

18-8 The Case for Raising *de minimis* Thresholds in NAFTA 2.0

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The fraught negotiations over revising the North American Free Trade Agreement (NAFTA) have focused largely on US demands to limit imports from Canada and Mexico. But one little discussed step could help the United States increase *exports* to Canada and Mexico in a way the Trump administration ought to support. US express shipments to its NAFTA partners are far below potential, partly due to what are called low *de minimis* thresholds in those countries. The *de minimis* threshold refers to the value of imported goods below which no duty or tax is collected, and the customs declaration is very simple. Hence the level of the *de minimis* threshold in a destination country affects the volume of low-value shipments exported by US business firms. The United States has a high threshold for imports from Canada and Mexico. Accordingly, raising the Canadian and Mexican *de minimis* thresholds would facilitate more exports and enlarge the choices available to consumers in those two countries. At the same time, higher thresholds would level the ecommerce playing field between North American partners and substantially benefit US exporters. Hence raising *de minimis* thresholds is a worthwhile goal in the renegotiation of NAFTA.

While tariff liberalization has stalled around the world, the agenda of trade facilitation—which was agreed at the World Trade Organization (WTO) Ministerial in Bali in 2013—is making progress. Unfortunately, North America is a laggard region, despite extensive economic integration under NAFTA auspices. The renegotiation of NAFTA, led by the Trump administration, could change that picture. Concretely, negotiators could write a new trade facilitation chapter that promotes cross-border trade in low-value shipments.

This Policy Brief reviews the very low *de minimis* thresholds in Canada and Mexico and argues that substantial room exists for the expansion of express shipments within North America. Under the assumption that express shipments from the United States to Canada and Mexico could exhibit the same relationship to likely household buyers as found in the United States, the share of actual low-value shipments to Canada and Mexico is far below potential. US low-value shipments to Canada and Mexico could potentially increase to about \$34 billion annually but have reached less than half that level. The gap suggests that higher *de minimis* thresholds could boost US exports of low-valued goods and improve consumer choice in Canada and Mexico.

TARIFF LIBERALIZATION: PROGRESS AND REMAINING OBSTACLES

Although there has been little tariff liberalization in the past decade, negotiated tariff liberalization overall since the end of the Second World War has significantly reduced barriers to merchandise trade.¹ By 2016, the world average effectively applied tariff rates on agricultural products had declined to 7.4 percent, and on manufactures, 5.8 percent.² Policy liberalization, together with falling transportation and communications costs, drove an unprecedented postwar expansion in international trade. Global trade in goods and services increased from 24.2 percent of world GDP in 1960

1. Negotiations have taken place under the auspices of the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO), as well as regional trade agreements such as the European Union, the North American Free Trade Agreement (NAFTA), and other free trade agreements (FTAs).

2. The World Bank's World Integrated Trade Solution (WITS) database, <http://wits.worldbank.org/> (accessed on October 17, 2017).

Table 1 Comparison of Logistics Performance Index (LPI) ranking for NAFTA countries and other major economies, 2016

Country	Overall LPI		Customs		Infrastructure		International shipments		Logistics competence		Tracking and tracing		Timeliness	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Top 10 economies														
Germany	1	4.23	2	4.12	1	4.44	8	3.86	1	4.28	3	4.27	2	4.45
Luxembourg	2	4.22	9	3.90	4	4.24	1	4.24	10	4.01	8	4.12	1	4.80
Sweden	3	4.20	8	3.92	3	4.27	4	4.00	2	4.25	1	4.38	3	4.45
Netherlands	4	4.19	3	4.12	2	4.29	6	3.94	3	4.22	6	4.17	5	4.41
Singapore	5	4.14	1	4.18	6	4.20	5	3.96	5	4.09	10	4.05	6	4.40
Belgium	6	4.11	13	3.83	14	4.05	3	4.05	6	4.07	4	4.22	4	4.43
Austria	7	4.10	15	3.79	12	4.08	9	3.85	4	4.18	2	4.36	7	4.37
United Kingdom	8	4.07	5	3.98	5	4.21	11	3.77	7	4.05	7	4.13	8	4.33
Hong Kong, China	9	4.07	7	3.94	10	4.10	2	4.05	11	4.00	14	4.03	9	4.29
United States	10	3.99	16	3.75	8	4.15	19	3.65	8	4.01	5	4.20	11	4.25
NAFTA economies														
United States	10	3.99	16	3.75	8	4.15	19	3.65	8	4.01	5	4.20	11	4.25
Canada	14	3.93	6	3.95	9	4.14	29	3.56	15	3.90	9	4.10	25	4.01
Mexico	54	3.11	54	2.88	57	2.89	61	3.00	48	3.14	42	3.40	68	3.38
Other major economies														
France	16	3.90	17	3.71	15	4.01	20	3.64	19	3.82	15	4.02	13	4.25
Italy	21	3.76	27	3.45	19	3.79	17	3.65	21	3.77	20	3.86	22	4.03
China	27	3.66	31	3.32	23	3.75	12	3.70	27	4.05	28	3.68	31	3.90
Japan	12	3.97	11	3.85	11	4.10	13	3.69	12	4.05	13	4.03	15	4.21
Korea, Republic of	24	3.72	26	3.45	20	3.79	27	3.58	25	4.05	24	3.78	23	4.03

NAFTA = North American Free Trade Agreement

Source: World Bank Logistics Performance Index, 2016. Available at <https://lpi.worldbank.org/international/global>.

to 58.0 percent in 2015, making a significant contribution to economic growth.³

However, logistics costs—namely the time and expense incurred at the border to comply with customs regulations, as well as the costs of poor connectivity between ports, airports, railroads, and highways—continue to restrict trade. According to the World Bank report on *Doing Business 2016*, the US cost to import a standardized shipment of 15 metric tons of containerized auto parts valued at \$50,000 was \$3,671, or 7.3 percent of the total shipment value. Likewise, the US cost to export \$50,000 of similar products was \$3,455, or 6.9 percent of the total shipment value.⁴ In

other words, logistics costs for moving goods across the US border were comparable to the average effective tariff rate faced by US exporters in 2016, namely 7.8 percent.⁵ In addition, US goods met a second layer of logistics costs when they reached foreign ports.

NAFTA countries are not global stars in reducing logistics costs. In the 2016 World Bank Logistics Performance Index (LPI), among 160 economies, the United States, Canada, and Mexico ranked 10, 14, and 54, respectively, down 1, 2, and 4 positions from their 2014 rankings (table 1).⁶ Decomposition of the LPI indicates that NAFTA coun-

3. Data come from the World Bank World Development Indicators database, <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators> (accessed on October 16, 2017). For analysis, see Hufbauer and Lu (2017).

4. Export and import costs include documentary compliance, border compliance, and domestic transportation costs. Among the three types of costs, domestic transportation costs took the largest share, accounting for over 90 percent

of total import and export costs, respectively. See *Doing Business 2016*, available at <http://www.doingbusiness.org/-/media/WBG/DoingBusiness/Documents/Annual-Reports/English/DB16-Full-Report.pdf> (accessed on October 17, 2017).

5. Simple average applied tariff rate that US exporters face in all countries is sourced from the WITS database, <http://wits.worldbank.org/> (accessed on October 17, 2017).

6. The LPI evaluates each country from six perspectives (on a scale of 1 to 5, with 5 the best practice): efficiency of

tries scored particularly low for two out of the six indicators: the ease of arranging competitively priced international shipments and timeliness. Among the burdens, inadequate *de minimis* thresholds are significant handicaps for Canada and Mexico.

Cutting logistics costs has emerged as an essential issue in the global trading system. The WTO Trade Facilitation Agreement (TFA), signed at the Bali Ministerial Conference in December 2013, entered into force in February 2017.⁷ This was a major achievement: The WTO (2015) estimated that average global trade costs could be reduced by 14.3 percent when the TFA is fully implemented. Simulation results suggest that full implementation could increase global exports by 2 to 3 percent each year, and global GDP by 0.34 to 0.54 percent per year, over the period 2015 to 2030.⁸

Consistent with the multilateral trade agenda, trade facilitation ranks among US objectives for the NAFTA renegotiation. A central component of trade facilitation is the *de minimis* threshold applied by Mexico and Canada. The United States aims to “provide for streamlined and expedited customs treatment for express delivery shipments, including for shipments above any *de minimis* threshold,” and to “provide for a *de minimis* shipment value comparable to the U.S. *de minimis* shipment value of \$800.”⁹

WHAT IS THE *DE MINIMIS* THRESHOLD?

The *de minimis* threshold refers to the value of imported goods below which no duty or tax is collected by customs, and below which shipments enjoy streamlined paperwork requirements.¹⁰ Depending on the type of products, applied

customs and border clearance, quality of trade and transport infrastructure, ease of arranging competitively priced shipments, competence and quality of logistics services, ability to track and trace consignments, and frequency with which shipments reach consignees within the scheduled delivery times. The LPI is a weighted average of scores on these six indicators. See <https://lpi.worldbank.org/> (accessed on October 17, 2017).

7. See Trade facilitation, World Trade Organization, available at https://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm (accessed on October 17, 2017).

8. Likewise, the Organization for Economic Cooperation and Development (OECD 2014) estimates that full implementation of the TFA could reduce total trade costs by 14.1 percent, 15.1 percent, and 12.9 percent for low income, lower-middle income, and upper-middle income countries, respectively.

9. See Summary of Objectives for the NAFTA Renegotiation, Office of the United States Trade Representative, available at <https://ustr.gov/sites/default/files/files/Press/Releases/NAFTAObjectives.pdf> (accessed on October 17, 2017).

10. See the International Chamber of Commerce Customs Guideline #11 at <http://tfig.unece.org/contents/de-minimis.htm>. It recommends establishing a *de minimis* threshold of at least US\$200.

duty rates vary. Sales tax, value-added taxes (VAT), or goods and services taxes (GST) are imposed on imports, usually at a flat rate (e.g., the Canadian federal GST is 5 percent). Duties and taxes are collected from importers. Duties imposed on inbound shipments are generally paid to the federal government while sales tax, VAT, or GST are paid to state, provincial, and federal governments. When the value of an import shipment is below the threshold, zero duties and taxes are collected, which implies zero revenue for government but lower prices for consumers. The World Customs Organization encourages all its member countries to set *de minimis* thresholds but does not recommend specific levels.¹¹

NAFTA renegotiations should raise the *de minimis* threshold and ensure equal treatment for private express firms and the public postal service.

One objective of the *de minimis* threshold is to achieve a balance between the costs of assessing and collecting customs duty and sales taxes and the revenues raised.¹² When the costs of clearance procedures outweigh the revenues collected on imported goods, as often happens, it is clearly inefficient to spend resources on the collection effort.

Equally important, a reasonable *de minimis* threshold promotes digital trade and express delivery of low-value shipments. Both for business firms and customers, this is a major benefit. In fact, a reasonable *de minimis* threshold can make the difference between survival and closure for small business firms that depend on cross-border sales for their livelihood.

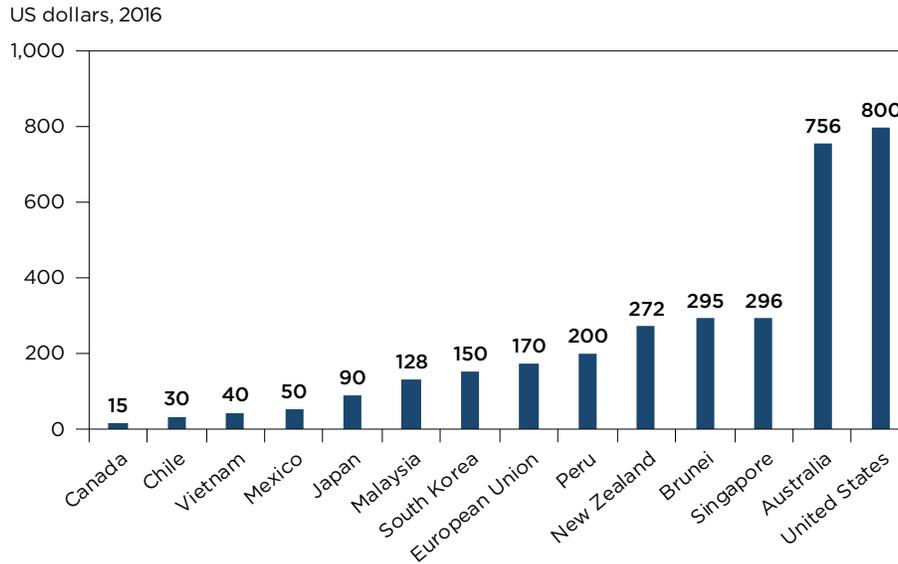
Responding to these arguments, the United States raised its *de minimis* threshold from the figure of \$200, which had prevailed for decades, to \$800 in March 2016. This allows incoming shipments valued below \$800 to be duty and tax free, and to pass US customs in an expedited manner.¹³

To its credit, the United States now has one of the highest *de minimis* thresholds in the world, but Canadian and Mexican thresholds are dismally low—respectively \$15

11. World Customs Organization, “Text of the Revised Kyoto Convention Chapter 4,” April 17, 2008, http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/conventions/pf_revised_kyoto_conv/kyoto_new/gach4.aspx.

12. Hufbauer and Wong (2011) argued that the *de minimis* thresholds should also consider the costs that express firms and the United States Postal Service (USPS) incur in processing entries and the value to purchasers (business firms and households) of faster delivery.

13. In February 2016 the US Congress approved an increase in the *de minimis* threshold from US\$200 to US\$800. See Sec. 601 of Trade Facilitation and Trade Enforcement Act of 2015 (H.R.1907), <https://www.congress.gov/bill/114th-congress/house-bill/1907> (accessed on October 17, 2017).

Figure 1 *De minimis* thresholds by country

Source: Global Express Association, https://global-express.org/assets/files/Customs%20Committee/de-minimis/GEA-overview-on-de-minimis_April-2016.pdf (accessed on October 19, 2017).

(C\$20) and \$50 (see figure 1).¹⁴ In fact, Canada's threshold is the lowest among advanced economies. A study by the C.D. Howe Institute estimated both the revenue and efficiency effects of raising the Canadian *de minimis* threshold to C\$200 (and evaluated lower as well). While the Canadian government would incur a C\$117 million revenue loss from a threshold of C\$200, the government would also realize cost savings of C\$278 million, while consumers and businesses would gain C\$487 million in efficiency benefits, far outweighing the revenue loss.¹⁵

On the other hand, Mexico employs two *de minimis* thresholds—\$50 for courier shipments and \$300 for postal shipments. Courier shipments are provided by express firms such as UPS, FedEx, and Mexican private firms, while postal shipments are delivered by Mexico's national postal service. Despite its reputation for low quality service, Servicio Postal Mexicano (Sepomex) retains a legal monopoly for the delivery of any parcel or mail item under 1 kilogram (about 2.2 pounds). Some exemptions allow domestic and foreign express companies to operate their delivery business through

certified service or advanced service options.¹⁶ But these alternatives discourage cross-border shipments of low-value imports into Mexico. NAFTA renegotiations should raise the *de minimis* threshold and ensure equal treatment for private express firms and the public postal service.

BENEFIT OF RAISING THE *DE MINIMIS* THRESHOLD

Higher Canadian and Mexican *de minimis* thresholds are critical to foster the expansion of cross border ecommerce, especially benefiting consumers and small and medium-sized enterprises (SMEs). Available platforms include Amazon, eBay, PayPal, Alibaba, and many others. But given the current low *de minimis* thresholds, logistic costs are a major burden. Higher thresholds would enable the government postal services and express shipping firms (such as UPS, FedEx, and DHL) to reduce handling costs and shorten delivery times.

Raising the thresholds would not undercut security at the border for either Mexico or Canada. Each shipper must provide full manifest detail and pre-arrival informa-

14. The *de minimis* threshold in Canada is set by the Government of Canada through the Postal Imports Remission Order and the Courier Imports Remission Order. A few countries, such as Qatar, Azerbaijan, and Georgia, actually have slightly higher *de minimis* thresholds than the United States.

15. For more details, see McDaniel, Schropp, and Latipov (2016).

16. Mexico Company Laws and Regulations Handbook: Strategic Information and Basic Laws, [https://books.google.com/books?id=RJKODAAAQBAJ&pg=PA208&lpg=PA208&dq=monopoly+of+Servicio+Postal+Mexicano+\(Sepomex\)&source=bl&ots=jyal7NpoHX&sig=erdpZyqR1Qal66fRwJt5v1sT9Y&hl=en&sa=X&ved=0ahUKEwi41tWf0MHYAhXsQt8KH YWoC7QQ6AEIRDAE#v=onepage&q=monopoly%20of%20Servicio%20Postal%20Mexicano%20\(Sepomex\)&f=false](https://books.google.com/books?id=RJKODAAAQBAJ&pg=PA208&lpg=PA208&dq=monopoly+of+Servicio+Postal+Mexicano+(Sepomex)&source=bl&ots=jyal7NpoHX&sig=erdpZyqR1Qal66fRwJt5v1sT9Y&hl=en&sa=X&ved=0ahUKEwi41tWf0MHYAhXsQt8KH YWoC7QQ6AEIRDAE#v=onepage&q=monopoly%20of%20Servicio%20Postal%20Mexicano%20(Sepomex)&f=false) (accessed on January 5, 2018).

tion for all shipments, regardless of declared value. In fact, higher thresholds would enable customs authorities to focus resources on important matters such as counterfeit merchandise, illegal drugs, food safety, and terrorist threats.

A LEVEL PLAYING FIELD BETWEEN DOMESTIC AND OVERSEAS RETAILERS

Despite the benefit of higher *de minimis* thresholds, domestic opposition in Canada and Mexico has prevented reforms. The opposition mainly comes from local brick-and-mortar retailers that compete with postal and express delivery imports. These firms argue that a higher *de minimis* threshold would make US ecommerce retailers more competitive in the Canadian and Mexican market because ecommerce firms would be exempt from value-added taxes that domestic retailers are obligated to charge.

Akin to this objection, the sales tax on purchases from remote retailers has long been debated in the United States. The most notable legal precedent was the 1992 US Supreme Court ruling in *Quill Corp. v. North Dakota*.¹⁷ That decision, drawing on earlier precedents, prevented states from imposing a sales tax collection obligation on remote retailers that do not have a physical presence in the taxing state but noted that Congress could overrule the decision by enacting new legislation.

Criticism of the *Quill* decision has gained ground owing to the rapid growth of ecommerce. US ecommerce sales increased from \$26 billion in 2000 (under 1 percent of total retail sales) to approximately \$452 billion in 2017 (about 9 percent of total retail sales).¹⁸ Most of these ecommerce retail sales have been free of either sales or “use” taxes in the destination states.¹⁹ The National Conference of State Legislatures (NCSL) and the International Council of Shopping Centers (ICSC) estimated that states lost \$25 billion in uncollected sales and use taxes from ecommerce sales in 2015.²⁰

17. See the Supreme Court’s ruling in <http://caselaw.findlaw.com/us-supreme-court/504/298.html> (accessed on October 25, 2017). On January 12, 2018, the Supreme Court agreed to hear an appeal by South Dakota on the *Quill* case. See Supreme Court of the United States Blog on *South Dakota v. Wayfair, Inc.*, <http://www.scotusblog.com/case-files/cases/south-dakota-v-wayfair-inc/> (accessed on January 16, 2018).

18. US Census Bureau quarterly retail ecommerce sales reports, released on February 16, 2018, available at https://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf (accessed on March 1, 2018).

19. “Use” taxes are theoretically imposed on state residents who buy ecommerce goods from out-of-state sellers. However, use taxes are seldom collected.

20. National Conference of State Legislatures (NCSL) and the International Council of Shopping Centers (ICSC),

Reflecting the concerns of brick-and-mortar retailers, proposals that would overrule *Quill* have been introduced in Congress. For example, the Marketplace Fairness Act of 2017 would allow states to collect sales tax from remote sellers but would exempt small remote sellers who make less than \$1 million annual sales. The Remote Transaction Parity Act of 2017 would likewise create sales and use tax collection obligations for remote sellers but with a different definition of small remote sellers.²¹ Neither bill has been enacted.

At the state level, despite the *Quill* decision, efforts are underway to tax ecommerce sales.²² Two notable examples are South Dakota and Alabama. South Dakota obligates remote retailers with in-state annual sales over \$100,000, or with 200 separate transactions, to collect and pay state sales tax. Likewise, Alabama deems a remote retailer as an Alabama establishment if it sells more than \$250,000 of merchandise to in-state customers. In these circumstances, Alabama requires the establishment to collect and pay state sales tax. Both the South Dakota and Alabama laws are being challenged in federal court under the *Quill* holding.

Whatever the outcome of congressional legislation and federal litigation with respect to the *Quill* holding, as concessions to Canada and Mexico, if they significantly raise their *de minimis* thresholds, the United States could negotiate an efficient regime to collect and remit VAT and GST taxes to the Canadian and Mexican fiscal authorities.

POTENTIAL ECOMMERCE HOUSEHOLDS WITH HIGHER DE MINIMIS THRESHOLDS

This section suggests an approach for estimating the potential number of ecommerce household purchasers in the United States, Canada, and Mexico, respectively. Most ecommerce consumers are probably households with close to the median income level. Accordingly, the assumption is made that NAFTA households with an annual income level equal to or greater than three-quarters of the US median are potential ecommerce customers.²³

“Uncollected Sales & Use Tax from Remote Sales: Revised Figures,” March 2017, <http://www.efairness.org/files/Updated%20Sales%20Tax%20Loss%20Report.pdf> (accessed on October 25, 2017).

21. These bills are available at <http://src.bna.com/o6d> and <http://src.bna.com/o6c> (accessed on October 25, 2017). The Remote Transaction Parity Act provides a 4-year phaseout of the small remote seller threshold, starting at \$10 million, then \$5 million, then \$1 million, and then no threshold.

22. Beebe (2017) provides a summary of recent developments in state taxation on ecommerce.

23. Since Mexico only reports household income distribution by average incomes, analysis on Mexico is on three-quarters of the average US household income. See the subsection on Mexico for more detail.

Table 2 US household income distribution, 2016, measured in 2016 US CPI-U-RS dollars

Year	Number (thousands)	Percent distribution								Median income (dollars)	Mean income (dollars)
		Total	Under \$34,999	\$35,000 to \$49,999	\$50,000 to \$74,999	\$75,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 and over		
2016	126,224	100.0	30.2	12.9	17.0	12.3	14.1	6.6	7.0	59,039	83,143

CPI-U-RS = CPI Research Series Using Current Methods

Source: US Census Bureau, table H-17, available at <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-households.html>.

United States

Table 2 presents the US household income distribution for 2016. The assumption is that, within each income range, household incomes are distributed so that the median is the center of the range.

In 2016, the median US household income was \$59,039. Based on the three-quarters assumption, US households with an annual income above \$44,279 are potential ecommerce consumers.²⁴ This income level falls in the US range of \$35,000 to \$49,999. Therefore, households with an annual income greater than \$49,999 are all assumed to be potential ecommerce customers. The total number of such US households is 71.9 million.²⁵

For the group of households that earned between \$35,000 and \$49,999 in 2016, some of them earned more than \$44,279 while others earned less. Since incomes are assumed to be uniformly distributed within each income group, 38 percent of households in the income range of \$35,000 to \$49,999 are potential ecommerce customers, some 6.2 million households.²⁶ Therefore, the total number of US households assumed to be potential e-shipment customers in 2016 is 78.2 million.²⁷

Canada

Statistics Canada conducts the Census of Population program every five years. The most recent release is the 2016 Census Program, which covers the decade of 2005 to 2015. Table 3 gives relevant details for 2015.

Canadian 2015 median household incomes reported by Statistics Canada can be converted into 2015 US dollars by applying the average annual exchange rate of 1.2791

Canadian dollars per US dollar, as reported by the Federal Reserve Bank of St. Louis.²⁸

The analysis also assumes that, within each province, household income levels are distributed uniformly, and the number of Canadian households with an income no less than three-quarters of the US median level in 2015 is estimated accordingly. The 2015 US median level was \$56,516 in 2015 prices.²⁹ Based on the three-quarters assumption, Canadian households with an annual income of at least \$42,387 in 2015 are assumed to be potential ecommerce customers in 2015.³⁰

Median income levels in all Canadian provinces in 2015 were higher than three-quarters of the US median level at \$42,387 (table 3). Therefore, at least half of households in each province count as potential ecommerce customers. The assumption of uniform distribution within each province enables a calculation of the number of households that earned between \$42,387 and the provincial median level.³¹

The total number of Canadian households assumed to be potential e-shipment customers in 2015 is the sum of the number of households above three-quarters of the US level but less than the Canadian median, plus the number of households that earned more than the Canadian median level. The calculations arrive at 8.5 million such Canadian households in 2015 (table 3). Further calculations put the

24. Calculated as 59,039 * 0.75 = \$44,279.

25. Calculated as 126,224,000 * (17% + 12.3% + 14.1% + 6.6% + 7%) = 71,947,680.

26. The arithmetic follows. For the percentage of households: (49,999 - 44,279.25) / (49,999 - 35,000) * 100% = 38.13%. For the number of households: 126,224,000 * 12.9% * 38% = 6,203,783.

27. Calculated as 71,947,680 + 6,203,783 = 78,151,463.

28. Board of Governors of the Federal Reserve System (US), Canada / U.S. Foreign Exchange Rate [AEXCAUS], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/AEXCAUS> (accessed on October 30, 2017).

29. 2015 US median income level was \$57,230 in 2016 dollars adjusted by the Consumer Price Index Research Series Using Current Methods (CPI-U-RS). US CPI-U-RS were 348.2 and 352.6 in 2015 and 2016, respectively (1977 = 100). Available at <https://www.bls.gov/cpi/research-series/allitems.pdf> (accessed on October 26, 2017). Therefore, in 2015 prices, the 2015 US median income level was \$57,230 * 348.2 / 352.6 = \$56,515.84.

30. \$56,515.84 * 0.75 = \$42,386.88.

31. For example, for Ontario, the number of Canadian households with an annual income below the median level of \$58,078 but earning more than \$42,387 in 2015 = (58,078 - 42,387) / 58,078 * (5,104,206 / 2) = 689,505.

Table 3 Canadian household income distribution, 2015

Province	Number of private households in 2015 ¹	2015 median total income (Canadian dollars)	2015 median total income (US dollars)	Number of households below the median income level	Total number of households above 3/4 of US level
Newfoundland and Labrador	216,424	67,272	52,593	108,212	129,212
Prince Edward Island	58,804	61,163	47,817	29,402	32,741
Nova Scotia	399,402	60,764	47,505	199,701	221,217
New Brunswick	317,310	59,347	46,397	158,655	172,369
Quebec	3,495,837	59,822	46,769	1,747,918	1,911,687
Ontario	5,104,206	74,287	58,078	2,552,103	3,241,599
Manitoba	484,866	68,147	53,277	242,433	291,988
Saskatchewan	427,842	75,412	58,957	213,921	274,045
Alberta	1,498,080	93,835	73,360	749,040	1,065,291
British Columbia	1,856,603	69,995	54,722	928,302	1,137,555
Yukon	14,933	84,521	66,078	7,466	10,143
Northwest Territories	14,904	117,688	92,008	7,452	11,471
Nunavut	9,603	97,441	76,179	4,802	6,932
Total	n.a.	n.a.	n.a.	n.a.	8,506,250

n.a. = not applicable

1. Statistics Canada reports number of private households in 2006 and 2016, respectively. The number of private households in 2016 was discounted back to estimate the 2015 level. The discount rate is the average annual growth rate of private household numbers over 2006–16, assuming the growth rate to be constant.

Source: Statistics Canada, <https://www.statcan.gc.ca/daily-quotidien/170913/t001a-eng.htm>, and authors' calculations.

total number of potential Canadian household ecommerce customers in 2016 at 8.6 million.³²

Mexico

The National Institute of Statistics and Geography conducts the National Survey of Household Income and Expenditure every even year. The most recent release covers household income statistics in 2016 by income decile groups. Different from Canadian data, Mexico reports average (not median) quarterly household income in 2016, expressed in Mexican pesos (table 4). Therefore, comparison of average household income levels between Mexico and the United States was made.

32. The average annual growth rate between 2006 and 2016 of the number of private households across all provinces was 1.22 percent. $8,506,250 * (1 + 1.22\%) = 8,610,026$. The source that table 3 is based on reports the number of private households by province in 2006 and 2016, respectively, as well as 2005 and 2015 median total income by province, respectively. Since data on median income by province is only available for 2015, the number of private households by province in 2016 is first discounted back to 2015. Then using statistics on the 2015 median total income by province, the total number of households that are potential ecommerce consumers in 2015 is calculated. Lastly, this 2015 number is inflated to a corresponding level in 2016.

Converting Mexican data into 2016 US dollars, using a purchasing power parity rate of 8.57 pesos per US dollar as reported by the OECD,³³ indicates that only the top income decile has an average household income greater than three-quarters of the 2016 US average household income of \$62,357 (table 4).³⁴ Remaining income deciles do not have average incomes close to \$62,357. Assuming that all households in the top income decile are potential ecommerce customers, this number in 2016 was 3.3 million households, shown in decile 10 of table 4.

To summarize, potential ecommerce consumers are estimated as 78.2 million households in the United States, 8.6 million households in Canada, and 3.3 million households in Mexico. Estimated ecommerce retail sales within the United States were about \$452 billion in 2017, about \$5,780 per household for those with incomes at or above

33. See Purchasing power parities (PPP), available at <https://data.oecd.org/conversion/purchasing-power-parities-ppp.htm> (accessed on October 30, 2017).

34. Purchasing power parities are rates of currency conversion that equalize the purchasing power of different currencies by eliminating differences in price levels between countries. 2016 US average household income was \$83,143 (table 2). Three-quarters of this level is $\$83,143 * 0.75 = \$62,357.25$.

Table 4 Mexican average income per decile of households, 2016

Income decile group	Average quarterly household income in 2016 (Mexican peso)	Average annual household income in 2016 (US dollars at PPP exchange rate)	Number of households in 2016 ¹
Decile 1	8,166	3,811	3,346,260
Decile 2	14,206	6,631	3,346,260
Decile 3	18,918	8,830	3,346,260
Decile 4	23,556	10,995	3,346,260
Decile 5	28,812	13,448	3,346,260
Decile 6	34,837	16,260	3,346,260
Decile 7	42,431	19,804	3,346,260
Decile 8	53,383	24,916	3,346,260
Decile 9	72,041	33,625	3,346,260
Decile 10	168,855	78,812	3,346,260

PPP = purchasing power parity

1. According to the National Survey of Household Income and Expenditure, the total number of Mexican households in 2016 was 33,462,598. Therefore, each income decile has 3,346,260 households.

Source: National Survey of Household Income and Expenditure, http://www.beta.inegi.org.mx/contenidos/proyectos/enchogares/regulares/enigh/nc/2016/doc/presentacion_resultados_enigh2016.pdf, and authors' calculations.

75 percent of the median household income (\$44,279). Based on the relative numbers of potential households, the possible annual value of low-value shipments to Canadian and Mexican households can be estimated. The analysis conservatively assumes that only half of the shipments in each country would come from suppliers in the United States and the other half from local suppliers—if the *de minimis* thresholds were substantially raised and accompanied by speedy customs clearance procedures. In fact, much more than half the shipments would probably come from the United States because of the greater number of ecommerce retailers in the United States than in Canada and Mexico combined. These estimates can then be compared with actual US low-value shipments to Canada and Mexico in 2017.

US low-value shipments to Canada and Mexico recorded \$9 billion and \$7 billion respectively in 2017.³⁵ Translated into shares of US ecommerce retail sales, \$452 billion in 2017, actual shipments to Canada and Mexico accounted for 2.0 percent and 1.5 percent.

If low-value shipments to Canadian and Mexican households bore the same relationship to the potential households as in the United States, and if half of these shipments came

from US suppliers, then shipments to Canada would be 5.5 percent of US ecommerce retail sales, and shipments to Mexico would be 2.1 percent of US ecommerce retail sales.³⁶ If US ecommerce shipments to Canada and Mexico reached the potential indicated by the arithmetic above, the value to Canada might approach \$24.9 billion (5.5 percent of \$452 billion), and the value to Mexico could reach \$9.5 billion (2.1 percent of \$452 billion). Instead, current shipments are well below these levels.

By way of comparison, ecommerce sales by UK nonfinancial firms were recorded as £503 billion (\$739 billion) in 2015.³⁷ According to Allen, Piecyk, and Piotrowska (2016), the total volume of parcels sent was 1.87 billion, with 1.40 billion domestically delivered, 0.13 billion exported, and 0.34 billion imported. Since half of UK exports go to the European countries, about £17 billion (\$25 billion) worth of parcels could land within the EU countries where no *de*

35. See US Census Bureau, USA Trade Online, <https://usatrade.census.gov/data/Perspective60/Browse/browsetables.aspx?utosid=aa909c9705a090f7a5c6bd0e2df56b6f&cache=p4xkso> (accessed on February 28, 2018). Low value estimates are identified by Harmonized System code 9880 for export and 9999.95.0000 for import. Definition and methodologies are available at <https://www.census.gov/foreign-trade/aip/lvpaper.html>.

36. For potential shipments to Canada: $(8.6 / 78.2) * 100 = 11.0$ percent. For potential shipments to Mexico: $(3.3 / 78.2) * 100 = 4.2$ percent.

37. Office for National Statistics, "E-commerce and ICT activity: 2016," <https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/bulletins/ecommerceandictactivity/2016> (accessed on December 15, 2017); the conversion into US dollars is based on the annual average exchange rate in 2015, \$1 = £0.681. Curiously, the reported dollar value for UK ecommerce sales is larger than the reported dollar value of US ecommerce sales, even though the United States is much larger. The difference may simply reflect statistical reporting methods.

minimis threshold exists.³⁸ This represents about 4.5 percent of domestic shipments within the United Kingdom—a plausible target for US ecommerce shipments to Canada and Mexico.³⁹

CONCLUSIONS

Analysis indicates that US express shipments to Canada and Mexico have considerable room to grow. US bilateral free

trade agreements have established mutual commitments for *de minimis* threshold at levels of \$200 or above with Peru, Colombia, and Korea. These agreements are precedents for more ambitious thresholds with Canada and Mexico. The US threshold of \$800 should be the goal for Canada and Mexico, to be reached within 10 or 15 years. It took the United States more than two decades to raise its threshold from \$200 to \$800; within trilateral trade negotiation, Canada and Mexico could build a shorter timeframe to reach the higher level. Higher Canadian and Mexican thresholds will dramatically enhance consumer welfare in those countries by providing more choice at lower cost. At the same time, higher thresholds will enable brick-and-mortar retailers and ecommerce firms to compete fairly and substantially increase US exports by small and medium-sized firms. Higher *de minimis* thresholds should be a major objective in the renegotiation of NAFTA.

38. The value for internationally shipped parcels = $0.47 * \text{£}503 / 1.87 = \text{£}126.4$. Outbound international shipments value = $\text{£}126.4 * 0.13 / 0.47 = \text{£}34.9$.

39. As a further comparison, Italian exports of parcels amounted to 17.2 percent of domestic shipments in 2016. At least half of these probably went to EU countries, or about 8.6 percent of domestic shipments. The parcel data are available at the Universal Postal Union database, <http://www.upu.int/en/resources/postal-statistics/query-the-database.html>.

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