

The Automotive Industry: Transition and Tension

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El Colegio de la Frontera Norte

*International Seminar. The China Effect: Rethinking Development in
Latin America and the Caribbean*

Center for Peace and Development & CECHIMEX-UNAM

On line, December 3, 2025

Agenda

- ❖ *Introduction*
- ❖ *Global changes*
 - *Technological*
 - *Economic*
 - *Governance*
- ❖ *Mexico's role*
- ❖ *Conclusions*

INTERNATIONAL SEMINAR

**THE CHINA EFFECT: RETHINKING DEVELOPMENT
IN LATIN AMERICA AND THE CARIBBEAN**

DECEMBER 3, 2025

9:00 A.M. - 12:30 P.M. CST
ONLINE VIA ZOOM

ZOOM ID 899 1660 5224




cuaed-unam-mx.zoom.us/j/89916605224

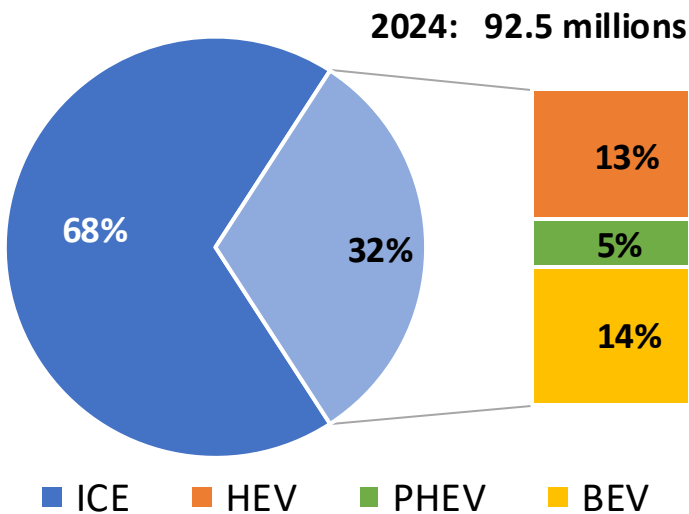
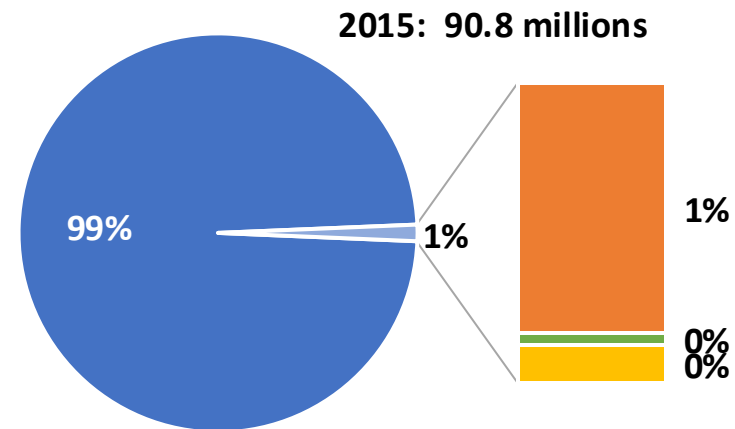


**SECURITY
CONTEXT**

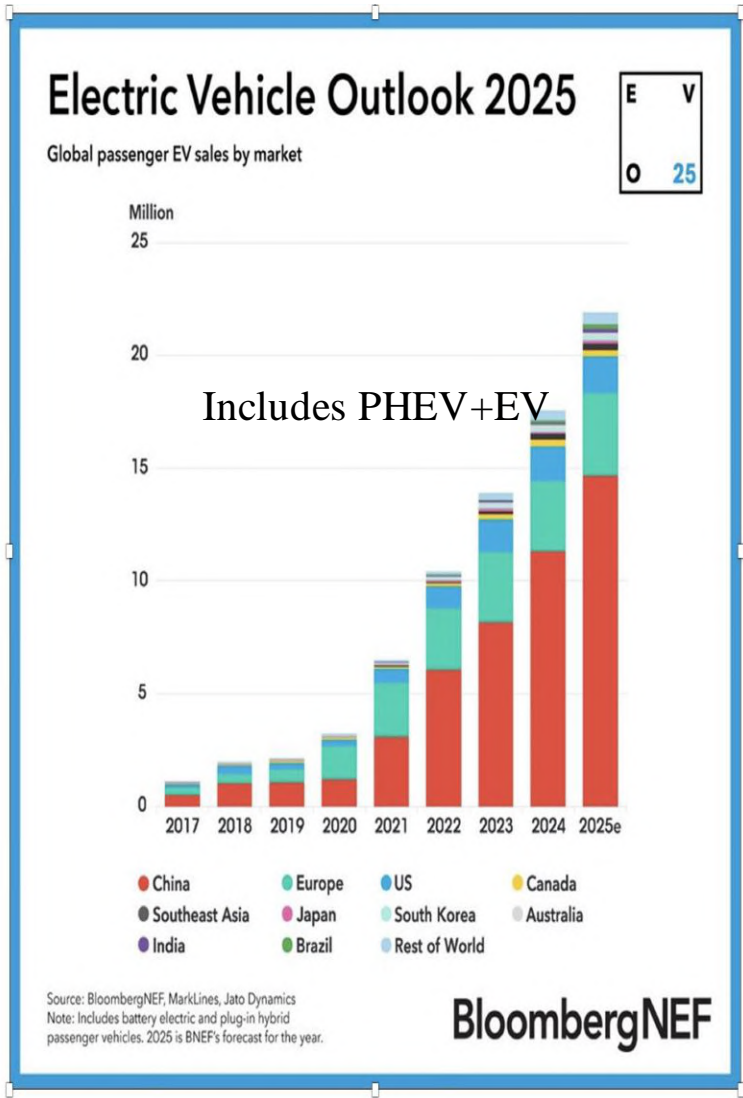
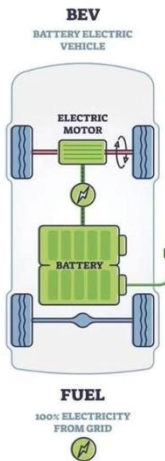
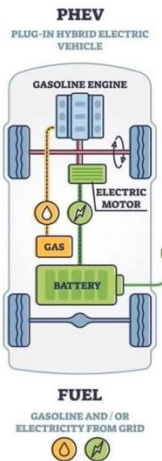
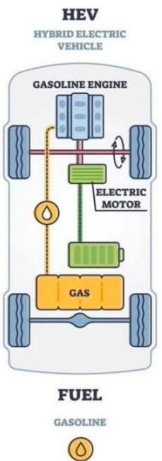
The International Seminar seeks to examine the conceptual and strategic policy

Production & Geography Changes

| Ranking | 2000 | 2024 |
|---|-------------------|-------------------|
| Global Production (millions of units) | 58.3 | 92.5 |
|  | 1 st . | 2 nd |
|  | 8 th | 1 st . |
|  | 9 th | 5 th |

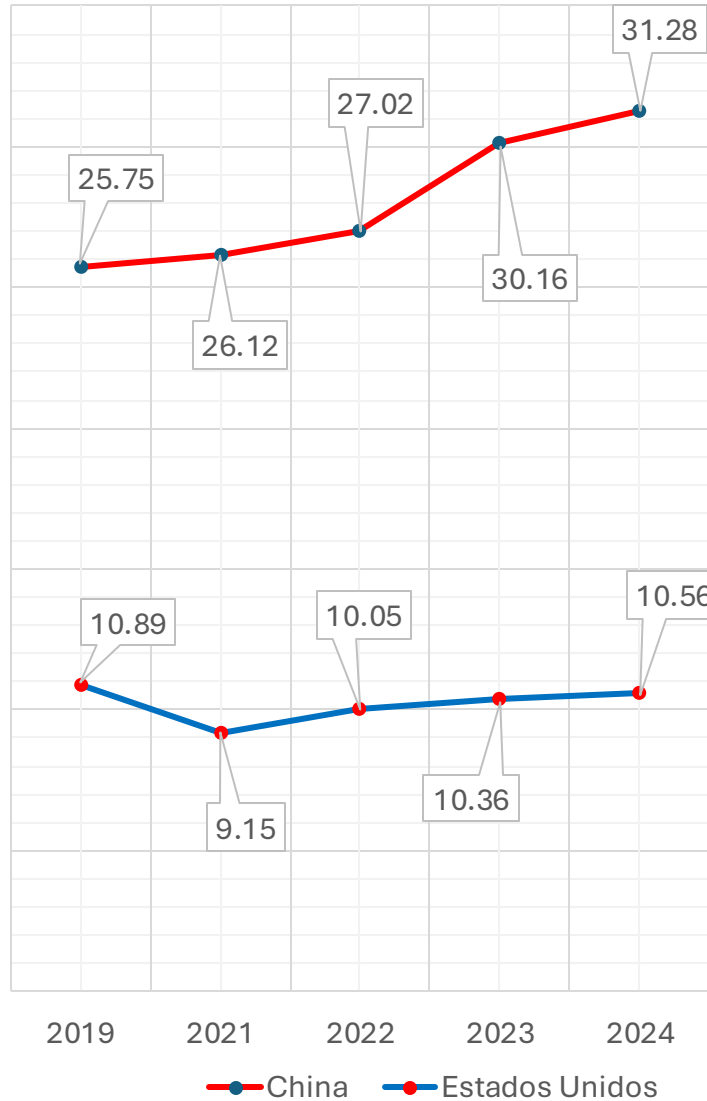


TYPES OF ELECTRIC VEHICLES



Leadership Changes

Vehicles

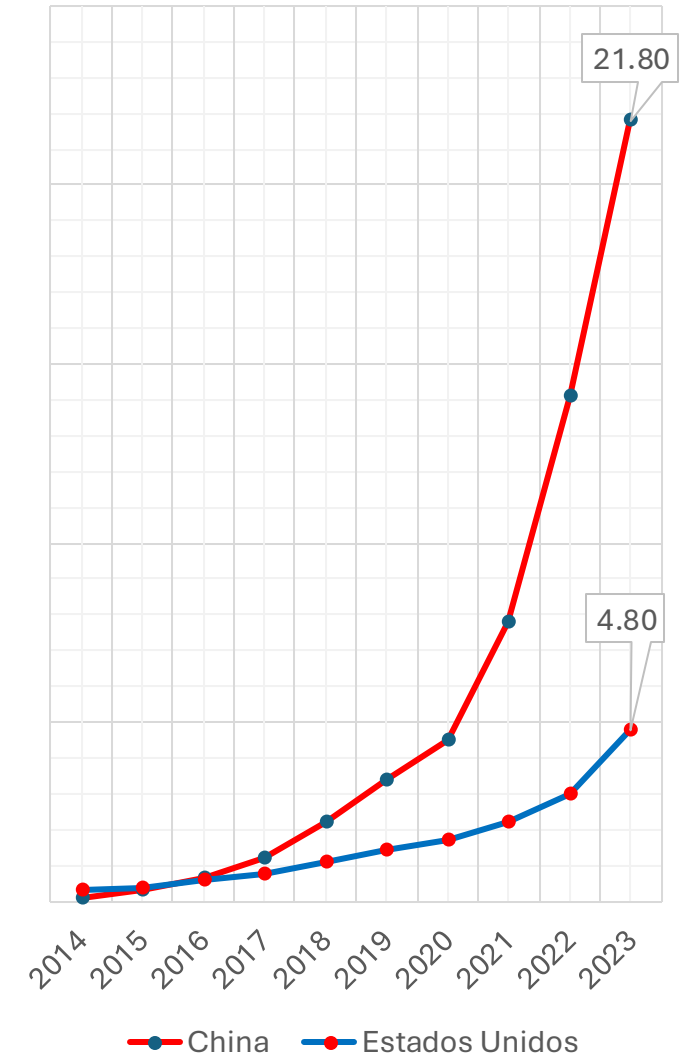


Source: Author's elaboration based on OICA (2019-2024) World Motor Vehicle – Production.

LV million units



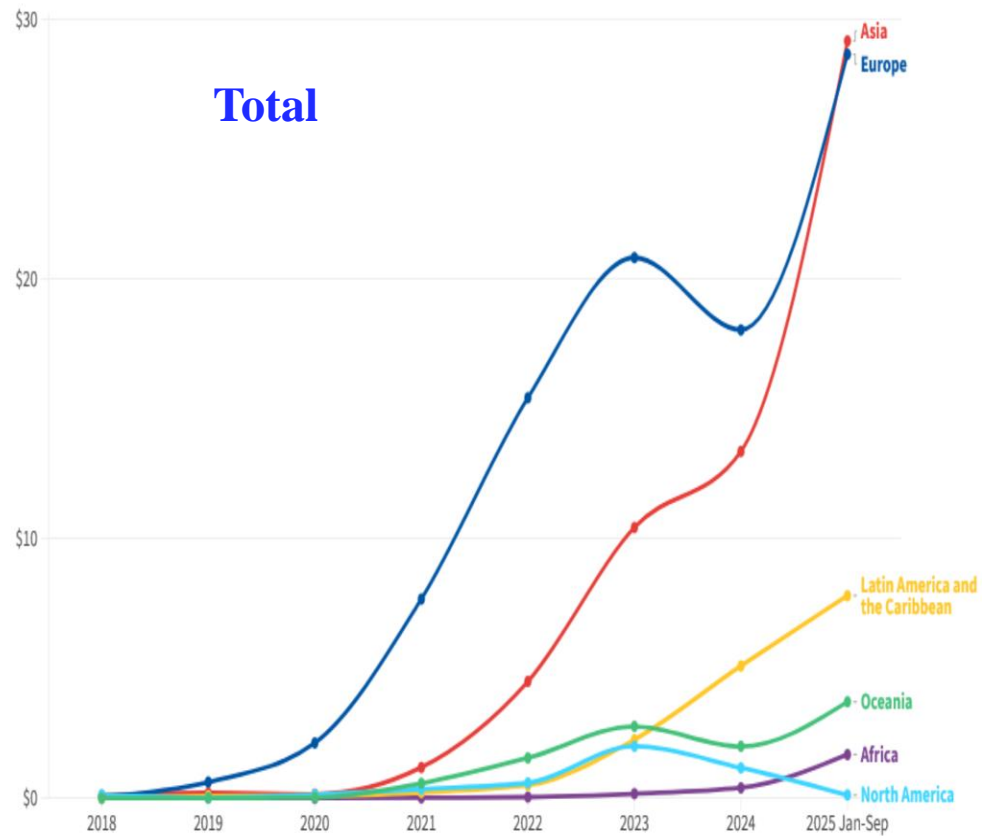
EV Stock



Source: Author's elaboration based on International Energy Agency (2024) Global EV Outlook 2024.

Exports Changes

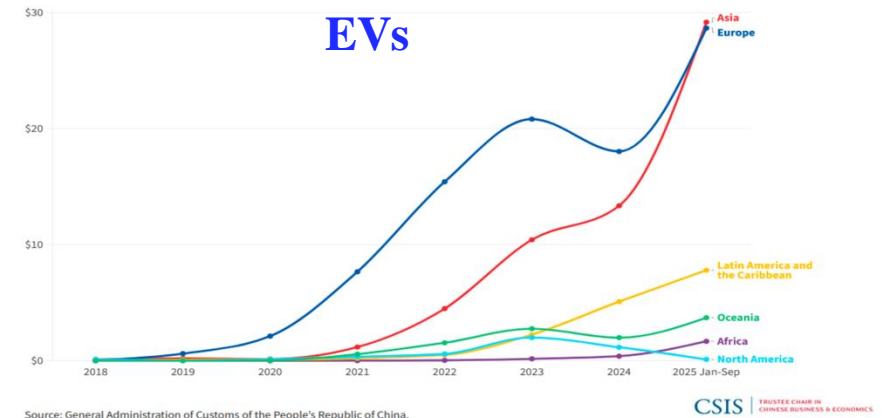
Chinese EV Exports by Region
USD, Billions



Source: General Administration of Customs of the People's Republic of China.

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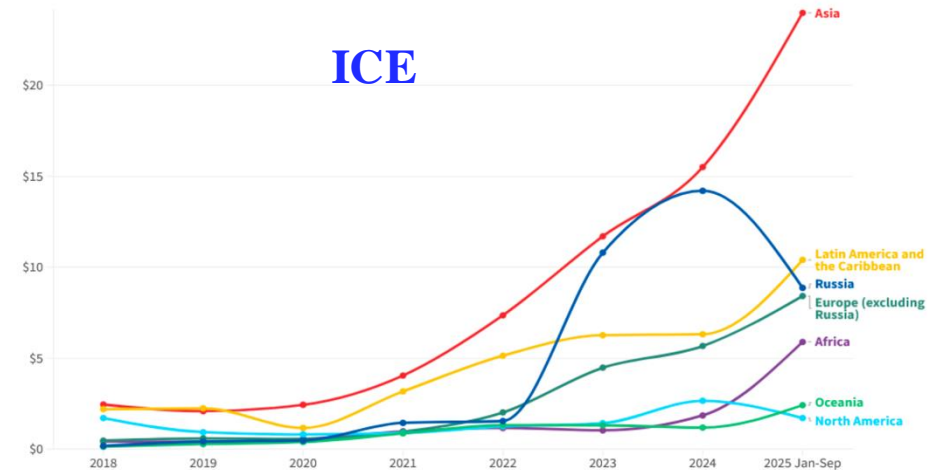
Chinese EV Exports by Region
USD, Billions



Source: General Administration of Customs of the People's Republic of China.

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Chinese ICE Passenger Vehicle Exports by Region
USD, Billions

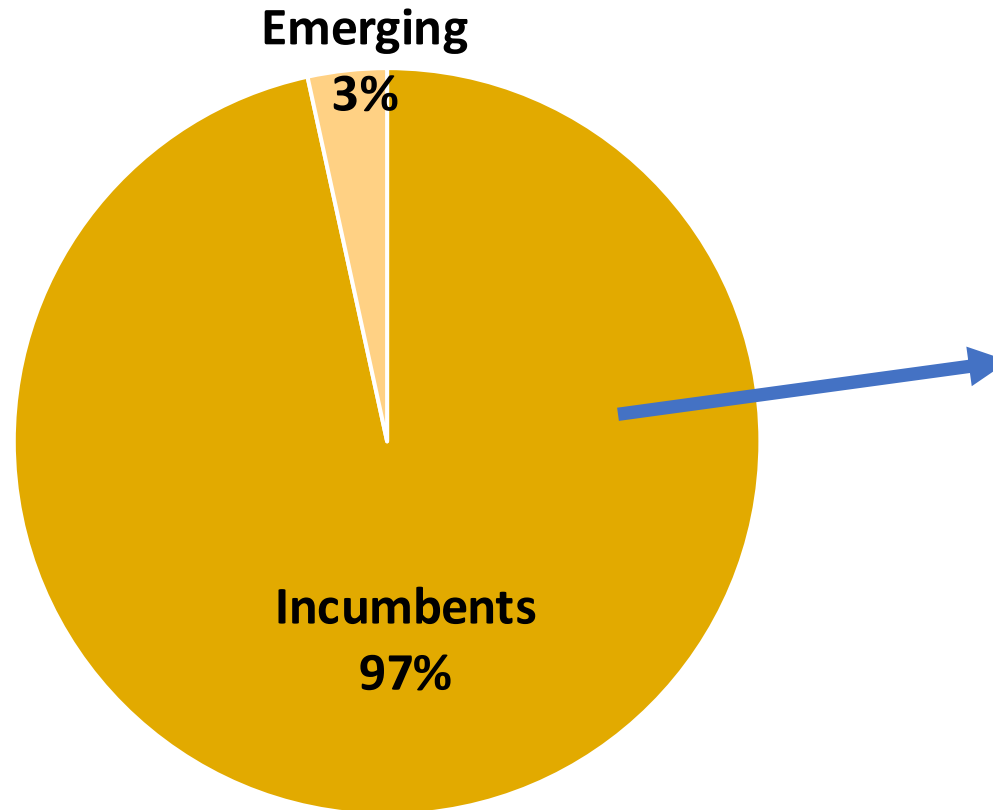


Source: General Administration of Customs of the People's Republic of China.

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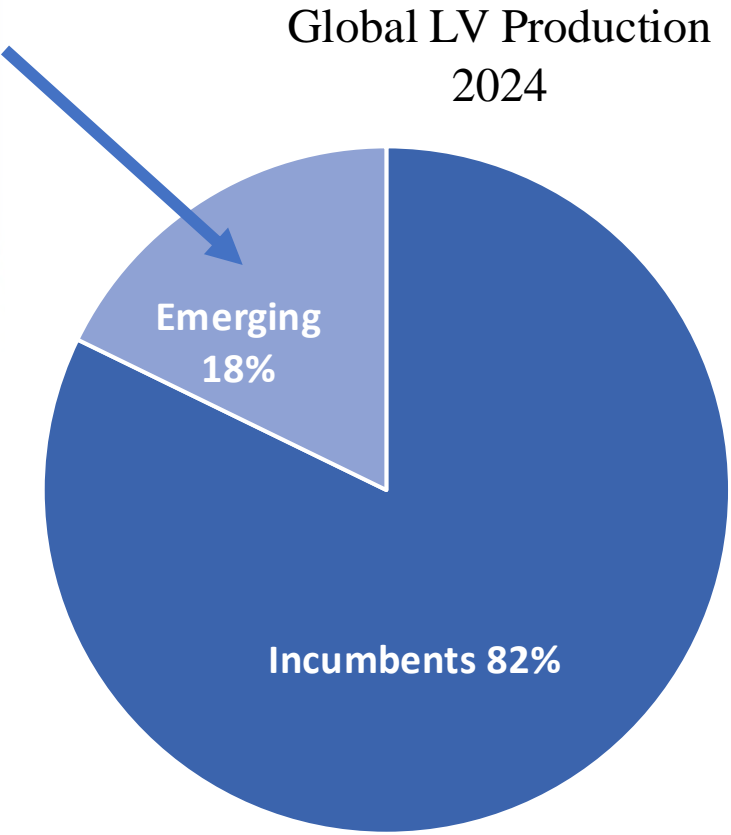
Companies: Governance Changes

Global LV
Production
2000



Source: Author's elaboration based on OICA (2000). World Motor Vehicle – Production.

Chinese Presence



Source: Author's elaboration based on OICA (2024) World Motor Vehicle – Production.

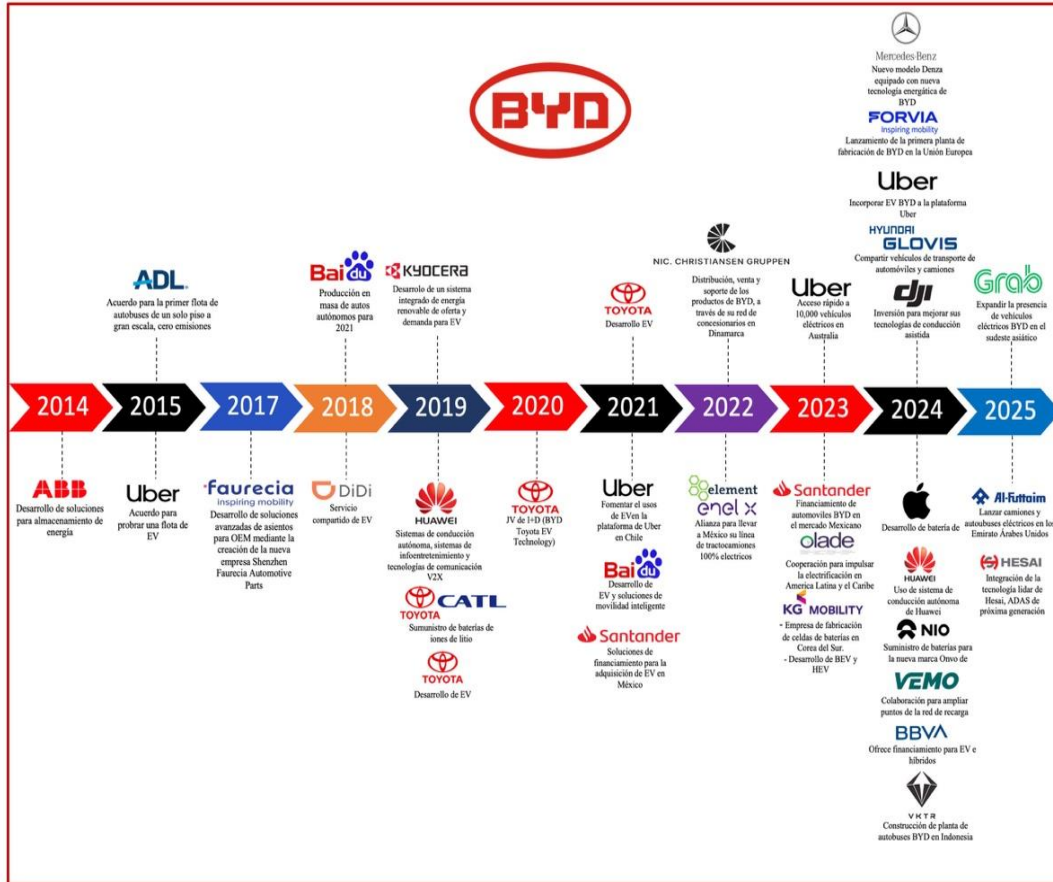
| GLOBAL MARKET SHARE SALES | | |
|------------------------------|---------|------|
| | CHINESE | US |
| ICE, HEV, PHEV, BEV | 33% | 17% |
| PHEV, BEV | 65% | 9% |
| EVs Emerging Companies | 77% | 9% |
| EV Battery demand | 59% | 13% |
| Robots (global market size) | 51% | 9% |
| Exports (units) (July 2025) | 35% | 7% |
| Labor productivity (2010-24) | +1.6 | -0.5 |

Source: Author's elaboration based on OICA (2024). World Motor Vehicle - Sales – 2024/ IEA (2025), Global electric car sales and Electric vehicle demand by region. IFR (2025), Global Market Size Robotics Industry. Mazzoco., 2025

Vertical Integration



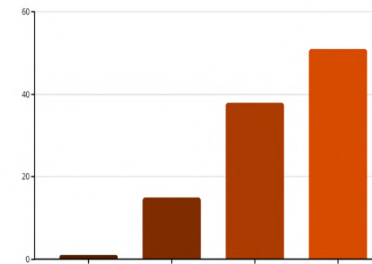
A Global Boom in Technological Alliances (co-petition)



Source: Jorge Carrillo & Redi Gomis, Fabricantes de autos y gigantes tecnológicos. Alianzas para la nueva movilidad, El COLEF, Tijuana, 20225

CAPAD Insights: China Speed = Vertical Alliances at Scale

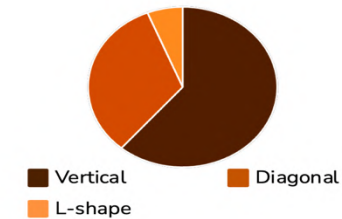
Annual Alliance Growth



51x growth in 10 years

2015: 1 case → 2025: 51 cases (9 months)

Alliance Types



Vertical: 161 cases (61%)

Diagonal: 86 cases (33%)

L-shape: 16 cases (6%)

100% vertical alliances are China-China

CAPAD = Living Database

Current: 263 cases

Growth: ~10 cases/month

Backfilling: Past decade data

December 2025: 300+ cases expected

Dr. Peter Zhou 18th A

Source: Pete Zhou, 2025, 18th Annual Inside China Automotive Conference, Michigan, Nov 2019

CAPAD Focus: **239** cases (91%) involve these 3 countries

- **China-China: 161** (domestic full-stack ecosystem)
- **China-Germany: 52**
- **China-Japan: 26**

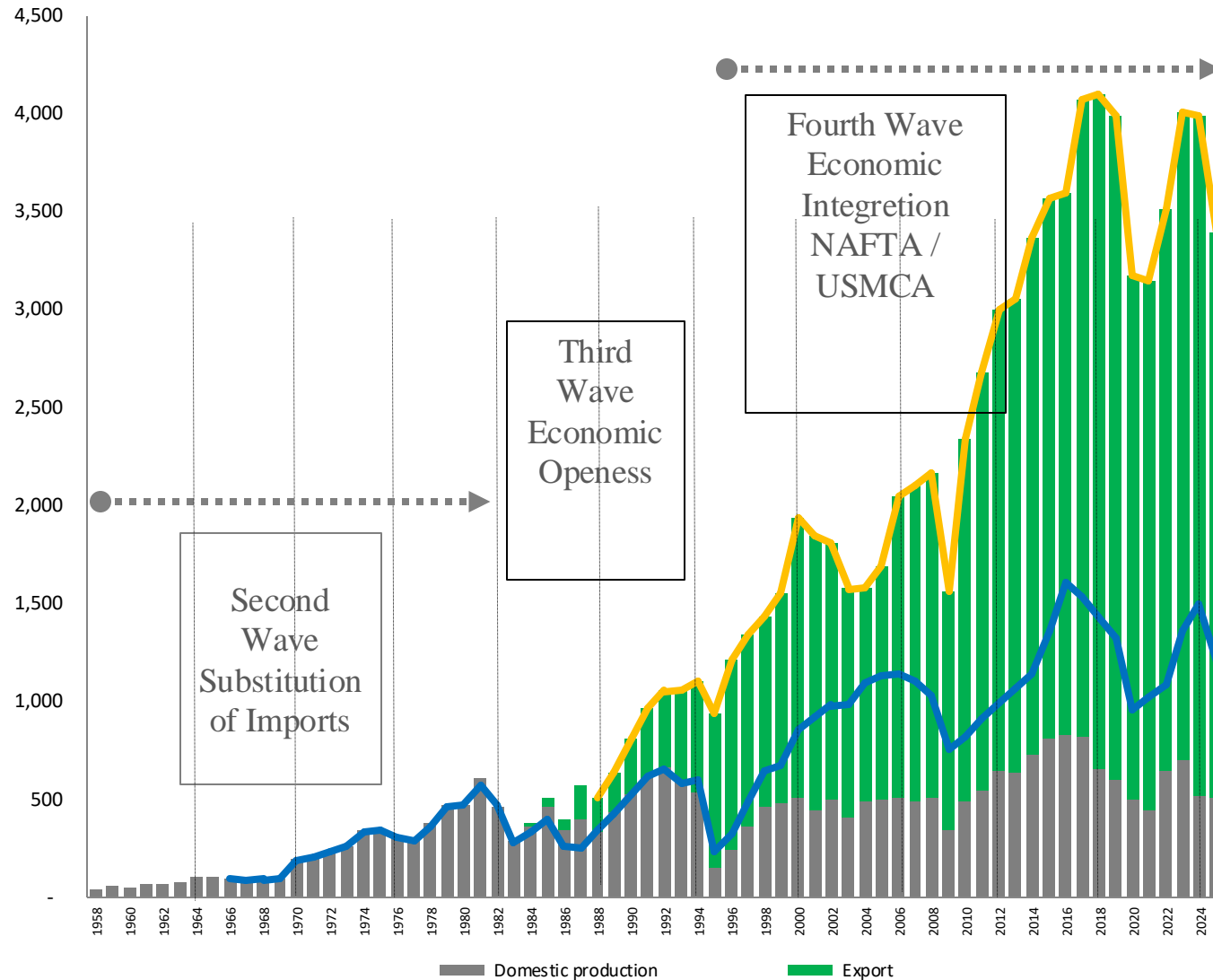
Why not US or other countries?

→ Current research scope: China-Japan-Germany depth

→ Future expansion planned for other markets

Mexico: Automotive Industry

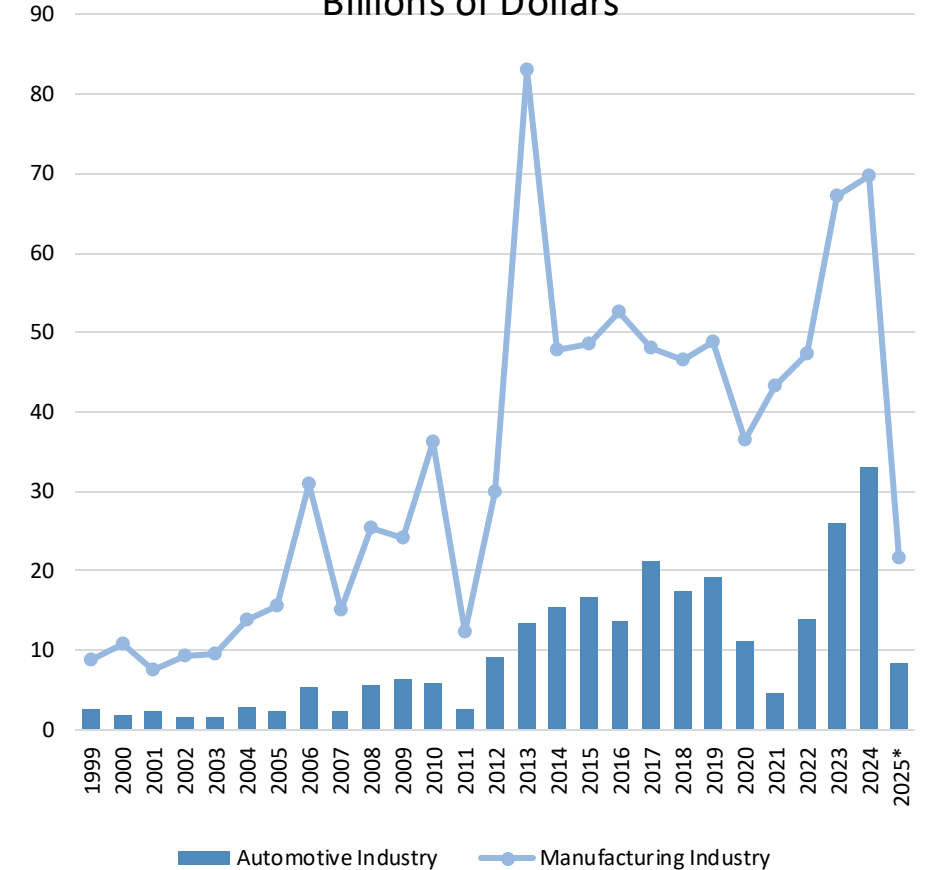
Production, sales & imports (000s)



Sources: Author's elaboration based on the Administrative Registry of the Light Vehicle Automotive Industry. Vehicle Production (RAIAVL) and National Institute of Statistics and Geography (INEGI)

FDI in Mexico by sector 1999-2025

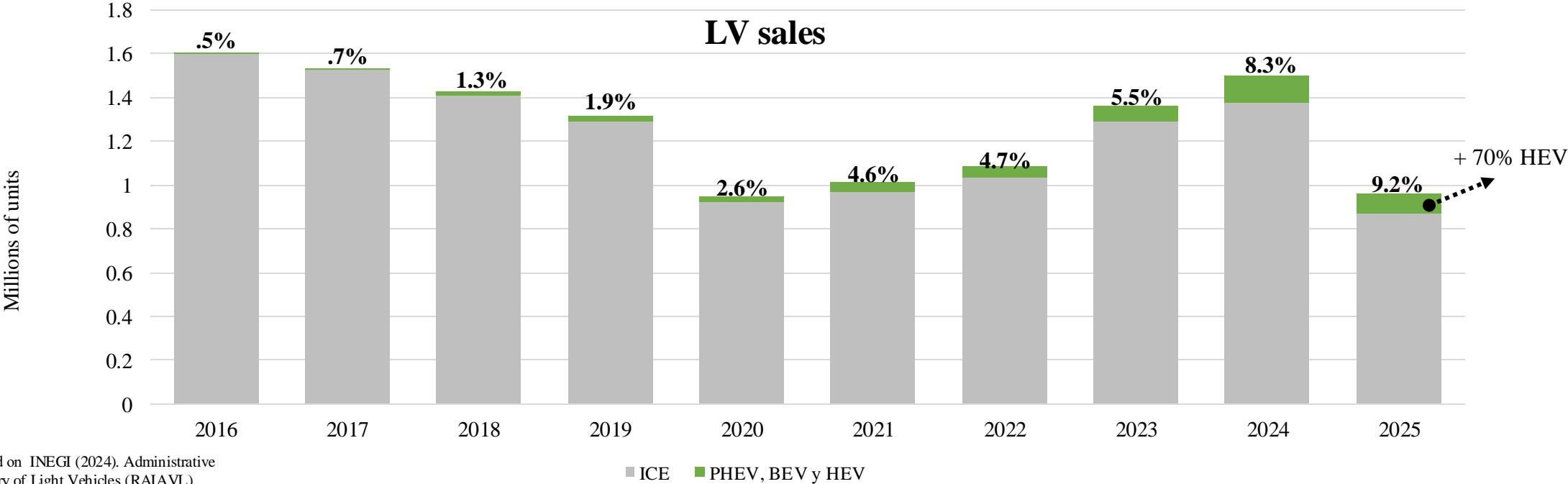
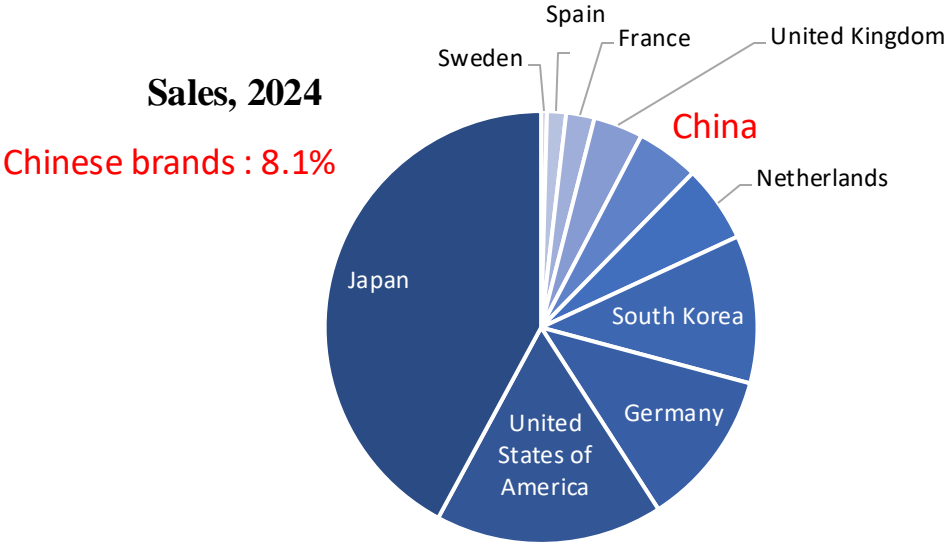
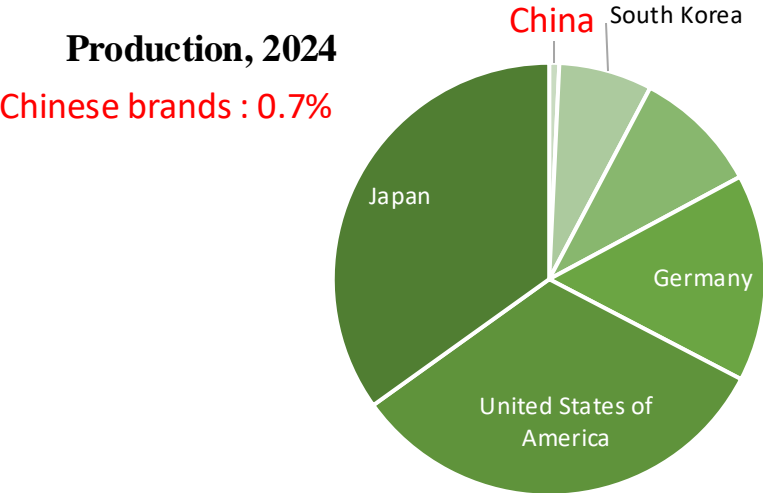
Billions of Dollars



Source: Author's elaboration with information from the Ministry of Economy (2025). Foreign Direct Investment in Mexico by Economic Activity.

*The 2025 data corresponds to the first half of the year.

Electrification in Mexico



Source: Author's elaboration based on INEGI (2024). Administrative Registry of the Automotive Industry of Light Vehicles (RAIAVL).

Conclusions

- Taxes Increases for Chinese EVs imports in Mexico (50%)
 - Pressures to discourage Chinese FDI
 - Constant uncertainty
-
- Structural dependence on the American economy
 - Search for a North American EV Pact

Urgent a necessary smart diversification

Questions?

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