

The geography of the North American auto industry

**2013 Southern Automotive Conference
Biloxi, MS
October 4, 2013**

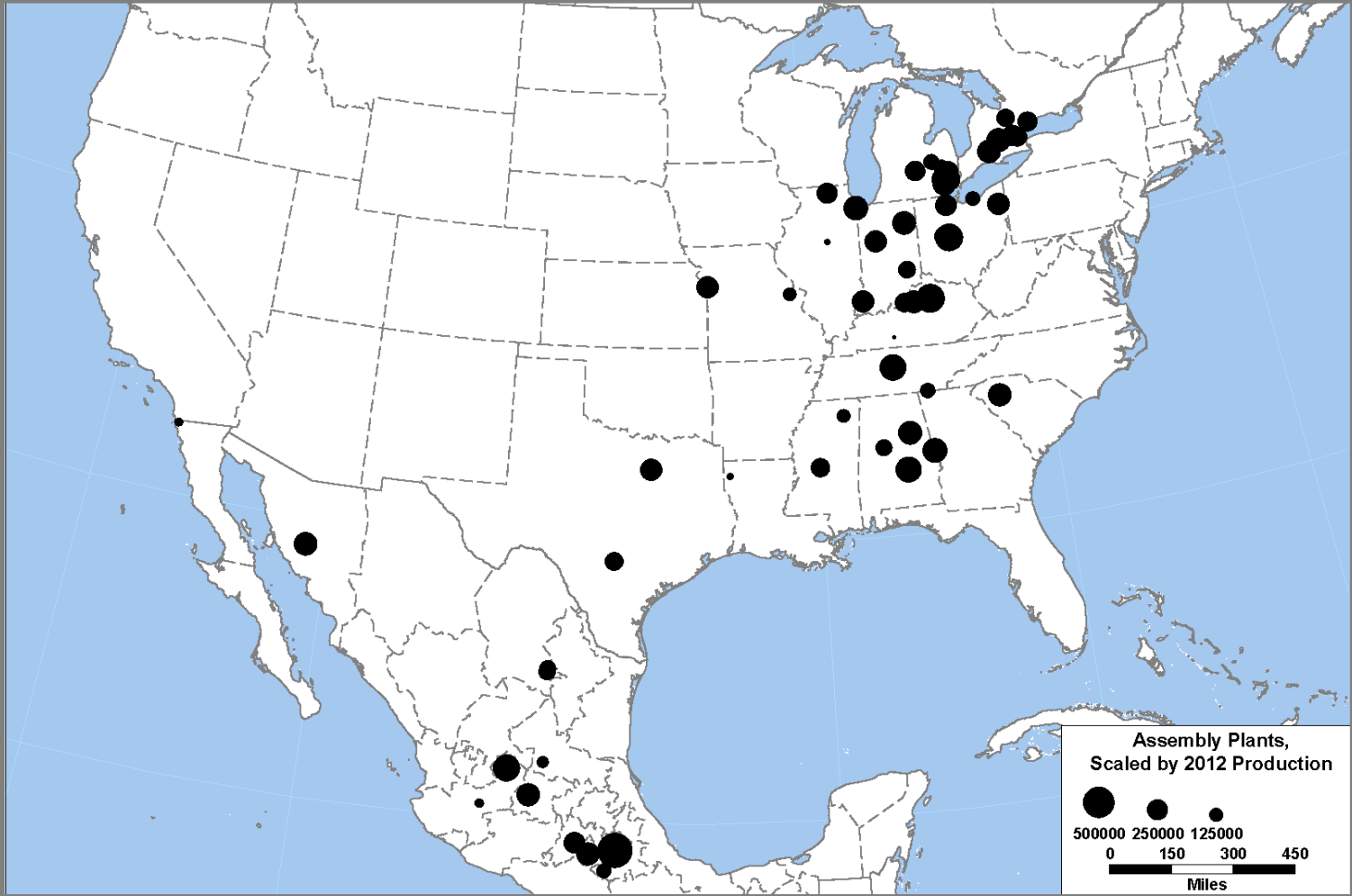
**Thomas Klier
Senior Economist
Federal Reserve Bank of Chicago
thomas.klier@chi.frb.org
www.chicagofed.org**

Outline

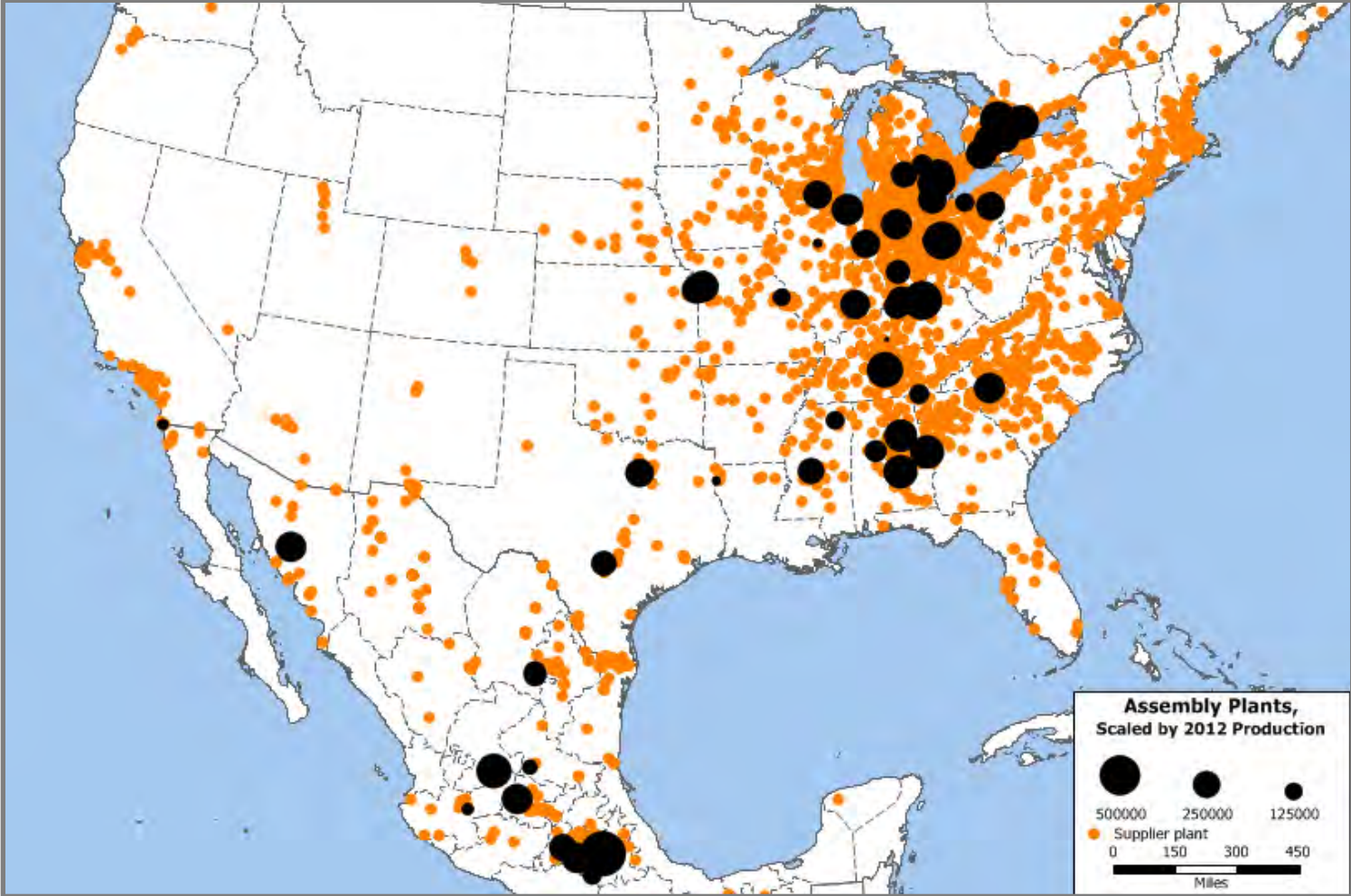
- **Geography of vehicle production**
 - **Auto Alley**
 - **North America**
- **Industry perspective**



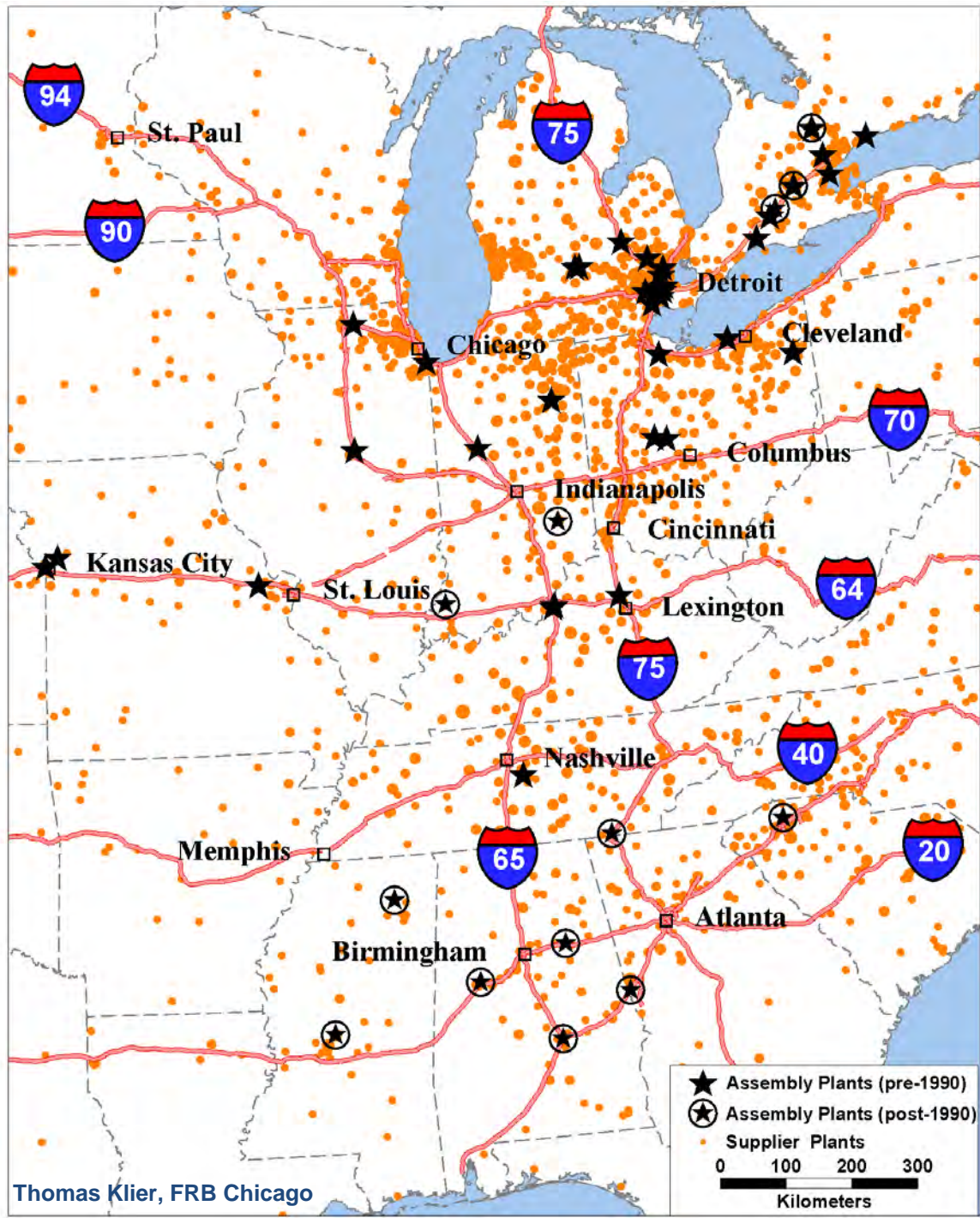
North America: auto industry clusters



North America: auto industry clusters



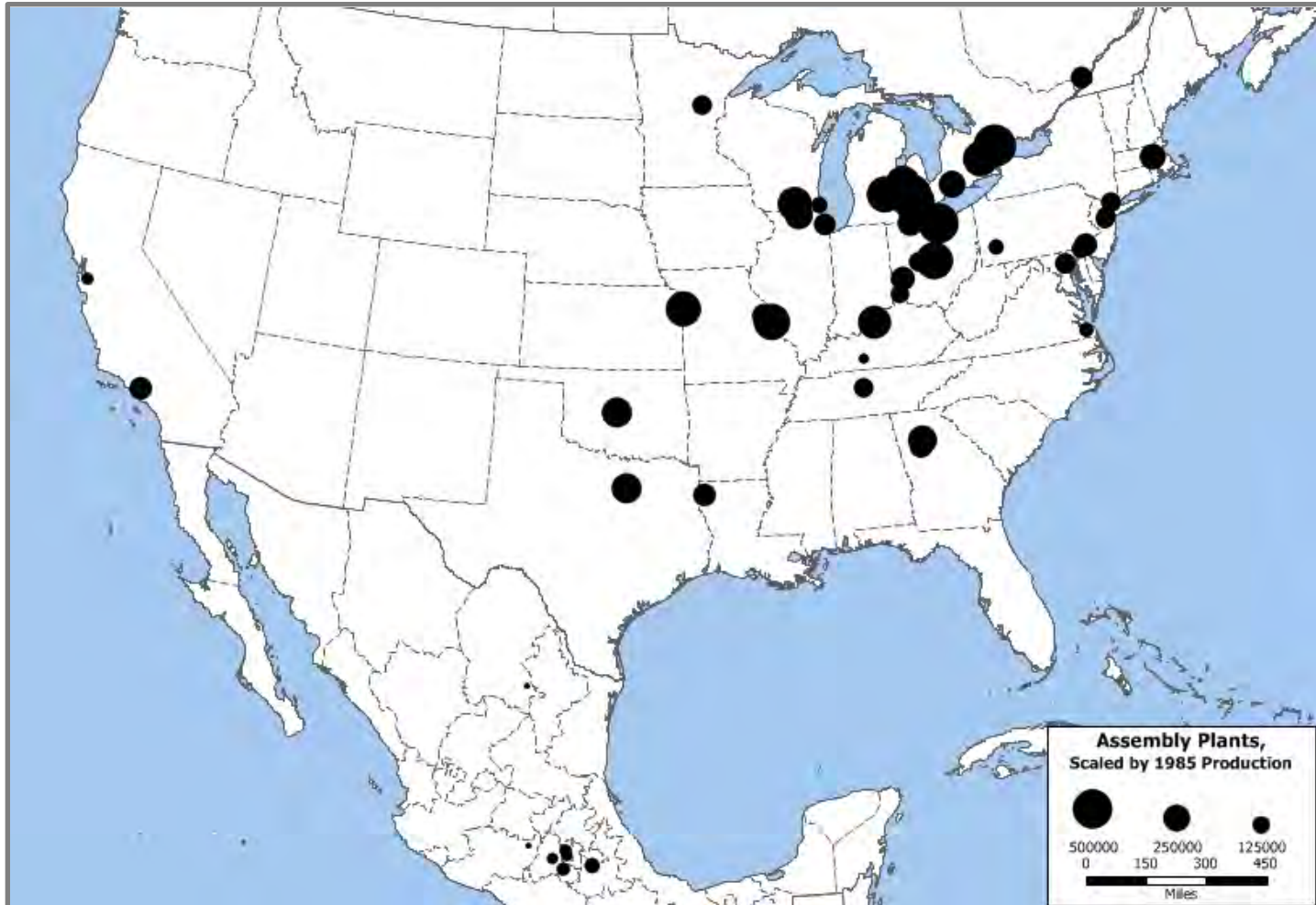
Close-up of auto alley



Emergence of auto alley in U.S.

- **Two factors:**
 - Detroit carmakers abandon the “branch plant” assembly system.
 - Foreign-based carmakers enter the U.S. and Canada as producers.

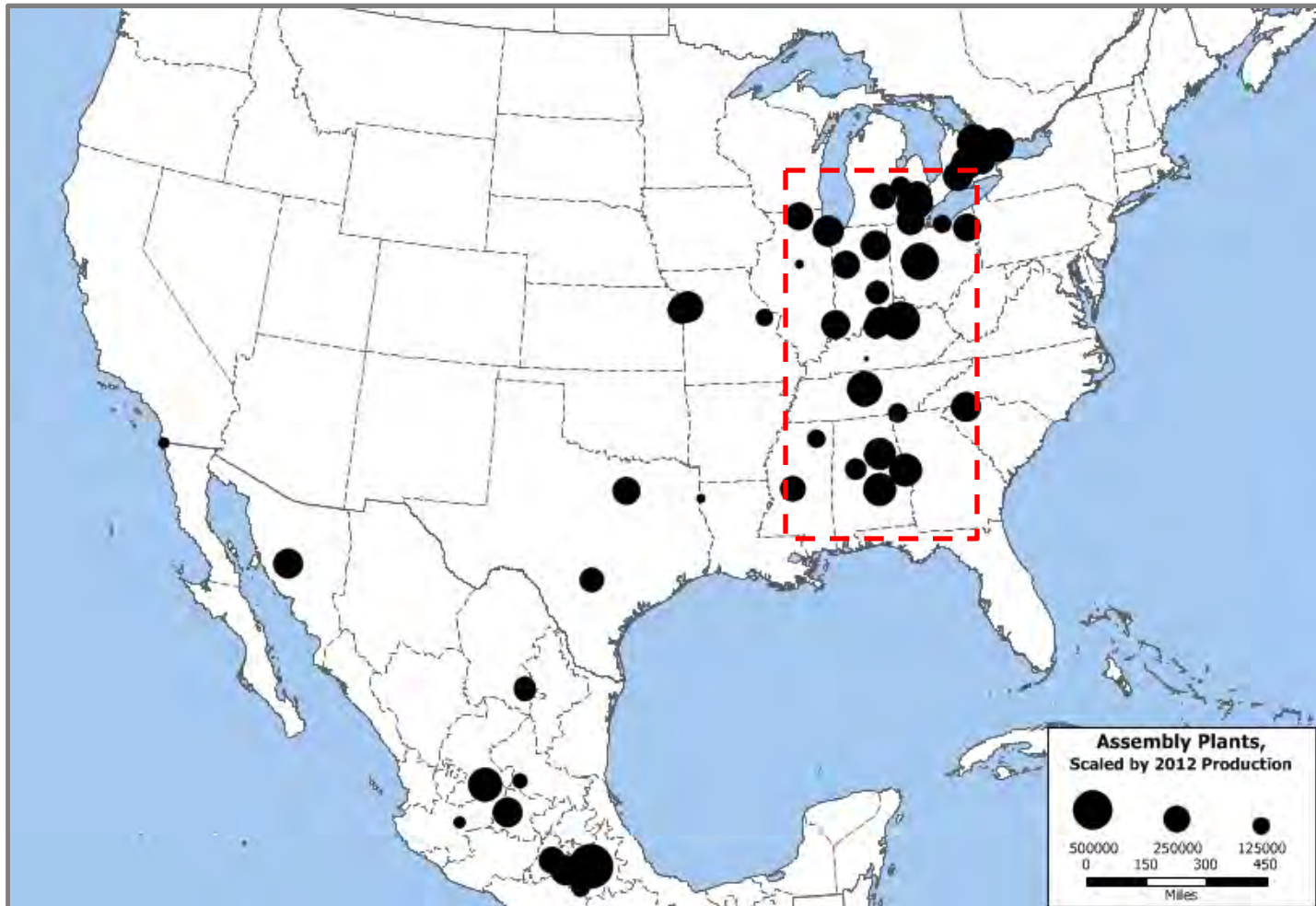
From manufacturing belt...



1985

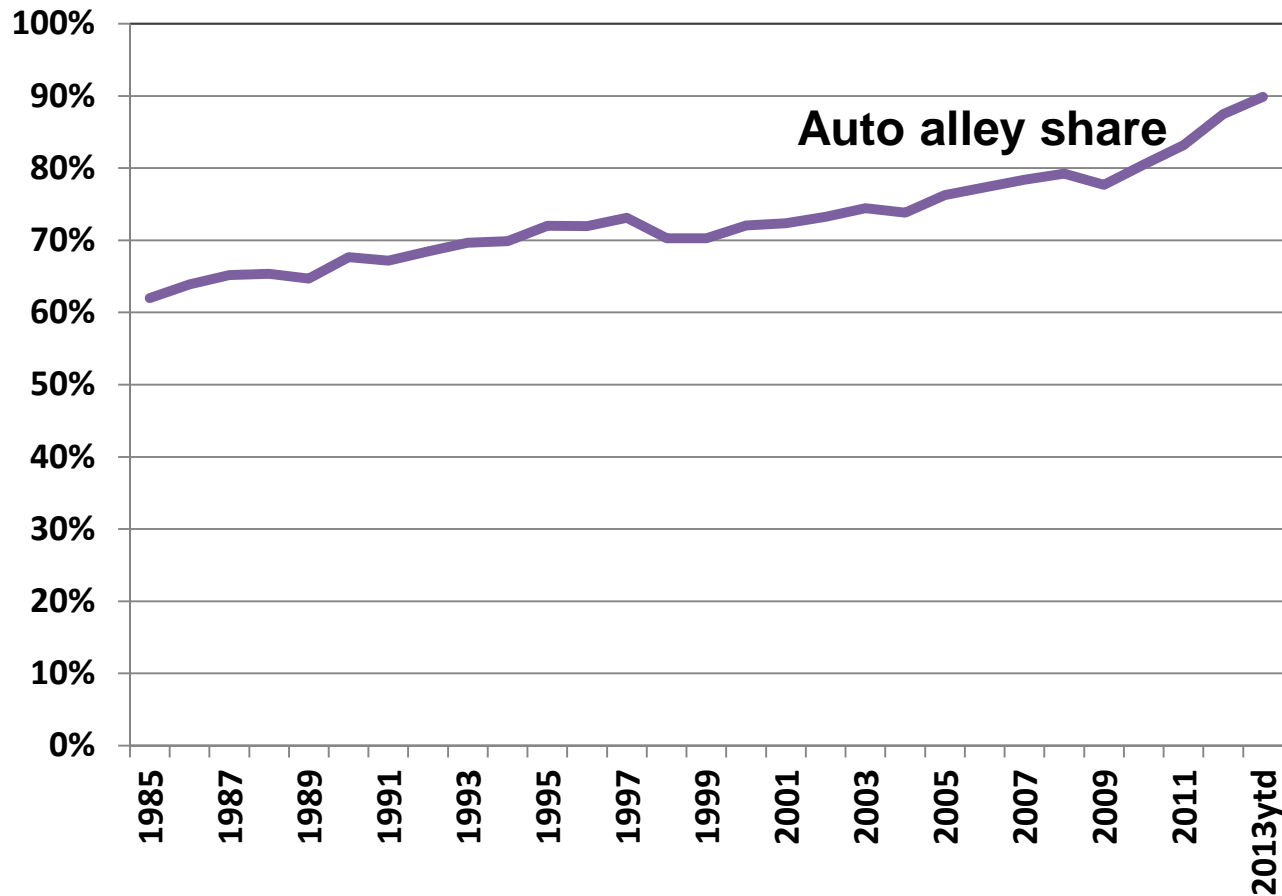
...to auto alley

2012

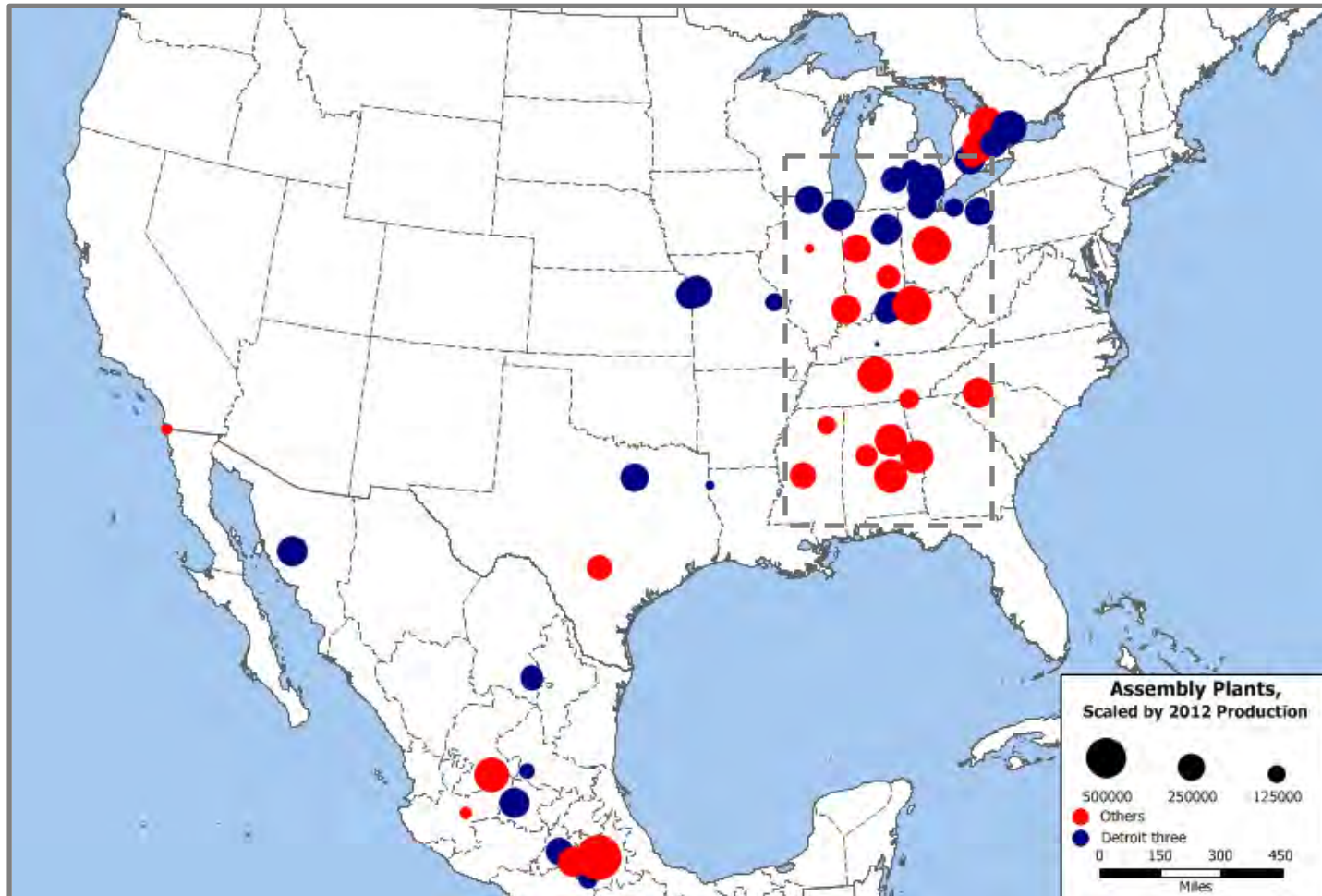


Today: Auto alley dominates

Share of U.S. light vehicle production within auto alley



Yet: Auto alley has two halves

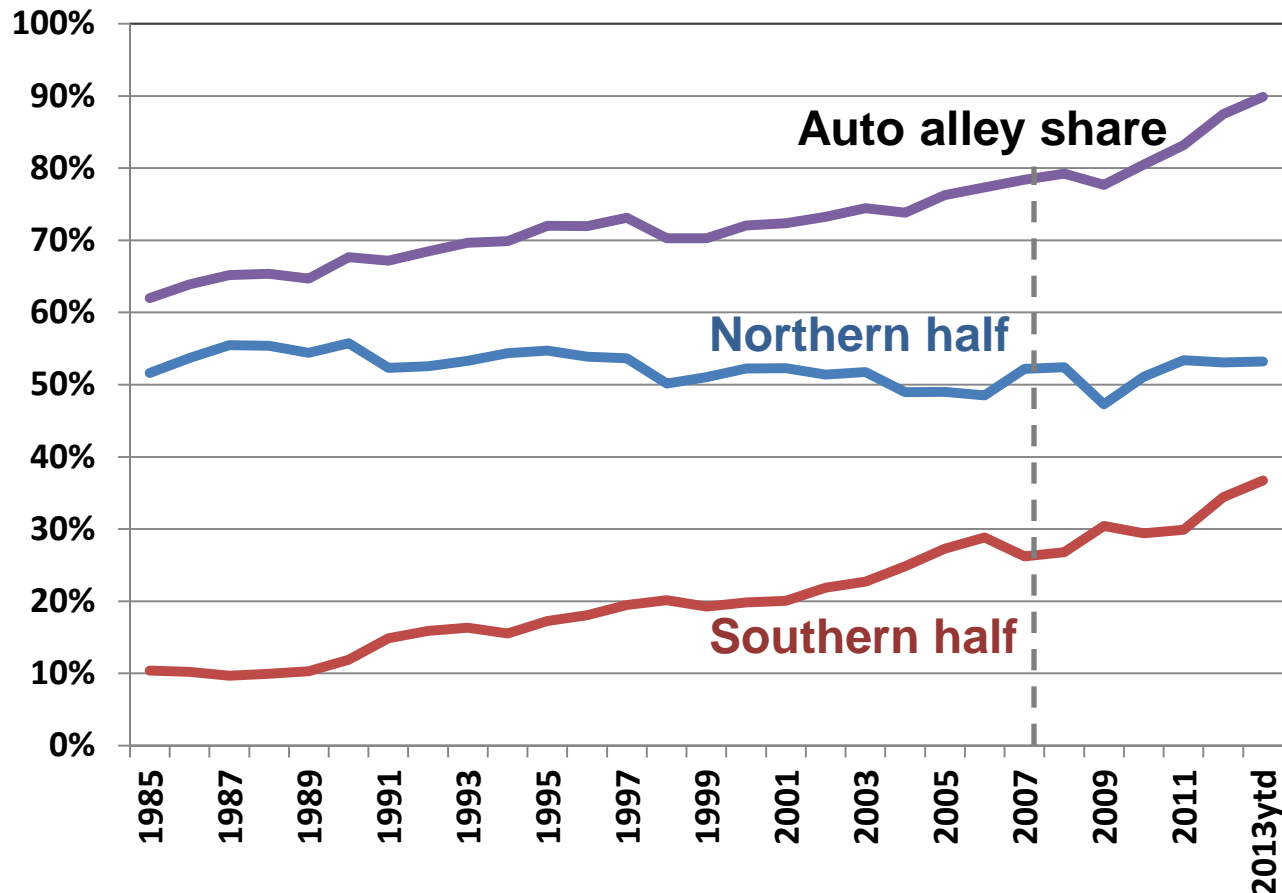


2012

2012: D3 production share in North: 71%, in South: 16%

Growth concentrated in South

Share of U.S. light vehicle production within auto alley

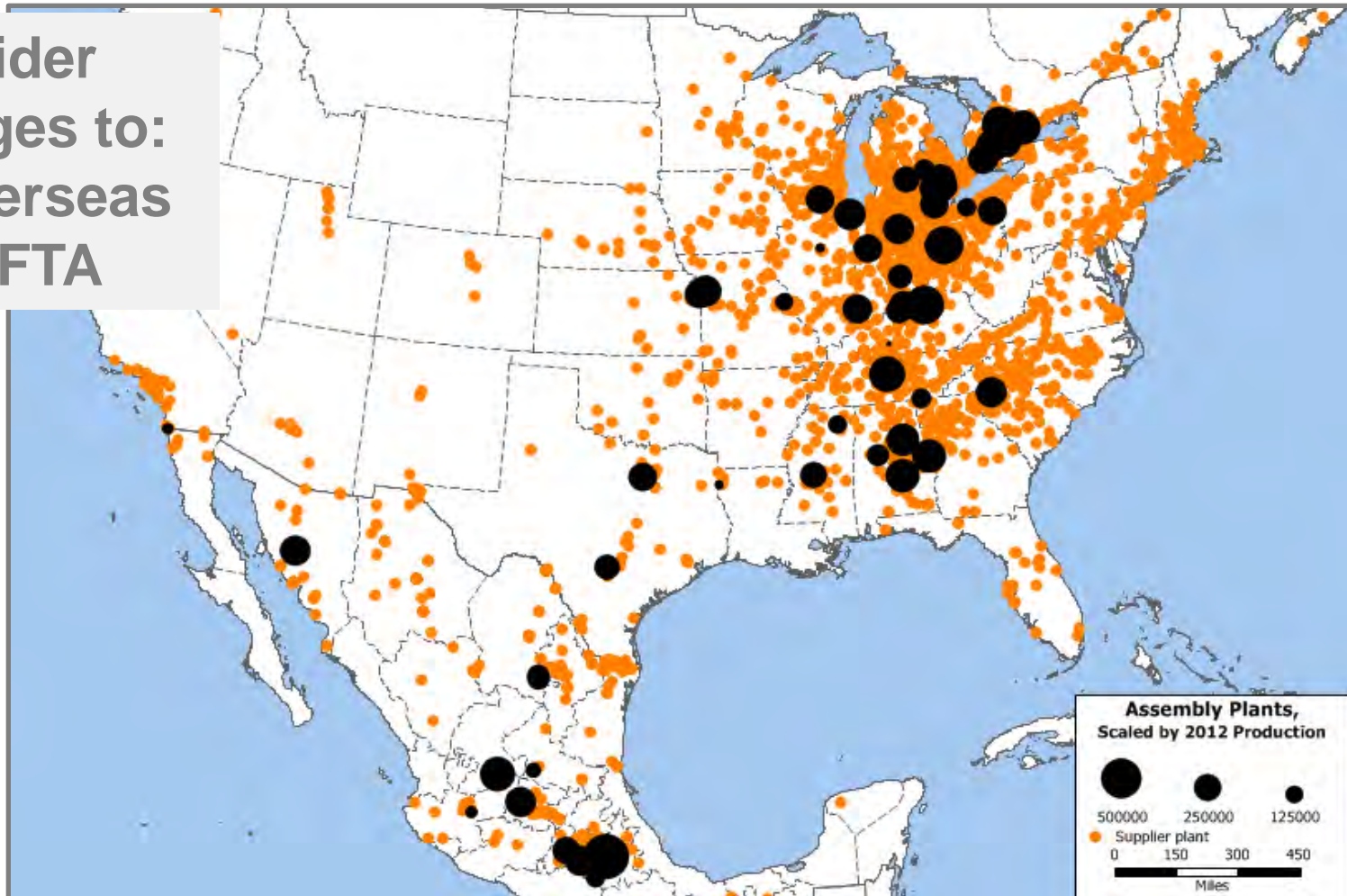


Note: North = WI, IL, MI, IN, OH South = KY, TN, AL, MS, GA, SC

Back to the big picture

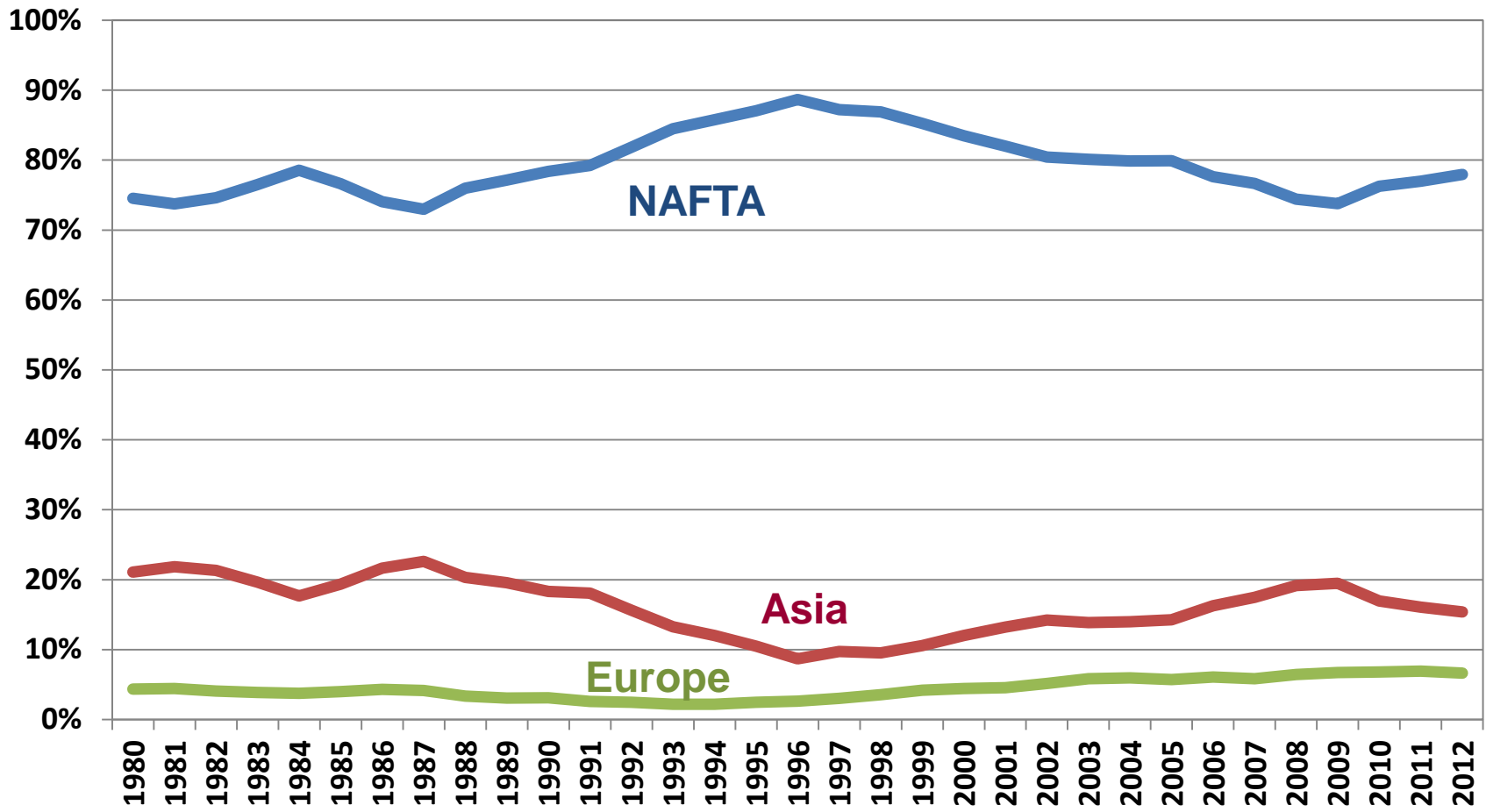
Consider linkages to:

- Overseas
- NAFTA



North America kept production

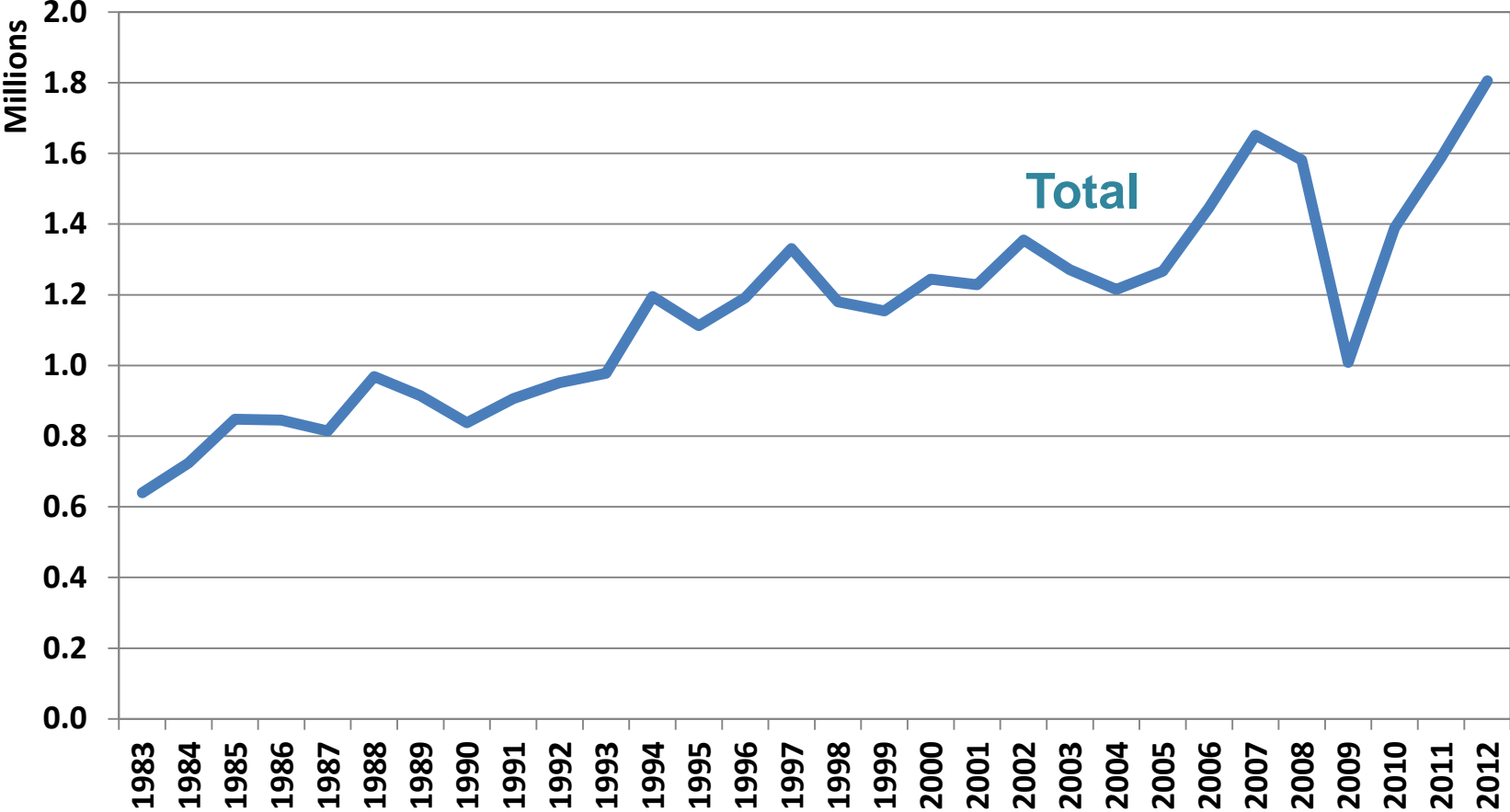
U.S. light vehicle sales by major production region



Vehicles produced in region where sold

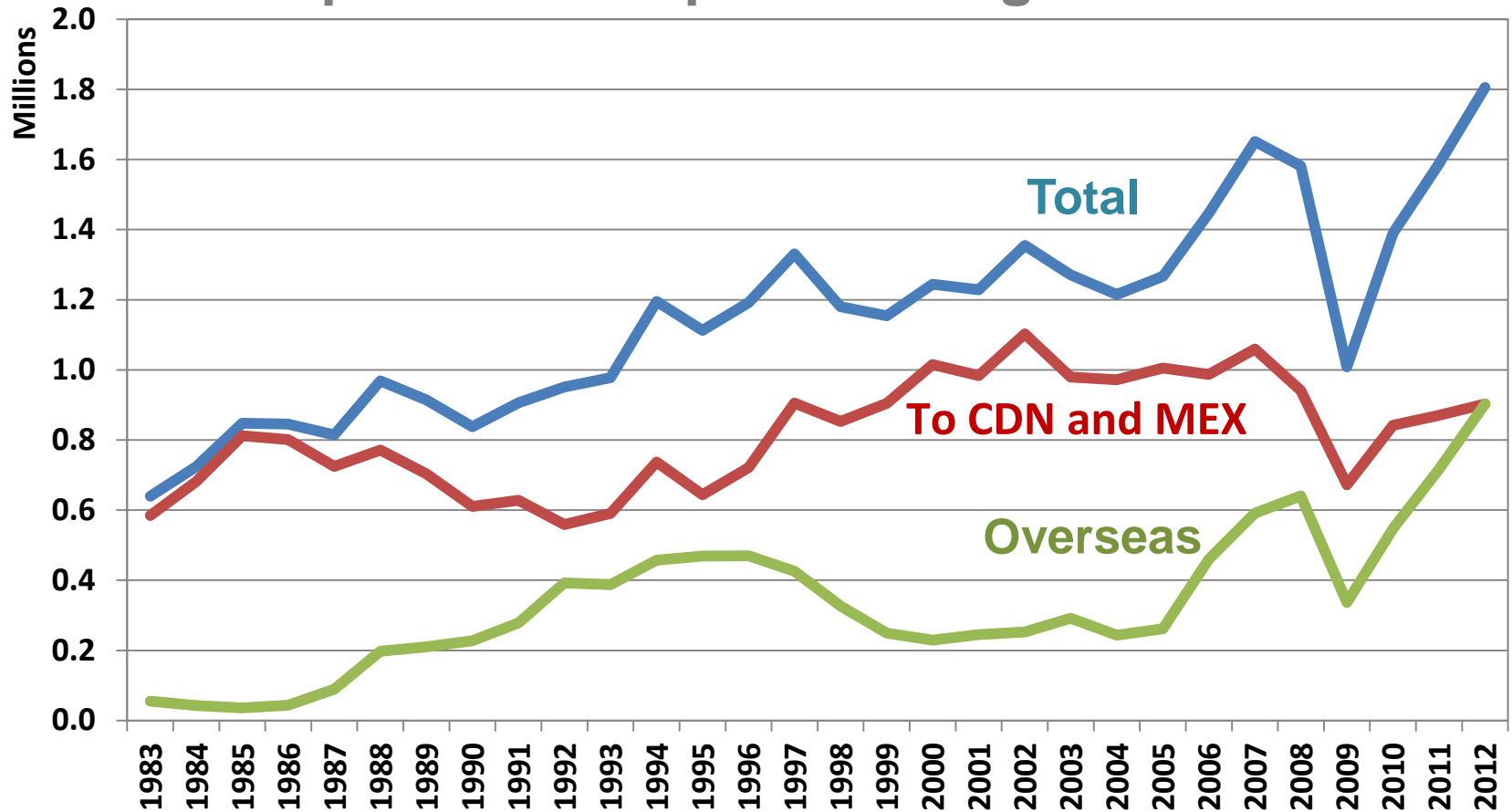
U.S. exports to overseas up strongly

Exports of U.S. produced light vehicles



U.S. exports to overseas up strongly

Exports of U.S. produced light vehicles



Within N. America, gains for Mexico

Share of light vehicle production

Country	1990	2007	2012
Canada	16	17	16
Mexico	6	13	19
U.S.	78	70	65
N. America	100	100	100

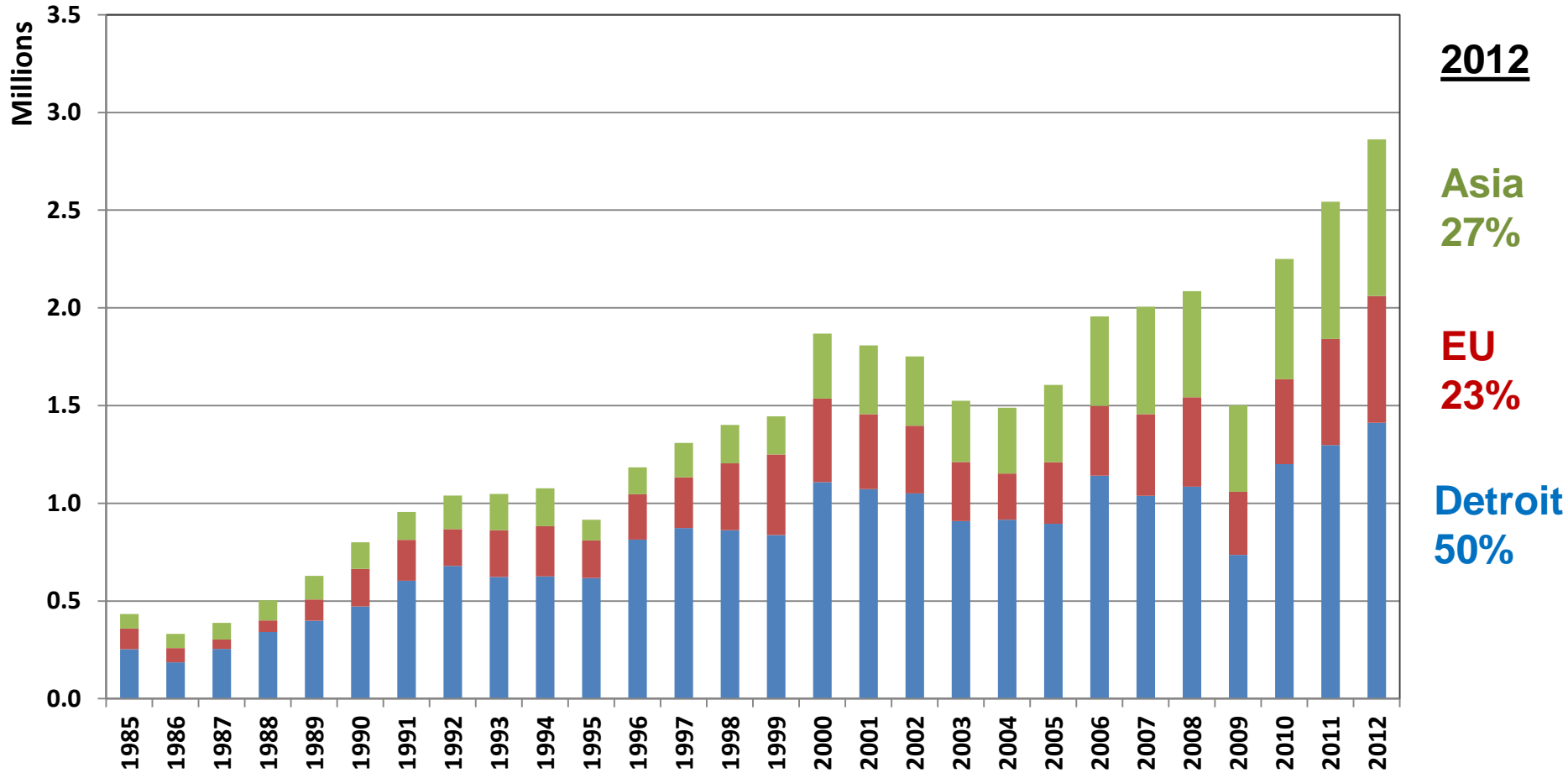
Within N. America, gains for Mexico

Share of light vehicle production

Country	1990	2007	2012	2013*
Canada	16	17	16	14
Mexico	6	13	19	19
U.S.	78	70	65	67
N. America	100	100	100	100

Volume up strongly, Detroit share down

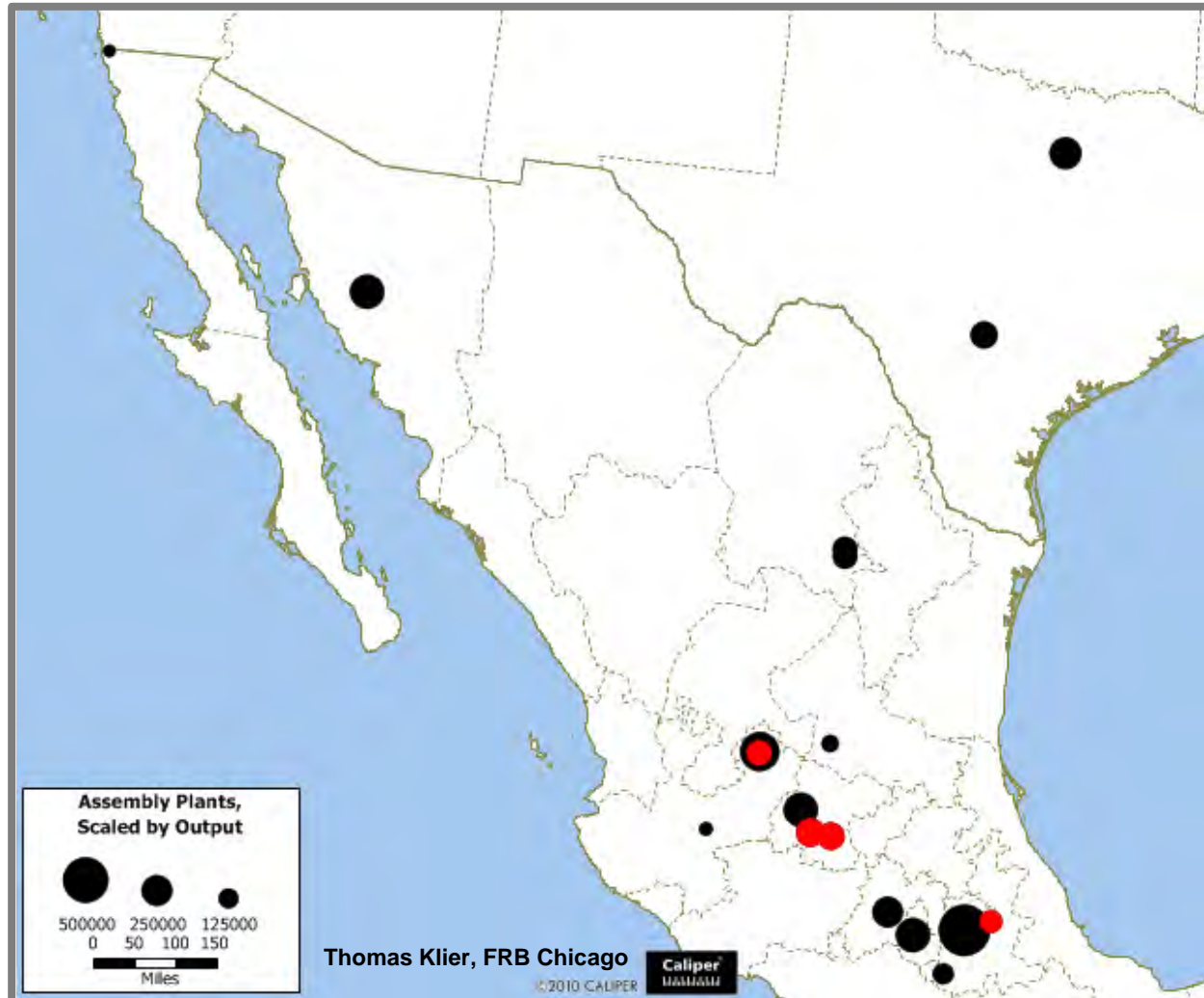
Light vehicle production in Mexico



Production has increased by 2.4 million units since 1985

Mexico's auto footprint is growing

Four LV assembly plants under construction (in red), all by overseas producers

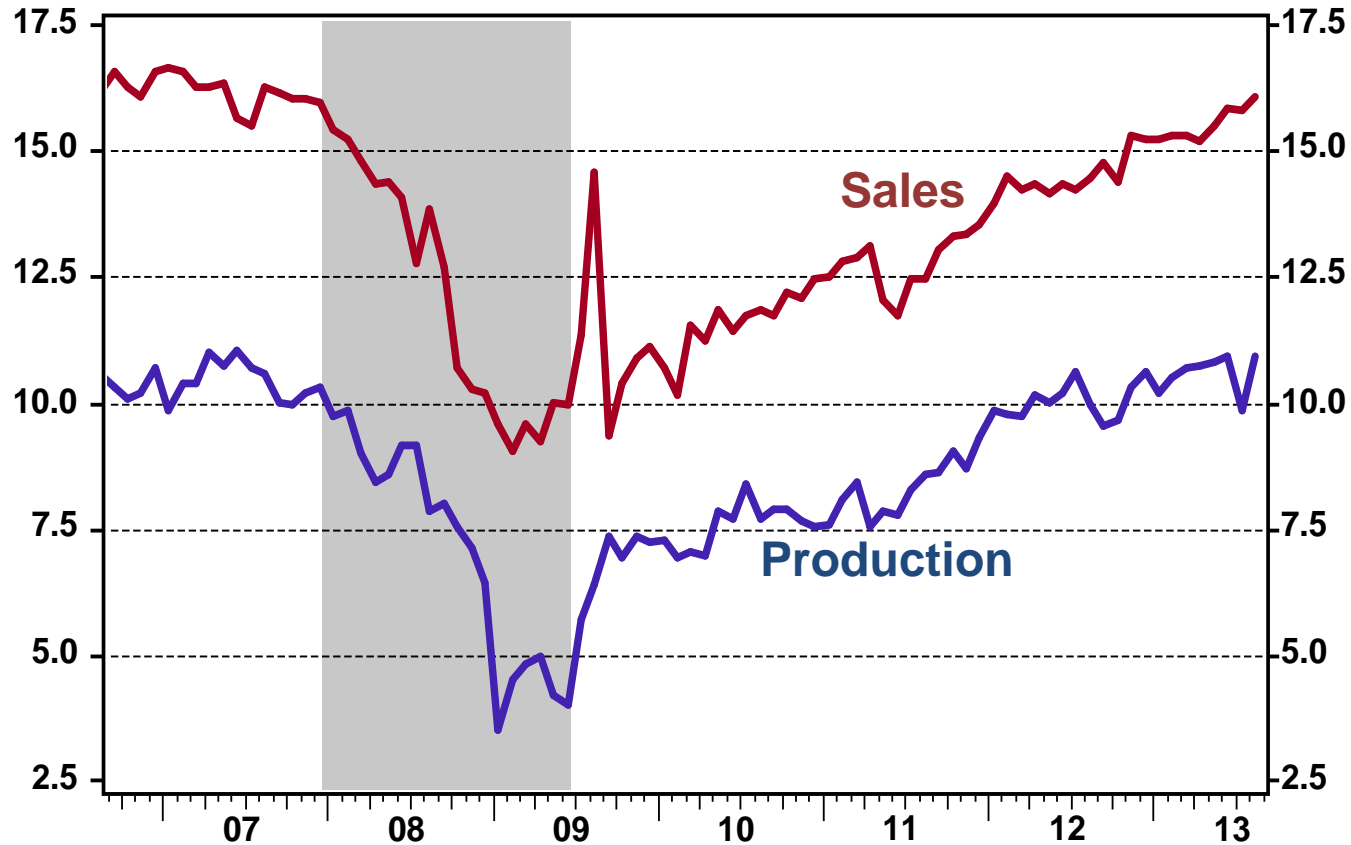


Brief industry perspective



Auto industry as bright spot

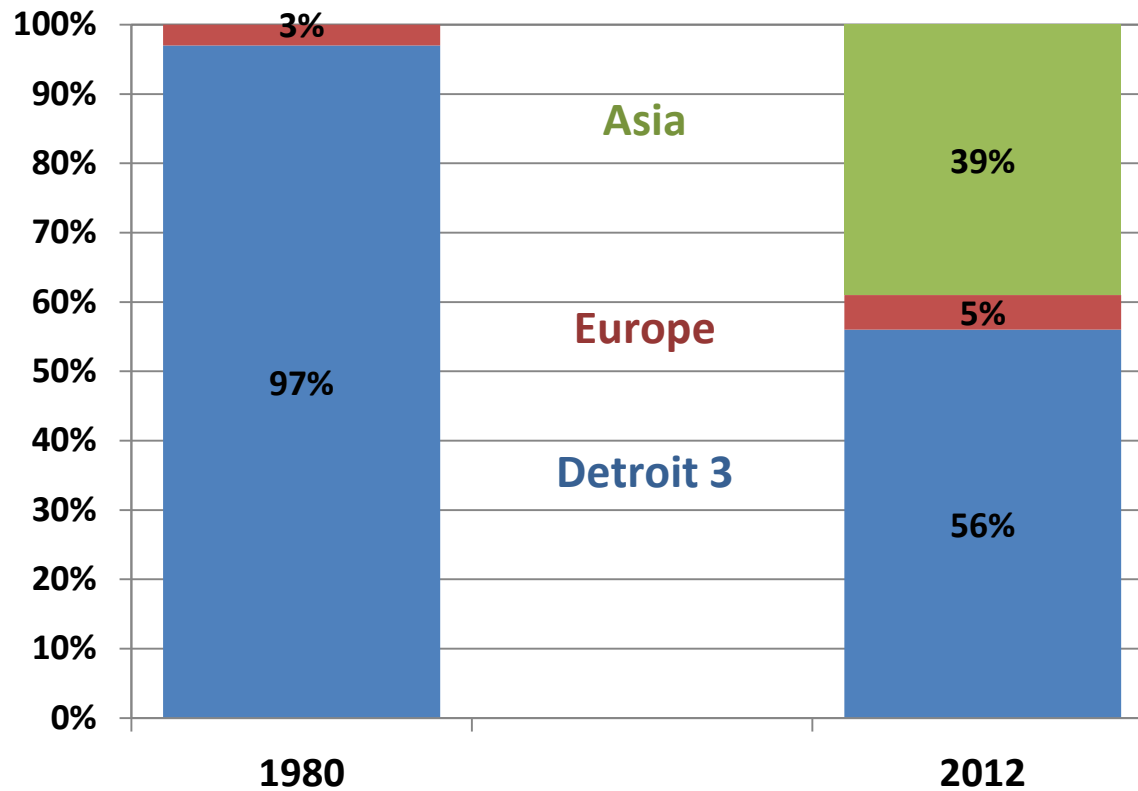
U.S. light vehicle sales and production (saar, million units)



Sources: Autodata, Federal Reserve Board /Haver Analytics

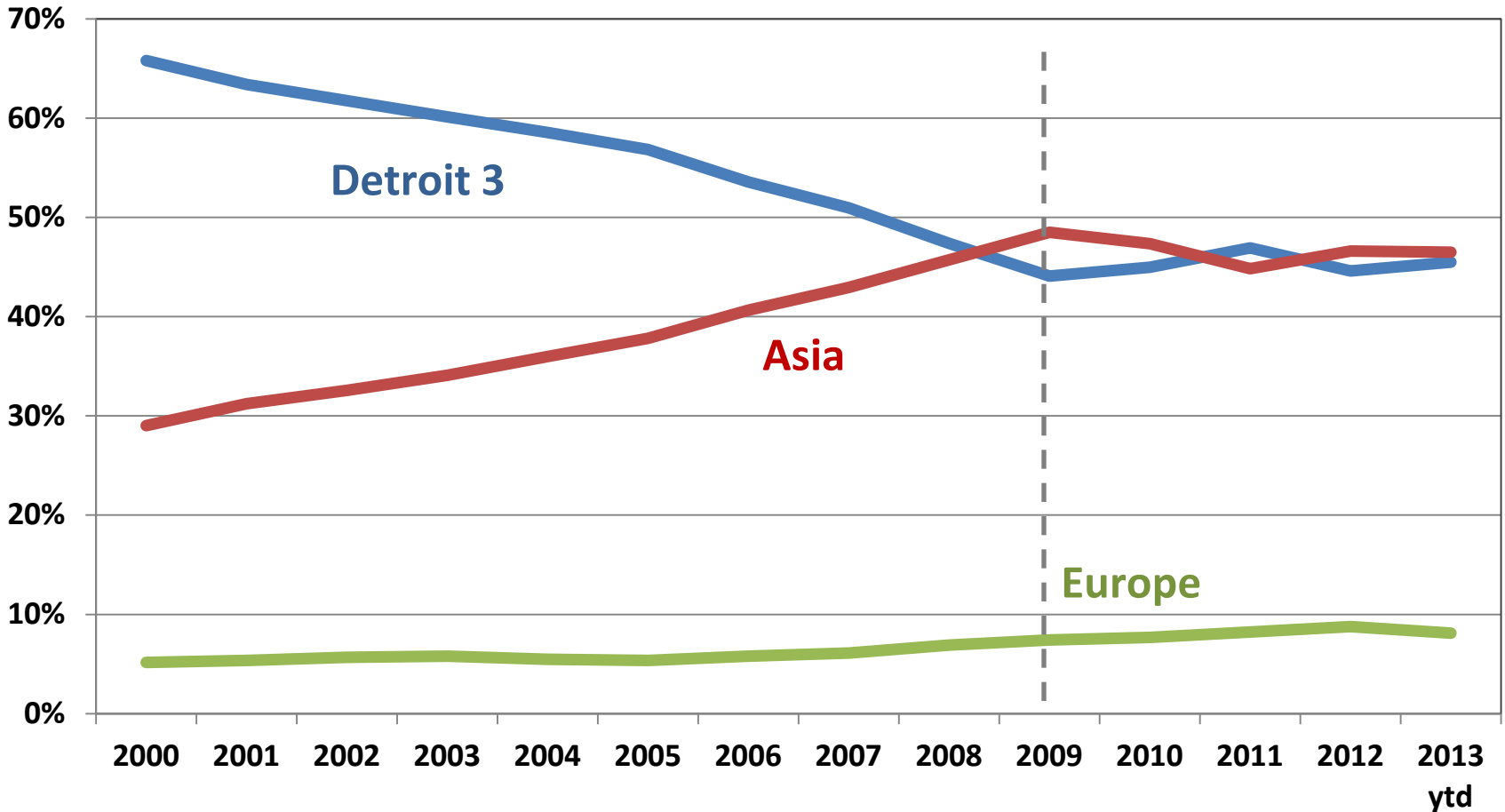
Detroit no longer dominates industry

U.S. light vehicle production share



A new normal?

U.S. light vehicle sales, annual shares



Summary

- The auto industry has represented a bright spot during the recovery.
- The southern half of auto alley has seen tremendous growth. The region's fortunes are strongly tied to specific producers.
- The geography of light vehicle production has been shifting within the U.S. and within North America.
- Vehicles sold in North America tend to be produced in North America.

The geography of the North American auto industry

**2013 Southern Automotive Conference
Biloxi, MS
October 4, 2013**

**Thomas Klier
Senior Economist
Federal Reserve Bank of Chicago
thomas.klier@chi.frb.org
www.chicagofed.org**