
Global Benchmarking – Automobile Supplier Industry

Comments

Transitions: The State of the Automotive Industry
Federal Reserve Bank of Chicago
Chicago, IL
June 11, 2007

Thomas Klier
Senior Economist
Federal Reserve Bank of Chicago
tklier@frbchi.org

Objective of global auto supplier benchmarking study

- **Context: Increasing globalization of value chain in auto sector**
- **Objective: Compare performance of parts suppliers around the world**
- **3 major markets: Europe, North America, and Asia**
- **Focus on 3 parts: seats, exhaust systems, brakes**

Methodology

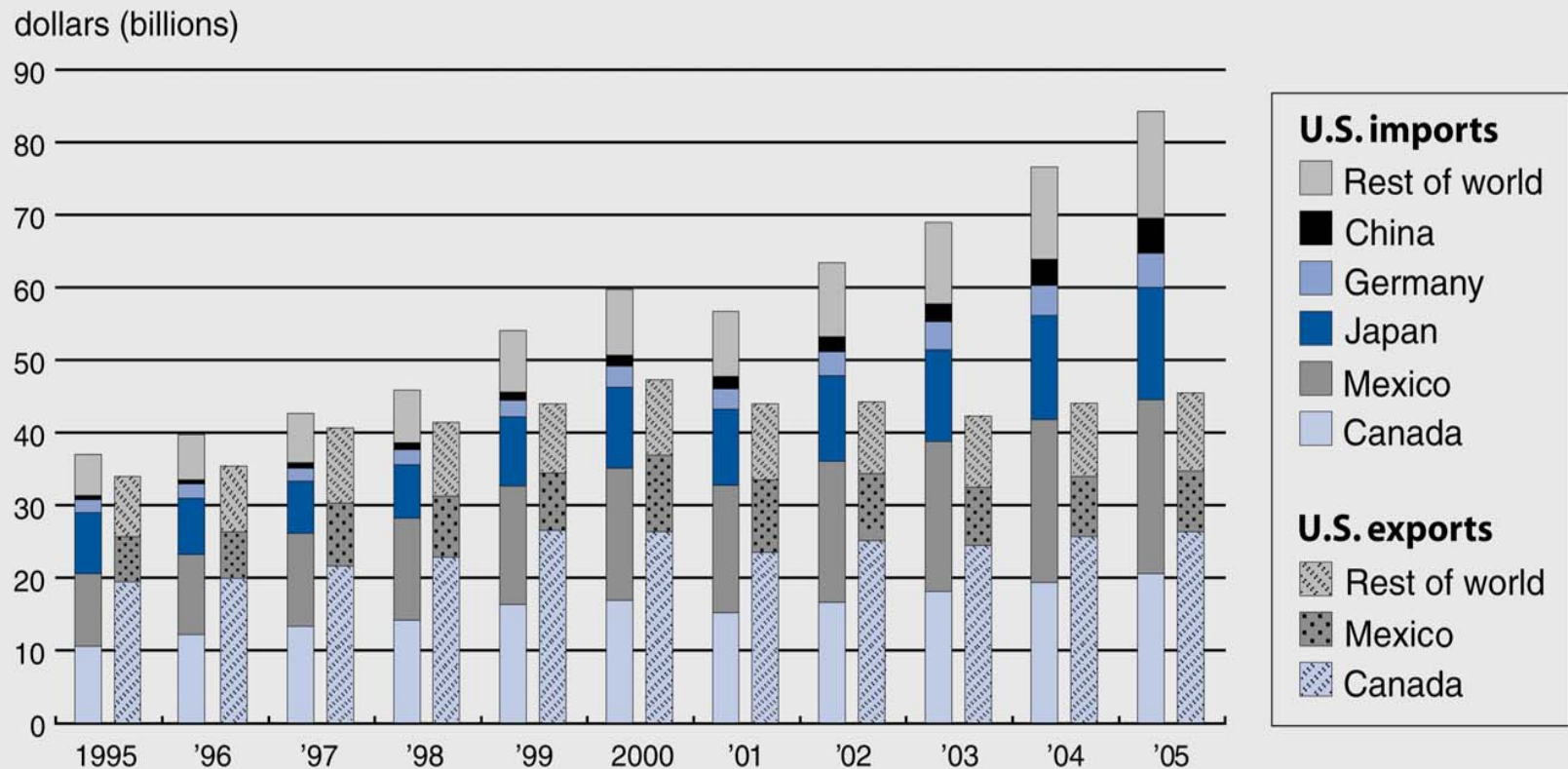
- **Extensive field work. Start with OEM interviews and plant visits. Then interview suppliers for car seats, exhaust systems, and brakes for each plant visited.**
- **Main questions:**
 - ◆ **Productivity and quality gap for same part across regions**
 - ◆ **Sharing of technology and engineering capability**
 - ◆ **Depth of domestic supply chain in each country**
 - ◆ **Changes in comparative advantage**

Comments – Big Picture

- **Auto industry supply chains are becoming more global – in more ways than one. For example, from the U.S. perspective we observe:**
 - ◆ **Increasing trade in motor vehicle parts, trade patterns vary by part**
 - ◆ **Increasing globalization of domestic motor vehicle parts production**
 - ◆ **Changing mix and behavior of car manufacturers**

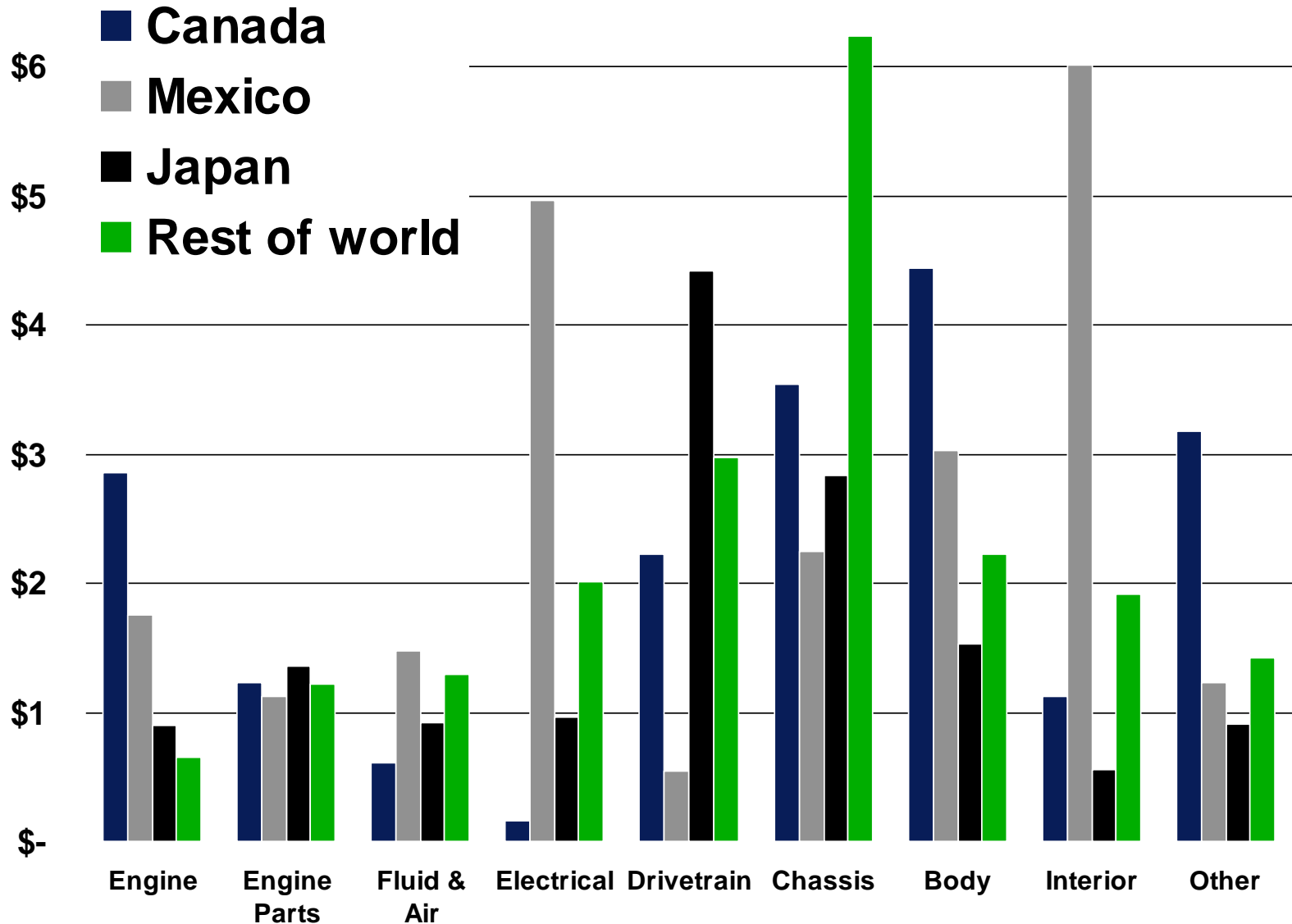
Motor vehicle parts imports are rising

Auto parts trade by major countries



Source: U.S. International Trade Commission; see the interactive ITC Trade DataWeb at <http://dataweb.usitc.gov/>.

Trade patterns vary by subsystem (and part)



Domestic auto parts production more global

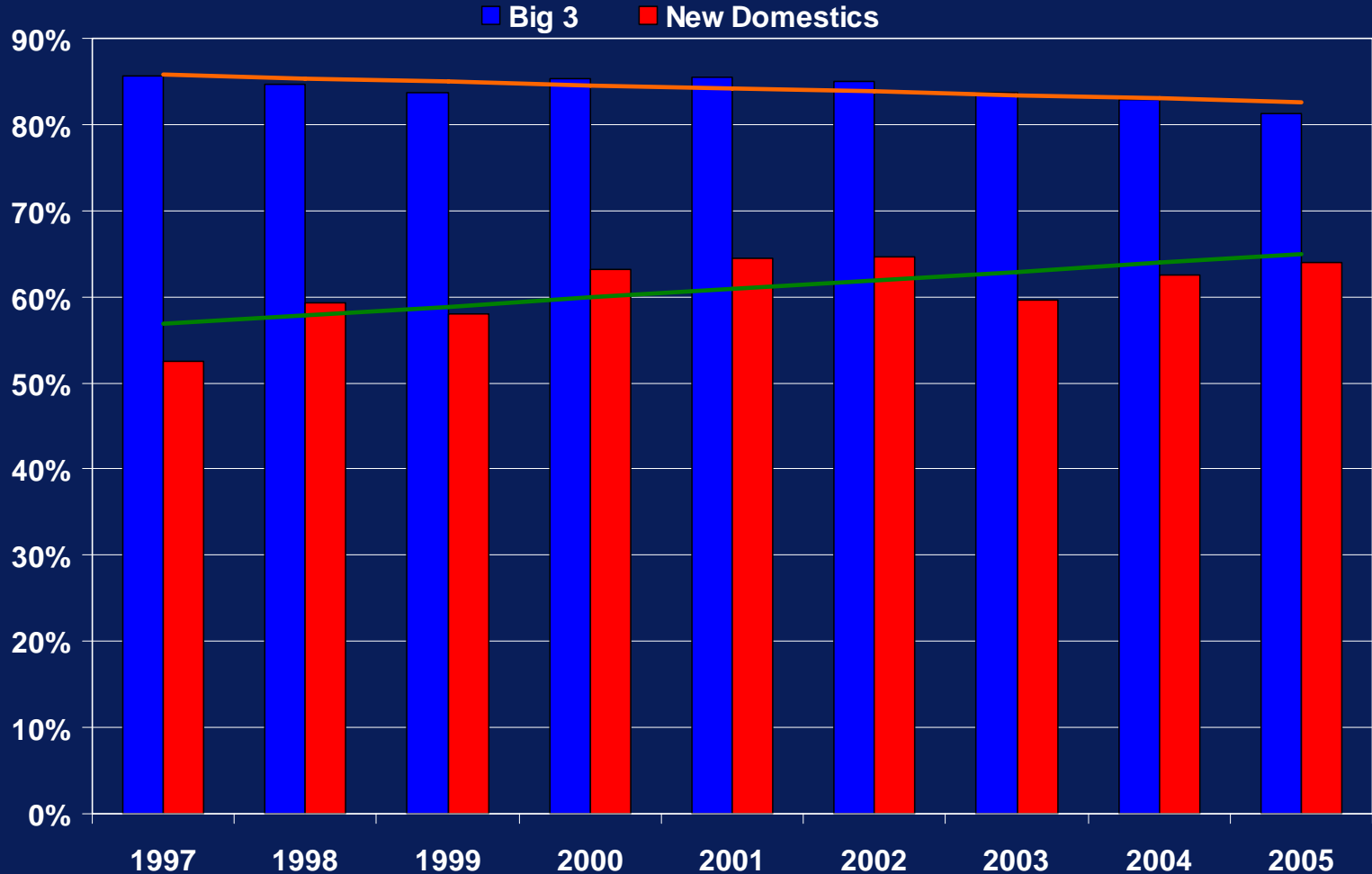
Share of OE and aftermarket parts sourced from U.S.-located auto suppliers

	<u>1997</u>	<u>2005</u>
U.S.-owned	68	41
Foreign-owned	12	30

Source: Dennis DesRosiers presentation, Chicago Fed conference in Detroit, 04/19/2006

U.S. producers' sourcing patterns are changing

Production-weighted Domestic Content of Light Vehicles



GM global sourcing approach

- “GM buys the best quality at the lowest landed cost”
- GM sources regionally across its major markets

GMNA

NA 97%

GMAP

AP 94%

GME

EU 96%

GMLAAM

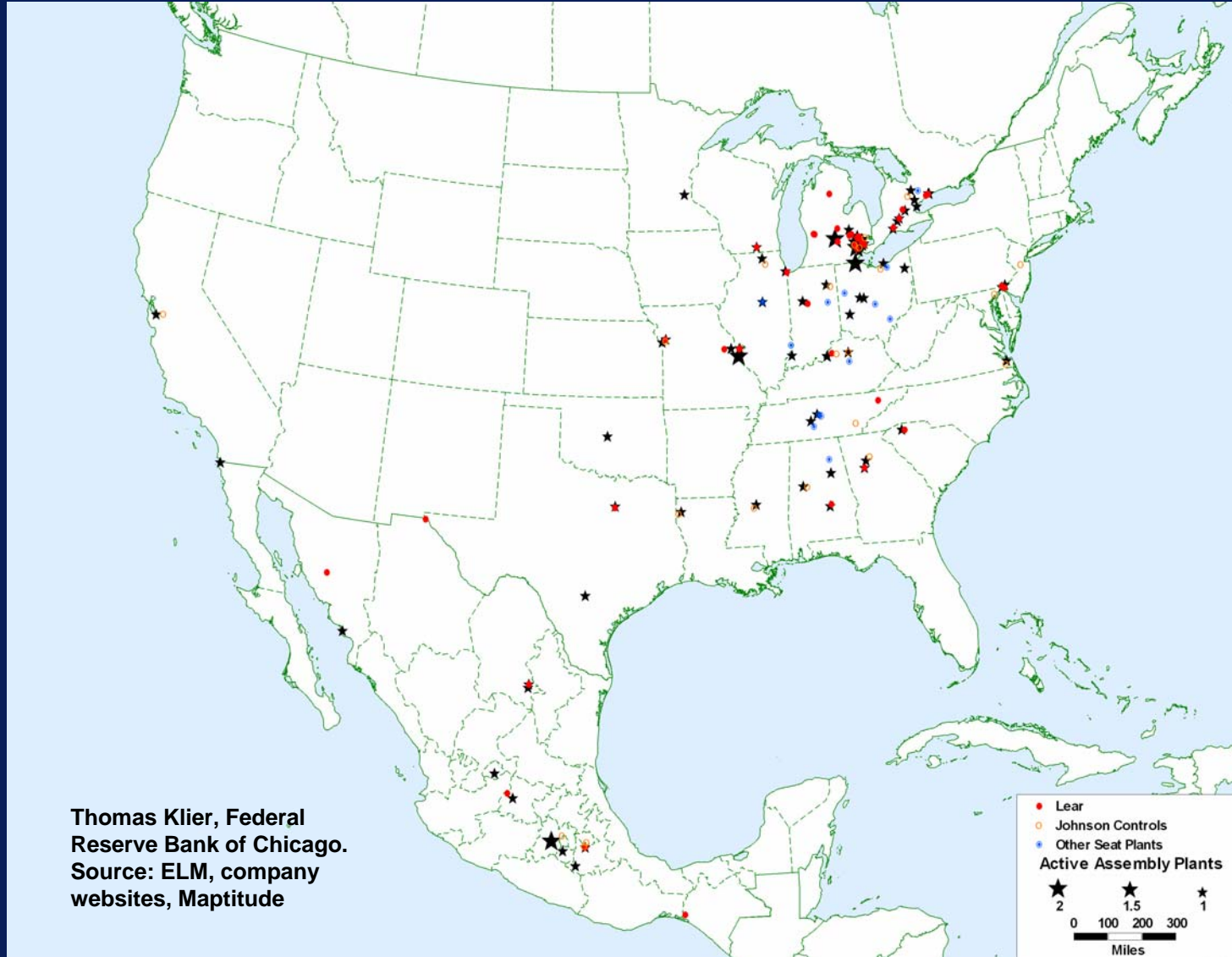
LA 93%

Source: Bo Andersson. GM Global Purchasing VP, presentation at Chicago Fed Conference April 18/19 2005, Detroit

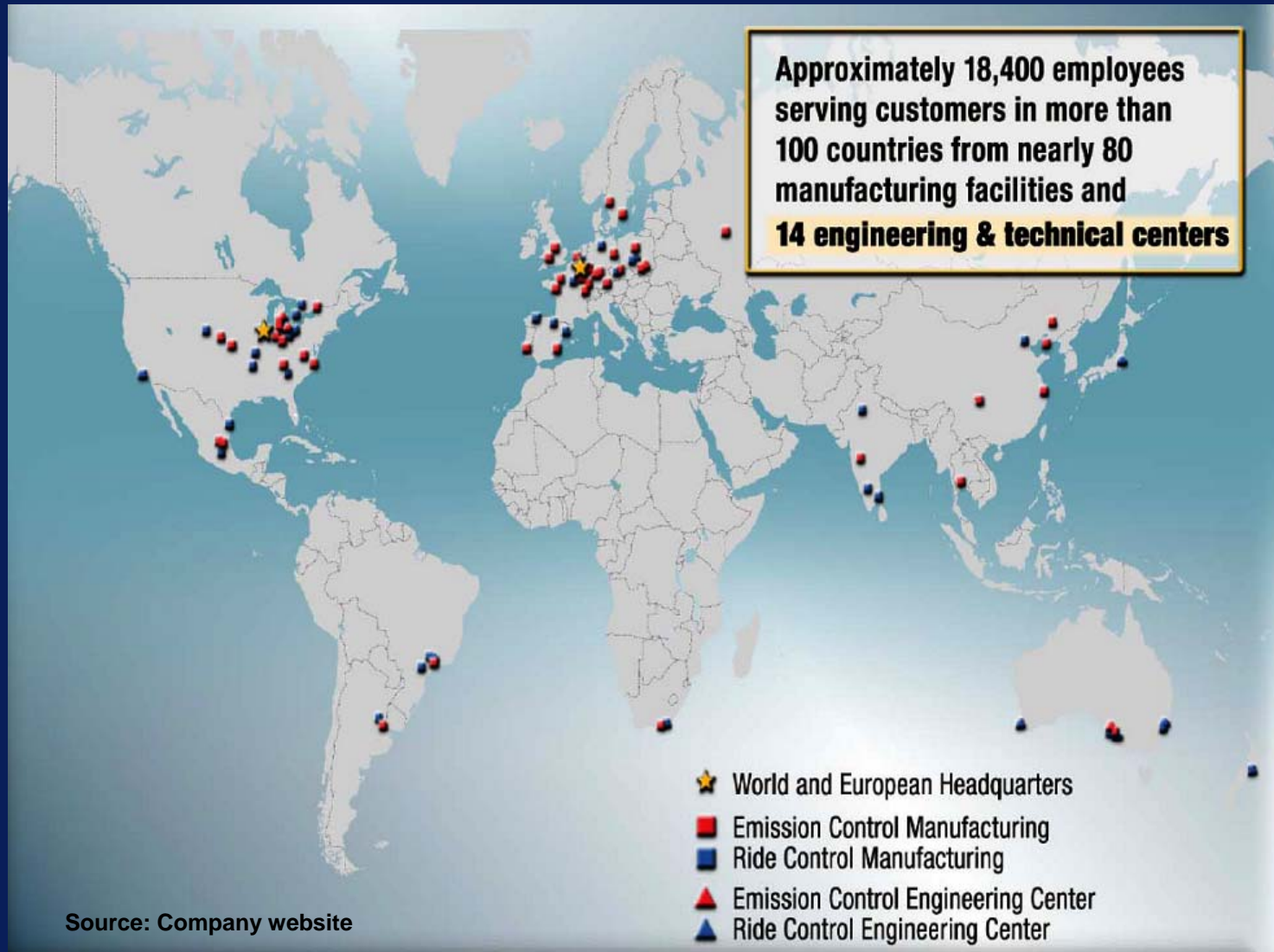
Comments – specifics of study

- **Field work approach**
- **Choice of parts to be benchmarked**
 - ◆ **Car seats** – consistently produced in very close vicinity of assembly plant. Little trade in seats. Lots of trade in seat components, such as seat frame, upholstery, and padding.
 - ◆ **Exhaust systems** – hard to ship as bulky and quite fragile. Different for individual parts such as catalytic converter, muffler etc.
 - ◆ **Brakes** – essentially a commodity part. Of the three parts in study the only truly global part.

Every assembly plant has its seat plant



Tenneco's global footprint



Comments – specifics of study (ctd.)

Expectations

- **Expect findings to depend on the extent to which part is a global part, i.e. the extent to which it is exported.**
 - ◆ **The more trade, the more pressure for convergence in measurable outcomes such as productivity and quality.**
- **What role for car maker's approach toward its supply base in explaining findings?**
 - ◆ **Toyota: fosters strategic and long-term relationships**
 - ◆ **GM: relationships tend to be adversarial and short term**

It is all about the parts

