

CAR
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Michigan Automotive Industry Update

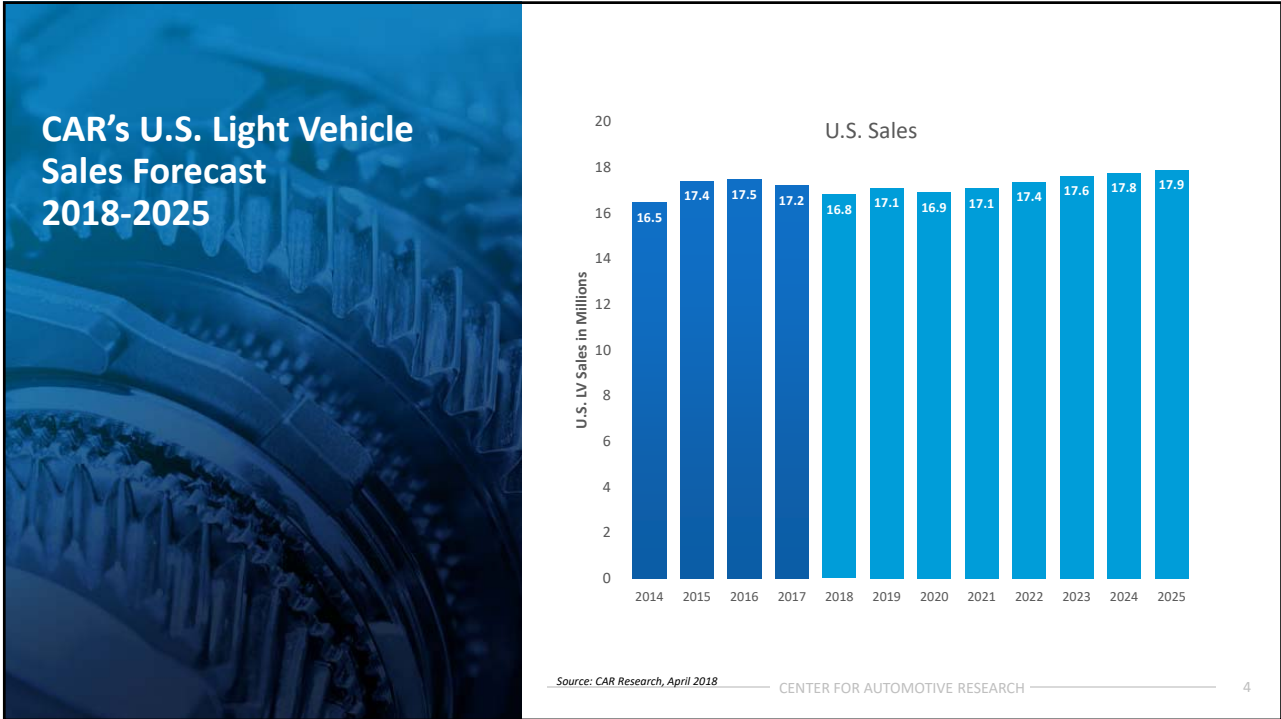
Kristin Dzciczek | Vice President
Center for Automotive Research

CREC
16 May 2018

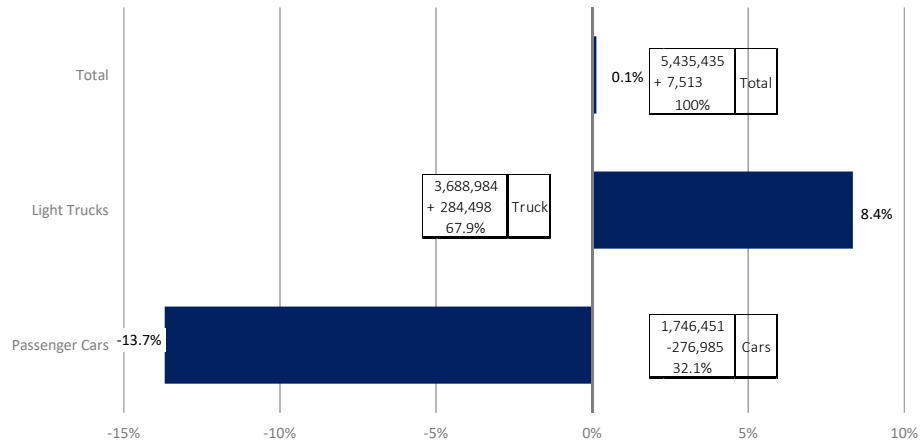
AGENDA

- Sales, Production & Employment
- Automaker Investments
- Trade
- Meridian

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U.S. Light Vehicle Sales Percent Change (YTD) Through April: 2018 vs. 2017

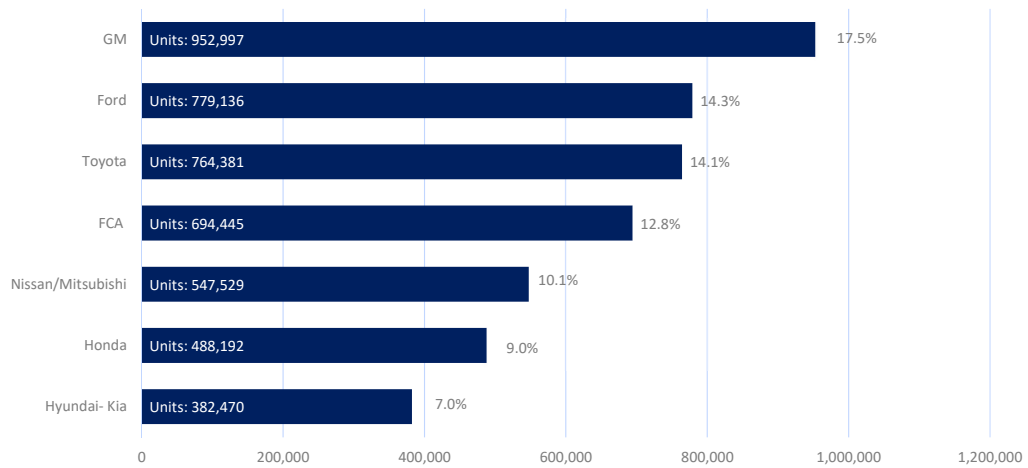


Source: Wards Auto; CAR Research

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U.S. Market Share: YTD April 2018

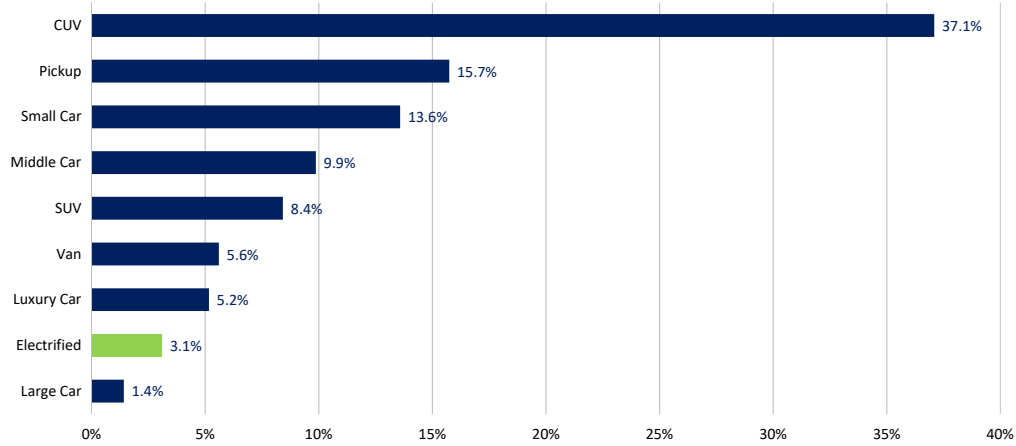


Source: Wards Auto; CAR Research

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Market Share: Segment Breakdown U.S. Light Vehicle Sales 2018 YTD Through April



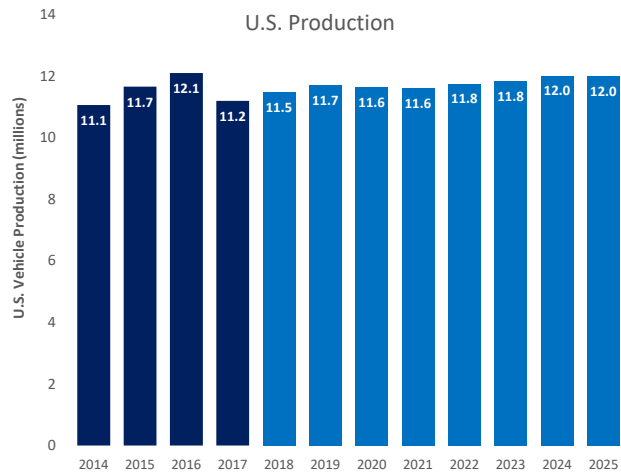
Note: Electrified Segment consists of BEVs, HEVs and PHEVs; all other segments are sales exclusive of Hybrid models

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Source: Ward's Automotive Reports and CAR Research

CAR's U.S. Light Vehicle Production Forecast 2018-2025

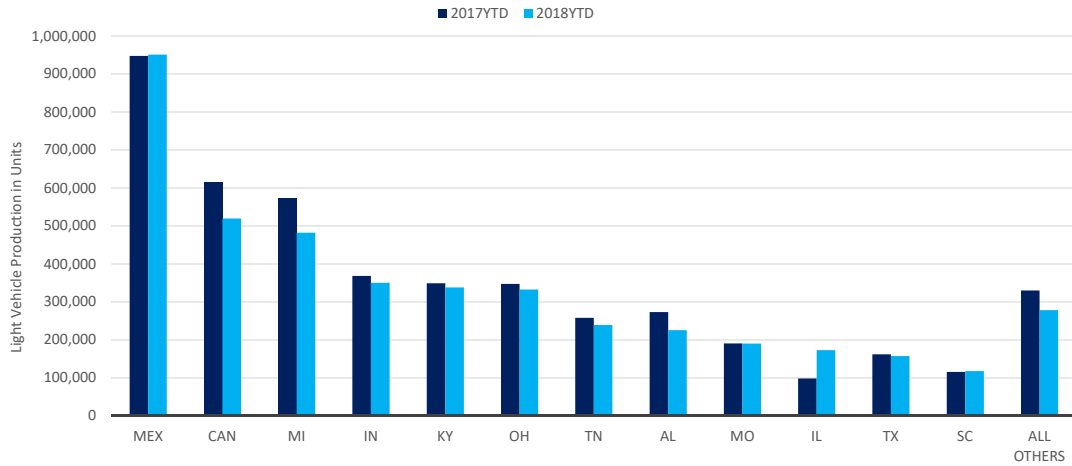


Source: CAR Research, April 2018

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2018 YTD Light Vehicle Production: Michigan Ranks 1st in the U.S.; 3rd in NAFTA Region



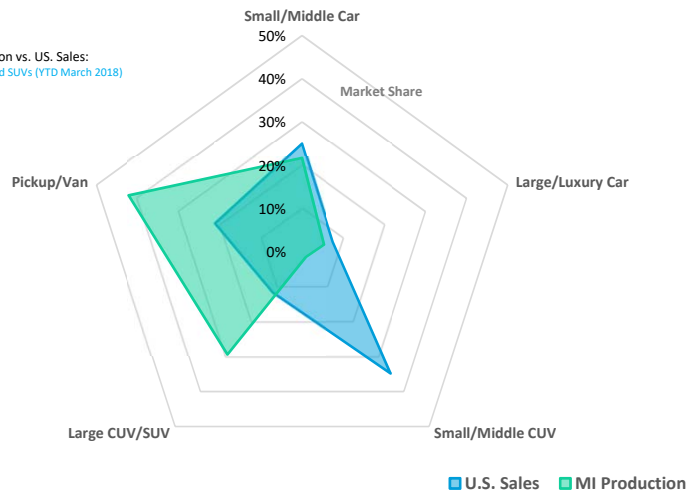
Source: Automotive News

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Michigan produces proportionately more pickups & SUVs than the U.S. market buys.

Segment Breakdown of Michigan Production vs. U.S. Sales:
Michigan Production Concentrated on Pickups and SUVs (YTD March 2018)



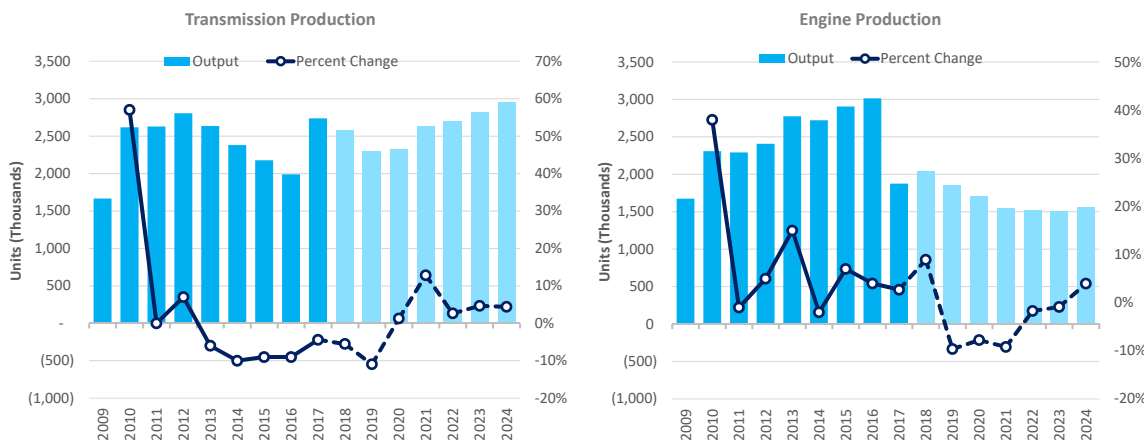
*Please see Appendix for vehicle segment definitions.

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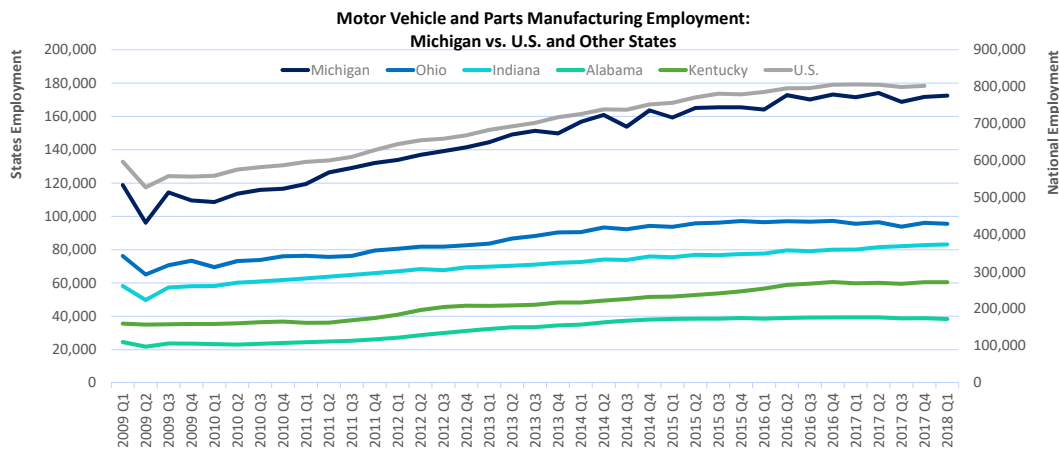
Michigan engine production was down; transmission production up between 2016-2017.

Michigan Powertrain Production Forecasts: 2017 to 2024



Source: LMC Automotive 4Q 2017

Michigan motor vehicle & parts employment is up 49% from January 2009, but flat over the past 12 months.



Source: Bureau of Labor Statistics

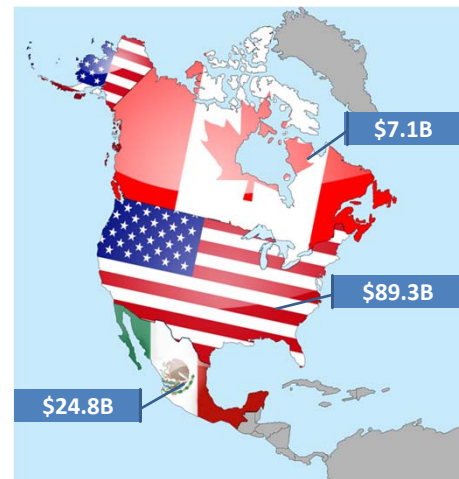
Automaker Investments

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Michigan automaker investments greater than Mexico since 2009.
 North American Announced Automaker Investment by Region 2009 to Q1 2018

Region	Investment Amount (\$USD)
Canada	\$7.1B
United States	\$89.3B
<i>U.S. Great Lakes</i>	\$56.3B
<i>Michigan</i>	\$28.1B
<i>South</i>	\$20.4B
Mexico	\$24.8B
Total	\$119.5B



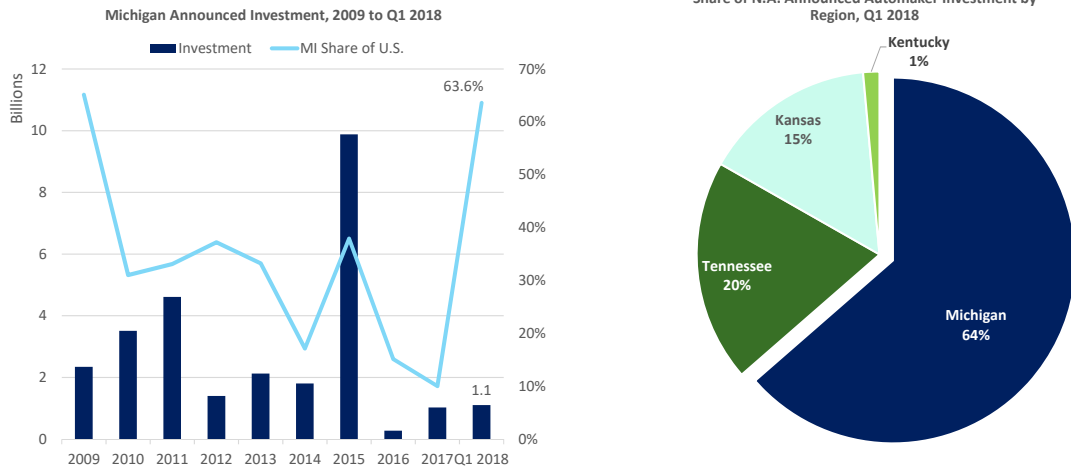
Note: U.S. Great Lakes includes: IL, IN, KY, MI, MO, and OH
 South includes: AL, FL, GA, MS, SC, TN, and TX

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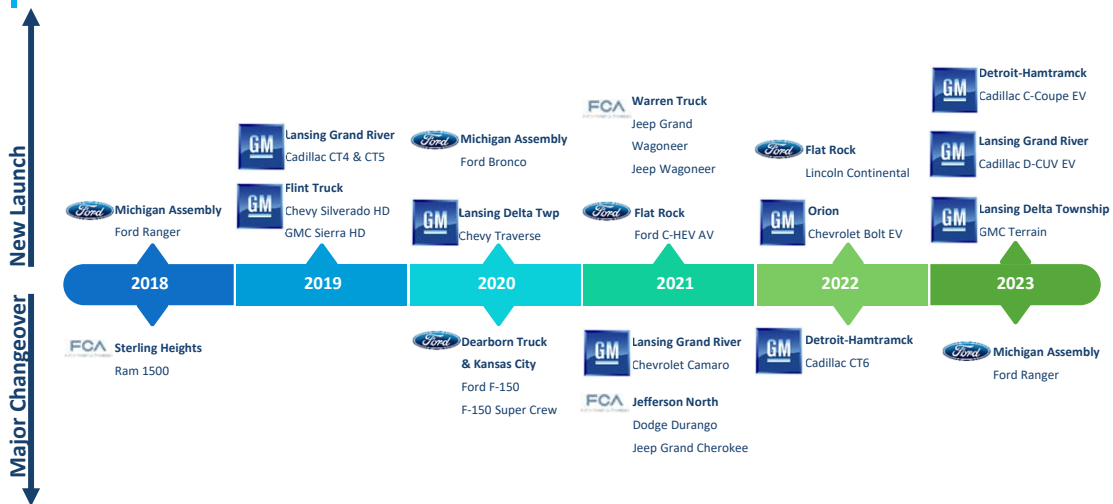
Source: CAR Book of Deals, March 2018

Automaker Announced Investment: Michigan vs. Other States Q1 2018

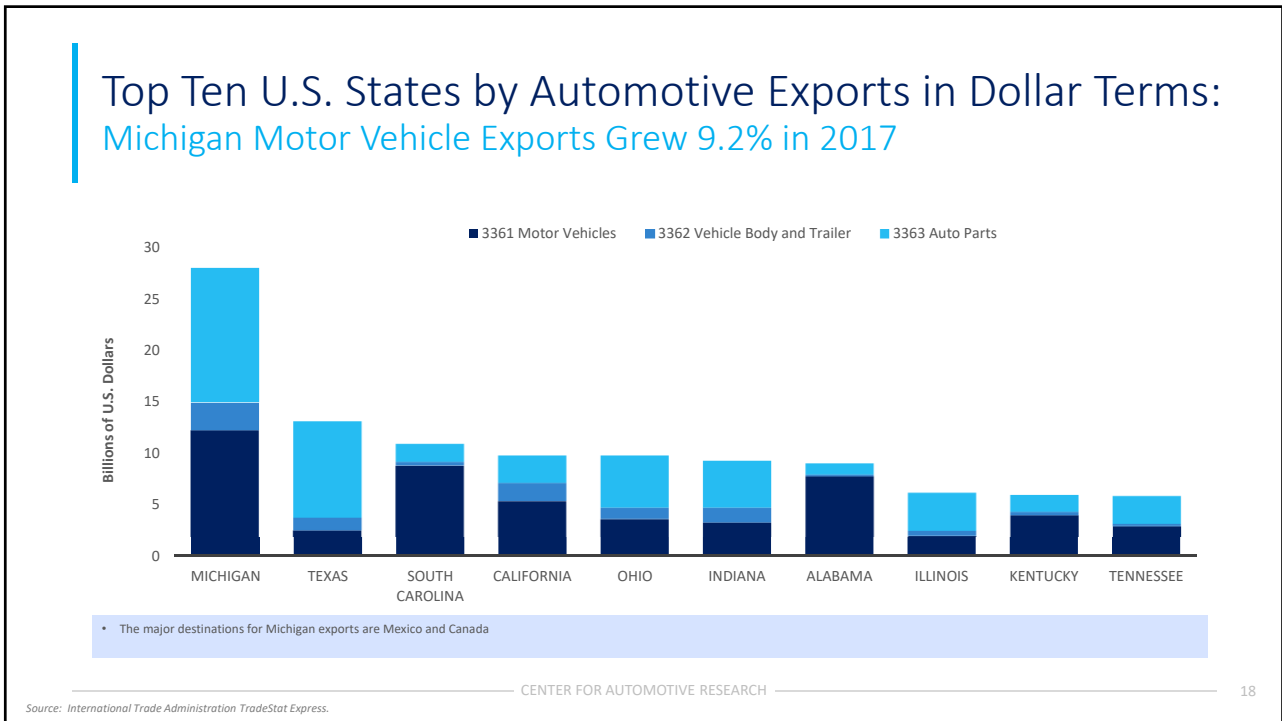


Source: CAR Book of Deals, March 2018

Michigan New & Major Change Launches



Source: Center for Automotive Research Product Timing Charts, May 2018



Standard U.S. Tariffs On Imported Steel, Aluminum, Automotive Parts & Passenger Cars/Trucks Under WTO

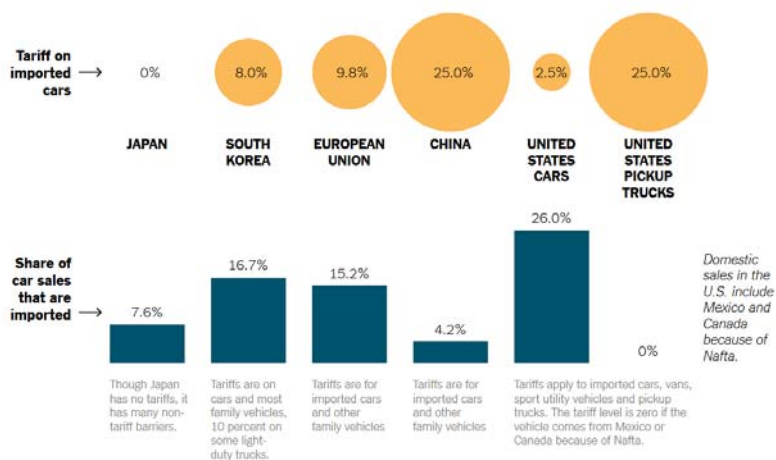
Most-Favored-Nation Tariff Rates

- Steel—0%
- Aluminum—0-6%
- Automotive Parts—2.5%
- Passenger Cars—2.5%
- Pickup Trucks/Cargo Vehicles—25%



Harmonized Tariff Schedule of the United States (2018) Basic Edition

Global Tariffs and Light Vehicle Imports



Source: LMC Automotive

NAFTA Background

- Enacted in 1994, NAFTA eliminated tariffs and created a unified trading region
- Canada & Mexico responsible for half of U.S. light vehicle imports
- NAFTA makes North America a globally competitive and complete auto region
- Every global automotive region relies on low-cost content

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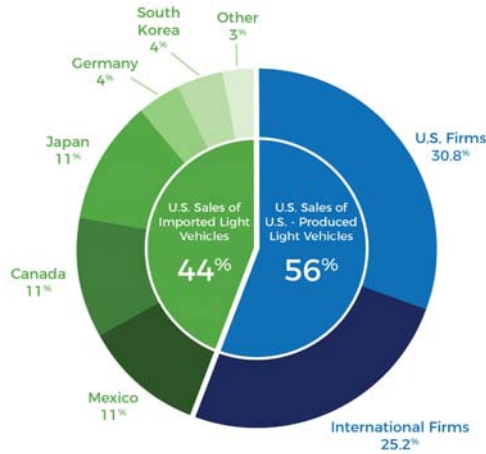
The United States cannot self-supply.



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Sourcing of U.S. Light Vehicle Sales in 2017

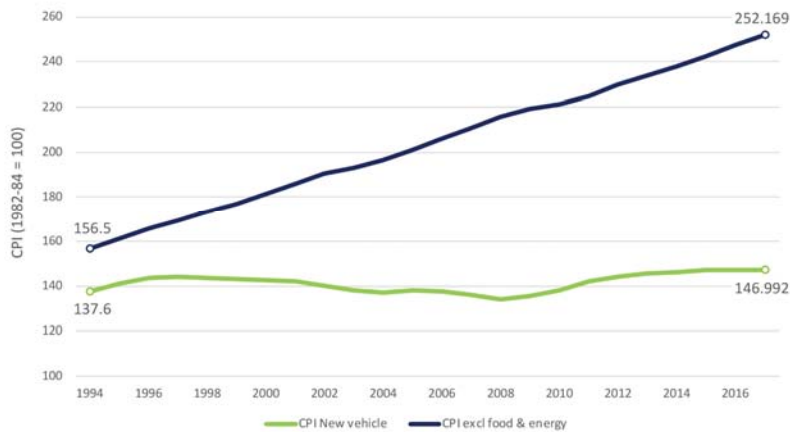


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A competitive automotive industry is good for consumers.

U.S. Consumer Price Indices for All Items Except Food & Energy and New Vehicles, 1990-2017



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Overview of U.S. Proposal

- Increases Regional Value Content (RVC) from 62.5%—already the highest of any U.S. trade agreement
- Institutes an RVC for steel and aluminum content
- Institutes a Labor Value Content (LVC) requirement for a share of work to be done at or above a specified wage

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Not everything traded in NAFTA Region uses NAFTA preferential rates

2017 U.S. Motor Vehicle, Bodies & Trailers, and Parts Imports from Canada and Mexico by Trade Program

YEAR: 2017 in USD Billions		NAFTA	Civil Aircraft	No Program Claimed	Total	NAFTA share of Total
CANADA	Motor Vehicles	43.6	-	0.7	44.3	98.40%
	Motor Vehicle Bodies & Trailers	0.5	-	0.4	0.9	56.20%
	Motor Vehicle Parts	11.1	0.04	2.0	13.2	84.30%
	CANADA TOTAL	55.2	0.04	3.1	58.4	94.50%
MEXICO	Motor Vehicles	57.5	-	0.1	57.7	99.80%
	Motor Vehicle Bodies & Trailers	0.05	-	1.4	1.5	3.50%
	Motor Vehicle Parts	34.6	0.01	10.3	45.0	76.90%
	MEXICO TOTAL	92.2	0.01	11.8	104.2	88.50%
CANADA/MEXICO TOTAL		147.5	0.1	15.0	162.6	90.70%

Source: U.S. International Trade Commission

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China, Japan & South Korea Could Replace Canada & Mexico to be U.S.'s Largest Automotive Parts Importers

2017 Total U.S. auto parts imports: \$108.8B



Mexico: \$45.7B
Canada: \$14.0B

	Mexico	Canada	Next Largest Importers		
Engines & Parts	38%	21%	Japan 13%	Germany 5%	China 5%
Transmission & Powertrain Parts	35%	13%	Japan 18%	China 8%	South Korea 7%
Electrical & Electronic (excl. Lighting)	52%	2%	China 11%	Japan 8%	Taiwan 4%
Steering & Suspension Parts	40%	10%	Japan 21%	China 7%	South Korea 7%
Seating & Interior Trim	64%	10%	UK 6%	China 6%	Germany 3%
Brake Systems	31%	8%	China 31%	Japan 6%	Germany 5%
Metal Stampings	13%	38%	Taiwan 20%	South Korea 9%	China 5%
Other Motor Vehicle Parts	38%	16%	China 18%	South Korea 7%	Japan 6%

Source: U.S. International Trade Commission

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Results:

At least 22 and as many as 40 vehicle nameplates that currently qualify under NAFTA would not qualify under the U.S. proposal CAR evaluated.

CAR estimates that the U.S. proposal as of 26 April 2018 would:

- Add USD 2.1-3.8 billion to the cost of light vehicles in the United States
- Averages USD 470-2,200 to the cost of these particular vehicles
- Assuming manufacturers pass through increased costs, result in an estimated 60,000-150,000 lost U.S. light vehicle sales

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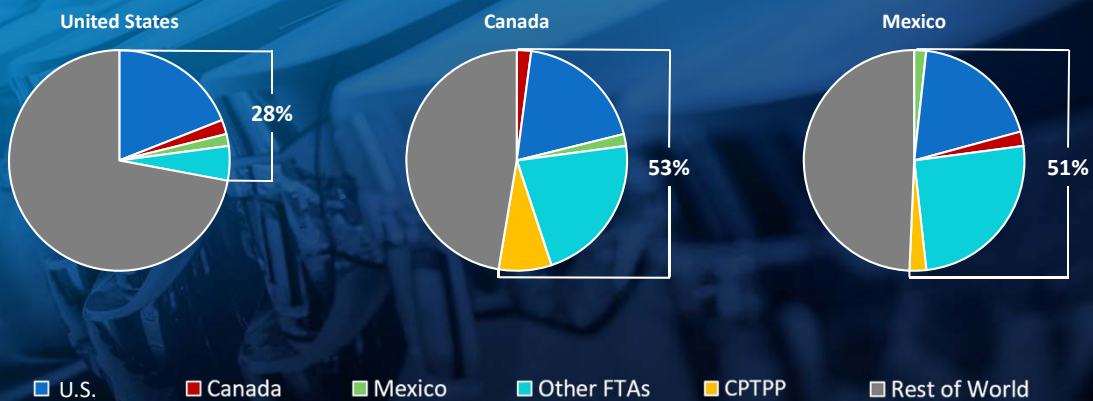
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Timeline and Phase-In

- 2-year, 3-year, or 4-year transition periods are inadequate
- Minimum time to launch new assembly capacity is 3 years *once the decision has been made*
- Adjusting and re-sourcing the supply chain also takes time
- And all of this might cost more than the 2.5% MFN tariff

U.S., Canadian, and Mexican Free Trade Reach

Share of the New Motor Vehicle Market That Can Be Reached Tariff-Free
2016 Market; Free Trade Agreements in Place as of March 2018



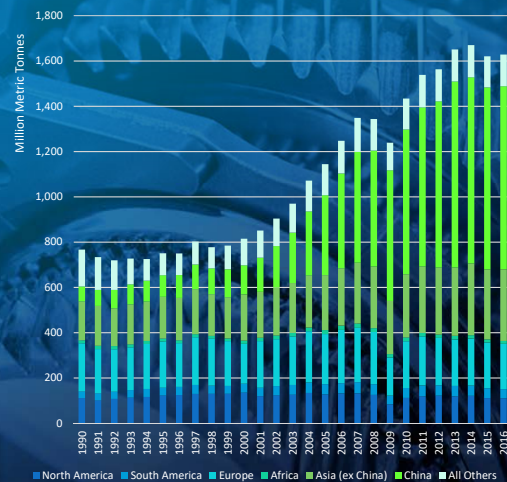
Sources: OICA; United Kingdom included as part of the EU; Canada's CPTPP reach is larger than Mexico's because Mexico had FTAs with CPTPP partners prior to CPTPP

NAFTA & Steel/Aluminum Tariffs

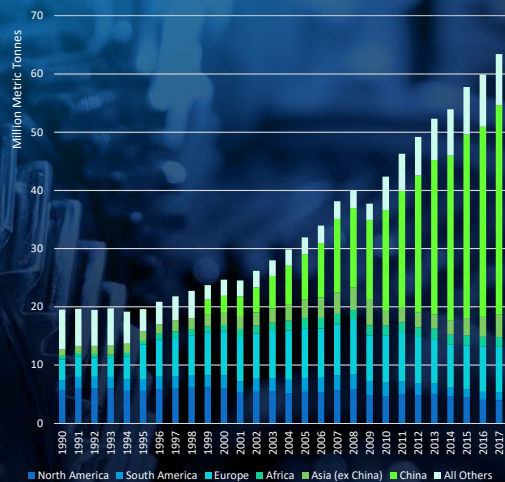
- Removing the exclusion for Canada and Mexico would endanger NAFTA.
- Canada is among the top 5 countries that import rolled steel products and bar and ingot steel to the U.S. and the number one import source for unwrought, bar, and sheet aluminum.
- Mexico is a top 5 rolled steel exporter to the U.S.

Global Steel & Aluminum Production Capacity 1990-2017

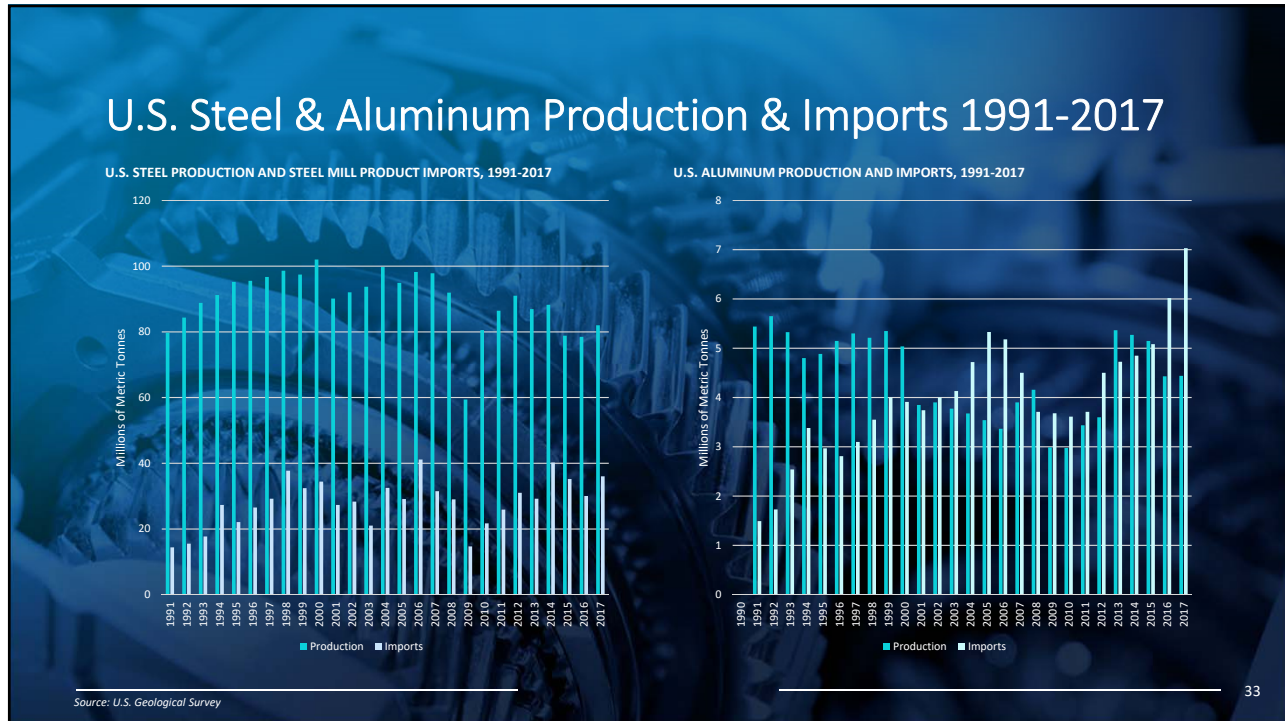
WORLD CRUDE STEEL PRODUCTION BY REGION, 1990-2016



WORLD ALUMINUM PRODUCTION BY REGION, 1990-2017



Source: World Steel Association, 2018; International Aluminum Institute, 2018



U.S. Steel was already highly protected from imports

- As of April 19, 2017, the U.S. has 152 antidumping (AD) and countervailing duty (CVD) orders in place on steel from 32 countries.
- Twenty-eight of the 152 orders (18%) are on steel products from China – 16 AD and 12 CVD.
- The steel orders represent almost 40 percent of all AD/CVD orders in place.
- There are also 25 investigations underway for steel products, 16 in which Commerce has yet to issue final determinations and 9 investigations (on cut-to-length plate) for which Commerce has issued final determinations and are waiting for final determinations from the International Trade Commission.

Special restrictions already cover 94 percent of steel imports from China, which now make up only 3 percent of all US steel imports.

Percent of US steel imports subject to special tariffs, by exporting region

Source: See Figure 1 in blog post, "Trump's Steel and Aluminum Tariffs Are Counterproductive. Here Are 5 More Things You Need to Know." Note: Special tariffs include safeguards, antidumping, and countervailing duties. Learn more at <https://piae.com/research/piae-charts/us-steel-imports-are-already-highly-protected>. Calculations by Chad P. Bowen.

#PIIECharts

Conclusions

- The steel & aluminum tariffs may impact the automotive supply chain more than automakers themselves.
- Suppliers could move work to:
 - A FTZ (tariff inversion in effect) or
 - Outside the United States since imported articles, parts & components made of steel or aluminum are not subject to the tariff.
- There are more workers in steel- and aluminum-consuming industries than there are in metals production in the United States.
- The last broad steel tariffs under President Bush lasted 18 months.



Meridian

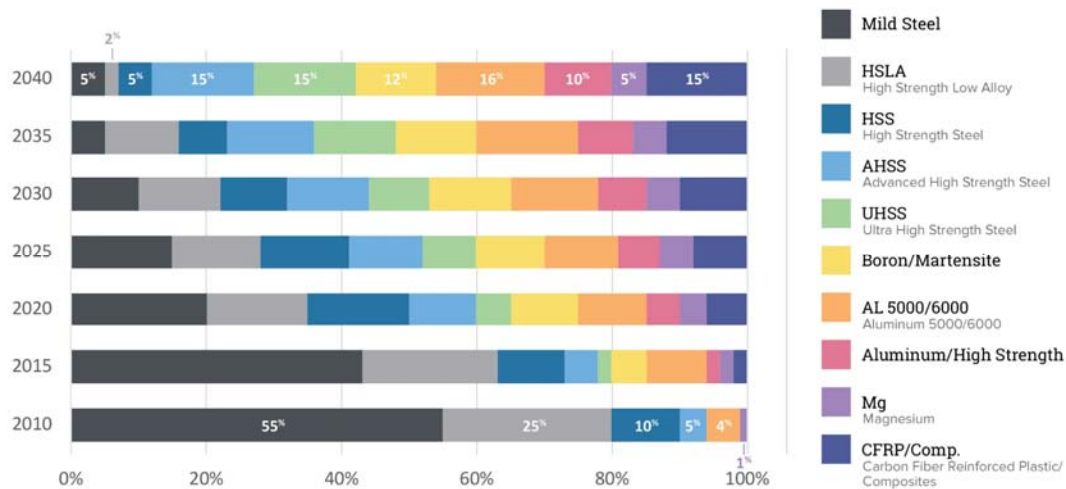
Impact of Meridian Fire



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Material Percentage Use by Year, 2010 to 2040



Note: Between 2010 to 2020 the mix of material represents the mix throughout the industry as some vehicles in the fleet still use predominantly mild or lower grade steels while few higher end vehicles use ultra high strength steels with aluminum. Automotive engineers want the right material at the right place but are currently constrained with issues such as mixed-material joining, supply chain risk, infrastructure etc. In the future, no single material wins the race to lightweighting. Future vehicles will have highly optimized mixed-material body structure; therefore, From 2025 to 2040 the material percentages represents material mix in a single vehicle.

Source: CAR Research

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Thank you

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