SIX TRADE CORRIDORS TO THE US: THE LIFEBLOOD OF CANADA'S ECONOMY

Russ Kuykendall

The Canada-US border is the crossing point for the largest merchandise trade relationship in world history. Driven by the Canada-US Free Trade Agreement and the NAFTA, Canada's merchandise exports to the US reached US$255 billion in 2004, while imports from the US were US$163 billion, for total two-way merchandise trade of US$418 billion, leaving Canada with a merchandise trade surplus of US$92 billion. In this article, adapted from the publication, *Greenlighting Trade: A Trade Corridors Atlas*, from the Work Research Foundation, the author drills down on the numbers and finds that Canada-US trade can be broken into six corridors, largely along regional and sectoral lines, such as the Ontario-Michigan automotive corridor, and the Alberta energy corridor.

La frontière canado-américaine est le point de passage de la plus importante relation commerciale de toute l'histoire mondiale. Sous l'impulsion de l'Accord de libre-échange Canada-É.-U. et de l'ALENA, nos exportations vers les États-Unis comptaient pour 255 milliards de dollars en 2004 et les importations américaines vers notre pays pour 163 milliards. Des échanges totalisant 418 milliards qui laissent au Canada un excédent de 92 milliards. Dans cet article adapté de son étude intitulée *Greenlighting Trade: A Trade Corridors Atlas* publiée par la Work Research Foundation, l'auteur décortique les chiffres et conclut que ces échanges peuvent être répartis entre six corridors commerciaux, la plupart suivant un axe régional ou sectoriel. C'est le cas notamment du corridor automobile Ontario-Michigan et du corridor énergétique de l'Alberta.

In *A Special Relationship: Canada-US Trade in the 21st Century*, a speech delivered to a Trade Corridors Roundtable in 2005, Allan Gotlieb argued for the deepening of bilateral channels between the two countries, given "a common commitment to values, principles and way of life that marks our relationship as different from that of most other nations, even the most friendly." Former ambassador Gotlieb advocates the broad strategy framed by common commitments that reflect the trading culture of Canada and the US. The following argues that these commitments and our trading culture are expressed in the various trading communities shaped by geography, the sectoral character of most trade, and by the myriad human and institutional relationships that make trade possible.

Canada-US trade can best be understood framed by the concept of "trade corridors." The following proposes a sector-based and geographically conditioned argument for the "corridor character" of Canada-US trade. That Canada and the US cooperate in the production of goods and services across political boundaries within sectors, by geographic proximity, and by way of physical transportation infrastructure. Trade corridors tend to integrate the Canada and US economies.

Trade corridors are more than transportation infrastructure. Therefore, trade corridors are defined as streams of products, services, and information moving within and through communities in geographic patterns according to a matrix or "culture" of trade agreements and treaties, statutes, delegated legislation, and custom that govern and guide trading relationships, institutions, and structures.

In what follows, the six largest sectors of Canada's export trade to the United States, which illustrate the usefulness of the concept of trade corridors, are described. First, trade corridors are related to two other conceptual frameworks currently employed in understanding Canada's international trade, gateways and global supply chains.

David Emerson was sworn into the Harper cabinet as minister of international trade and minister for the Pacific

Gateway and the Vancouver-Whistler Olympics. Part of Emerson's title, minister for the Pacific Gateway, is indicative of a Canadian trade priority focusing on the Pacific Rim and, especially, development of trade with China. Canadian traders are enamoured of the prospects of reaching a market populated by more than 1.2 billion people. However, market access and penetration tends to flow in favour of the Chinese.

This is clearly illustrated in respect of Canada's largest trading partner and export market, the United States. From 2000 to 2004, China's merchandise exports to the US grew from about US$100 billion to US$196.2 billion, while US merchandise exports to China grew from about US$15 billion in 2000 to US$32.6 billion in 2004. The US trade deficit with China increased US$38.6 billion to US$163.6 billion from 2003 to 2004. The clear advantage went to China. For comparison (from the same US government source), Canadian merchandise exports to the US rose from about US$235 billion in 2000 to US$255.7 billion in 2004. US merchandise exports to Canada rose slightly from about US$160 billion in 2000 to US$163.2 billion in 2004. The US trade deficit with Canada increased US$17.2 billion (23 percent) to US$92.5 billion from 2003 to 2004. While China's merchandise exports to the US rose in 2004 over 2003 by US$44.5 billion or 29 percent, Canada's merchandise exports to the US in the same period increased by US$31.6 billion or 14 percent. Again, advantage China.

For purposes of comparison, Canada's merchandise exports to China increased from US$3.4 billion in 2003 to US$5.1 billion in 2004 and to US$5.8 billion in 2005. Canada's merchandise imports from China increased from US$13.2 billion in 2003 to US$18.5 billion in 2004 and to US$24.3 billion in 2005. Yet again, the advantage clearly goes to the Chinese.

To frame Canada's international trade policy in terms of gateways focused on trade with China is to reinforce their competitive advantage, not ours. This is true for the bilateral trade, and for Canada's competition with China in the US merchandise market. The latter is the case since a gateway's framework tends to divert Canada's international trade focus from the world's largest merchandise market, and from the merchandise market, where Canada holds the greatest competitive advantages in terms of geographic proximity, language, and culture — including business culture. That market, of course, is the United States.

Global supply chain research points to how Canada's trade is organized mainly in terms of businesses, offering a description of Canada's trade flows. It is helpful. But this presents an inadequate explanation by itself of Canada's trade capable of informing and providing direction to Canada's international trade policy.

In February 2006, the federal Department of Industry hosted a conference in Ottawa designed to educate public servants with the department about the concept of "the global supply chain." Over the last few years, Industry Canada has pursued research framed by this concept, seeking to drill down onto how goods and services move, not just through the Canadian economy, but through Canadian industry to and from the world. In effect, "the global supply chain" is framing Industry Canada's efforts to understand the flows of Canadian exports and imports — Canada's international trade.

Global supply chain research points to how Canada's trade is organized mainly in terms of businesses, offering a description of Canada's trade flows. It is helpful. But this presents an inadequate explanation by itself of Canada's trade capable of informing and providing direction to Canada's international trade policy.

That said, both "gateways" and "global supply chains" are conceptual metaphors designed to bring coherence to our understanding of international trade. "Trade corridors," however, is a metaphor grounded in history that offers greater coherence, insight, and a more fully rounded understanding of international trade, and allows us to account for Canada's most important trading relationship — that with the US.

Canada's challenge is to maintain and expand the infrastructure necessary to keeping itself accessible to the world, especially to the US. The Canada-US trading relationship is by far the largest and most valuable in the world. In terms of merchandise trade, Canada's exports to the world in 2004 were valued at $411.3 billion. Exports of merchandise to the United States amounted to $348.1 billion, constituting 85 percent of Canada's merchandise exports.

Canada's dependence on the US market for merchandise exports can hardly be overstated. For example, over half of Ontario's output is in exports to the US. Canada's dependence on the US market for services exports is similar. In 2004, Canadian service exports globally were $62.3 billion. Service exports to the United States were valued at $36.0 billion.

If trade is the foundation on which Canada's economy is built, then trade with the United States is the cornerstone. Our living standards and our ability to fund health care, education, old age pensions, and other social programs are predicated on trade, especially Canada-US trade.

Canada's trade is characterized by a heavy dependence on trading with the United States, and on a Canada-US economy that is integrated by way of trade. This integration of the Canada-US economy is represented in Canada's top six export sectors to the United States: motor vehicles and parts, mineral fuels and oils, machinery and equipment, forest products, commercial services, and agricultural and fish products. These six sectors illustrate how Canada's trade is shaped by its sectoral character, and how these sectors' regional orientations — or, *concentration in certain geographic regions of North America* — tend to integrate the Canadian and US economies regionally. The integration of these sectors of trade constitutes trade corridors. Since exports of merchandise and services are concentrated by region, the trade corridors account that follows focuses on the region, province, or provinces that are the primary source of these exports from Canada and their destinations in the United States. This research looks at Canada to US merchandise trade in two ways: first, by industry; and then by product and service.

However, for consistency, the statistics cited and the analysis given is based on the value of export products and services.

1. The Ontario-Michigan automobile manufacturing trade corridor (figure 1). Canada's exports of "motor vehicles, trailers, bicycles, motorcycles and other similar vehicles" in 2004 to the world were valued at $80.1 billion. Canada's exports to the United States in this category totalled $77.6 billion in 2004. This export category accounts for a favourable trade balance — a trade surplus — of $28.3 billion with the US. Some 95 percent of Canada's exports to the US from automobile manufacturing come from Ontario.

Ontario's merchandise exports to the world in all categories amounted in 2004 to $199 billion, of which $180 billion, or 90 percent, went to the United States. Of Ontario's exports to the world, $75.8 billion, or 38 percent, for 2004 were in the automotive industry. From Ontario, automobile manufacturing exports were responsible in 2004 for $73.8 billion or 41 percent of Ontario's total merchandise exports to the US. Over the last five years, Ontario's exports in this category were relatively stable, averaging $75 billion, albeit trending slightly downward overall.

FIGURE 1. ONTARIO-MICHIGAN AUTO MANUFACTURING TRADE CORRIDOR*

Source: *Greenlighting Trade: A Trade Corridors Atlas*, based on Statistics Canada data.
* Approximate major points of origin and destination, and volume of Canadian export trade. Does not necessarily portray transportation routes.

That Ontario is engaged in automobile manufacturing with Michigan becomes clear when one considers that Ontario's exports in this category to Michigan are valued at $46.6 billion. Compare this with exports to other states and regions of the US, which are relatively evenly distributed, except for California, which receives automobile manufacturing exports from Ontario valued at $13.8 billion. Nearly 60 percent of Ontario's exports to the US in this category are to Michigan. As Stephen Blank of Pace University, New York City, put it: "We (Canada and the United States) make cars together." To narrow or focus this remark further, Ontario and Michigan make cars together.

What this suggests is the integration of a Canada-US auto industry concentrated in the Ontario-Michigan trade corridor, which then distributes the products of this industry in a supply chain throughout the rest of Canada and the United States. Consequently, the greatest strain on physical infrastructure — highways, ports and canals, railways, bridges and tunnels, and customs and border facilities — are those incoming and outgoing between Ontario and Michigan. But the greatest strain is on infrastructure from Ontario to Michigan. The strain placed on this infrastructure should not be underestimated: 27 percent of all Canada-US merchandise trade exports pass over the Ambassador Bridge between Windsor and Detroit.

2. The Alberta mineral energy trade corridor (see figure 2). Canada's total merchandise exports to the world in the category of "mineral fuels, mineral oils, bituminous substances and mineral waxes" in 2004 were valued at $68.6 billion. Canada's exports to the US in this merchandise category were valued at $66.5 billion in 2004, or almost 97 percent of its world exports. Canada's trade balance with the US in this sector alone is $43.4 billion in Canada's favour. This sector is responsible for almost 77 percent of Canada's overall trade surplus with the US accumulating to $56.6 billion in 2004. Some 69 percent of all mineral energy exports in this category from Canada to the US, valued at $46.1 billion, comes from Alberta.

Alberta's 2004 merchandise exports to the world are valued at $67.3 billion, of which $59.5 billion, or 88 percent of the total, go to the United States. Of Alberta's exports to the US, 77 percent are "mineral fuels, mineral oils, bituminous substances and mineral waxes" valued at $46.1 billion.

Year on year, Alberta's mineral energy exports increase at a remarkable rate. Alberta's mineral energy exports to the US increased 6.8 percent from 2000 to 2001, decreased 17.5 percent from 2001 to 2002, increased 32.6 percent from 2002 to 2003, and increased 15.2 percent from 2003 to 2004 — for a total increase in the value of mineral energy exports of 34.6 percent from 2000 to 2004.

Alberta's exports of oil and gas follow a network of energy pipelines, and as such the destinations of these exports follow the pipeline network. From the point of view of infrastructure, the Alberta mineral energy trade corridor is defined by this pipeline network. Its number one and number two export destinations — to Illinois, valued at $9.8 billion, and to Washington State, valued at $6.8 billion, or more than one-third of total mineral energy exports to the US — are the sites of major pipeline terminals.

While the key to understanding Canadian and US automobile manufacturing is that it is a North American automobile manufacturing industry centred in Ontario and Michigan, mineral energy exports from Canada are somewhat different. Here, the key things to keep in mind are that Canada is a net exporter — by far — of mineral energy to the US, and that mineral energy production is concentrated in Alberta. Canada's production of oil is far outstripping domestic demand and is projected over time to approach US levels of oil production.

Canada's demand for natural gas is a fraction of domestic natural gas production, most of which is exported to the US. So, while there is a North American mineral energy industry, Canada's role and, especially, Alberta's, is as a net supplier of mineral energy to US demand. Alberta's mineral fuels industry — "the oil patch" — is poised for another stage of if not unprecedented, near-unprecedented growth, with the potential to create thousands of new jobs in Canada. According to the Alberta Chamber of Resources, the industry is poised to see its production increase "more than twofold to five million barrels a day, or 16 percent of North American demand by 2030," and to "generate an additional $40 billion of economic growth in Canada." More than $100 billion of development construction has been announced in the Fort McMurray-Athabasca oilsands, alone. The Alberta Chamber of Resources calls for advance planning to keep pace with development of supply and demand as this trade corridor expands and intensifies.

As Alberta's production of natural gas from northwestern Alberta and production of oil sands crude from northeastern Alberta increases along with US demand, exports will outstrip pipeline capacity. As more production of offshore crude comes onstream from Atlantic Canada, pipeline capacity must be increased in order to move supply to US markets. But the big player in the Canadian export market for mineral energy is, and will remain for some time to come, Alberta.

3. The Ontario-Quebec Machinery and Equipment Trade Corridor. According to *Trade Date Online*, Canada exports electrical or electronic machinery and equipment and nuclear reactors, boilers, machinery and mechanical products to the world valued at $51.5 billion. Of this, $40.3 billion or 78 percent goes to US destinations, resulting in a negative trade balance of $11.6 billion. Some 87 percent of US-bound exports in this sector, valued at $34.9 billion, are from Quebec and Ontario. Exports of machinery and equipment from Quebec and Ontario represent 80

FIGURE 2. ALBERTA MINERAL ENERGY TRADE CORRIDOR*

Source: *Greenlighting Trade: A Trade Corridors Atlas* based on Statistics Canada data.
* Approximate major points of origin and destination, and volume of Canadian export trade. Approximates major pipeline routes.

percent of Canada's such exports to the world. Of these exports, nearly 55 percent, valued at $19.1 billion, were to the Great Lakes states, the "mid-east," and New England. With the exception of some $2.3 billion to California, most exports of this equipment are distributed in a trade corridor running mainly east of the Mississippi south to Georgia, Florida, and Texas.

However, the value of exports of this equipment to the US has fallen by about one-quarter over the last five years, representing a shrinking export market and trade corridor for Canada. It also represented a negative trade balance of $11.6 billion, albeit the lowest over the past five years, beginning in 2000. Even with this taken into consideration, these exports represent about 10 percent of Canada's total exports to the US — an important source of jobs and trade.

4. The Forest Products Trade Corridors. Canada exports forest products in 2004 were valued at $44.7 billion, of which $35.6 billion, or nearly 80 percent, went to destinations in the United States. Canada enjoys a huge trade surplus with the US in this sector totalling $27.4 billion. The largest part of forest products bound for export is produced in seven provinces clustered in three groups: Quebec and Ontario; New Brunswick and Nova Scotia; and British Columbia, Alberta, and Saskatchewan.

- Quebec and Ontario together export forest products valued at $19.1 billion, or almost 54 percent of all such exports to the US.
- British Columbia, Alberta, and Saskatchewan together export forest products valued at $12.6 billion, or nearly 36 percent of such exports to the US.
- New Brunswick and Nova Scotia together export forest products valued at $2.8 billion, or 8 percent of such exports to the US.

Ontario and Quebec export forest products throughout a trade corridor supply chain running east of the Mississippi from the Great Lakes, the "mid-east," New England, on south to the southeast and Texas, valued at $16.3 billion or 85 percent of the total bound for US destinations from Ontario and Quebec. Nova Scotia and New Brunswick export forest products valued at $2.5 billion, or 91 percent of their US exports in this sector throughout the same trade corridor. The British Columbia-Alberta-Saskatchewan cluster, however, exports forest products valued at $7.9 billion, or 62 percent of its total US exports, to the "far west" (including a small amount to Alaska and Hawaii), to the southwest, the Rocky Mountain region, and to the plains states. To the Great Lakes region, these provinces also export forest products valued at circa $1.8 billion, or another 14 percent of their total exports of this type to the US. Since most forest products are moved between Canada and the US by rail or by highway, the key physical infrastructure challenges may be potential choke points at border crossings for customs, particularly with respect to exports from British Columbia to Washington and Oregon. But the greater barrier of long standing to the export trade in forest products from Canada has more to do with US tariffs and quotas on Canadian forest products and the ongoing dispute prosecuted by the US forestry industry in US courts and by the US administration alternately through the FTA, NAFTA, or the World Trade Organization disputes resolution processes. The 2006 softwood lumber agreement between the Harper and Bush administrations ends a five-year trade war, provides seven to nine years of certainty of access, though at capped levels of market share, and with some money left on the table.

5. The commercial services trade corridor. To reiterate, Canada's service exports to the world total $62.3 billion, of which half are in the form of commercial services valued at $32.3 billion, or nearly 52 percent of the total. Canada's service exports to the United States are valued at $36 billion, and of these $20.4 billion, or nearly 58 percent, are commercial services. By comparison, over one-quarter of service exports to the US were travel services amounting to $9.7 billion, and transportation and government services amounting to $5.8 billion. In 2004, Canada ran a trade deficit of about $5.8 billion in this sector.

Exports of commercial services to the US represent nearly one-third (33 percent) of all service exports there. Of service exports to the United States, over half were commercial services amounting to $20.4 billion. Key advantages for Canada in this sector are the overall integration in business and information technology and in accounting practices, shared time zones, and, to a large extent, our common language and culture. This sector may well represent an archetype of our definition of trade corridors.

The research does not trace the flows of Canadian exports of commercial services from specific Canadian jurisdictions to specific US jurisdictions or regions. This begs further study to track the trade corri-

As Alberta's production of natural gas from northwestern Alberta and production of oil sands crude from northeastern Alberta increases along with US demand, exports will outstrip pipeline capacity. As more production of offshore crude comes onstream from Atlantic Canada, pipeline capacity must be increased and created in order to move supply to US markets. But the big player in the Canadian export market for mineral energy is, and will remain for some time to come, Alberta.

dors of commercial services from Canada to the United States.

*6. The agricultural and fishing products trade corridors***.** Canada's agricultural products for export — excluding implements — total $26.7 billion (2004), of which $16.5 billion or almost 62 percent went to US destinations. Canada enjoys a trade surplus with the US in this sector of $4.7 billion. By far, the majority of agricultural exports to US destinations follow a trade corridor to northern states across the Canada-US border, and to California, Texas and to the more populous southeastern states of North Carolina, Georgia, and Florida.

The bulk of Canada's agricultural exports come from six provinces: Quebec, Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia. Close to one-half, or 45 percent, of Canada's US-bound agricultural exports come from Ontario, about 15 percent from Quebec, 13 percent from Alberta, about the same from Saskatchewan and Manitoba taken together (14 percent), and about 6 percent from British Columbia. Or, to put it differently, about 60 percent from Quebec and Ontario, 27 percent from the three Prairie provinces together, or almost 20 percent from Alberta and BC.

Canada's exports of fish products to the US in 2004 totalled $2.4 billion, or more than 62 percent of its exports to the world ($3.9 billion) in this category, with a resulting trade balance in Canada's favour of $1.7 billion. The value of US-bound fish products from Atlantic Canada in 2004 totalled $1.6 billion, or 67 percent of Canada's exports in this category. If Quebec is included with Atlantic Canada, that brings the total exports of fish products from this region to $1.7 billion — 71 percent of the total from Canada. British Columbia represents 22 percent of Canada's fish products exports to the US.

Of Atlantic Canada's (excluding Quebec) fish product exports, nearly 84 percent follows a trade corridor to New England. British Columbia's fish products exports to Washington, Oregon, and California total $436 million — 79 percent of its exports to the US in this product category.

Each of Canada's six largest sectoral, trade corridors is conditioned by its geographic proximity to the US market. But it is more than that. Much more. Each trade corridor represents a common or shared culture of trade. The culture of trade is more than the Canada-US Free Trade Agreement or the North American Free Trade Agreement, or any other trade agreements and treaties. The culture of trade includes a common commitment to constitutional, representative government in which the rule of law is upheld and elected officials are accountable to a popular electorate. It includes the myriad business and accounting practices, a common commitment to the sanctity of the contract, and the numerous webs of business and personal relationships, which allow orders to be placed and filled on the basis of a telephone call and the strength of a handshake. These are components of what are understood here to be trade corridors. It is this more rounded understanding of Canada-US trade that encompasses both the "gateways" and "global supply chain" frameworks, and takes both a step further.

In *Greenlighting Trade: A Trade Corridors Atlas*, published in 2005, a number of next steps are proposed that would take account of these dimensions of trade corridors. Also discussed, at greater length, is the philosophical framework that informs this development of the trade corridors concept. Trade is more than the econometrics of international transactions in goods and services. The Canada-US trade corridors are illustrative of this. The Canada-US trade corridors can point to what Canada's trade priorities should entail, predicated as they are on our shared culture. It may be that Canada should focus its trade policy by geographic proximity, but not geography alone. Canada's trade policy should take account of geography, of shared business and trading culture, of common commitments and similar institutions, and personal, human relationships across frontiers.

Trade is more than the econometrics of international transactions in goods and services. The Canada-US trade corridors are illustrative of this. Canada-US trade corridors can point to what Canada's trade priorities should entail, predicated as they are on our shared culture. It may be that Canada should focus its trade policy by geographic proximity, but not geography alone. Canada's trade policy should take account of geography, of shared business and trading culture, of common commitments and similar institutions, and personal, human relationships across frontiers.

This means to recognize the "trade corridor" character of Canada's international trade, as streams of products, services, and information moving within and through communities in geographic patterns according to a matrix or "culture" of trade agreements and treaties, statutes, delegated legislation, and custom that governs and guides trading relationships, institutions, and structures.

Russ Kuykendall is senior researcher with the Work Research Foundation (www.wrf.ca) and the assistant editor of Comment *(www.wrf.ca/comment). He is a former speechwriter for Stephen Harper. rkuykendall@wrf.ca*