Michigan Auto Update

...production, employment, technology, & policy

16 MAY 2025

KRISTIN DZICZEK POLICY ADVISOR

FEDERAL RESERVE BANK OF CHICAGO

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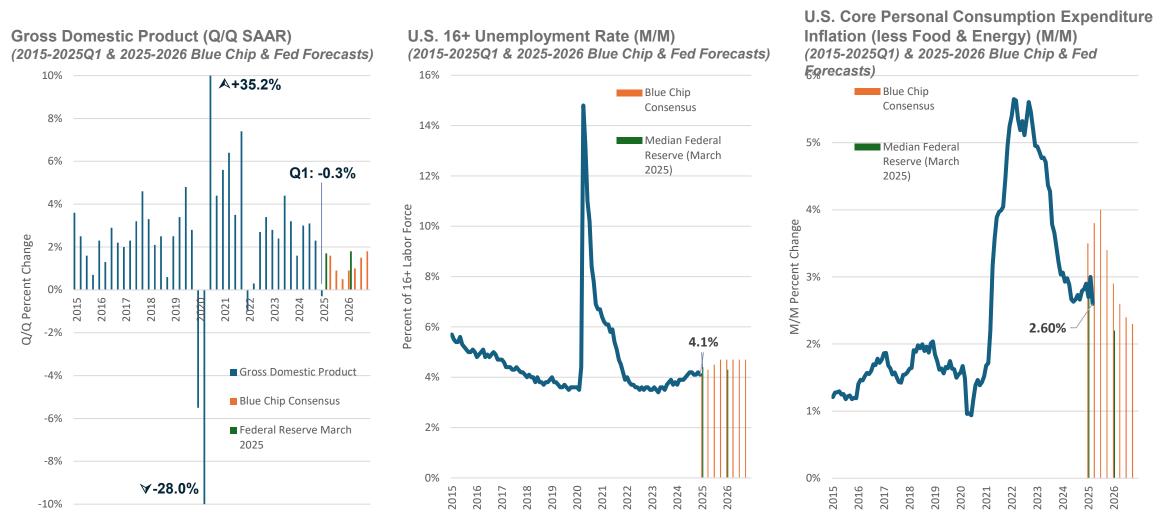
Agenda

- Economic backdrop
- Light vehicle market
- U.S. & Michigan employment & production
- Recent policy changes
- Wrap up

Economic Backdrop Data & sentiment are not aligned

ECONOMIC BACKDROP

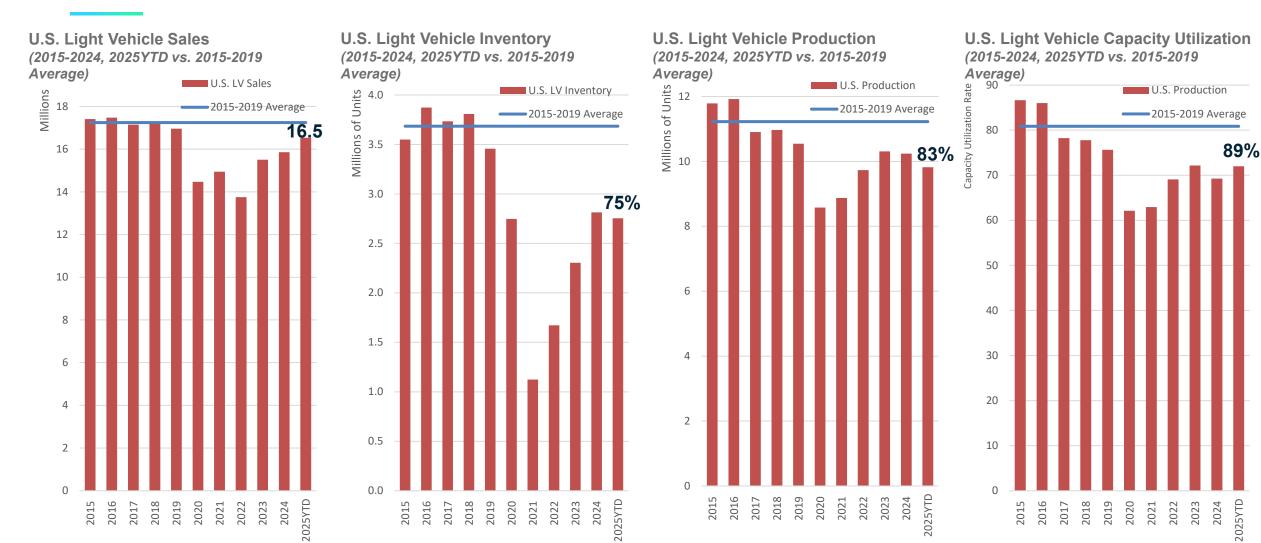
Data show U.S. economic growth down but labor market, & prices steady/falling



Source: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Labor, Bureau of Labor Statistics; Board of Governors of the Federal Reserve; Wolters Kluwer Blue Chip Forecast via Haver Analytics

U.S. AUTO INDUSTRY

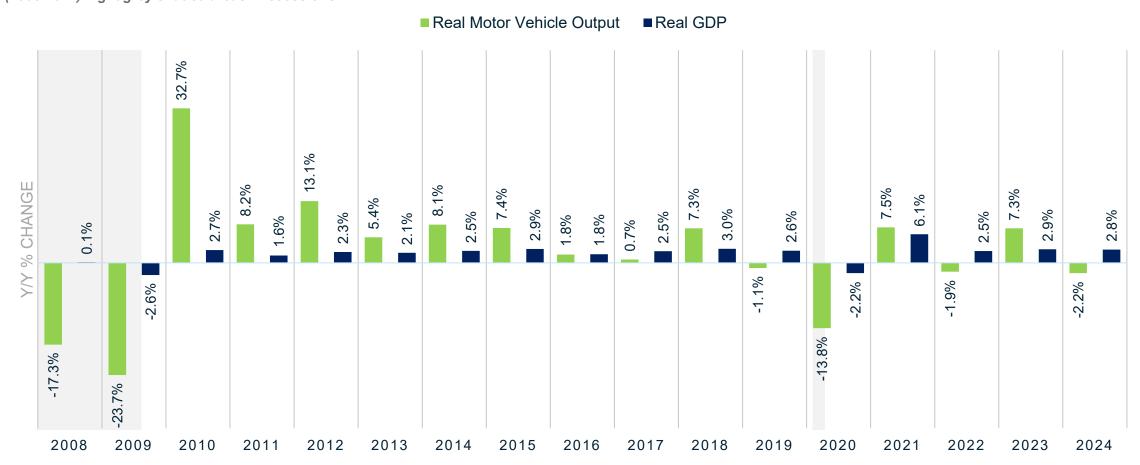
U.S. light vehicle sales & production: still recovering from COVID shocks



ECONOMIC BACKDROP

U.S. economic growth & motor vehicle output, 2007-2024

Real Motor Vehicle Output & Real Gross Domestic Product (Y/Y % Change) (2008-2024) Light grey shaded areas = recessions



Source: U.S. Department of Commerce, Bureau of Economic Analysis

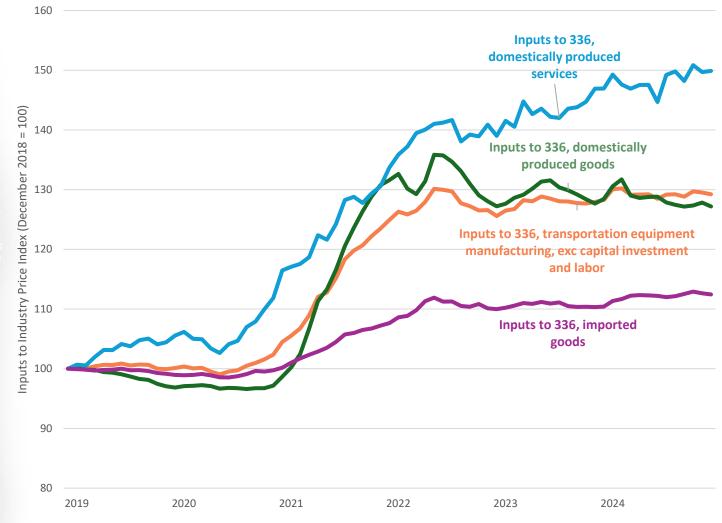
INFLATION

It's more expensive to produce vehicles these days (before tariffs)

Relative to December 2018 prices, December 2024 prices were higher overall:

All inputs	+29.2%
Domestically produced goods	+27.2%
Domestically produced services	+49.9%
Imported goods	+12.4%

Inflation in Inputs to Transportation Equipment 2019-2024, December 2018=100

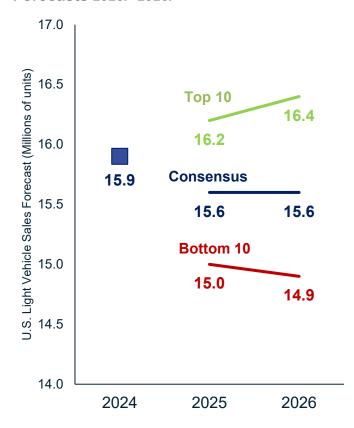


Source: U.S. Department of Labor, Bureau of Labor Statistics, Satellite Series: Inputs to Industry Price Indexes

U.S. AUTO INDUSTRY

U.S. light vehicle sales forecasts are (mostly) lower for 2025-2026

U.S. Light Vehicle Sales Blue Chip Forecasts 2025F-2026F



U.S. Light Vehicle Sales Forecasts from Selected Forecasters (Millions of Units)

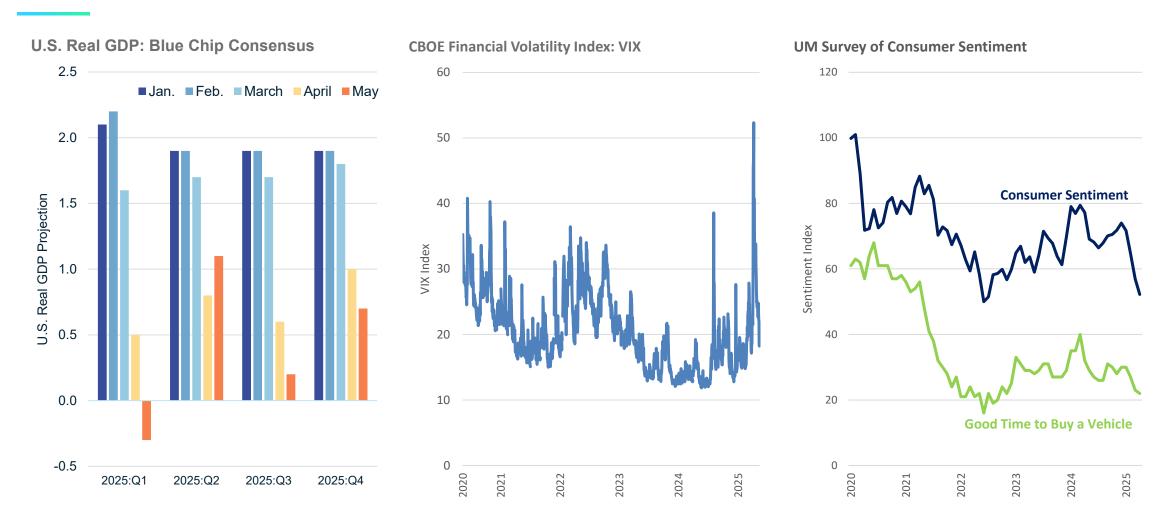
2024:	2025	F-2026F
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	2024	2025	2026
Bank of America	15.9	17.4	18.6
Comerica		15.4	15.7
Moody's		16.1	16.1
Oxford Economics		15.3	14.4
S&P Global		15.5	15.0
Wells Fargo		15.3	15.2

Source: FRBC Research; Bank of America, Comerica, Moody's, S&P Global, Wells Fargo, Wolfers Kluwer via Haver Analytics

ECONOMIC BACKDROP

Uncertainty & negative sentiment for outlook, financial markets, & consumers



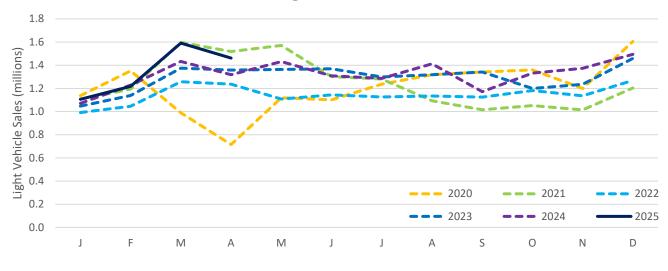
Source: FRBC calculations using data from the Wolters Kluwer Blue Chip Economic Forecast via Haver Analytics, Chicago Board Options Exchange VIX Index of financial volatility via FRED, University of Michigan Survey of Consumers Tables 1 & 17.

Light Vehicle Market U.S. & Michigan

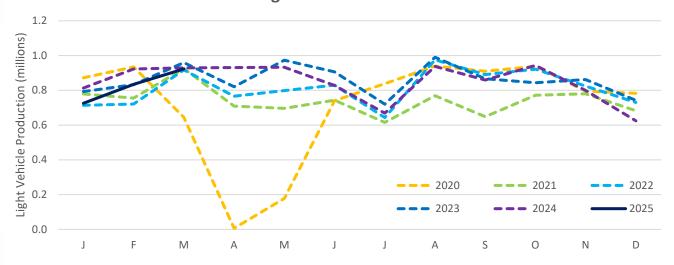
SENTIMENT

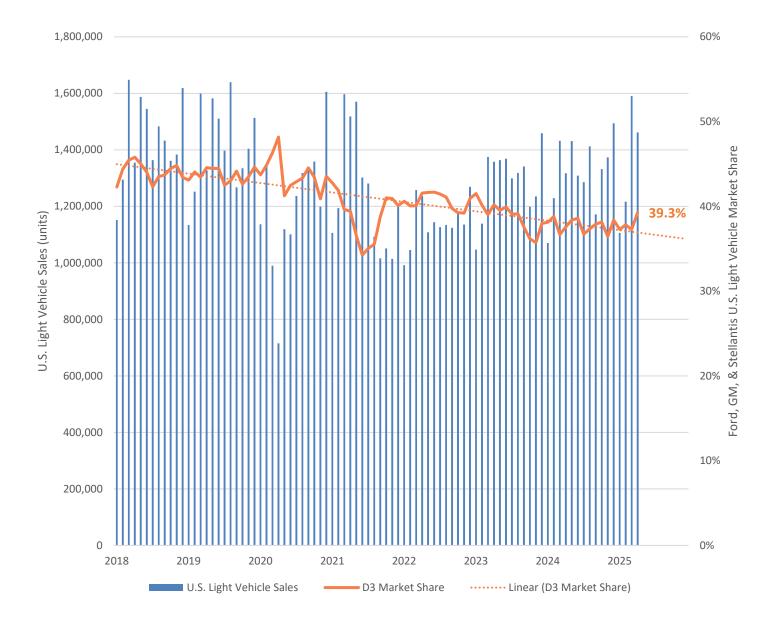
2025 Light Vehicle Sales & Production are off to a Strong Start

U.S. Light Vehicle Sales



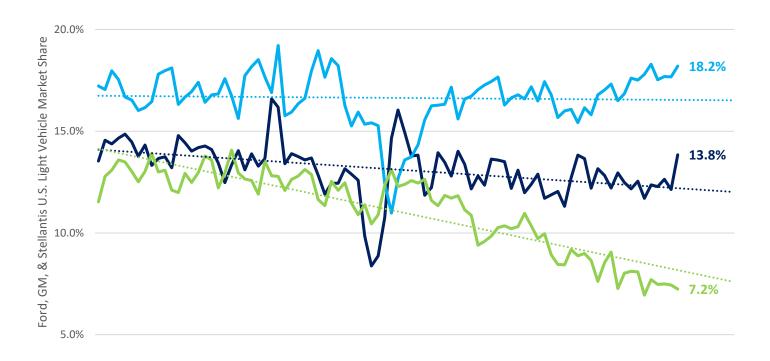
U.S. Light Vehicle Production







U.S. Light Vehicle Sales & Ford/GM/ Stellantis "D3" Market Share, 2018-2025YTD

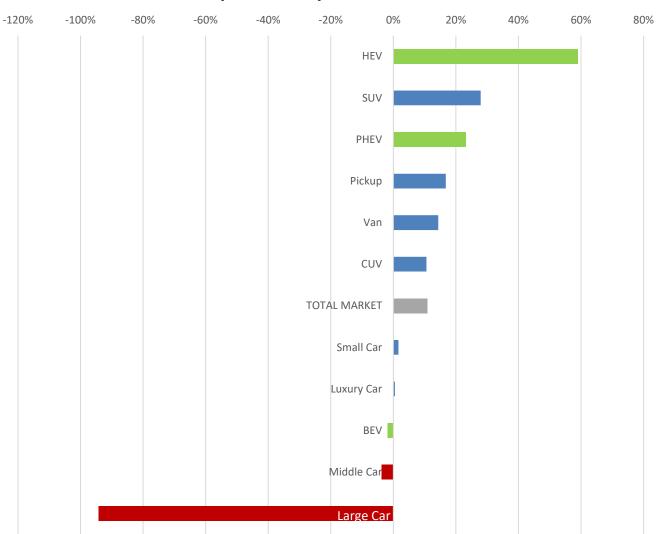






Ford, GM, & Stellantis U.S. Light Vehicle Market Share, 2018-2025YTD HEVs & PHEVs are the fastest growing segments in the U.S. market

April 2024-April 2025 YoY △



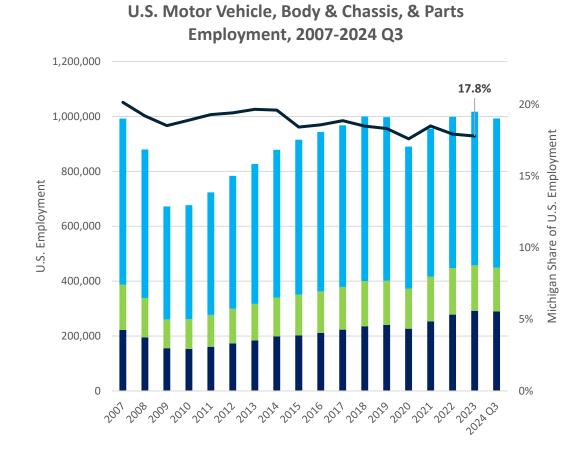
U.S. & Michigan Employment & Production

Including Michigan's Role Motor Vehicle & Parts Trade

EMPLOYMENT & PRODUCTION

Michigan's share of U.S. motor vehicle employment has been relatively stable—though powertrain employment has dipped

Michigan Share of US

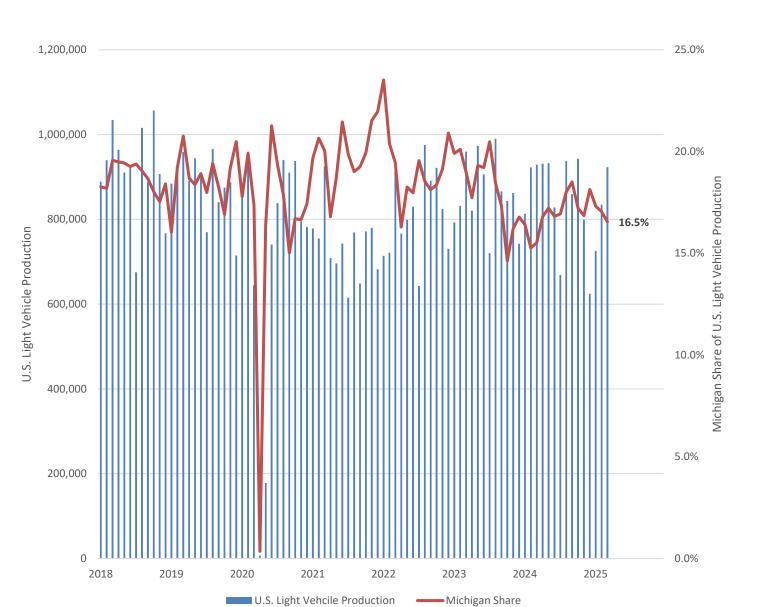


U.S. Engine, Transmission, & Related Parts Employment, 2007-2024 Q3 160,000 25% 19.7% 140,000 Michigan Share of U.S. Employment 120,000 Employment 80,000 60,000 40,000 20,000 200 200 201 201 2013 2014 2015 2016 201 2014 2015 2010 2012 2013 2014 Transmissions & Parts

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages

■ Bodies & Chassis

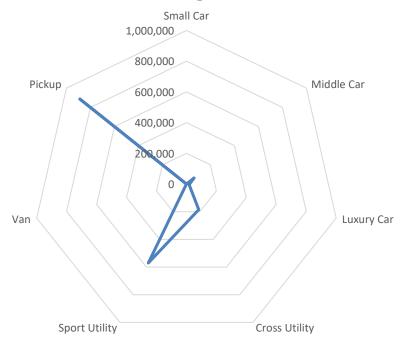
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U.S. Light Vehicle Production & Michigan Share, 2018-2025YTD

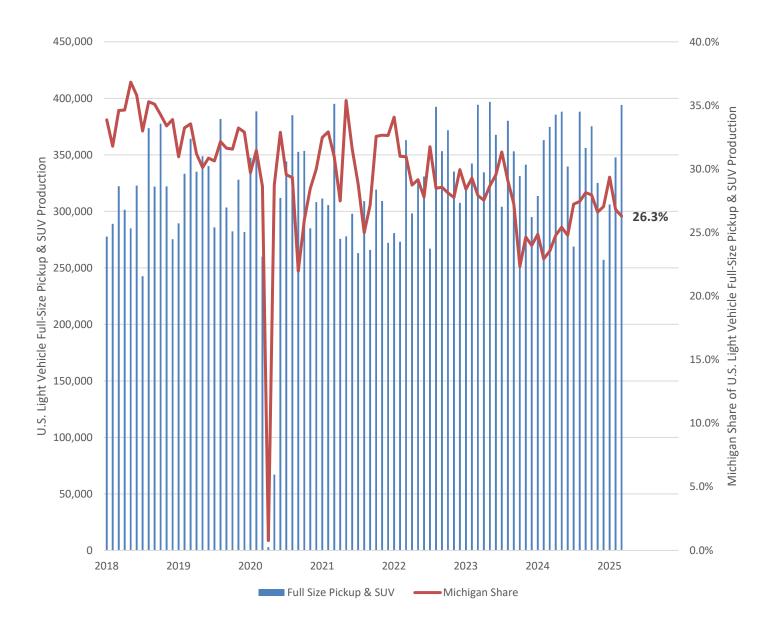
Michigan



Rest of U.S.









U.S. Light Vehicle Full-Size Pickup & SUV Production & Michigan Share, 2018-2025YTD

Impact of Recent Policy Changes *Uncertainty clouds outlook*

POLICY

Current policy proposals cut both ways for the auto industry

The New York Times

Auto Tariffs Are Likely to Lead to Much Higher Car Prices

Experts say tariffs could soon drive car prices up by several thousand dollars and limit production.



Cars from the Stellantis plant in Windsor, Ontario. Canada is among the top exporters of vehicles and parts to the United States. Ian Willims for The New York Times

Ios Angeles Times

POLITICS

Trump, congressional Republicans seek to block California's ban on gas-powered vehicles



Electric vehicle charging stations in Calexico, Calif., in 2024. Gov. Gavin Newsom has sought to ban sales of gas-powered vehicles in 2035, a move the Trump administration is seeking to undo. (Dania Maxwell/Los Angeles Times)

By Faith E. Pinho, James Rainey, Julia Wick and Michael Wilner

Feb. 26, 2025 3:34 PM PT

THE WALL STREET JOURNAL.

BUSINESS | AUTOS

House Bill Would Scrap EV Tax Credit

The proposal would eliminate one of the biggest drivers of electricvehicle sales

By Ryan Felton Follow

May 12, 2025 4:45 pm ET

Listen (3 min)



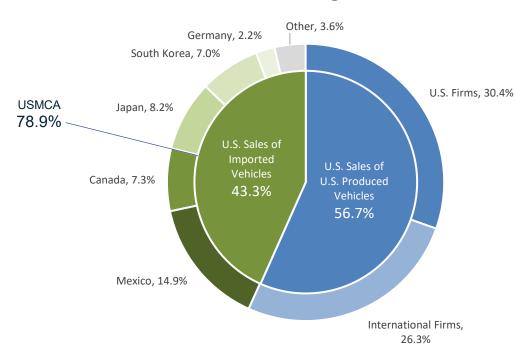
The bill's introduction marks the first step in a long-awaited move by Republicans to pare back EV credits. PHOTO: MEGAN VARNER/BLOOMBERG NEWS

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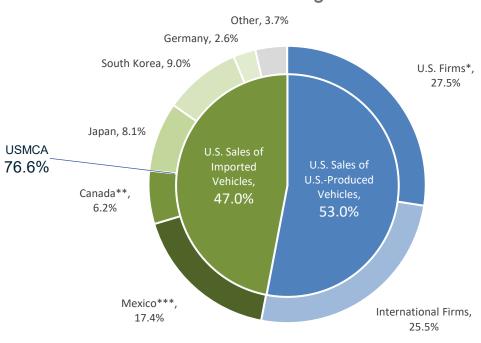
U.S. Light Vehicle Sales grew 2.6% in 2024, but...

The U.S.-produced share of U.S. sales fell from 56.7% to 53.0%; USMCA share fell from 78.9% to 76.6% in 2024





2024 = 15.9M U.S. Light Vehicles Sold

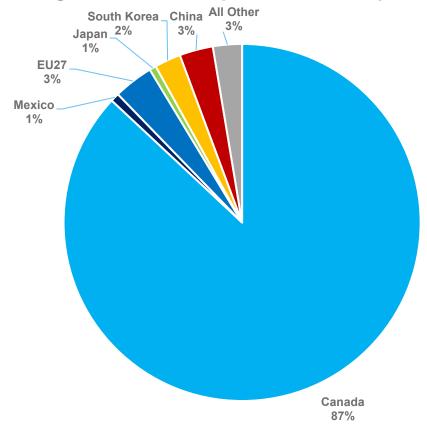


Other includes: U.K, Slovenia, China, Sweden, Hungary, Italy, Belgium, Thailand, Austria, Spain, Netherlands, Turkey, & Serbia in 2024; all 2024 countries plus India in 2023.

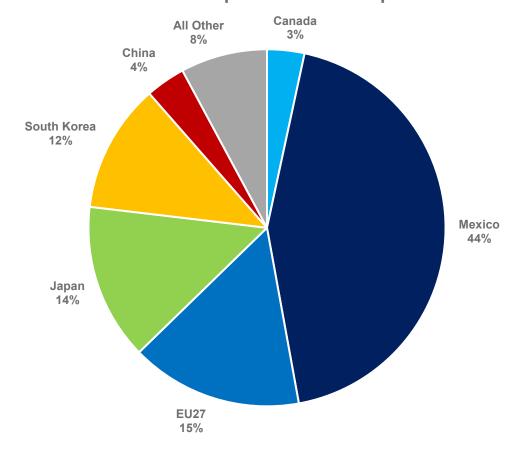
Source: FRBC analysis of Wards Informa & USITC Dataweb data

In 2024, Michigan was more dependent on Canada (87%) for automotive imports than was the U.S. overall (3%)





Rest of U.S. Automotive Imports for Consumption



Source: U.S. International Trade Commission DataWeb for NAICS 3361-Motor Vehicles, 3362-Bodies & Trailers, & 3363-Motor Vehicle Parts; Federal Reserve Bank of Chicago analysis.

In January 2025, Passenger Vehicle & Parts Tariffs Generally 2.5%; Cargo Vehicles 25%; New Tariffs are ADDITIONAL to previous rates

Tariff Authority	Applies To:	Additional Tariff Rate	Share That Did Not Pay Duty in 2024	Exceptions
Emergency: Fentanyl/Border	Canada & Mexico	+10%	86%	USMCA Compliant (nearly all vehicles, 60-70% of parts were compliant in 2024)
	China*	+20%	1%	Some Semiconductor & Electronics
National Security: Steel/Aluminum	All Countries	+25%	53%	U.S. Content
National Security Autos & Parts	All Countries	+25%	63%	U.S. Content of vehicles/25-year-old vehicles/USMCA parts
Emergency: Reciprocal (items NOT included under other authorities)	Most Countries	+10% (rates >10% suspended through July 9)	27%	U.S. content if at least 20%; Countries not included: Canada, Mexico, Belarus, Burkina Faso, Cuba, North Korea, Palau, Russia, Seychelles, Somalia, & Vatican City
UK Framework	UK Only	+10%	2.6%	100,000 Light Vehicles @ 10%; more @ 27,5% (2024 UK-imports to US = 96 451)

Most stacking removed, no duty drawback still in place meaning parts incur tariffs at each 5% role thousand to US = 96,451

^{*} China had previous 301/IP tariffs of 7.5-100% on automotive & Fentanyl tariffs (+20%) stack with other rates

Ongoing investigations: potentially new tariffs

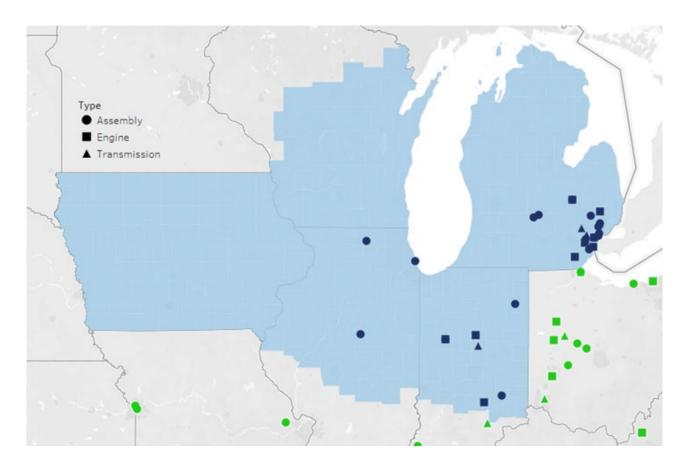
Tariff Authority	Applies To:	Additional Tariff Rate	Status
Intellectual Property: Semiconductors	China		Initiated December 2024
Emergency: Venezuela	Countries importing oil/products directly or indirectly from Venezuela	+25%	Initiated March 2025
National Security: Copper	All Countries		Initiated March 2025
National Security: Lumber/Timber	All Countries		Initiated March 2025
National Security: Pharmaceuticals	All Countries		Initiated April 2025
National Security: Semiconductors	All Countries		Initiated April 2025

Others pending or mentioned in executive orders/social media: digital services, energy & energy products, seafood, movies/entertainment industry

AUTOMOTIVE POLICY

Michigan's high automotive concentration means positives & negatives of policy will be felt more strongly here

- Consistent tariff policy could drive investment in U.S. manufacturing
 - Michigan has the largest share of auto & parts production
 - Relatively higher costs could reduce benefit to state (more south, greater automation)
 - Higher costs could mean fewer exports
- Ending California EV mandate could mean longer run for conventional powertrain production
 - Consumer preference for HEV means more engines & transmissions
 - Michigan has largest share of transmission output, 5th largest engine output



Wrap-up

Michigan has a lot at stake in the current automotive policy environment

Wrap-up

- 1) U.S. motor vehicle manufacturing costs were rising before tariffs went into effect
- Economic, financial, consumer, and light vehicle sales
 & production outlooks have shifted downward since the start of the year; many auto companies pulled back financial guidance
- 3) Overall light vehicle data remains solid, but "D3" market share continues to erode (& full-size pickup share is something to keep an eye on given Michigan's dependence on this segment)
- 4) Michigan stands to gain from reshoring efforts & a longer ICE/HEV run—but much depends on scope & durability of policy changes as well as industry response (greater automation, geographical shifts)
- 5) Higher production costs, as well as potential loss of EV production incentives, may impact long-run competitive position of the U.S. industry



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