

Appendix D: For “Better In than Out? Canada and the Trans-Pacific Partnership”

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Overall Impact of the TPP

The TPP’s trade impacts will likely be quite modest. We calculate an expansion of intra-TPP trade of goods and services on the order of US\$40 billion or about 1.5 percent. This is down from the 3.6 percent calculated in Ciuriak and Xiao (2014), which was based on a “best guess” at the time concerning the final shape of the agreement, excluding the impact of the then already-concluded Japan-Australia EPA. The main difference is that the “landing zone” study assumed large reductions in goods and services non-tariff barriers (NTBs), which the final TPP text did not validate.

Total two-way trade of TPP parties with the world expands by about 0.4 percent by 2035, with exports to the world rising by about US\$30 billion and imports from the world by about US\$33 billion.

As a trade deal, the TPP mainly benefits the United States, Vietnam, and Japan. These three parties account for about 87 percent of intra-TPP export and 91 percent of intra-TPP import gains. Malaysia, New Zealand, and Canada also make notable gains in exports; for the remaining parties (which notably include all the Latin American parties), the deal is essentially a wash in trade terms.

Third parties are negatively impacted because of trade diversion. Exports into the TPP zone fall for the EU28 (-US\$2 billion), India (-US\$0.9 billion), Other APEC (-US\$0.9 billion), and China (-US\$0.8 billion). The largest percentage impact is on India (-0.4 percent). Korea and Taiwan are minimally affected, reflecting the absence of large negative competitiveness spillover effects on third parties from goods and services NTB reductions within the TPP zone. Losses on sales into the TPP zone are partly offset by gains to the rest of the world as trade patterns reshuffle to reflect the changed preferential structures. These results do not mesh with predictions of a strong “domino” effect of countries lining up to join the TPP to avoid negative spillover effects (as discussed in Baldwin, 1995; Ciuriak, 2010).

Modest trade impacts translate into modest impacts on GDP and economic welfare. For the whole TPP group, the simulations suggest that real GDP will rise by about 0.074 percent, generating economic welfare benefits of close to US\$30 billion by 2035, our cut-off point for evaluating the impacts. This is before any adjustments for (a) ROOs costs; (b) welfare costs of the subsidies announced for rice in Japan, dairy in Canada, or the implied subsidy for sugar in the United States from institutionalizing the managed trade regime for sugar; and (c) the distributional impacts and potentially inhibiting effects on innovation from the IP provisions.

The summary results are shown in Table 3. We observe that this GDP gain is, in real terms, about one-fifth the size of the trade gain, which is a reasonable ratio in light of earlier literature on this issue (the rule of thumb suggests a ratio of around 20 percent). However, the welfare gain is large in value terms relative to the total trade gain (a ratio of about unity), reflecting terms of trade improvements for the TPP region. Given the size of this region relative to the world, a non-negligible impact on terms of trade is plausible. Overall, the simulation results generate broadly reasonable ratios.

Consistent with previous TPP modelling, Vietnam experiences the largest real GDP gains in percentage terms; however, absent the large gains from goods NTB reductions featured in earlier studies, our results suggest this

will build up only to 1.9 percent over baseline by 2035; the slow phase-in of US tariff concessions for Vietnam results in back-end loading of Vietnam's gains.

Also consistent with previous modelling, the two major economies in the group, Japan and the United States make the biggest gains in absolute terms (US\$11.5 billion and US\$6.9 billion, respectively), apart from Vietnam (US\$7.0 billion). Canada, a late-comer to the negotiations, and an economy that was judged to benefit comparatively little under previous analyses, makes the fourth largest welfare gains in absolute terms (US\$1.9 billion). New Zealand (US\$1.6 billion), Malaysia (close to US\$1 billion), and Singapore (US\$0.8 billion) make modest gains; the other TPP parties fail to break even in this simulation.

Third parties experience consistently negative impacts with China (-US\$6.7 billion), the EU (-US\$4.1 billion), and India (-US\$3.3 billion) taking the largest hits in terms of economic welfare. The third-party impacts are sufficient to reduce global gains to a very modest US\$4.5 billion, as there are no positive spillovers from regulatory harmonization to soften the trade diversion and terms of trade impacts.

About three-quarters of the impacts are felt within the commercially and politically important early phase-out to 2025. The impacts continue to build out to 2035 as the remaining tariff cuts in sensitive sectors are progressively implemented and as investment gradually responds to the changed competitive situation; the lag in investment reflects the lead time for corporate investment planning, as well as for markets to respond to the new opportunities.

Table 4 provides a decomposition of the impacts in 2035 by policy: A: tariff reduction; B: imposition of ROOs; C: reduction of services NTBs; and D: easing of FDI restrictions. For the whole TPP group, the major gains in welfare come from tariff reduction (about US\$23 billion), supplemented by services liberalization (about US\$8 billion). Most of the gains in services are attributable to the binding of existing market access and, thus, due to a reduction of uncertainty. Investment liberalization contributes comparatively little (US\$1.6 billion). Under-utilization of preferences reduces the gains from tariff liberalization by US\$2.7 billion, which does not include the welfare cost of the administrative burden of complying with ROOs.

For individual TPP parties, the measures that drive the impacts vary significantly. Japan and Vietnam make the largest gains from goods trade impacts. The United States makes balanced gains from liberalization of the goods and services sectors. Canada, New Zealand, and Malaysia also obtain most of their gains from tariff reductions. Every party benefits from FDI liberalization, but only modestly, given the already highly open investment regime applied in the region pre-TPP.

The TPP's minimal impact on FDI barriers translates into its relatively modest impacts on FDI flows and, consequently, on Mode 3 services trade ("commercial presence") and FAS for goods. The FDI stock expands by about US\$12.3 billion and FAS by about US\$7.7 billion, mostly due to the TPP's income effects, rather than to FDI-related liberalization.

Finally, Table 6 sets out the TPP's sectoral impacts. Two sectors stand out in terms of intra-TPP exports: textiles and apparel, in the case of goods exports, and business services for service exports.

Vietnam makes the main textiles and clothing export gains. Business services benefit from the general binding of market access, rather than from specific cost reductions due to TPP measures. Other sectors that will palpably feel the TPP include automotive products (US\$3.5 billion expansion of intra-TPP exports), chemicals, rubber and plastics (US\$3.4 billion), machinery and equipment (US\$2.8 billion), food products (US\$2.2 billion), and beef (US\$2.0 billion).

Table 1: Trade Impacts: Exports to TPP Partners and to the World

Pre-shock Level	Accumulated Change over Baseline, US\$ Millions at 2011 Prices			Accumulated Percent Change over Baseline, Real Terms		
	2018	2025	2035	2018	2025	2035
Exports to TPP Parties						
Australia	227	163	-162	0.25	0.20	-0.14
Canada	403	1,162	1,454	0.10	0.31	0.36
Chile	-33	-41	-59	-0.10	-0.11	-0.16
Japan	3,522	7,033	8,775	1.56	3.32	4.15
Malaysia	588	1,084	1,789	0.55	0.90	1.21
Mexico	32	131	-53	0.04	0.09	0.05
New Zealand	557	1,108	1,580	2.40	4.47	5.66
Peru	-21	-40	-107	-0.10	-0.17	-0.38
Singapore	13	348	501	0.01	0.31	0.36
United States	3,243	7,649	11,935	0.45	0.98	1.41
Viet Nam	2,075	5,036	12,653	3.39	6.62	11.99
China	-893	-1,148	-778	-0.08	-0.07	-0.04
India	-162	-436	-873	-0.11	-0.24	-0.38
Korea	-39	-88	332	-0.02	-0.03	0.14
Taiwan	-34	43	346	-0.03	0.04	0.29
Other APEC	-214	-484	-855	-0.06	-0.12	-0.19
EU28	-859	-1,927	-2,138	-0.09	-0.20	-0.23
Rest of World	-488	-1,019	-1,920	-0.06	-0.11	-0.20
Memo: TPP12	10,635	23,675	38,293	0.50	1.06	1.54

Source: Authors' calculations.

Table 1: Continued

Pre-shock Level	Accumulated Change over Baseline, US\$ Millions at 2011 Prices			Accumulated Percent Change over Baseline, Real Terms		
	2018	2025	2035	2018	2025	2035
Exports to the World						
Australia	111	195	95	0.02	0.06	0.05
Canada	251	850	1,045	0.03	0.13	0.14
Chile	-10	-16	-35	0.01	0.01	0.00
Japan	1,757	3,999	6,227	0.14	0.33	0.52
Malaysia	203	521	964	0.03	0.11	0.16
Mexico	143	318	287	0.07	0.12	0.12
New Zealand	201	449	704	0.13	0.36	0.55
Peru	-12	-28	-68	-0.01	-0.01	-0.04
Singapore	13	786	858	0.00	0.23	0.20
United States	2,939	5,845	9,996	0.14	0.24	0.37
Viet Nam	917	3,216	9,709	0.35	1.36	2.99
China	-611	-1,162	-1,357	-0.01	-0.02	-0.02
India	16	-92	-334	0.02	0.02	0.00
Korea	-14	-73	36	0.00	0.00	0.01
Taiwan	-32	-54	16	-0.01	-0.01	-0.01
Other APEC	-39	-319	-750	0.01	-0.01	-0.04
EU28	-462	-1,500	-2,004	0.00	0.00	-0.01
Rest of World	-256	-880	-1,674	-0.01	-0.01	-0.03
Memo: TPP12	6,522	16,148	29,733	0.10	0.24	0.39

Source: Authors' calculations.

Table 2: Trade Impacts: Imports from TPP Partners and from the World

Pre-shock Level	Accumulated Change over Baseline, US\$ Millions at 2011 Prices			Accumulated Percent Change over Baseline, Real Terms		
	2018	2025	2035	2018	2025	2035
Imports from TPP Parties						
Australia	29	123	123	0.00	0.06	0.04
Canada	283	1,161	1,328	0.09	0.33	0.34
Chile	-11	4	14	-0.04	0.01	0.03
Japan	3,040	7,057	9,392	1.06	2.32	2.94
Malaysia	13	93	216	-0.01	0.06	0.13
Mexico	381	889	1,155	0.15	0.32	0.35
New Zealand	343	576	728	1.48	2.36	2.65
Peru	-11	-25	-35	-0.07	-0.14	-0.15
Singapore	-86	40	39	-0.11	0.00	0.00
United States	6,634	12,683	22,585	0.73	1.38	2.27
Viet Nam	585	2,184	4,773	1.53	4.55	7.07
China	-1,028	-2,028	-2,469	-0.15	-0.23	-0.20
India	-148	-290	-412	-0.13	-0.20	-0.22
Korea	-338	-556	-582	-0.17	-0.23	-0.20
Taiwan	-169	-269	-231	-0.15	-0.23	-0.19
Other APEC	-488	-810	-1,065	-0.19	-0.27	-0.30
EU28	-1,228	-2,127	-2,279	-0.15	-0.25	-0.26
Rest of World	-699	-1,382	-1,571	-0.14	-0.24	-0.24
Memo: TPP12	11,166	24,728	40,194	0.50	1.05	1.54

Source: Authors' calculations.

Table 2: Continued

Pre-shock Level	Accumulated Change over Baseline, US\$ Millions at 2011 Prices			Accumulated Percent Change over Baseline, Real Terms		
	2018	2025	2035	2018	2025	2035
Imports from the World						
Australia	87	44	-60	0.02	0.01	-0.02
Canada	270	882	1,025	0.05	0.16	0.16
Chile	-21	-31	-44	-0.02	-0.02	-0.03
Japan	2,380	5,410	7,208	0.22	0.47	0.57
Malaysia	227	494	909	0.08	0.15	0.20
Mexico	95	324	328	0.02	0.07	0.05
New Zealand	269	527	751	0.54	0.96	1.15
Peru	-16	-36	-75	-0.03	-0.05	-0.09
Singapore	3	279	334	0.00	0.07	0.07
United States	3,234	6,633	10,882	0.11	0.24	0.36
Viet Nam	1,475	4,264	11,535	0.89	1.91	3.47
China	-646	-1,383	-1,930	-0.03	-0.05	-0.05
India	-155	-458	-793	-0.02	-0.05	-0.07
Korea	-77	-163	-20	-0.02	-0.02	-0.01
Taiwan	-45	-61	10	-0.02	-0.02	-0.01
Other APEC	-257	-557	-966	-0.04	-0.06	-0.08
EU28	-965	-2,298	-2,625	-0.01	-0.02	-0.02
Rest of World	-517	-1,411	-2,195	-0.01	-0.03	-0.04
Memo: TPP12	8,011	18,798	32,735	0.13	0.29	0.44

Source: Authors' calculations.

Table 3: GDP and Economic Welfare Impacts of the TPP

	Percent Change in Real GDP Relative to Baseline			Change in EV* Relative to Baseline, US\$ Millions at 2011 Prices		
	2018	2025	2035	2018	2025	2035
Australia	0.001	0.016	0.007	34	260	-132
Canada	0.011	0.056	0.068	317	1,321	1,901
Chile	-0.002	0.000	-0.007	-19	-33	-102
Japan	0.028	0.096	0.135	2,266	7,943	11,470
Malaysia	0.011	0.069	0.103	136	490	971
Mexico	0.006	0.010	0.008	-35	-286	-854
New Zealand	0.058	0.235	0.380	238	826	1,640
Peru	-0.003	-0.007	-0.018	-12	-50	-155
Singapore	0.005	0.261	0.181	-4	856	803
United States	0.007	0.021	0.033	1,012	4,138	6,872
Viet Nam	0.294	0.939	1.896	1,005	2,913	6,978
China	-0.005	-0.011	-0.018	-875	-3,069	-6,735
India	-0.004	-0.018	-0.029	-230	-1,265	-3,270
Korea	-0.005	-0.016	-0.023	-150	-465	-730
Taiwan	-0.003	-0.013	-0.017	-52	-113	-94
Other APEC	-0.006	-0.022	-0.038	-319	-1,009	-2,038
EU28	-0.002	-0.007	-0.013	-792	-2,304	-4,070
Rest of World	-0.002	-0.010	-0.022	-415	-2,916	-7,875
Memo: TPP12	0.013	0.050	0.075	4,937	18,378	29,391

Note: "EV" is equivalent variation or the lump sum payment to households to leave them as well off without the TPP as they are with it.

Source: Authors' calculations.

Table 4: Decomposition of TPP Impacts by Policy, Cumulated Change in 2035

	Percent Change in Real GDP Relative to Baseline				Change in EV Relative to Baseline, US\$ Millions at 2011 Prices			
	A	B	C	D	A	B	C	D
Australia	-0.01	0.00	0.00	0.01	-313	43	-48	187
Canada	0.04	0.00	0.02	0.01	1,178	-10	599	133
Chile	-0.02	0.00	0.01	0.01	-175	16	34	23
Japan	0.10	-0.01	0.04	0.00	9,567	-1,267	2,997	174
Malaysia	0.11	-0.02	0.00	0.02	1,059	-190	-40	142
Mexico	-0.01	0.00	0.01	0.01	-1,525	132	406	132
New Zealand	0.35	-0.02	0.04	0.02	1,557	-46	86	42
Peru	-0.02	0.00	0.00	0.00	-170	21	-14	7
Singapore	-0.02	0.00	0.06	0.14	-73	15	245	617
United States	0.02	0.00	0.01	0.00	3,831	-450	3,316	175
Viet Nam	2.09	-0.27	0.08	0.00	7,637	-951	276	16
China	-0.02	0.00	0.00	0.00	-7,549	1,213	-839	440
India	-0.03	0.00	-0.01	0.00	-3,087	430	-774	161
Korea	-0.02	0.00	0.00	0.00	-668	105	-210	43
Taiwan	-0.02	0.00	0.00	0.00	-75	18	-44	7
Other APEC	-0.04	0.01	0.00	0.00	-2,248	308	0	0
EU28	-0.01	0.00	0.00	0.00	-3,461	519	-1,347	219
Rest of World	-0.02	0.00	0.00	0.00	-4,412	633	-1,391	699
Memo: TPP12	0.06	-0.01	0.02	0.01	22,573	-2,689	7,857	1,649

Source: Authors' calculations.

Table 5: Change in FDI and FAS, Total of All Sectors, 2035, US\$ Millions at 2011 Prices

	Change in FDI 2035	Change in FAS 2035
Australia	3,241	1,014
Canada	860	510
Chile	165	83
Japan	1,331	1,104
Malaysia	584	585
Mexico	510	168
New Zealand	657	441
Peru	57	33
Singapore	3,126	2,319
United States	1,459	944
Viet Nam	314	463
China	-699	-604
India	-209	-151
Korea	-105	-54
Taiwan	-17	-2
Other APEC	-120	-90
EU28	-1,368	-797
Rest of World	-761	-506
Memo: TPP12	12,305	7,663

Source: Authors' calculations.

Table 6: Sectoral Impacts 2035, Change over Baseline, US\$ Millions at 2011 Prices

	Intra-TPP Exports	TPP Exports to World	TPP Imports from World	Intra-TPP Exports	TPP Exports to World	TPP Imports from World	TPP Exports to World	TPP Imports from World
1 Rice	1,650	8,337	4,608	60	-50	66		
2 Wheat and Cereals	19,958	65,464	27,311	92	-61	27		
3 Fruit and Vegetables	20,259	41,795	42,934	427	289	337		
4 Oilseeds and Vegetable Oils	20,602	105,946	45,810	129	-83	192		
5 Sugar	2,413	3,566	9,711	46	44	47		
6 Other Agriculture	14,744	63,872	45,397	100	-139	268		
7 Dairy	8,435	28,522	14,283	1,027	663	777		
8 Forestry	2,300	16,418	4,380	4	-24	12		
9 Fishing	2,906	6,218	8,257	27	16	51		
10 Fossil Fuels	285,433	587,282	1,072,444	389	124	1,672		
11 Mineral Products	59,295	421,421	153,737	232	69	437		
12 Beef	12,675	25,586	18,739	1,971	1,874	1,963		
13 Pork and Poultry	11,292	20,224	23,415	526	461	160		
14 Food Products	56,396	106,777	146,619	2,207	2,039	1,434		
15 Beverages and Tobacco	15,949	31,836	48,604	291	279	247		
16 Textiles and Apparel	58,316	115,753	315,457	13,612	12,997	10,810		
17 Leather Products	11,616	34,266	69,080	554	288	250		
18 Wood Products	89,090	193,220	231,003	241	-33	459		
19 Chemicals, Rubber, Plastics	266,474	780,932	803,551	3,394	2,735	2,932		
20 Metal Products	184,098	546,169	530,215	997	383	1,376		

Table 6: Continued

	Intra-TPP Exports	TPP Exports to World	TPP Imports from World	Intra-TPP Exports	TPP Exports to World	TPP Imports from World	TPP Exports to World	TPP Imports from World
21 Automotive	325,440	573,426	536,975	3,459	3,138	1,618		
22 Transport Equipment	61,542	182,625	165,362	204	-72	249		
23 Electronic Equipment	228,568	591,427	778,674	482	-204	1,004		
24 Machinery and Equipment	384,041	1,033,467	1,111,232	2,831	1,092	2,882		
25 Other Manufacturing	19,573	65,713	166,010	321	63	358		
26 Other Services	40,164	176,281	103,800	12	-199	119		
27 Construction	7,527	38,266	31,406	211	145	217		
28 Trade	23,149	97,401	107,662	46	-45	178		
29 Transportation Services	58,787	216,801	268,755	487	362	409		
30 Communications	7,113	30,807	33,864	18	-31	55		
31 Financial Services	44,007	159,120	158,066	560	431	413		
32 Business Services	64,678	264,678	272,863	3,196	2,888	1,583		
33 Recreation Services	28,557	110,529	61,353	140	32	132		
Total	2,437,049	6,744,147	7,411,578	38,293	29,471	32,735		

Source: Authors' calculations.