy capacity and effective autonomy. Up to 85 percent of critical infrastructure in each country is owned and operated by the private sector or by provincial, state and/or quasi-governmental authorities. As a result, these policy frameworks – and the ways in which they are reflected in or integrated with the operations of critical infrastructure – can vary widely from one sector to another. In addition, very different regulatory structures in the United States and Canada generally ensure that cooperation on critical infrastructure planning and protection is subject to varying domestic political and legal requirements in each country. Historically, this reality has been even more evident in constraining cross-border cooperation between the United States and Mexico.

Even in sectors in which national or federal governments have primary jurisdiction, such as border-related infrastructure, the development of cooperative bilateral or trilateral policies are heavily dependent on the extent to which specific government agencies, as well as regional/local economic, social and political interests perceive their own interests to be positively (rather than negatively) associated with the development of cooperative and complementary policies. As a result, framing effective policies for the development, operation, renewal and protection of border infrastructure – as with other forms of critical infrastructure – requires an awareness of similarities and differences in operational conditions and requirements along U.S.-Canadian and U.S.-Mexican borders.

Northern and Southern Borders: Similarities and Differences

Border infrastructure on the U.S. northern and southern borders differs significantly in at least five major ways:

- the number and geographic dispersion of border crossings;
- differences in the nature and intensity of traffic flows;
- relative traffic concentration on land borders;
- regularity and seasonality of traffic flows;
- variations in levels and types of border enforcement.

There are 121 U.S. land border crossings with Canada along a 5,525 mile border, 3,987 miles with the lower-48 states, compared to 47 with Mexico, including a recently opened automated crossing, along a 1,969 mile border.

Infrastructure and related services along the U.S.-Canada border are organized to facilitate local border crossings by area residents, many of whom have developed a “borderlands” culture of extensive interaction and interdependence, even in relatively remote areas of western and northern Canada. For example, 69.4 percent of the 85 DHS reporting areas⁵ on the U.S.-Canada border reported fewer than

⁴ Public Safety Canada (2009). *National Strategy for Critical Infrastructure* (Ottawa); online at: www.publicsafety.ca.ca/prg/ns/ci/fl/ntnl-eng.pdf; accessed 8 January 2013; see also Graham, *Canada’s Critical Infrastructure*.

⁵ Reporting areas in more densely populated areas may involve more than one port-of-entry – e.g. the Buffalo-Niagara and Detroit-Windsor corridors.

500 daily passenger vehicle crossings in 2011, accounting for 8.7 percent of such crossings. In addition, 66.3 percent of DHS reporting areas reported fewer than 50 daily truck crossings in 2011 – and 5.1 percent of overall truck crossings on the northern border.

By contrast, security measures on the U.S.-Mexican border funnel traffic through a much smaller number of ports-of-entry, mainly located in or close to major urban areas. Only 1 of the 25 DHS reporting areas on the U.S.-Mexican reported fewer than 500 daily passenger vehicle crossings in 2011, accounting for 0.02 percent of such crossings; only 3 of 18 reporting areas had fewer than 50 daily truck crossings accounted for 0.5 percent of U.S.-bound crossings.

a) Differences in the Nature and Intensity of Traffic Flows

Trends in cross-border travel **by individuals** across the land borders with Canada and Mexico have been even steeper than reductions in passenger vehicle traffic noted in Table 1, dropping 40.6 percent and 41.2 percent respectively between 2000 and 2009 – although entries from Canada had recovered to 65.7 percent of 2000 levels by 2011, compared with a further decline to 46.3 percent from Mexico.

However, these aggregate statistics mask significant regional differences in trends and volumes of cross-border travel and truck shipments on both borders – particularly since the end of the 2008-09 recession. Personal vehicle traffic increased 18.4 percent on the U.S. northern border in 2009-11, despite falling even more rapidly than traffic from Mexico between 2000 and 2009. Northbound traffic from Mexico dropped an additional 13.0 percent during the same period.

Table 1: What effects from economic recovery since 2009?

	Passenger Vehicles			% chg	Trucks			% chg
	2000	2009	2011	2009-11	2000	2009	2011	2009-11
U.S.-Canada Total	100.0	72.3	85.6	+ 18.4	100.0	71.2	77.9	+ 9.4
* East of Lakehead	100.0	66.1	73.1	+10.6	100.0	69.2	76.0	+8.1
* West of Great Lakes	100.0	92.5	125.9	+36.1	100.0	78.7	85.0	+9.8
U.S.-Mexico Total	100.0	76.2	66.3	-13.0	100.0	113.4	108.4	+13.4
* California	100.0	85.2	79.2	-7.0	100.0	108.1	107.6	+8.1
* Texas	100.0	70.7	57.7	-18.4	100.0	116.4	106.7	+16.4
* Arizona	100.0	71.7	65.2	-9.1	100.0	103.1	103.0	+3.1
* New Mexico	100.0	170.3	150.5	-11.6	100.0	181.4	220.9	+21.8

Source: U.S. Bureau of Transportation Statistics; author's calculations.

By contrast, truck traffic has increased on both borders since 2009 – 13.4 percent from Mexico and 9.4 percent from Canada. However, above average growth in “inbound” U.S. truck traffic is notable in New Mexico (21.8 percent - from a small base), Michigan (17.4 percent), Texas (16.4 percent), Montana (14.4 percent), Minnesota (11.6 percent) and Idaho (11.3 percent).

One major implication of these diverse patterns is the need for different regional planning processes, as recognized by the U.S.-Mexico 21st Century Border Management process initiated in 2010, and in the

need for different strategies for the effective management of major regional ports-of-entry and smaller (and more remote) ports – as recognized in the U.S.-Canada Border Action Plan of December 2011.⁶

b) Relative traffic concentration (Land Borders)

The seven (28 percent) busiest U.S.-Mexico border crossing areas processing more than 10,000 passenger vehicles daily accounted for 71.2 percent of U.S.-bound passenger vehicle traffic and 84.8 percent of U.S.-bound truck traffic. The six (7.1 percent) busiest U.S.-Canada border crossing areas (with 3,000 passenger vehicles or more daily) accounted for 54.7 percent of U.S.-bound vehicle traffic and 71.1 percent of U.S.-bound truck traffic (see Table 3).

Although this concentration of traffic points to the importance of cross-border cooperation in developing both capital funding and operational strategies that focus a larger share of available resources on the busiest crossings – as with the Canadian government’s “Gateway Strategy” of recent years, the highly regionalized nature of much border traffic also suggests the importance of ensuring that investments in border modernization also flow to crossings which account for a disproportionate share of traffic in their respective regions.

c) Regularity / Seasonality of Traffic Flows

Most U.S.-Mexico border crossings are characterized by very limited monthly variations in passenger vehicle traffic, with a standard deviation of 5.8 percent in monthly averages, along with modest variations in truck traffic – suggesting relatively high volumes of local and other regular users. Only 4 of 25 reporting areas report standard deviations of more than 10 percent in passenger vehicle or truck traffic.

U.S.-Canada border crossings are characterized by a much greater range of seasonality. Major regional crossings along the Michigan-Ontario border, Pacific Coast region, the Maine-New Brunswick border, and the Alberta-Montana border are characterized by limited seasonal volatility (less than 20 percent for passenger vehicles; less than 10 percent for trucks). However, some regionally significant crossings and many smaller border crossings are characterized by much higher levels of seasonality.

d) Enforcement Actions

Enforcement levels along the U.S. southwestern border with Mexico border have always been substantially higher than on its northern border with Canada. Tighter border and workplace enforcement since 2000 and a substantial decline in illegal immigration since the 2008-09 recession have been noticeable on both borders – although the discrepancy between enforcement action at ports of entry between the two borders has usually been significantly less than in enforcement actions against non-U.S. citizens in other sectors.

Recommendations

The most important priority for the strengthening and protection of border infrastructure is for all three governments to focus on the implementation and extension of current bi-national border modernization initiatives: the U.S.-Canada Beyond-the-Border Action Plan and the U.S.-Mexico 21st Century Border Management process. The agendas and stakeholder networks of the two processes are complementary

⁶ *United States and Canada Beyond the Border Action Plan: A Shared Vision for Perimeter Security and Economic Competitiveness – Action Plan* (Washington and Ottawa: U.S. Department of Homeland Security and Privy Council Office, Government of Canada, 11 December 2011), 17-18; online at: <http://www.dhs.gov/xlibrary/assets/wh/us-canada-btb-action-plan.pdf>.

in some areas, but are also sufficiently distinctive in engaging issues specific to each border and border region to warrant the continued development of their separate agendas.

Specific recommendations for improving infrastructure management include:

- the development of clear parameters for prioritizing investments in each sector, involving both national and bi-national collaborative processes;
- the development of innovative approaches for internal and cross-border funding partnerships to provide increased leverage for federal funding in each country;
- the development of incentives for more efficient use of resources including targeted user pay methods, congestion pricing, and sharing of 'best practices' in traffic management and conservation techniques;
- the need for clear deadlines and regular reporting mechanisms to provide greater transparency and operational accountability, and provide mechanisms for the sharing of best practices ("retail metrics" as well as "systems metrics")⁷ among stakeholders on both borders.

It should be recognized that the use of such methods are part of a broader toolkit for the effective management of border infrastructure and related systems that require adaptation to the specific circumstances of individual projects and ports-of-entry.

Implementation of promised land-precleanance pilot projects on the U.S.-Canada border is a vital complement to the ongoing modernization and efficient management of border infrastructure – especially in areas with locational constraints on expanding border facilities. Officials of both governments should seek creative approaches to the challenges of managing different border settings, and reconciling differences in each country's legal requirements and immunities which have created barriers to more effective cooperation in this area.

⁷ Thanks to Mariko Silver for this helpful distinction.