

GLOBAL CAR INDUSTRY RUNS ON NAFTA

Auto parts come from multiple producers and can cross borders several times; jobs shift to overseas plants

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QUERÉTARO, Mexico—Jody Fledderman is one of five original employees at the auto-parts factory his father founded in rural Batesville, Ind. He also spends a lot of time at the company's 97,000-square-foot plant in central Mexico.

The two operations have expanded

together as automotive production in both countries boomed. Mr. Fledderman credits the success of Batesville Tool & Die Inc., where he is president, in part to the addition of a Mexican plant 16 years ago that helps service Honda Motor Co., Nissan Motor Co. and other clients on both sides of the border.

"We have three or four clients back in Indiana that we wouldn't have had

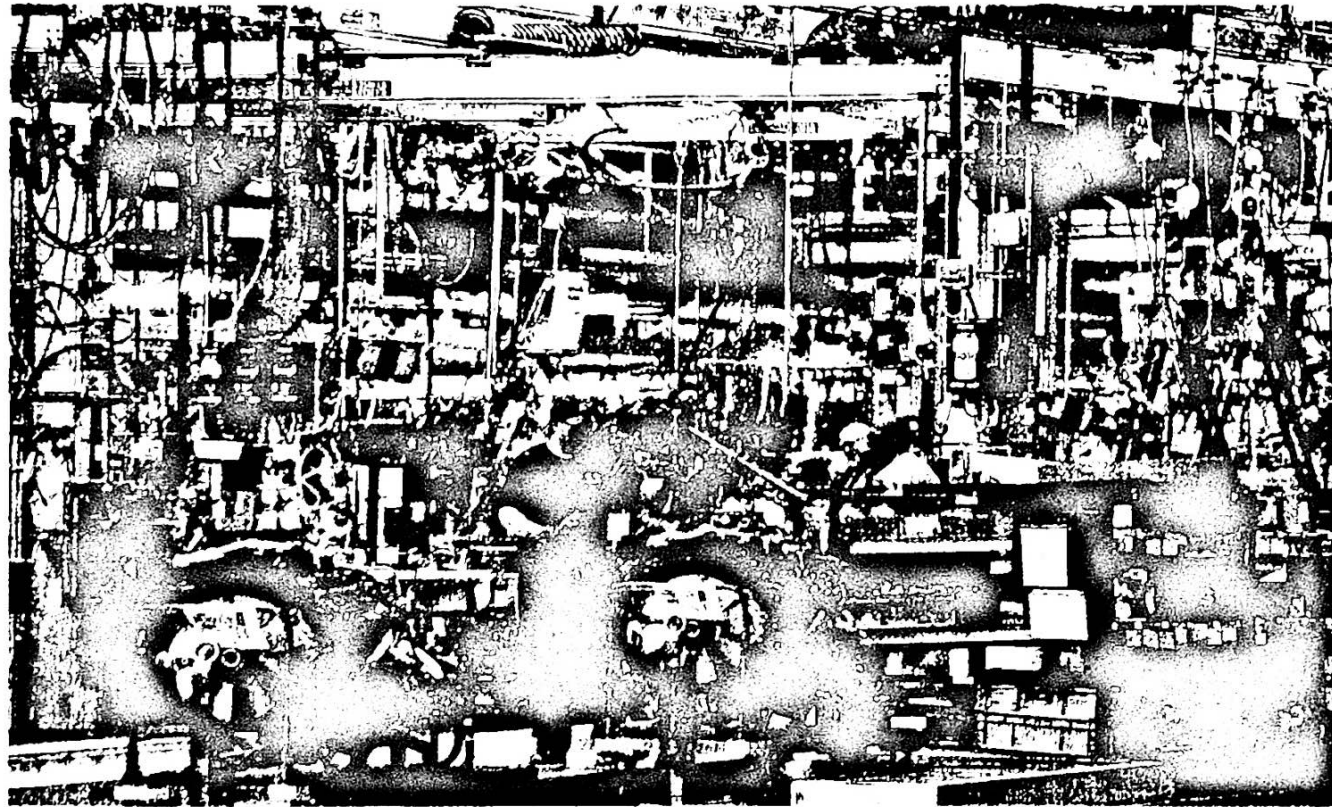
if we weren't here," Mr. Fledderman, 54 years old, said in an interview at the plant in Querétaro.

President-elect Donald Trump has said that in his first days in office he will reopen talks on the North American Free Trade Agreement, which connects Canada, the U.S. and Mexico, and leave the pact if Mexico doesn't agree to improved terms for the U.S. He blames unfair trade, in particular

with Mexico and China, for the loss of millions of factory jobs.

Ending the 1994 trade pact is relatively easy. The U.S. legally can pull out of Nafta six months after Mr. Trump as president notifies Mexico and Canada of his intention to do so,

Please see NAFTA page A12



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Auto makers have multilayered connections between U.S. and foreign suppliers and assembly points. Above, a Ford plant in Avon Lake, Ohio.

according to a September study by the Peterson Institute for International Economics in Washington. Imposing tariffs on imports lies within the authority of U.S. presidents.

For the auto industry, as Mr. Fledderman's business shows, such a change would be substantially more complicated, because of the multilayered connections between U.S. and foreign suppliers and assembly points. The tens of thousands of parts that make up any vehicle often come from multiple producers in different countries and travel back and forth across borders several times.

This is a tenet of modern manufacturing: Where a product is ultimately assembled increasingly has little bearing on where its component parts are made.

Assembly plants are prized engines of local economies because they tend to pay better than most factories. Mr. Trump has repeatedly criticized Ford Motor Co.'s plan to move assembly of its Focus compact from Wayne, Mich., to Mexico, vowing to impose a steep tariff on the car if Ford follows through. Ford executives have said moving the Focus to Mexico won't result in American job losses and that the company remains committed to producing in the U.S.

But more than half the parts in the Focus today are made outside the U.S. and Canada, including 20% in Mexico. Ford also ships in some of the car's engines from Spain and transmissions from Germany.

Similarly, only 10% of the parts that go into the 200,000 BMW luxury crossovers built each year in Spartanburg, S.C., come from U.S. and Canadian plants, according to U.S. government data. The rest are imported from Europe and elsewhere. BMW in turn exports most of the Spartanburg plant's production around the world.

Where a product is assembled has little bearing on where its components are made.

By contrast, 70% of the components in the Honda CR-Vs assembled in Guadalajara, Mexico—the production of which soon will be moved to central Indiana—are currently made by U.S. and Canada-based factories, data show.

The parts that make up a car or truck, from bolts to motor blocks, window lifts to oil filters, account for two-thirds of

its value, according to the Motor & Equipment Manufacturers Association, a trade group.

U.S. assembly plants vary on the amount of U.S.-made components they use. A Chevy Silverado pickup built in Indiana has 51% parts content from Mexico, according to the window sticker, while Ford's exclusively U.S.-assembled F-Series truck, the country's top selling vehicle for 39 years straight, has 70% U.S. and Canadian content.

"This industry, particularly in North America, has integrated a lot," said Thomas Kher, an economist at the Federal Reserve Bank of Chicago who specializes on automotive supply chains.

American made

Such integration poses a challenge for anyone wanting to buy an entirely U.S.-made vehicle.

"You can't buy an American-made car anymore. You can buy an American-assembled car," said Loren Baisden, 32, a 13-year veteran of Ford's assembly line now working at the company's heavy-truck chassis plant in Avon Lake, Ohio.

Auto makers and many primary suppliers have moved some high-tech production to Mexico and elsewhere. Lower-tier suppliers typically relegate labor-intensive production such as assembling wire harnesses or sewing materials for seats to low-wage Mexico plants while keeping more highly skilled and automated tasks at their U.S. factories.

That strategy allows auto makers and their suppliers to be

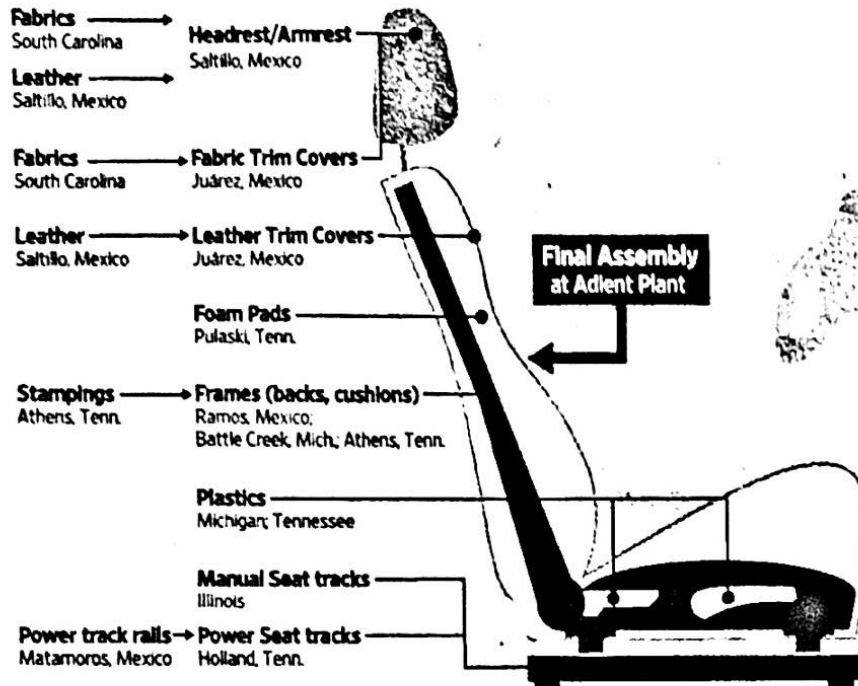
cost competitive with Asian and European imports, analysts say.

"The free flow of components is integral to the supply chain in auto manufacturing," Steve Arthur, an automotive analyst at RBC Capital Markets, said Thursday. It is "a situation not easily or inexpensively reversed."

Still, with so much final assembly moving to Mexico, the

Dual Citizen

The components in American vehicles can be made from elements manufactured all over the world. Seat-maker Adient incorporates pieces from four states and four Mexican locations into products it makes in the Midwest, and then sells on to major car makers.



Source: Adient PLC

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epicenter of North American auto production, which for more than a century has been deeply rooted in the Midwest, is moving an average of 14 miles toward the Southwest annually, according to a 2014 analysis by IHS Markit Automotive Advisory, the consultancy.

The neighboring small Indiana cities of Anderson and Muncie, which straddle Interstate 69 less than hour's drive north of Indianapolis, have been suffering that migration for more than three decades, as General Motors Co. and its suppliers have decamped for the south. The cities collectively have lost tens of thousands of high paying factory jobs.

Mursix Corp., a family-owned supplier company on the edge of Muncie, has been under increasing pressure to move some operations to Mexico to be closer to big Japanese and U.S. firms located there. The maker of switches, connectors and other electronic components exports about 60% of what it pro-

duces, primarily to Mexico, company president Todd Murray said.

The company is losing two product lines to suppliers located near his customers' Mexican plants, he said.

"That scares me," said Mr. Murray, 47, whose company opened a plant in China 11 years ago to win business there. "I see that [competition] becoming more aggressive in the years to come."

Mr. Murray said Wednesday that if a Trump administration overhauls or scraps Nafta, and gets tough with China, it could ultimately help him fend off that competition.

In the short run, he said, the healthier operating margins available to companies producing in Mexico will outweigh any new U.S. import duties. With the right policy mix, including lower corporate taxes, Mr. Murray said, any profits from Mexico operations could be invested to create cutting-edge technology jobs in the U.S.

U.S. and Canada-based factories shipped nearly \$29 billion worth of parts to Mexico in 2015, according to INA, the Mexican auto-parts industry's national association. Mexican plants in turn sent more than \$61 billion worth of parts to the two Nafta partners, accounting for much of the trade surplus Mexico has with the U.S.

About a third of Mexico's 1,300 suppliers, which employ some 720,000 people, are U.S. owned, according to INA. Mexican, Asian and European companies make up a growing share of U.S.-based suppliers, which the U.S. Labor Department says provide jobs for nearly 600,000 Americans.

Mr. Fledderman's Batesville Tool & Die produces an array of components for the automotive, appliance and other supply chains. The 38-year-old company is a primary supplier to Honda and makes parts for Swedish air bag maker Autoliv AB, currently its biggest Mexico customer.

Batesville growth

Some components, including engine hood hinges, oil filter seals and air bag parts, are made on both sides of the border to be closer to customers who demand quick and reliable delivery of parts.

The plant in Batesville, a town of 6,000 staked amid the corn and soy fields of hilly southern Indiana, also handles product design and employs robots and a 3-D printer to make more intricate or larger parts. The Batesville factory has expanded five times in recent years as the company's North American business has surged. The company now employs 800 people, evenly divided between its two factories, and has annual revenue of \$130 million, up from \$8 million in 1989, when Mr. Fledderman took over.

"You don't make any money producing things that everybody in every corner of the world can make," said Mr. Fledderman, who recently returned to Indiana from his latest tour of Eastern Europe, where he sniffed out opportunities. "If it's not Mexico, then it's Poland or Vietnam or wherever. We're not the low-cost country in the world."

Auto production in Mexico by U.S., Asian and European auto makers has boomed in the past decade, nearly doubling to reach 3.4 million light vehicles last year.

Despite the surge in Mexico, nearly 60% of the 17.5 million light vehicles sold in the U.S. last year were assembled within a so-called auto alley that runs from the Great Lakes to the Gulf of Mexico, said James Rubenstein, a geographer at Miami University of Ohio who writes extensively about the industry.

Imports from Nafta partners Mexico and Canada, which contain a heavy mix of North American made parts, account for much of the rest. The auto-parts industry alone accounted for about 14% of the \$531 billion in U.S.-Mexico trade in 2015, according to U.S. government data.

"In this day and age, when so much manufacturing has left the U.S., the auto industry is a striking exception," Mr. Rubenstein said. "It's not a win-lose situation. It's dividing up the growth. Mexico is winning, but so is auto alley."