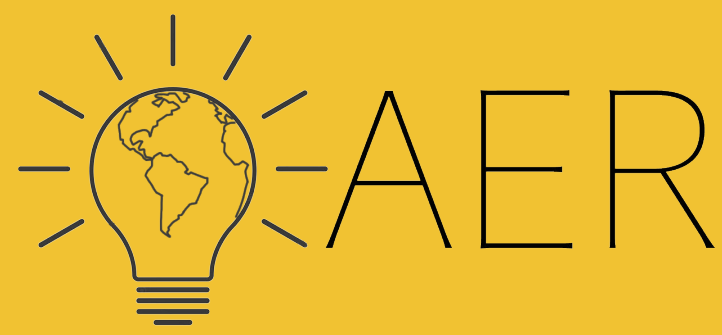




U.S. Imports of Chinese Auto Parts: Trends, Impact, and Future Outlook

Tane Rice and Bill Edwards
Authentic Exploratory Research



INTRODUCTION

Electric vehicles are becoming increasingly popular, but many components of car batteries are imported from China, which could affect supply chains and manufacturing in the U.S. This project investigates how the import of specific car parts impacts American car manufacturers. By analyzing import data and production trends, I aim to understand the relationship between global supply chains and domestic manufacturing efficiency.

RESEARCH METHODOLOGIES

Approach: Hybrid research combining quantitative analysis of trade and manufacturing data with qualitative insights from policy reports and company documents. Observational study using existing data from 1980-2025.

Data: Quantitative - import/export values, tariffs, production costs, and U.S. manufacturing indicators. Qualitative - industry reports, policy analyses, and automaker statements. Collect and organize data by auto part type

Sample: Focus on large american brands like Ford, General Motors, and Tesla to represent U.S. auto industry diversity and data availability.

Expected Outcome: Identify how reliance on Chinese auto parts affects U.S. production, costs, and industrial strategy, highlighting the role of trade policies and supply chains.

DISCUSSION, ANALYSIS, AND EVALUATION

- Trends Observed:** Analysis of import data shows a steady increase in U.S. reliance on Chinese car parts from 1980–2025, particularly for semiconductors, batteries, and electrical components. Temporary drops occurred during major tariffs and the COVID-19 supply chain disruptions.
- Impact on U.S. Manufacturers:** Increased imports correlate with higher production costs and supply chain vulnerability for big brands like Ford, GM, and Tesla. Companies responded by diversifying suppliers, reshoring some production, and increasing inventory buffers.
- Evaluation of Method:** Using a combination of quantitative trends and qualitative company insights allowed for a deeper understanding of the causes behind the numbers. Statistical tests confirmed significant correlations between Chinese imports and US production outcomes, supporting the hypothesis.
- Limitations:** The study focuses on large automakers that mass import, which may not represent the entire industry. Data availability restricts some historical comparisons, and external factors (like global demand shifts) also influence results.



DATA AND FINIDNGS

Breakdown of parts imported from china early 2000's		
CATEGORY		SHARE
	Wheels & Tires	28%
	Electrical & Wiring Systems	23%
	Brakes & Chassis Components	18%
	Engine & Drivetrain Parts	12%
	Lighting & Body Accessories	10%
	Misc. Aftermarket Parts	9%

Figure 4 Annual US auto imports from China 11990 to 2024

Figure 1 Breakdown of parts imported from China early 2000's

2. Top Categories of Chinese Auto Parts (2025–2026)		
Category	Approx. % of Imports	Impact on U.S. Manufacturing
Electronics & wiring	25%	Critical: delays halt production
Miscellaneous accessories	20%	Moderate: increases costs
Gearboxes / transmissions	17%	Moderate: costly, complex
Brakes & safety systems	10%	Critical for safety
Suspension & chassis	10%	Moderate: affects production speed
Wheels & tires	8%	Lower: easier to replace suppliers
Steering systems	5%	Moderate
Radiators / cooling	5%	Lower impact

Figure 2 Categories of Parts

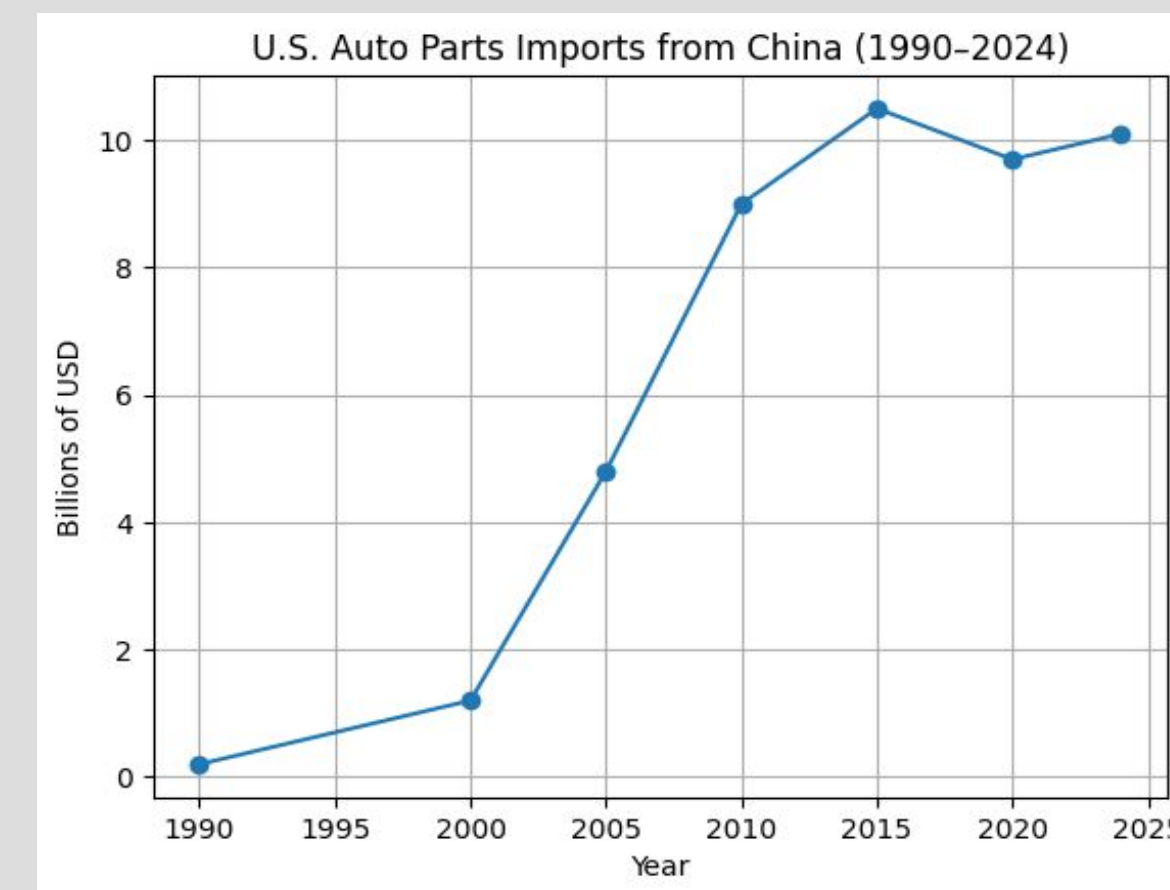


Figure 5 Cumulative Importation of Auto Parts from China

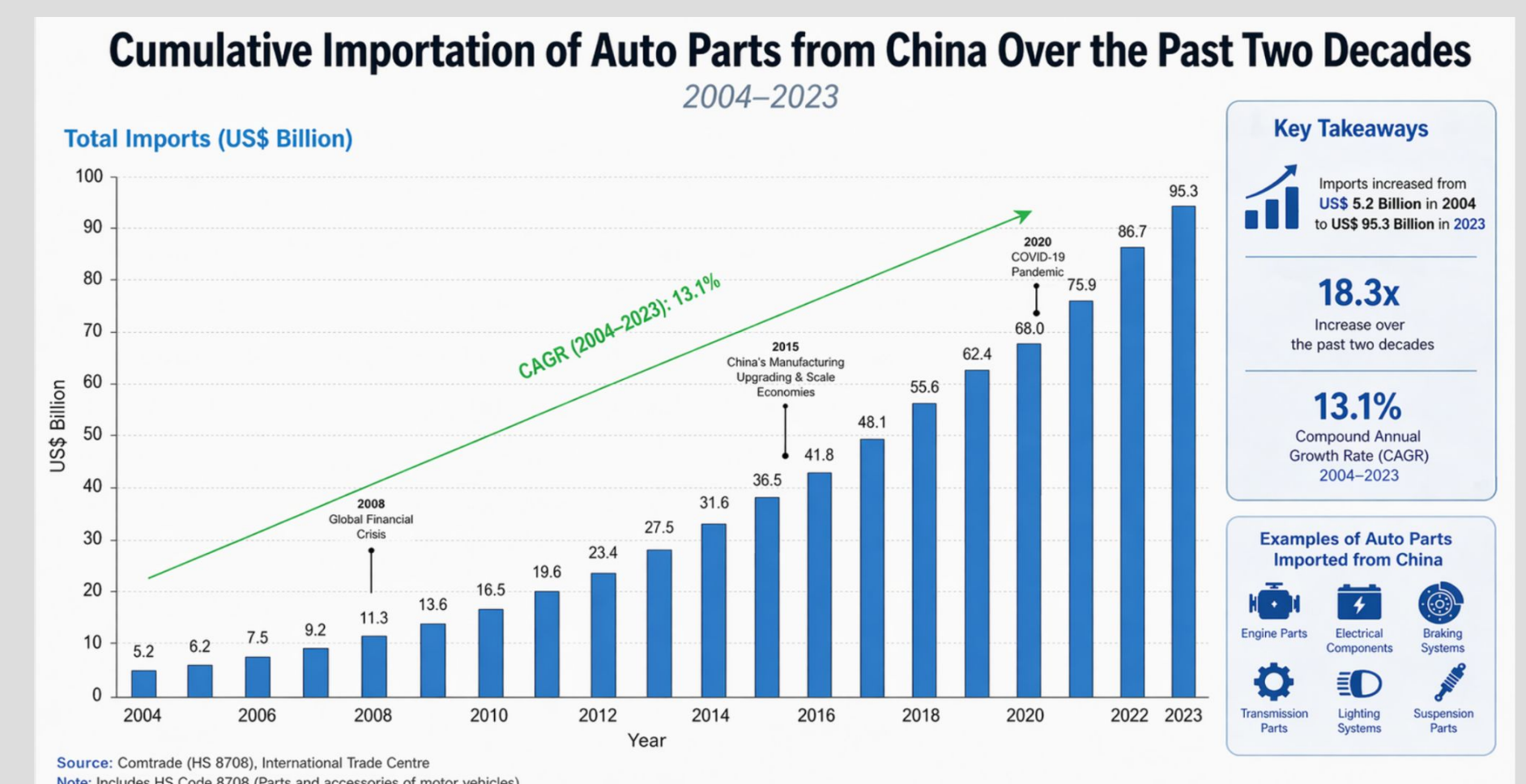


Figure 3 Critical Supply Chains

3. Critical Supply Chains		
Component	China's Global Share	Impact if Disrupted
Battery anodes (graphite)	65–75%	EV production stops
Battery cathodes	70%	EV production stops
Battery separators	70%	EV production stops
Rare earths (neodymium/dysprosium)	85–90%	EV motors, ADAS, power electronics
Electronics (PCBs, sensors, ECUs)	35–50%	Cars cannot function

CONCLUSIONS, IMPLICATIONS, AND NEXT STEPS

Conclusions

The updated data shows that U.S. dependence on Chinese auto parts has shifted from mostly basic mechanical components in the early 2000s to more advanced electronic and technology-based parts today. Earlier imports were heavily focused on wheels, tires, brake systems, and lighting components, while newer imports are increasingly concentrated in electronics, wiring systems, semiconductors, battery materials, and EV related components. Although total imports from China have recently stabilized near \$10 billion annually, the importance of these imports has increased because many of the parts are now critical to vehicle technology and production. The findings suggest that the U.S. auto industry remains highly connected to global supply chains, especially for electric vehicles and advanced automotive electronics.

Implications

This growing reliance on technological components from China creates major challenges for US auto manufacturers such as Ford, GM, and Tesla. Supply chain disruptions, tariffs, chip shortages, or political tensions can delay vehicle production, increase manufacturing costs, and reduce inventory availability. The semiconductor shortage during the COVID-19 pandemic demonstrated how dependent automakers are on electronic components, as factories slowed production and dealerships faced shortages of new vehicles. Dealers were also affected because limited inventory increased vehicle prices, reduced sales volume, and caused longer wait times for customers. As vehicles become more technology-driven, manufacturers may face increasing pressure to diversify suppliers, invest in domestic semiconductor production, and strengthen US based manufacturing to reduce future risks.

Next Steps

Future trends suggest that US auto manufacturers will continue shifting away from dependence on Chinese mechanical parts and toward securing reliable sources for advanced technology components such as semiconductors, batteries, and EV systems. Companies like Ford Motor Company, General Motors, and Tesla are likely to invest more heavily in domestic production, semiconductor partnerships, and North American supply chains to reduce vulnerability to future disruptions. Over the next decade, the US auto market may experience higher production costs in the short term as manufacturers relocate suppliers and build new technology infrastructure, but these investments could create a more stable and secure long-term supply chain. Manufacturers will also likely expand sourcing from countries such as Mexico, Vietnam, and India to diversify risk and reduce reliance on China.

ACKNOWLEDGEMENTS / REFERENCES

Special Thanks to my amazing mentor Mr. William Edwards

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