

Educating Donald: The Integrated North American Automotive Industry

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1. Origins

- Trump's intention to renegotiate or withdraw from NAFTA
- Trump's woeful lack of understanding of the integrated nature of the North American auto industry

2. Aim

- data-rich analysis to benchmark current patterns of auto production and trade within NAFTA
- assess potential impacts on Canada of possible changes to NAFTA

3. Data

- Trade data – Industry Canada's Strategis Online Trade Database
- Detailed Vehicle Production and Sales Data

Levels of Analysis



- Canada's Auto Trade with All Countries
- Canada's Auto Trade within NAFTA
- Ontario and Québec Auto Trade with Regions within North America
- Ontario and Québec Auto Trade within the Great Lakes Region

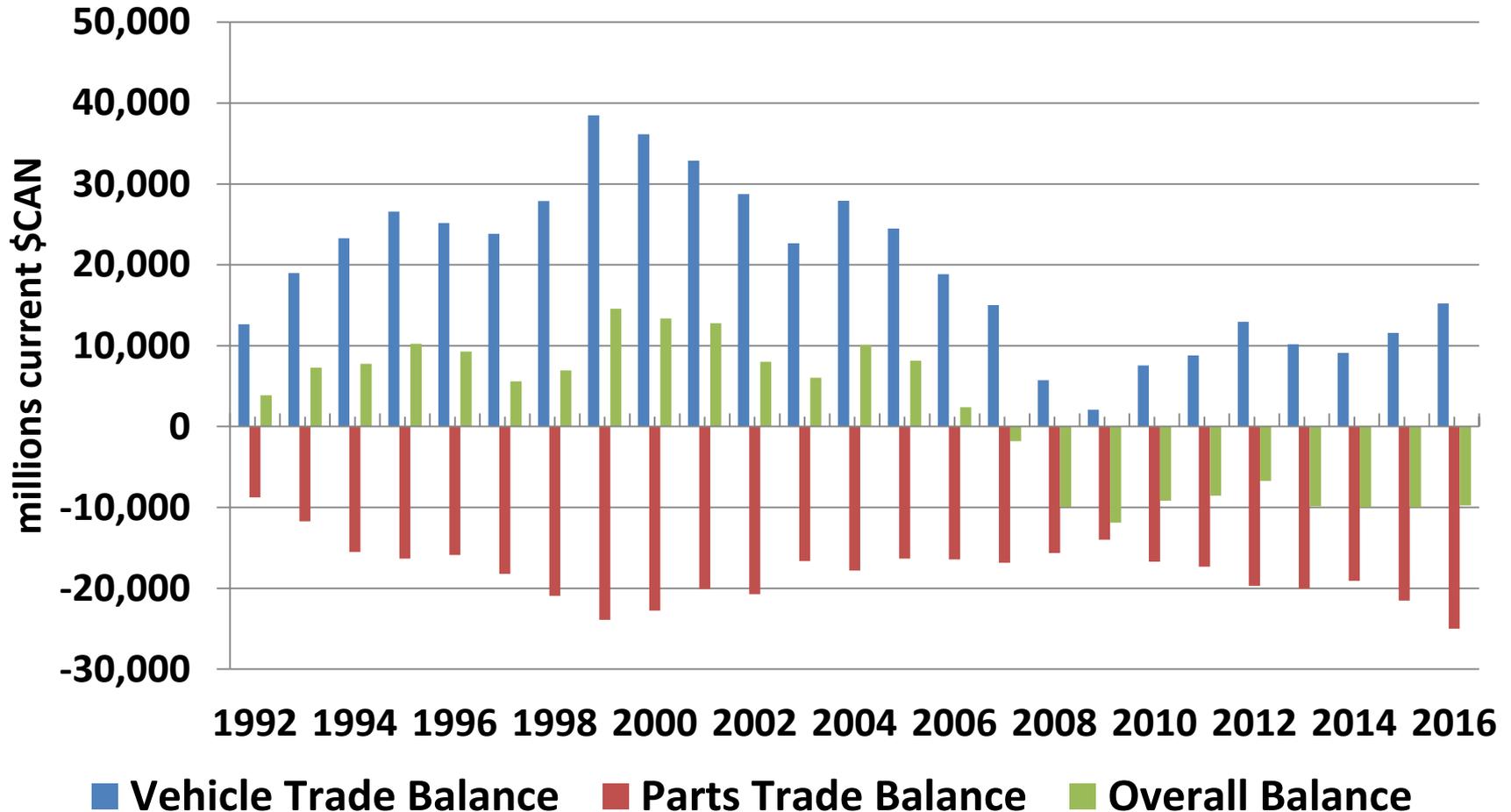
Main Points



- NAFTA Auto Trade reflects high levels of specialization and intra-industry trade
- Still essentially a hub and spoke arrangement:
Canada ↔ US ↔ Mexico
- Within NAFTA, Canada runs positive but small auto trade balance (5% of total trade)
- ON/QC highly integrated within Great Lakes Region
 - 70% of parts exports; 56% of parts imports
 - 3 core “red” states: MI, OH, IN!

Canada's Overall Automotive Trade

Canada Automotive Trade Balances with All Countries: 1992-2016

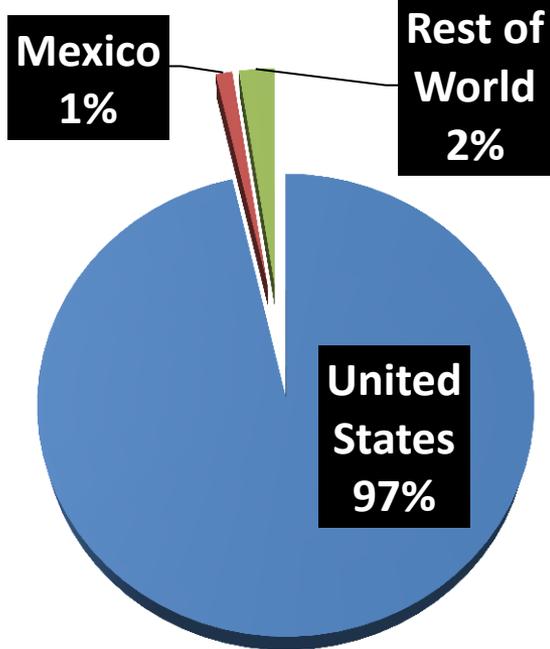


Source: Industry Canada: Strategis Online Trade Data

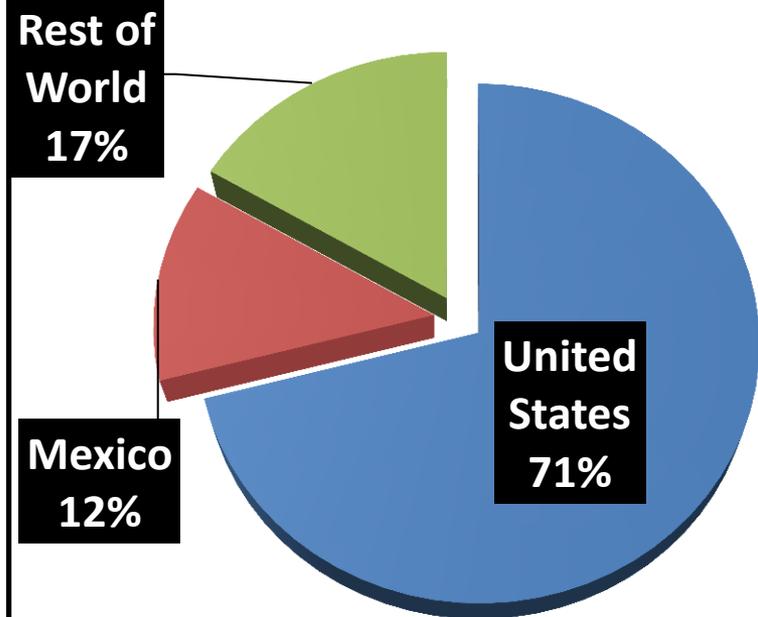
Percentage Shares (by value), Total Vehicle Trade, Canada: 2016



VEHICLE EXPORTS: \$62.87 billion



VEHICLE IMPORTS: \$47.64 billion

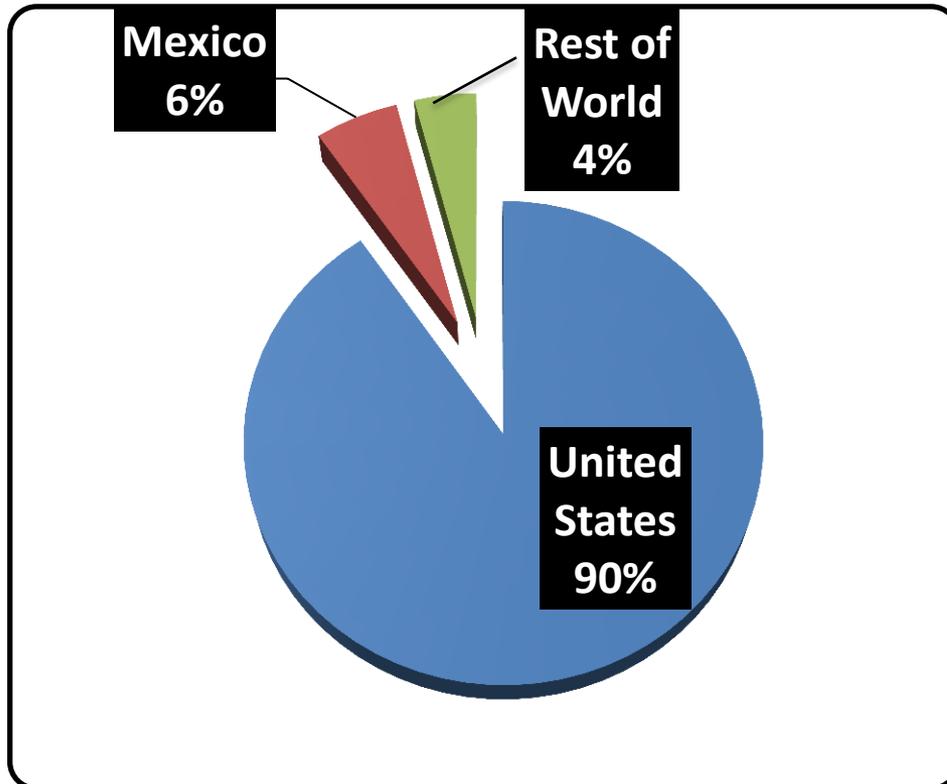


Source: Industry Canada, Strategis Online Trade Database

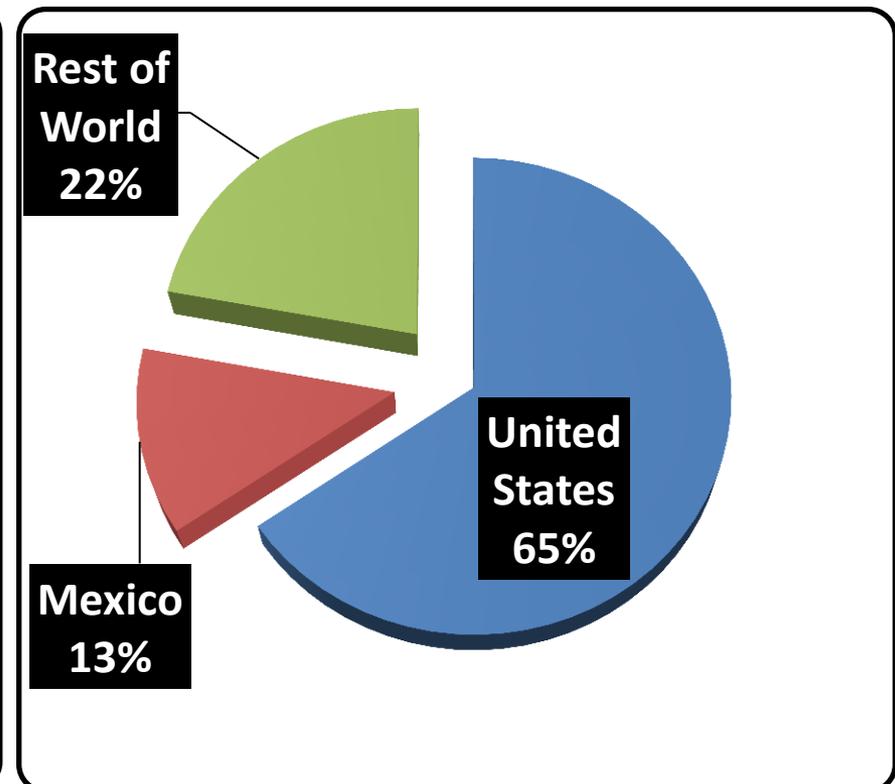
Percentage Shares (by value), Total Automotive Parts Trade, Canada: 2016



PARTS EXPORTS: \$21.1 billion



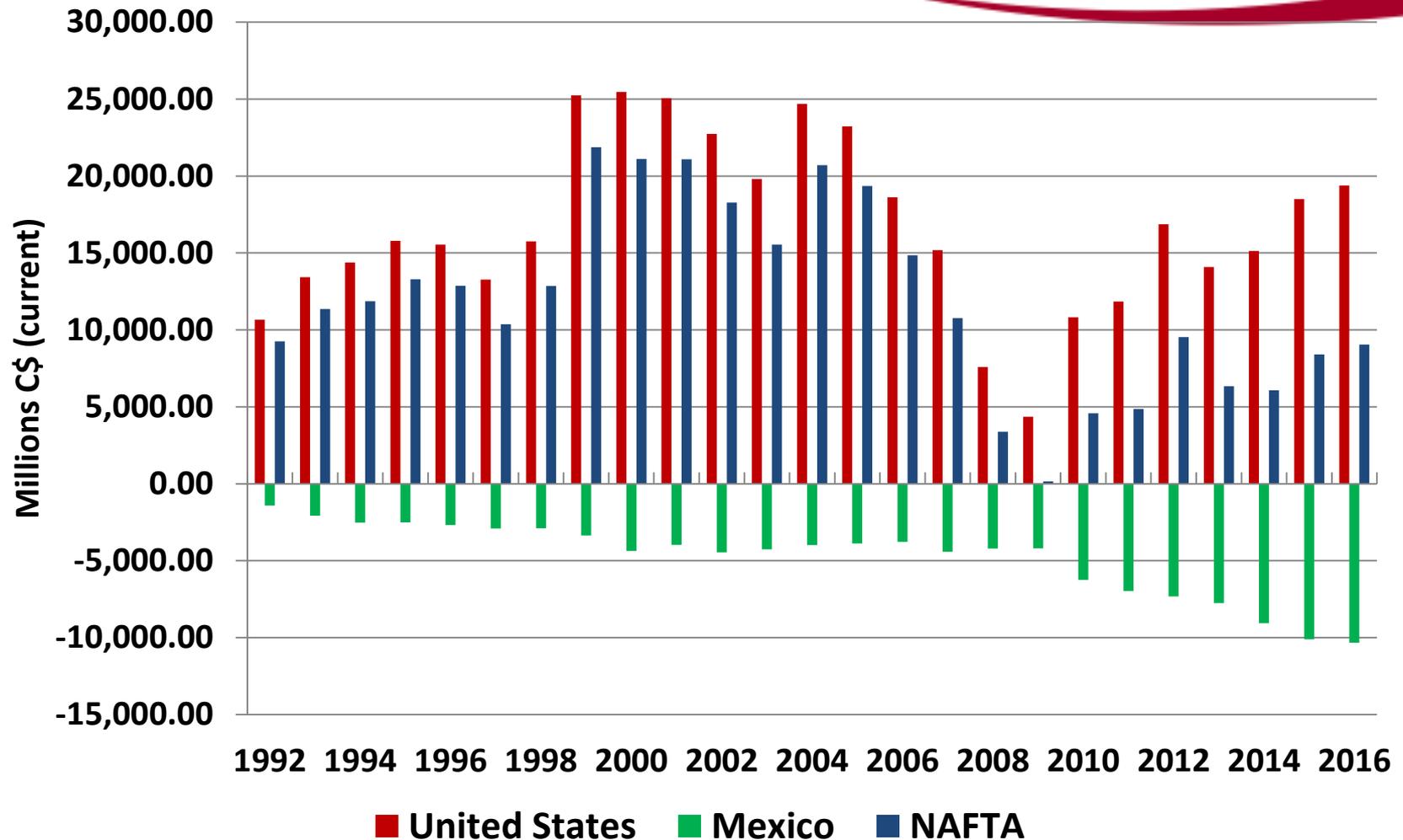
PARTS IMPORTS: \$47.8 billion



Source: Industry Canada, Strategis Online Trade Database

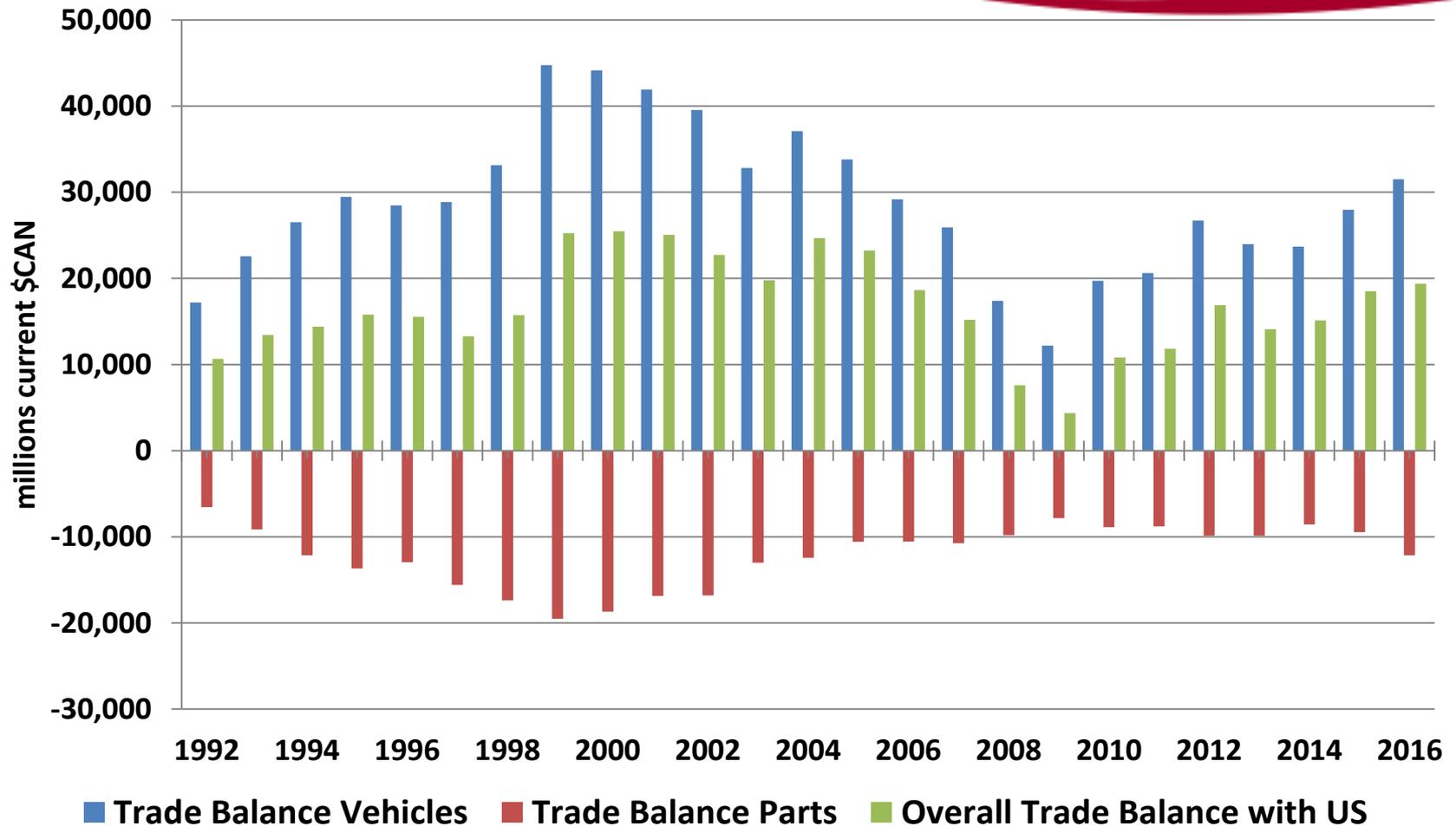
Automotive Trade within NAFTA

Canada Automotive Trade Balances Within NAFTA: 1992-2016



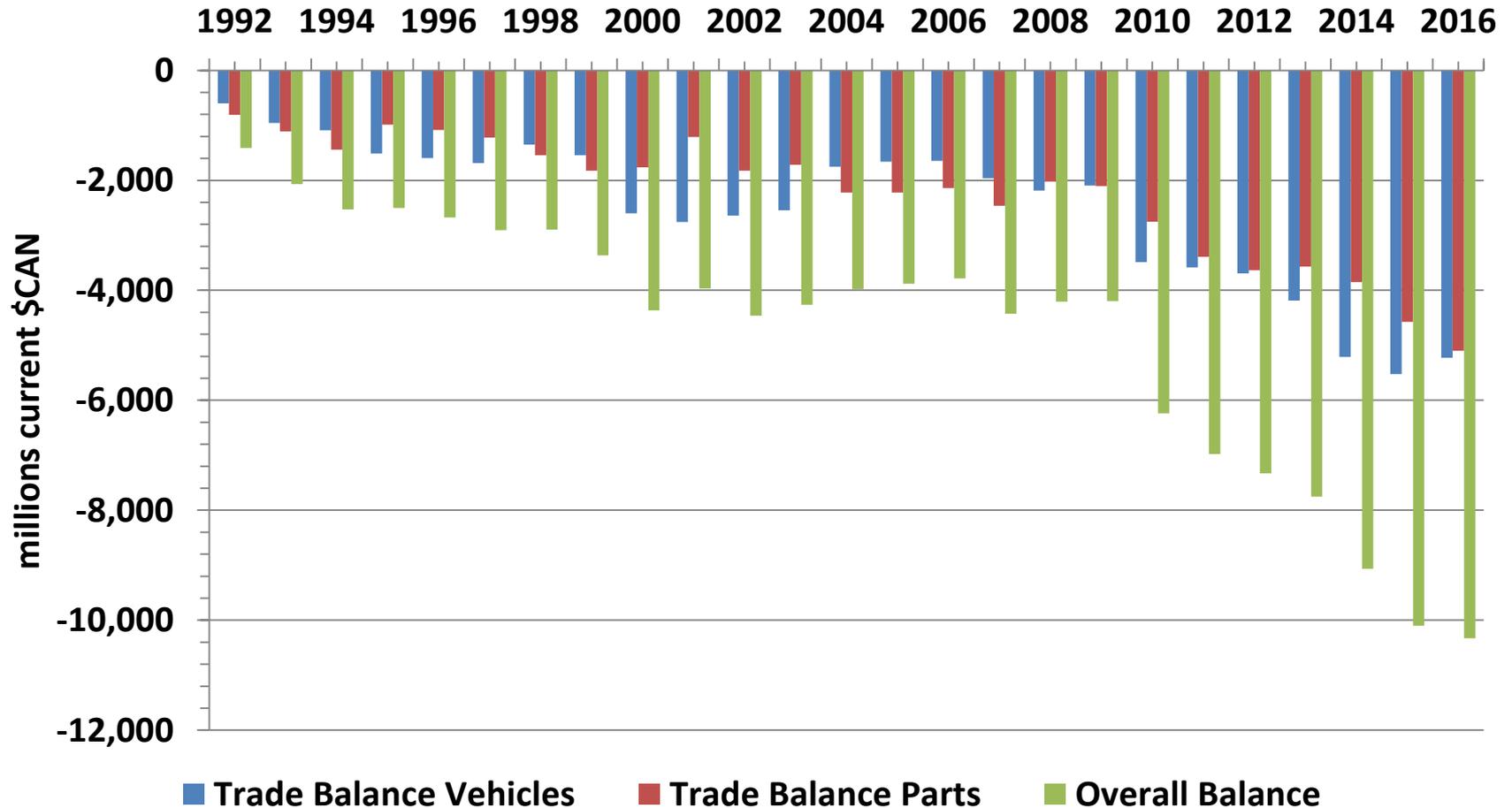
Source: Industry Canada, Strategis Online Trade Data

Canada Automotive Trade Balances with U.S. 1992-2016



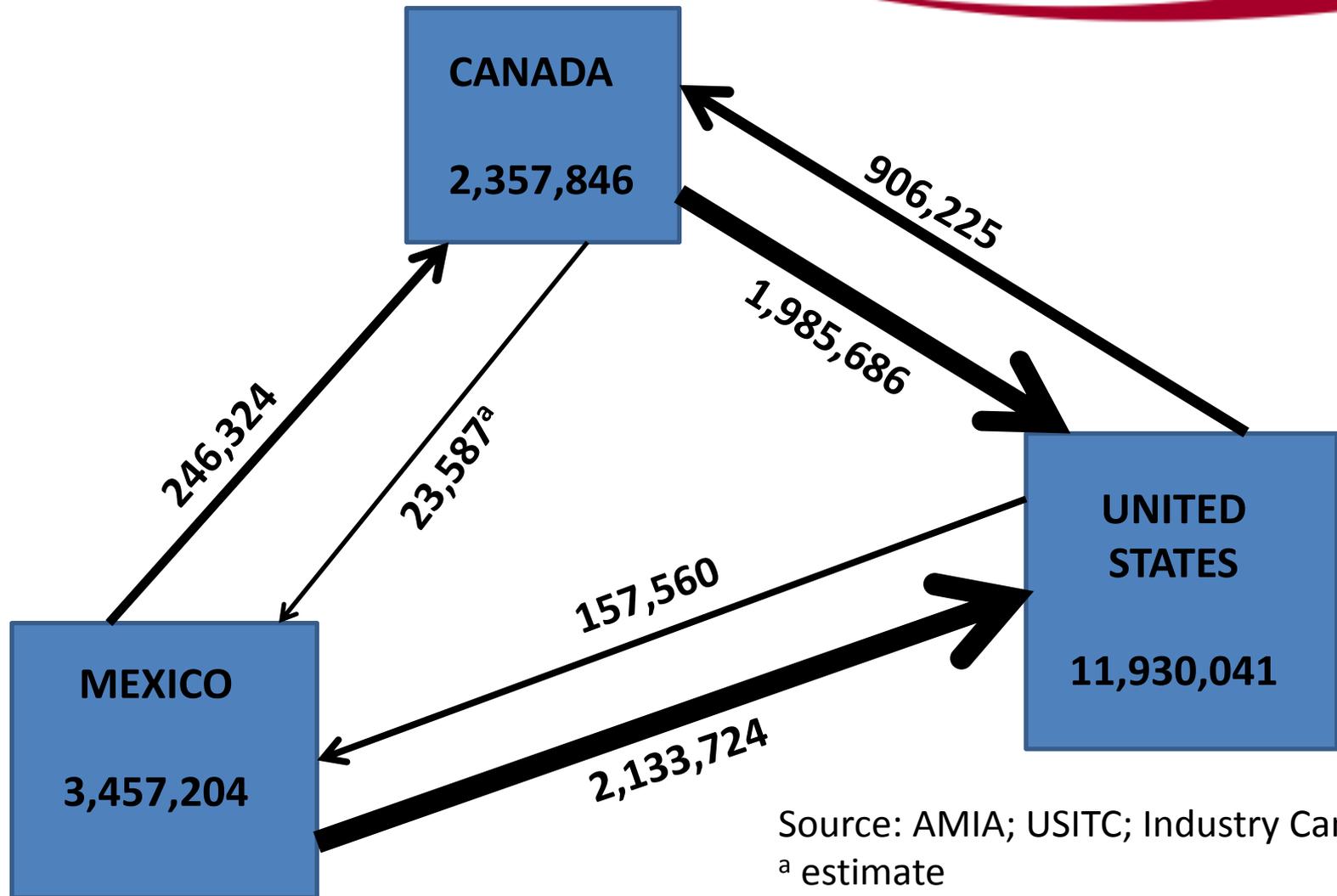
Source: Industry Canada, Strategis Online Trade Data

Canada Automotive Trade Balances With Mexico: 1992-2016



Source: Industry Canada, Strategis Online Trade Data

NAFTA Vehicle Production and Trade Flows: 2016 (Units)



Source: AMIA; USITC; Industry Canada
^a estimate

NAFTA Vehicle Production and Sales: FCA 2016



FCA	NAFTA Production 2016			NAFTA Sales 2016			
	Volume	Canada	U.S.	Mexico	Canada	U.S.	Mexico
Chrysler 300	64,152	100%			6%	93%	0%
Dodge Challenger	59,922	100%			5%	94%	1%
Dodge Charger	109,262	100%			4%	95%	1%
Chrysler Pacifica	90,592	100%			4%	96%	0%
Dodge Grand Caravan	202,703	100%			29%	79%	0%
Dodge Dart	51,306		100%		3%	97%	0%
Jeep Patriot	129,999		100%		4%	94%	1%
Jeep Compass	109,786		100%		7%	91%	2%
Dodge Durango	79,961		100%		4%	95%	1%
Jeep Grand Cherokee	269,455		100%		8%	91%	1%
Jeep Cherokee	244,968		100%		14%	86%	1%
Chrysler 200	77,828		100%		11%	89%	0%
Jeep Wrangler	244,947		100%		9%	90%	1%
Ram Pickup	613,801		54%	46%	15%	83%	2%
Dodge Journey	109,544			100%	13%	81%	6%

Models with volumes > 50,000

Source: Automotive News Database

NAFTA Vehicle Production and Sales: Ford 2016



Ford	NAFTA Production 2016				NAFTA Sales 2016		
	Volume	Canada	U.S.	Mexico	Canada	U.S.	Mexico
Ford Edge	191,998	100%			13%	86%	1%
Ford Taurus	59,125		100%		5%	86%	9%
Ford Explorer	323,300		100%		6%	93%	1%
Ford F-Series	990,510		100%		15%	84%	1%
Ford Mustang	142,382		100%		7%	91%	3%
Ford Transit	152,886		100%		7%	91%	2%
Ford Expedition	75,814		100%		6%	93%	1%
Ford Escape	346,657		100%		13%	85%	2%
Ford Focus	162,426		100%		9%	89%	2%
Ford E-Series	55,275		100%		0%	100%	0%
Ford Fusion	287,023		3%	97%	5%	94%	1%
Ford Fiesta	69,082			100%	5%	72%	23%

Models with volumes > 50,000

Source: Automotive News Database

NAFTA Vehicle Production and Sales: General Motors 2016



GM	NAFTA Production 2016				NAFTA Sales 2016		
	Volume	Canada	U.S.	Mexico	Canada	U.S.	Mexico
Chevrolet Equinox	278,393	100%			7%	88%	5%
GMC Terrain	116,556	100%			11%	87%	2%
Chevrolet Impala	82,521	47%	53%		3%	97%	0%
Chevrolet Suburban	67,999		100%		3%	91%	5%
Chevrolet Tahoe	124,979		100%		3%	96%	2%
GMC Yukon	61,242		100%		5%	93%	2%
Chevrolet Malibu	207,331		100%		5%	94%	1%
Buick Enclave	64,175		100%		6%	92%	1%
Chevrolet Traverse	133,560		100%		4%	95%	1%
GMC Acadia	156,227		100%		4%	94%	2%
Chevrolet Camaro	99,640		100%		3%	94%	3%
Cadillac XT5	53,071		100%		7%	92%	1%
Chevrolet Colorado	120,843		100%		6%	93%	1%
Chevrolet Express	86,801		100%		6%	94%	0%
Chevrolet Silverado	656,688		60%	40%	7%	91%	2%
GMC Sierra	277,368		52%	48%	19%	81%	0%
Chevrolet Cruze	416,339		85%	15%	12%	86%	2%
Chevrolet Sonic	98,344		52%	48%	4%	51%	45%
Chevrolet Aveo	76,674			100%	0%	0%	100%
Chevrolet Trax	109,793			100%	8%	69%	23%

Models with volumes > 50,000

Source: Automotive News Database

NAFTA Vehicle Production and Sales: Honda and Toyota 2016

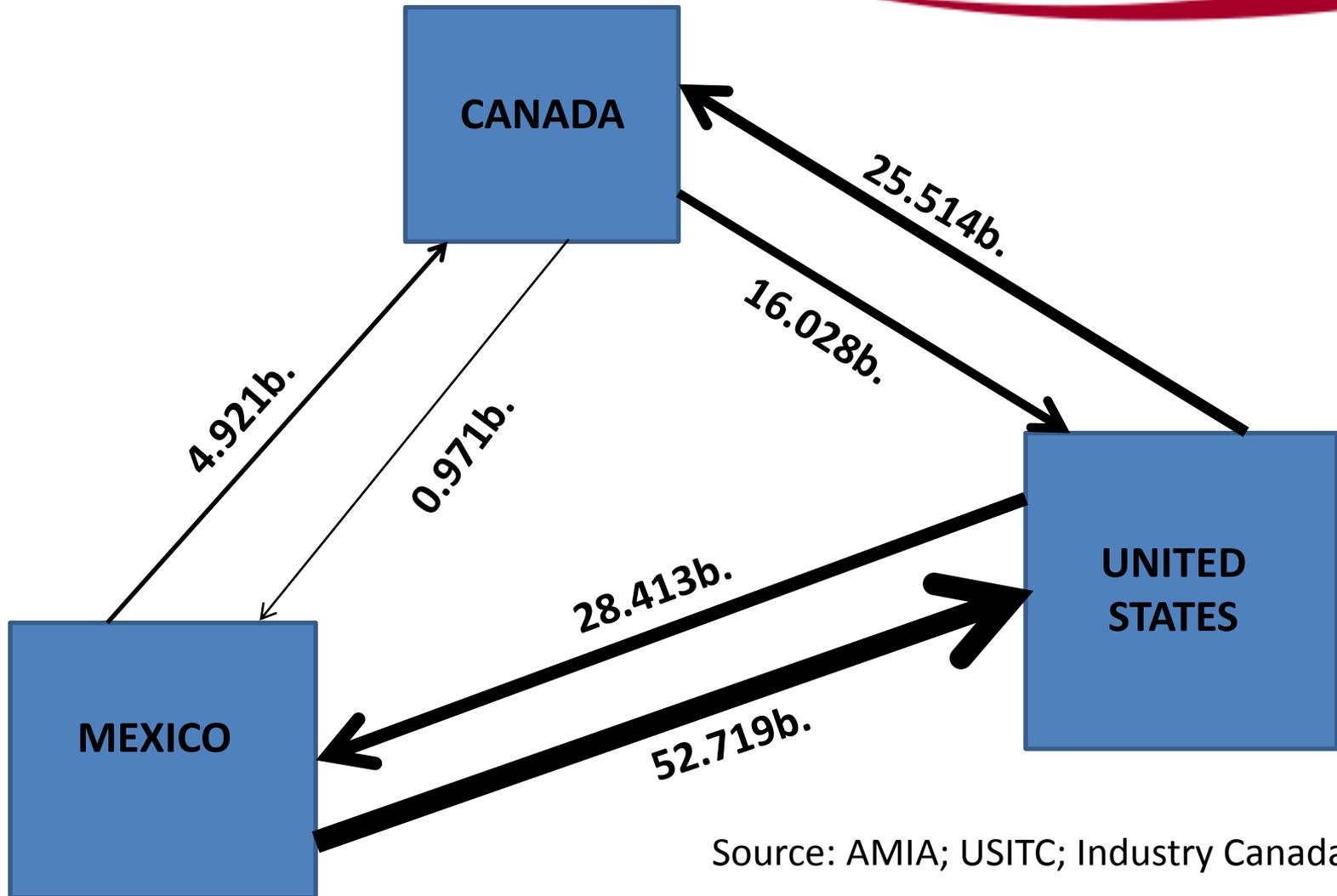


Honda	NAFTA Production 2016			NAFTA Sales 2016			
Model	Volume	Canada	U.S.	Mexico	Canada	U.S.	Mexico
Honda Civic	460,115	45%	55%		15%	83%	3%
Honda CR-V	436,823	48%	38%	14%	11%	85%	5%
Acura RDX	68,474		100%		13%	86%	1%
Acura MDX	64,759		100%		9%	90%	1%
Honda Odyssey	131,498		100%		9%	89%	2%
Honda Pilot	140,898		100%		6%	92%	2%
Honda Accord	383,334		100%		4%	95%	1%
Honda HR-V	171,980			100%	11%	73%	16%
Toyota							
Lexus RX350	105,892	100%			7%	93%	0%
Toyota RAV4	250,347	100%			18%	78%	4%
Toyota Corolla	419,578	57%	43%		11%	86%	3%
Toyota Camry	402,247		100%		4%	95%	1%
Toyota Highlander	222,561		100%		6%	92%	2%
Toyota Sienna	151,905		100%		9%	87%	4%
Toyota Tundra	133,769		100%		9%	91%	0%
Toyota Tacoma	225,037		57%	43%	6%	92%	2%

Models with volumes > 50,000

Source: Automotive News Database

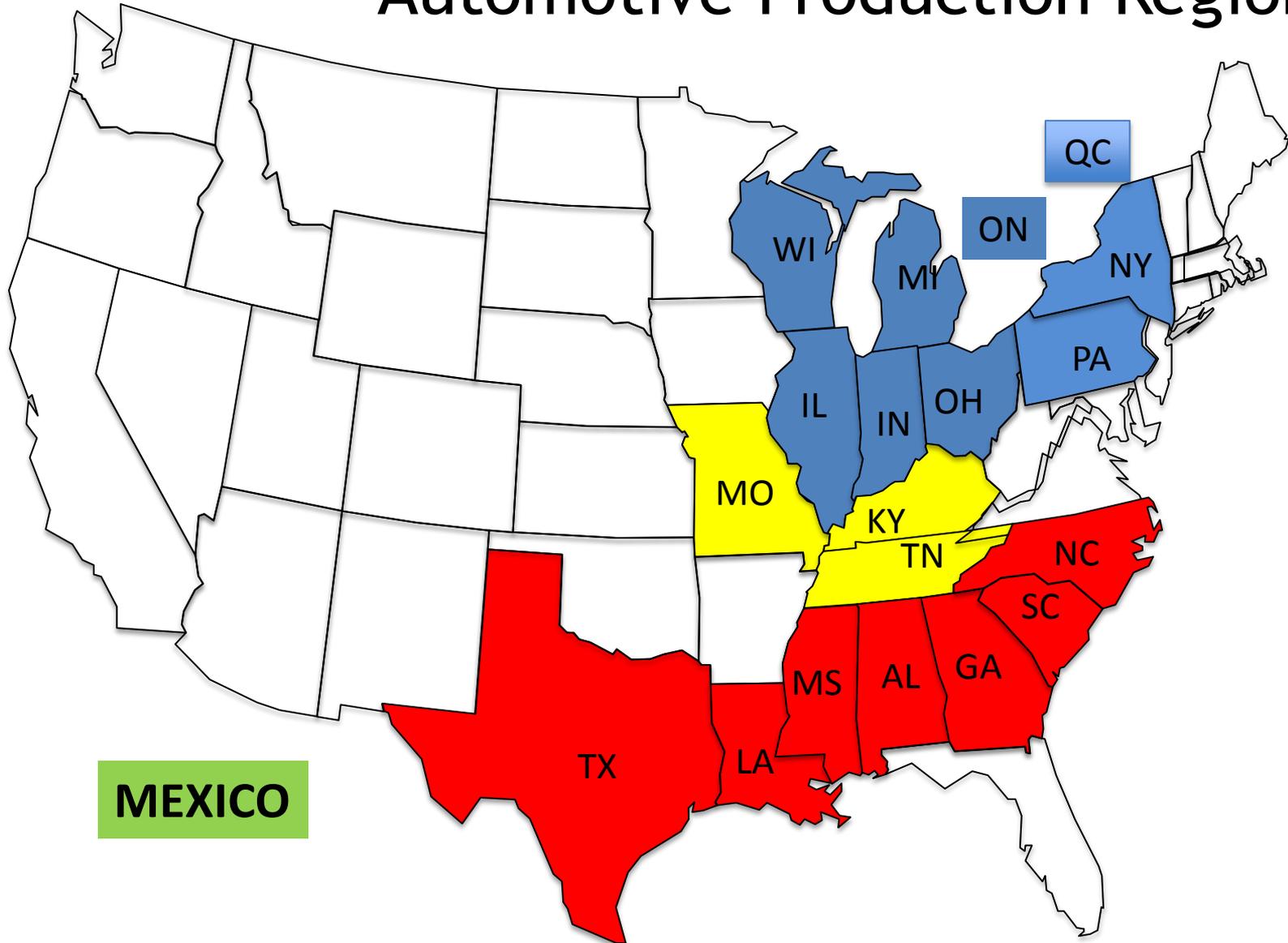
NAFTA Automotive Parts Trade Flows: 2016 (\$US Billions)



Source: AMIA; USITC; Industry Canada

Ontario-Québec Integration within the Great Lakes Region

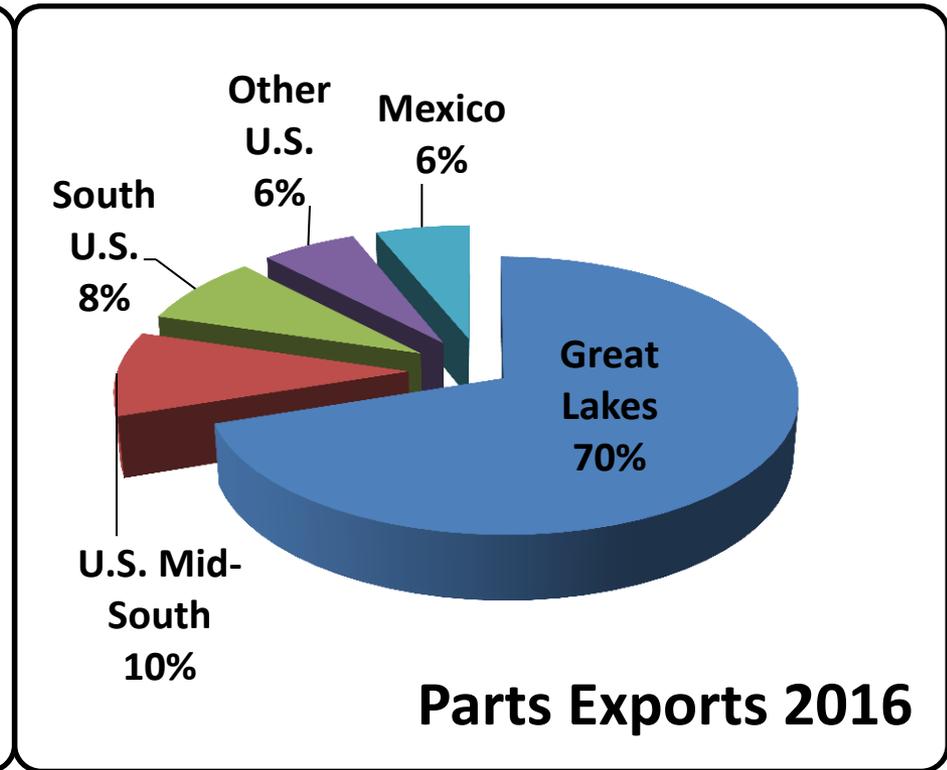
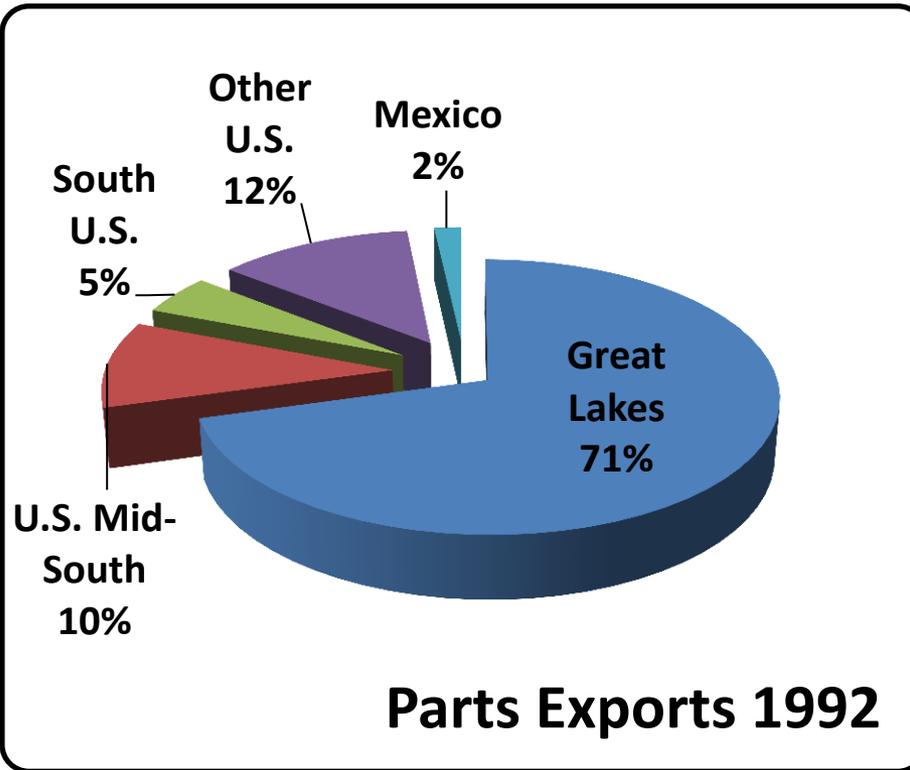
Automotive Production Regions



MEXICO

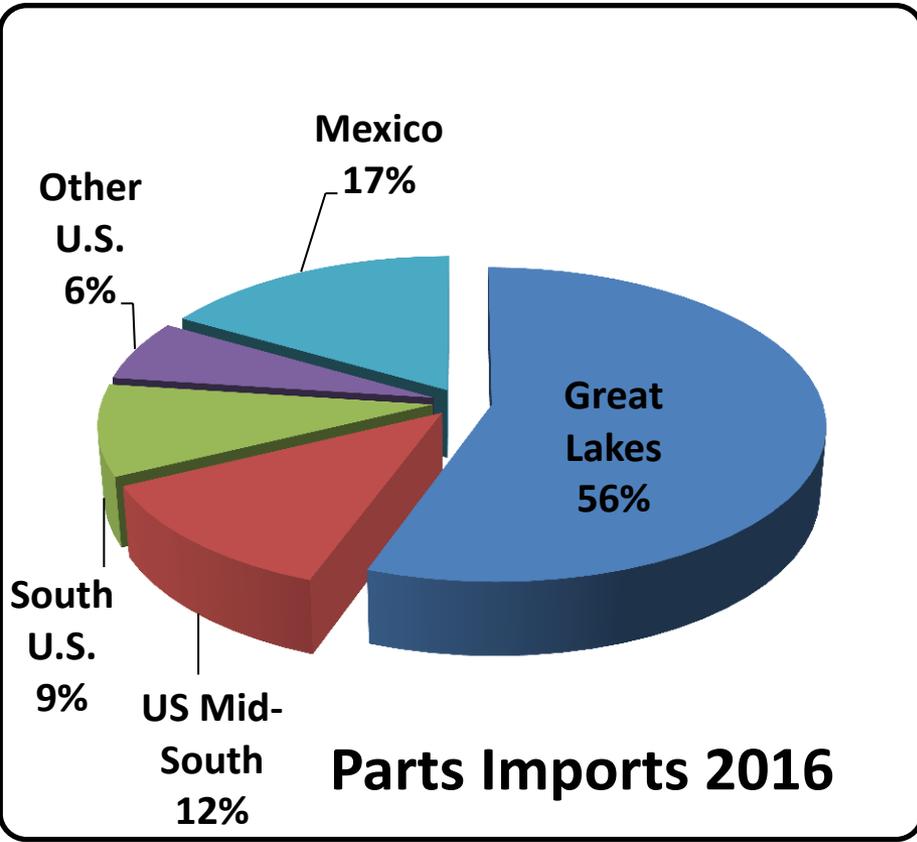
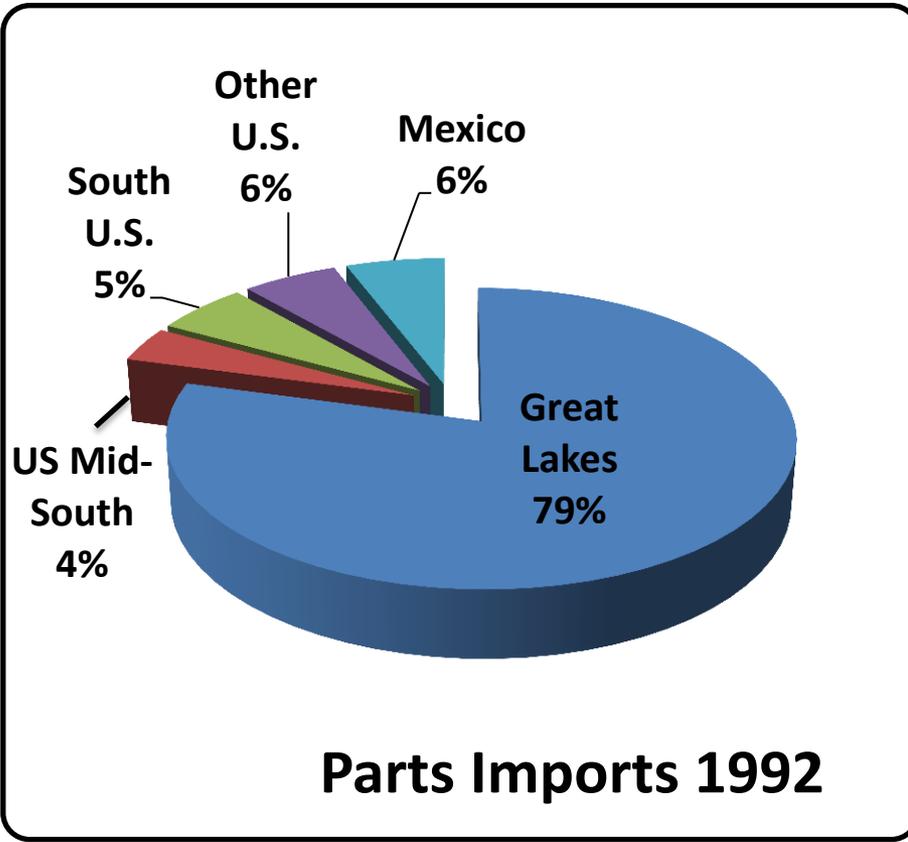
-  South U.S.
-  U.S. Mid-South
-  Great Lakes

Percentage Shares, NAFTA Automotive Parts Exports from ON/QC: 1992 and 2016



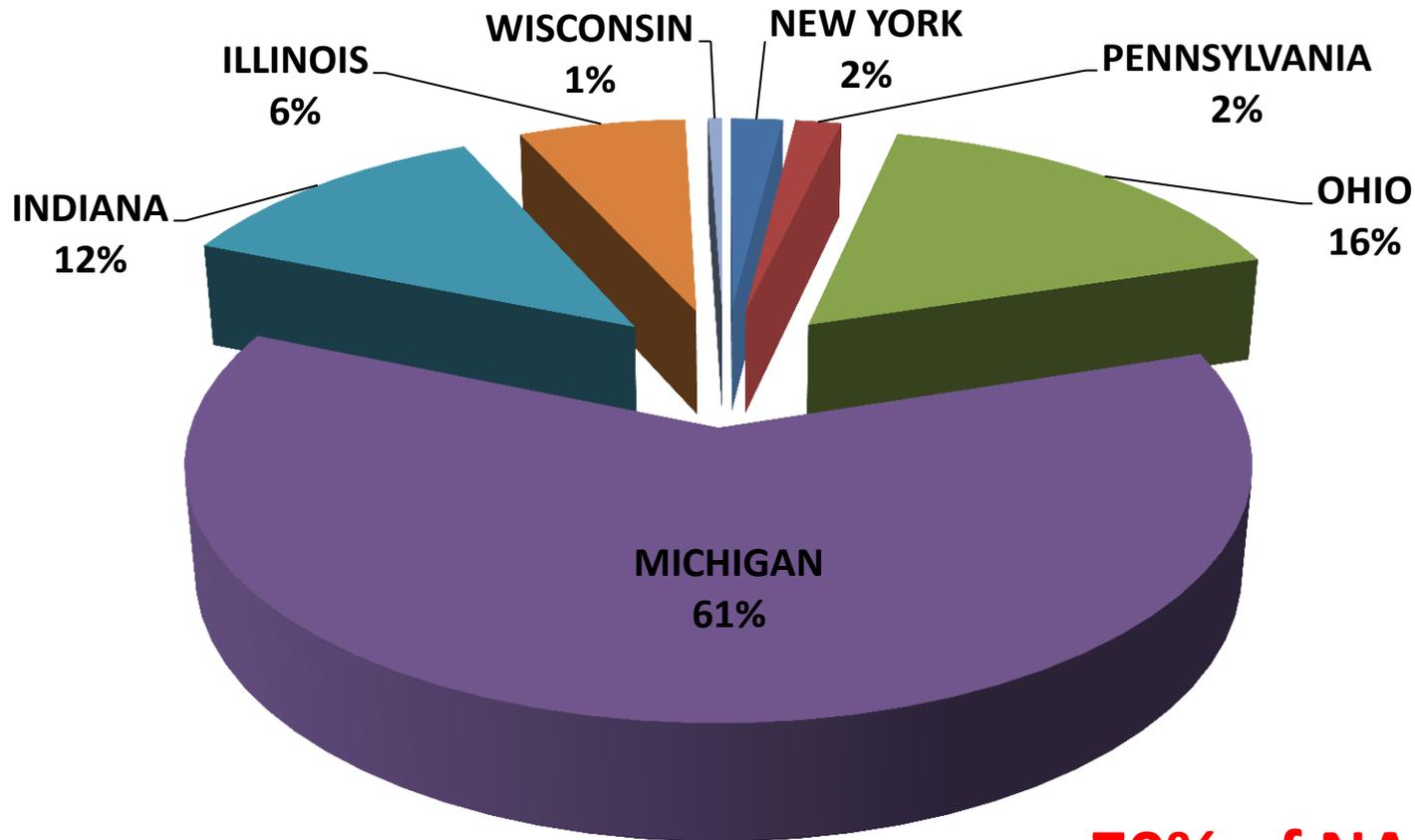
Source: Industry Canada: Strategis Online Trade Data

Percentage Shares, NAFTA Automotive Parts Imports to ON/QC: 1992 and 2016



Source: Industry Canada: Strategis Online Trade Data

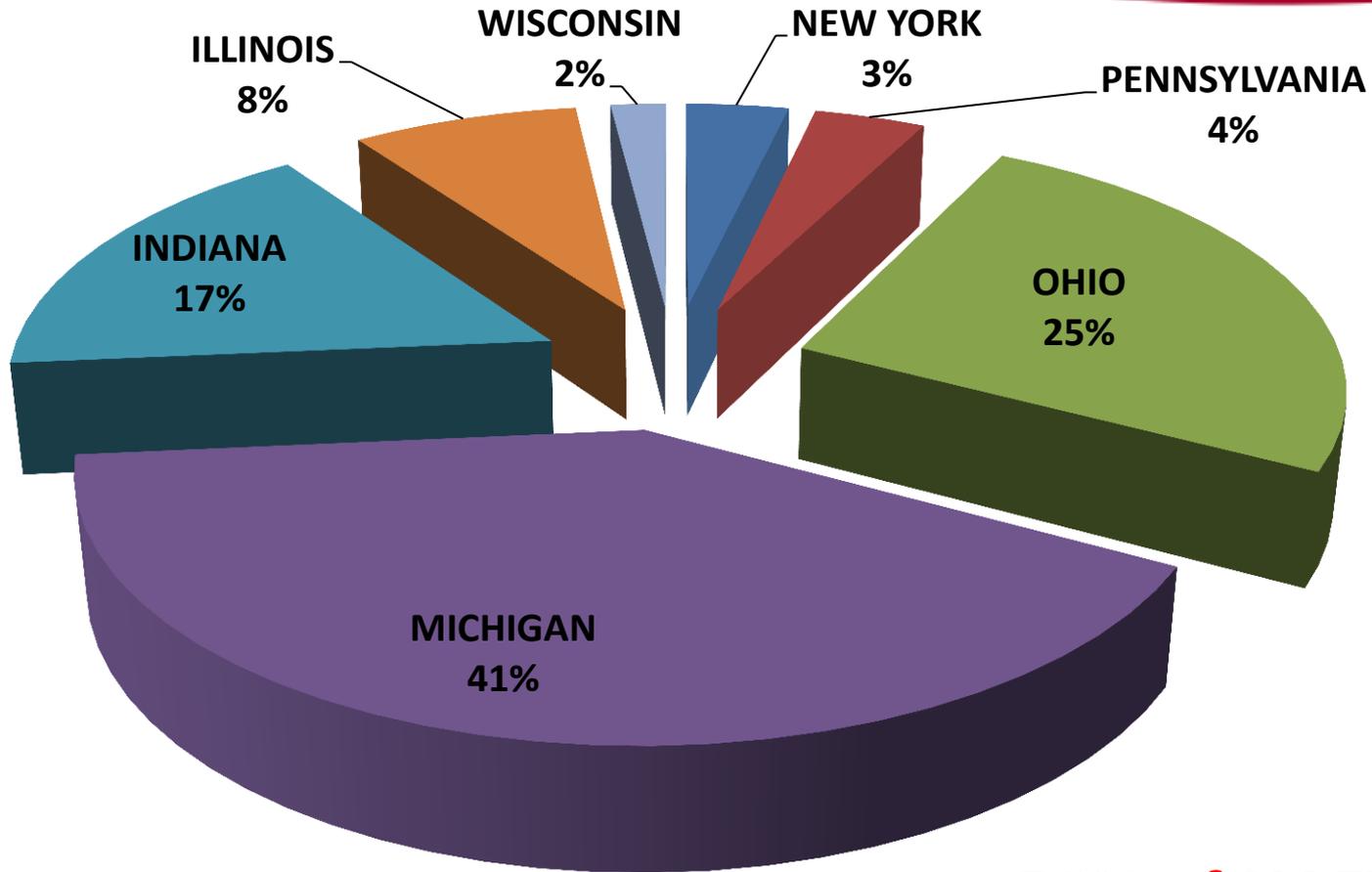
Percentage Shares of Auto Parts Exports from ON/QC to Great Lakes Region: 2016



70% of NAFTA Total

Source: Industry Canada: Strategis Online Trade Data

Percentage Shares of Auto Parts Imports to ON/QC from Great Lakes Region: 2016



56% of NAFTA Total

Source: Industry Canada: Strategis Online Trade Data

Whither NAFTA under Trump??



- NAFTA allowed OEMs and suppliers to optimize regional production networks by locating different operations in best cost locations
- current NAFTA Auto Trade reflects high levels of integration , specialization , and intra-industry trade
- keeps the North American auto industry globally competitive
- significant changes to the tariff structure would result in consequences for OEMs, suppliers and consumers
- more on this in tomorrow's session!