

Technical Annex to the *Viewpoint* “The Economic Costs of Protectionism: The Case of Softwood Lumber”
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The 2006-2015 Canada-United States Agreement

The restrictions set out in the Agreement were triggered whenever the monthly regional price was at or below \$355 per thousand board feet. Between its entry into force in October 2006 and January 2015, these penalties were engaged for 85 months, or 77% of the time (see Table A-1).

Table A-1
Number of months in which export tariffs were activated

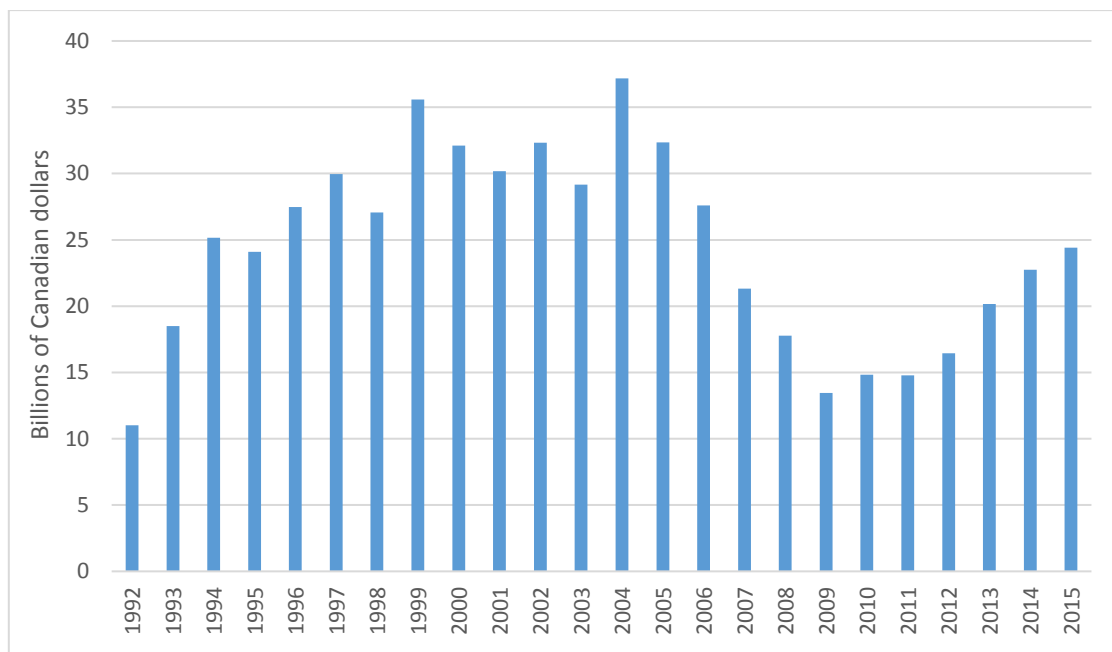
Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Total number of months	3	12	12	12	12	12	12	12	12	12	111
Number of months in which the tariffs were activated	3	12	12	12	11	12	12	3	0	9	85
Share of the total	100%	100%	100%	100%	92%	100%	100%	25%	0%	75%	77%

Source: Rajan Parajuli and Daowei Zhang, “Welfare impacts of the 2006 United States – Canada Softwood Lumber Agreement,” *Canadian Journal of Forest Research*, Vol. 46, No. 7, May 2016, p. 956.

Manufacturing Sales

The manufacturing sales mentioned in the text include the wood product manufacturing category (NAICS-321). More specifically, softwood lumber is represented by NAICS 321111, which includes the sawmill industry, excluding shingle and shake mills.¹ The available CANSIM data does not allow for the calculation of manufacturing sales for this sub-sector. Softwood lumber constitutes the large majority of NAICS 321, and because of this, we consider it representative of the softwood lumber industry. Figure A-1 illustrates the size of this sector.

Figure A-1
Total manufacturing sales for NAICS 321, 1992-2015



Note: The values are expressed in constant 2015 Canadian dollars. These are Canadian sales excluding the Atlantic Provinces. The 32 Quebec and Ontario mills excluded from the Agreement are included, but represent a negligible share of the total.

Sources: Statistics Canada, CANSIM Table 304-0015: Manufacturing sales, by North American Industry Classification System (NAICS) and province, 1992-2015; Statistics Canada, CANSIM Table 329-0077: Industrial product price indexes, by North American Industry Classification System (NAICS), 1992-2015.

¹ Daniel Dufour, "The Canadian Lumber Industry: Recent Trends," Statistics Canada, Small Business and Special Surveys Division, June 2007, p. 4.

Companies Exempted from the Agreement

Certain companies were exempted from the Agreement, but are nonetheless included in our calculations. These are 32 companies located near the border, mostly in southern Quebec, but also in Ontario, which get their lumber primarily or exclusively from private Quebec forests or from the forests of Maine. They are, however, subject to export quotas, and for this reason, we included them in our calculations since they are affected by the terms of the Agreement.² At any rate, in all, they represent an insufficiently large portion to have a substantial effect on our estimates. From October 2015 to August 2016, these companies' exports represented on average 4% of total softwood lumber exports targeted by the Agreement (see Table A-2).

Table A-2
Monthly softwood lumber exports, by region

<u>Region</u>	<u>Exports (fbm)</u>	<u>Share of total (%)</u>
British Columbia – Coastal area	661,670,197	5%
British Columbia – Interior area	6,093,014,254	46%
Alberta	1,631,027,998	12%
Saskatchewan	195,990,186	1%
Manitoba	19,042,335	0%
Ontario	995,551,795	8%
Quebec	1,990,275,743	15%
Atlantic Provinces	1,107,137,971	8%
Territories	-	0%
Excluded companies	468,740,781	4%
Total	13,162,451,260	100%

Note: “fbm” = board feet.

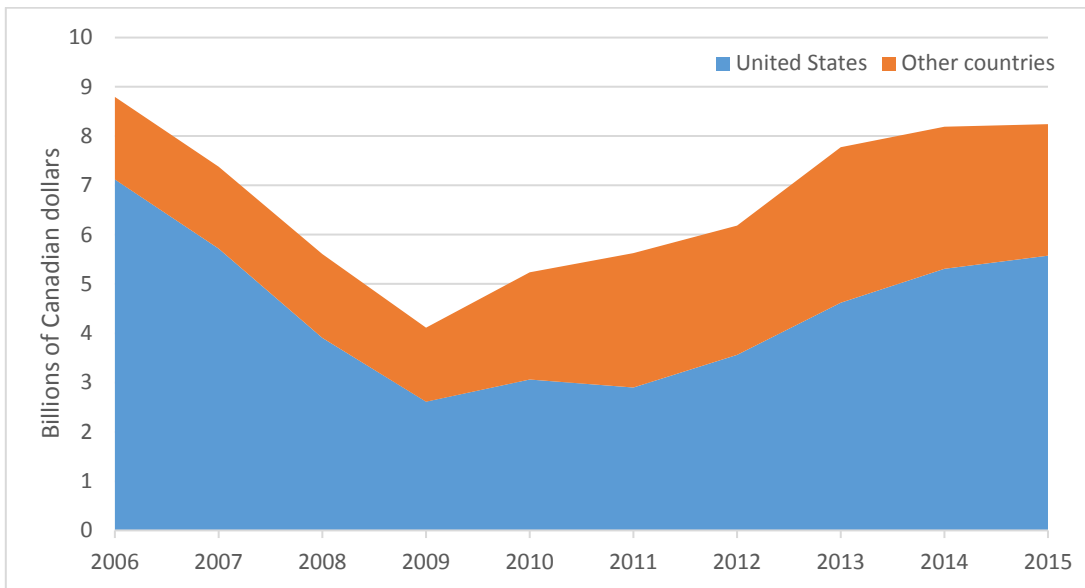
Source: Global Affairs Canada, Softwood Lumber, Monthly Export Reports, October 2015-August 2016.

² Katie Hoover and Ian F. Fergusson, *Softwood Lumber Imports From Canada: Current Issues*, Report prepared for members and committees of Congress, Congressional Research Service, August 27, 2015, p. 12; Quebec Department of Economy, Science and Innovation, *Accord sur le bois d'œuvre résineux de 2006 entre le gouvernement du Canada et le gouvernement des États-Unis*; Government of Canada, *Softwood Lumber Agreement between the Government of Canada and the Government of the United States of America*, Subsection X(2), September 12, 2006.

Softwood Lumber Exports Subject to the Canada-United States Agreement

In order to identify the value of softwood lumber exports subject to the Agreement, we used Trade Data Online (TDO) by HS code. The HS codes used are those that are closest to those mentioned in Annex 1A of the Agreement, namely HS4407.10 and HS4409.10. The TDO does not provide sufficiently precise subdivisions to include the codes mentioned in the Agreement (4407.1000, 4409.1010, 4409.1020 and 4409.1090). This is therefore the most precise estimate that can be made based on the available data. We used the NAICS 3211 industrial products price index so that the variation in the value of exports would not be affected by price volatility. Figure A-2 illustrates the value of these exports and testifies to the importance of the American market for the Canadian industry.

Figure A-2
Values of product exports, by destination, 2006-2015



Note: The values are expressed in constant 2015 Canadian dollars. These are Canadian sales excluding the Atlantic Provinces. The 32 Quebec and Ontario mills excluded from the Agreement are included, but represent a negligible share of the total. These are “domestic exports,” which include goods manufactured in Canada (including goods of foreign origin that have been transformed in Canada) and excluding re-exported products.

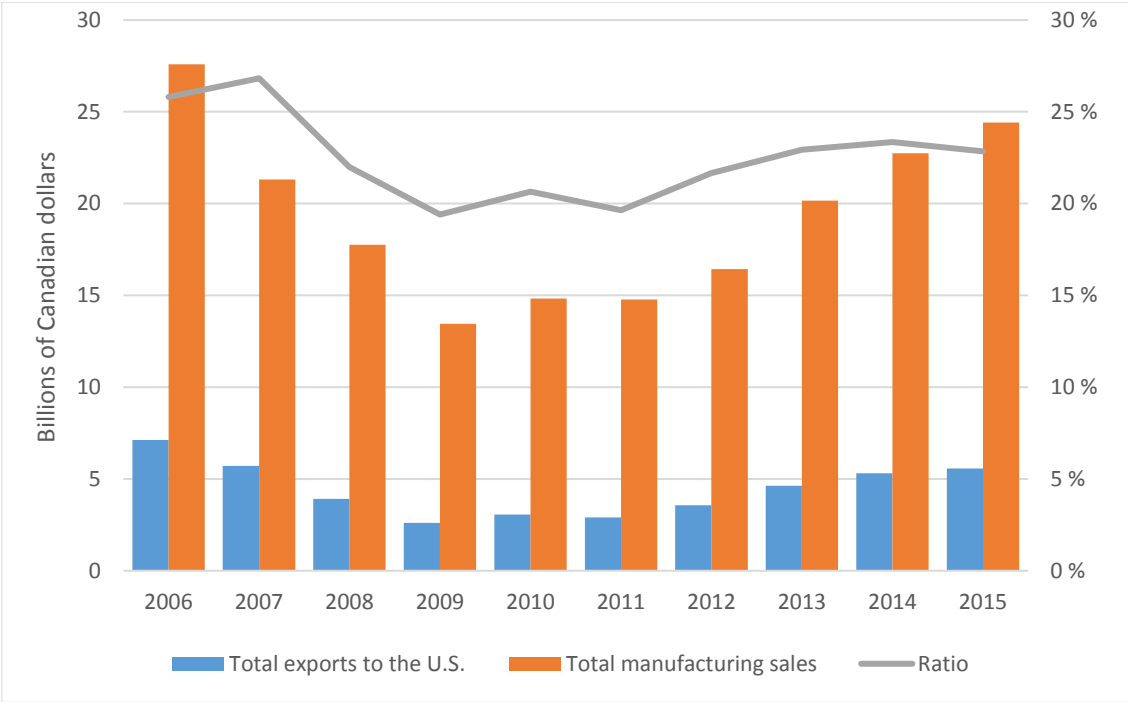
Sources: Innovation, Science and Economic Development Canada, Trade Data Online (TDO), Domestic Exports of Canada by Product (HS Code), 2006-2015; Statistics Canada, CANSIM Table 329-0077: Industrial product price indexes, by North American Industry Classification System (NAICS), 2006-2015; Global Affairs Canada, “Softwood Lumber Agreement between the Government of Canada and the Government of the United States of America,” Annex 1A, September 2006; Statistics Canada, Data quality, concepts and methodology: Technical notes, April 5, 2016.

Employment in the Softwood Lumber Sector

The available CANSIM data do not allow us to identify the NAICS 321111 that corresponds to the softwood lumber industry. Since softwood lumber represents the near-totality of NAICS 321, we used the share of exports to the United States of products covered by the 2006-2015 Agreement on softwood lumber out of the total manufacturing sales included in NAICS 321 for Canada in order to determine the share of jobs that depend on the terms of the Agreement. Our implicit assumption is that employment is distributed uniformly in NAICS 321. To obtain the proportion of 23%, we took an average for the 2006-2015 period (see Figure A-3). We then multiplied this ratio by the number of jobs in NAICS 321 for the provinces concerned by the Agreement (Quebec, Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia). Certain sawmills are exempted from the Agreement, but are nonetheless included in our calculations, including companies located near the border in Quebec which get their lumber primarily or exclusively from private Quebec forests or from the forests of Maine.³ Their weight is negligible, however, and does not distort our calculation. We obtain a total of 21,461 jobs depending directly on the terms of the Canada-United States Agreement. Jobs related to the harvesting of softwood species were not counted (NAICS 113: Forestry and logging).

³ Quebec Department of Economy, Science and Innovation, Accord sur le bois d'œuvre résineux de 2006 entre le gouvernement du Canada et le gouvernement des États-Unis.

Figure A-3
Ratio of exports of softwood lumber to the United States covered by the Agreement
over total wood product sales, 2006 to 2015



Note: The values are expressed in constant 2015 Canadian dollars. These are Canadian sales excluding the Atlantic Provinces.

Sources: Innovation, Science and Economic Development Canada, Trade Data Online (TDO), Domestic Exports of Canada by Product (HS Code), 2006-2015; Statistics Canada, CANSIM Table 329-0077: Industrial product price indexes, by North American Industry Classification System (NAICS), 2006-2015; Statistics Canada, CANSIM Table 304-0015: Manufacturing sales, by North American Industry Classification System (NAICS) and province, 2006-2015; Global Affairs Canada, “Softwood Lumber Agreement between the Government of Canada and the Government of the United States of America,” Annex 1A, September 2006.