

Presented by

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Paper available at: http://www.copsmodels.com/pdf/canada_trade_2013.pdf



Method

Use the USAGE model to simulate the effects on the U.S. economy of cessation of U.S./Canada trade.

USAGE: applied by and on behalf of U.S. International Trade Commission; U.S. Departments of Commerce, Agriculture, Homeland Security, Transportation, and Energy; Mitre Corporation; Cato; Canadian Department of Foreign Affairs, Trade & Development; and Canadian Embassy in Washington DC.

Labor-market assumption



Cessation of U.S./Canada trade does not affect real wages in the U.S. Allows us to work out how many jobs in the U.S at current real wages are sustained by trade with Canada.



Results: highlights

U.S./Canada trade:

- supports 8.27 million U.S. jobs (4.54%)
- is responsible for 6.5% of U.S. GDP (about \$1 trillion)
- creates employment in every state and Congressional district
- has a positive effect on employment in 437 out 533 industries

Canadian owned businesses in the U.S. employ 0.57 million U.S. residents

Industry results



Cessation of U.S./Canada trade:

- harms all industries through contraction of U.S. economy
- especially negative effects for industries with large exports to Canada (high value for SC_{exp})
- offsetting benefits for industries facing strong import competition from Canada (high value for SC_{imp}) or with considerable exports to countries other than Canada (high value for SNC_{exp})

USAGE output results (%): industries with large exports to Canada

Industry	(%)	SC _{imp}	SC _{exp}	SNC _{exp}
252 Ceramic tiles	-17.90	0.0007	0.24	0.2735
257 Earthenware	-32.92	0.0001	0.36	0.0828
342 Fans	-22.23	0.0225	0.19	0.2786
382 Storage batteries	-14.83	0.0393	0.16	0.1633
398 Travel trailers	-18.73	0.0688	0.09	0.0483
U.S. averages	-3.69	0.04	0.03	0.1505

USAGE output results (%): industries facing strong competition from Canadian imports

Industry	(%)	SC _{imp}	SC _{exp}	SNC _{exp}
34 Crude oil	11.98	0.35	0.0712	0.0024
162 Reconst. wood	21.47	0.54	0.0303	0.0361
177 Pulpmills	17.38	0.44	0.0204	0.5515
279 Copper smelting	19.12	0.40	0.0159	0.1481
281 Prim non-ferrous metals	18.41	0.35	0.0093	0.3322
U.S. averages	-3.69	0.04	0.0344	0.1505

USAGE output results (%): industries with large exports to countries other than Canada

Industry	(%)	SC _{imp}	SC _{exp}	SNC _{exp}
245 Womens handbags	12.10	0.0005	0.0231	0.75
321 Oil & gas field machinery	13.00	0.0066	0.0154	0.77
410 Electro-medical appliances	11.15	0.0018	0.0380	0.93
U.S. averages	-3.69	0.04	0.03	0.15

Output effects (%): USAGE & fitted

$y(i) = -4.54 + 34.85 * SC_{imp}(i) - 87.28 * SC_{exp}(i) + 16.92 * SNC_{exp}(i), R^2 = 0.66$



USAGE & Fitted output results (%): ^{Cops} outliers

Industry	USAGE	Fitted	SC _{imp}	SC _{exp}	SNC _{exp}
255 Vitreous China plumbing	-5.44	-13.80	0.0041	0.1250	0.0889
161 Wood products	-9.93	6.49	0.3793	0.0430	0.0926
149 Logging	6.17	-3.00	0.0729	0.0390	0.1421
U.S. averages	-3.69	-3.69	0.04	0.03	0.15
150 Sawmills	10.40	4.82	0.2886	0.0281	0.1041

State employment results



Disaggregation of national results taking account of:

- industrial composition of employment in each state
- interstate trade
- local multiplier effects
- port-effects
- tourism effects

Employment in most states shrinks by between 3 and 6% Narrow range because states have broadly similar industrial structures

Congressional district employment results

Disaggregation of state results taking account of:

- industrial composition of employment in each CD

Employment in most CDs shrinks by between 3 and 6% Narrow range because CDs have broadly similar industrial structures

Congressional district results: Alabama

CoPS

	Thousands of jobs	% effect on jobs	% Mix effect
Alabama	-102	-4.01	
1 Bonner AL1	-11	-3.61	0.41
2 Roby AL2	-19	-4.43	-0.42
3 Rogers AL3	-14	-4.18	-0.16
4 Aderholt AL4	-12	-3.61	0.40
5 Brooks AL5	-16	-4.31	-0.30
6 Bachus AL6	-17	-3.83	0.18
7 Sewell AL7	-12	-3.98	0.03

AL1 does well relative to Alabama because of Pulpmills (177), Crude oil (34) and Sawmills (150)

% Mix effects are usually small: Oil producing CDs are exceptions

	Thousands of	% effect on	% Mix
	jobs	jobs	effect
Texas	-420	-2.71	
363 PoeTX2	-8	-1.08	1.63
369 BradyTX8	-7	-1.64	1.07
370 GreenAlTX9	-5	-0.85	1.86
373 GrangerTX12	-8	-1.66	1.05
379 JacksonLeeTX18	-10	-1.86	0.85
381 CastroTX20	-6	-1.55	1.16
390 GreenGeneTX29	-8	-1.65	1.06

Congressional districts have same population but different numbers of jobs

	jobs	% effect on jobs	% Mix effect	
269 MaloneyCln NY12	-4,360	-5.16	0.39	
270 Rangel NY13	-2,500	-5.31	0.24	

Variance in percentage effects explains only half of the variance in jobs.



Why does GDP shrink (6.5%) by a bigger percentage than employment (4.5%)?



State employment effects (%): USAGE & fitted

