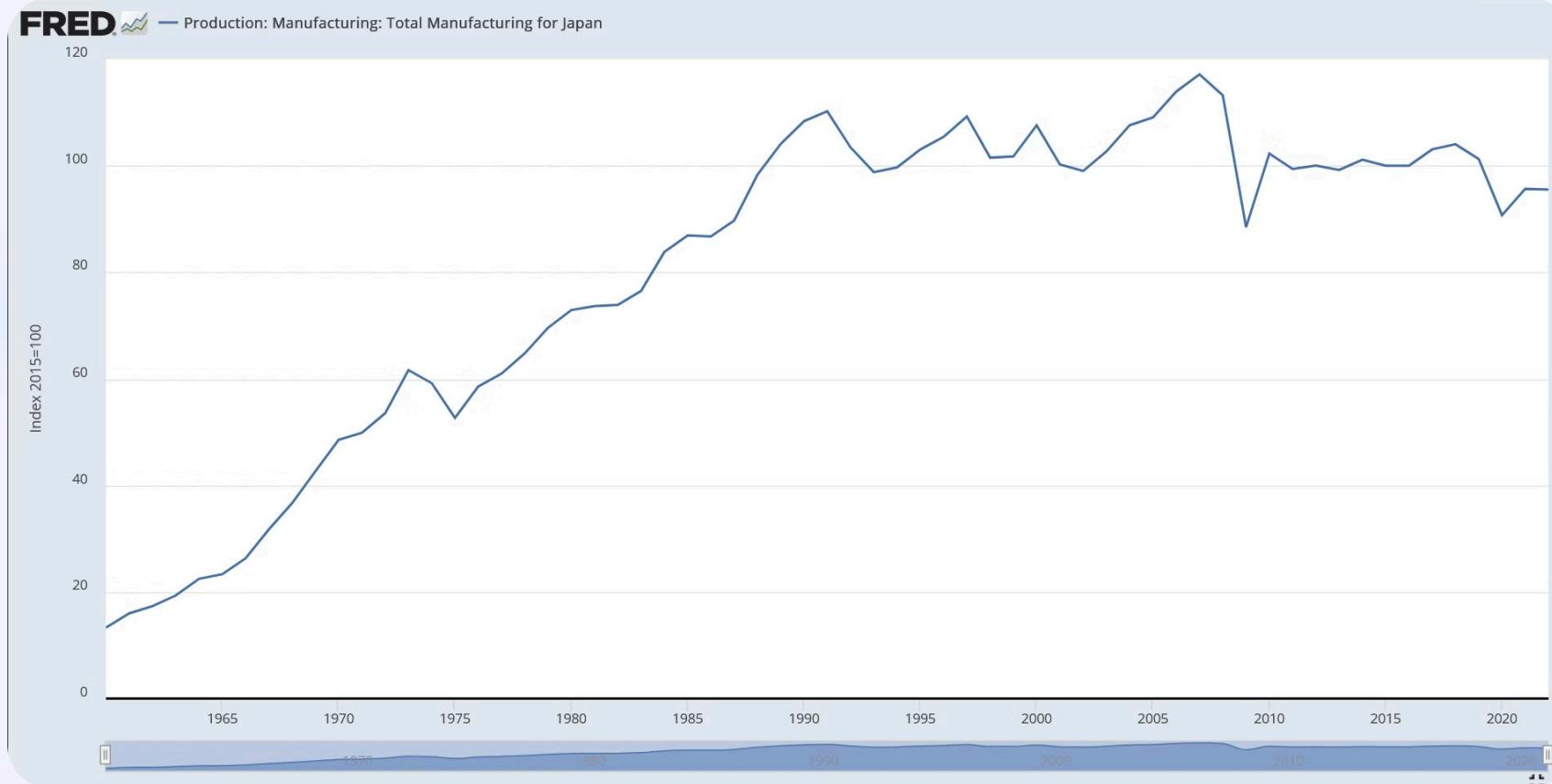


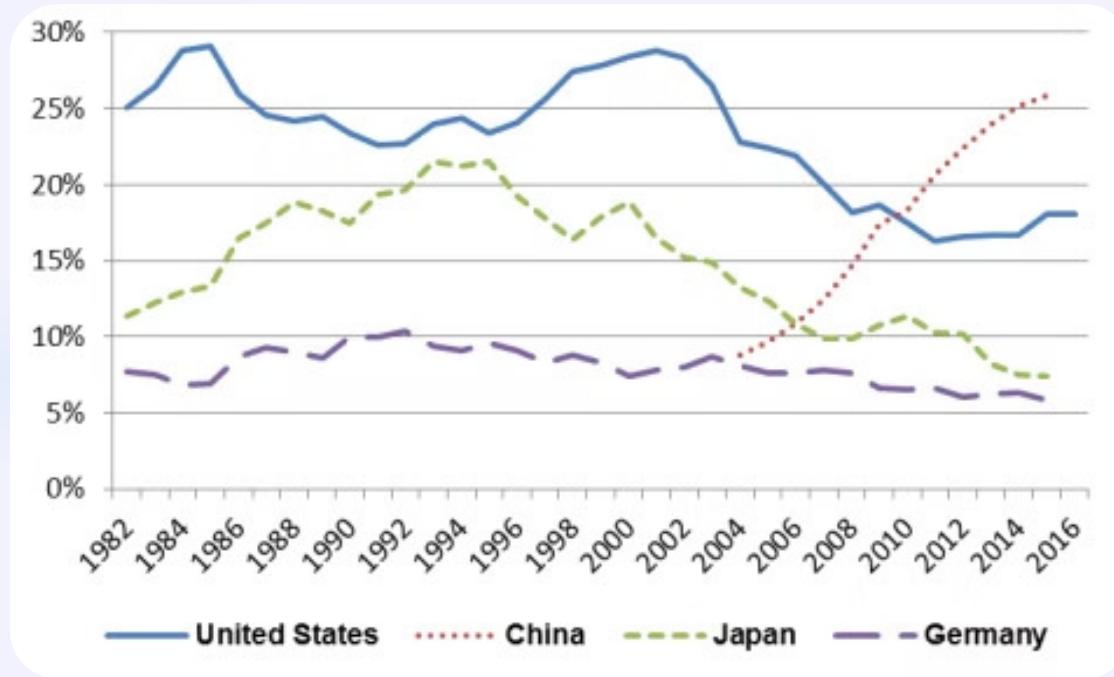
Made in Japan

Econ 3006 Asia-Pacific Economies

Japanese Postwar Industrialization



Japan as the World Factory



Selected Countries' Shares of Global Manufacturing Value Added

Source: U.N. National Accounts Main Aggregates Database

Manufacturing

- **Tradable:** Few producers can serve a large fraction of consumers in the world
- **Rapidly-growing productivities:**
 - Productivity growth is much faster in manufacture than in agriculture/service
 - Why?



Made in Japan

- 1 What Japanese products have you purchased?
- 2 What are your impressions about these products?

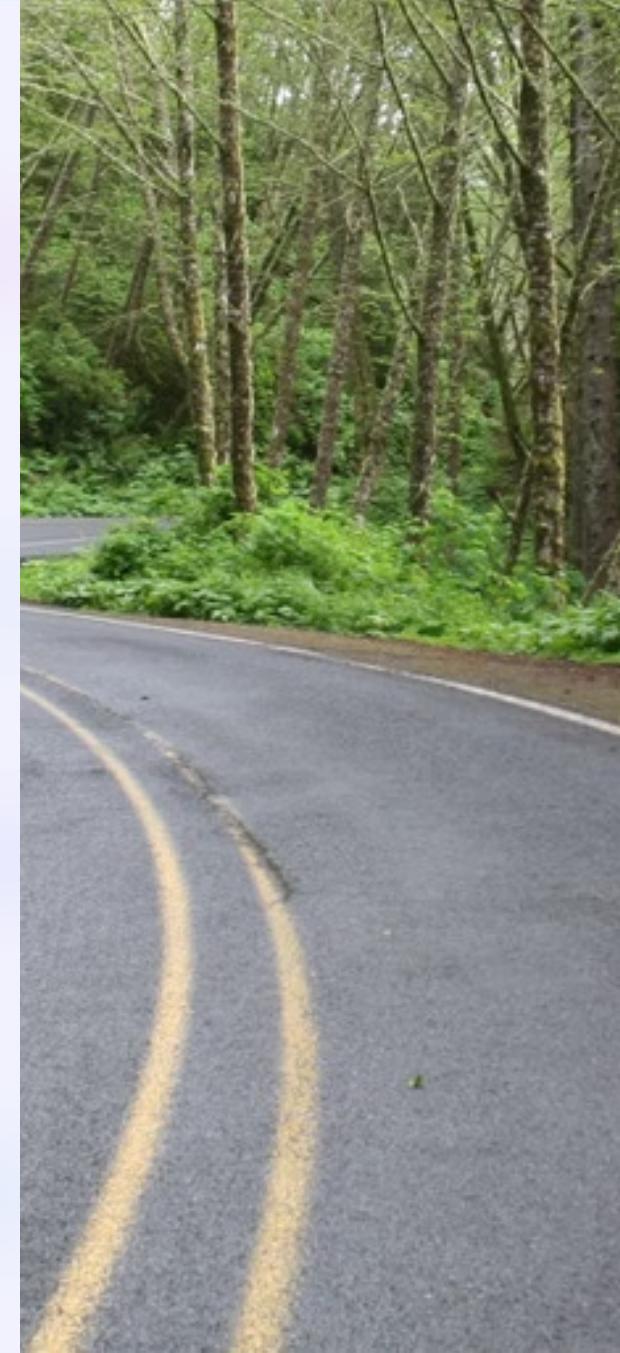
Made in Japan



UNI
QLO

Japanese Postwar Industrialization

- 1 Toyota (1970s): Jump start
- 2 Toshiba (1980s): US-Japan semiconductor competition
- 3 Uniqlo (2000s): Data-driven economy



Toyota's Crown in the U.S.

- Toyota's first full-fledged passenger car
- To the U.S. in 1958
 - **Image:** built to a price, of dubious quality, and shoved out the door and onto ships by the pallet load
 - Severely underpowered (**Why?**)
 - Sold only 1913 Crown vehicles in America

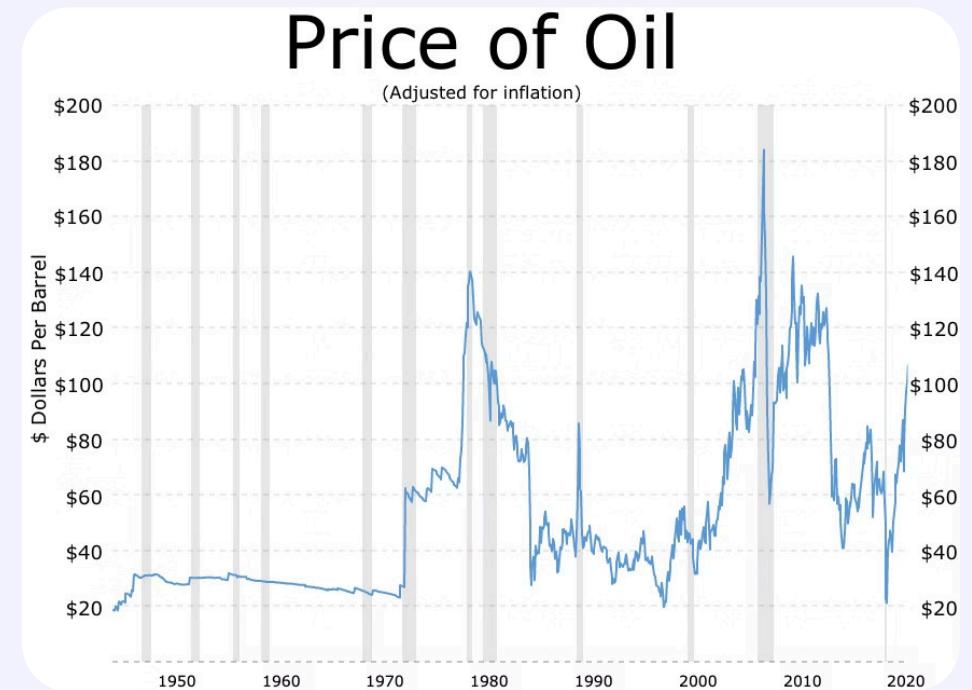


Two Opportunities

US Clear Air Act in 1970



1973 Oil Crisis



The 1967 Toyota Corona

- **Image:** inexpensive, useful, efficient, and durable
- 90-horsepower, 1.9-liter engine: no problem at highway speeds
- First Toyota vehicle to sell more than 10,000 in the U.S.



Toyota Production System

- 1 Just-in-time production
- 2 Design out overburden and inconsistency to eliminate waste
- 3 Inspired by the U.S. supermarket
- 4 Minimal inventory
- 5 Recent practice: Tim Cook at Apple

Kiichiro Toyoda



Vision of the 1970s by MITI

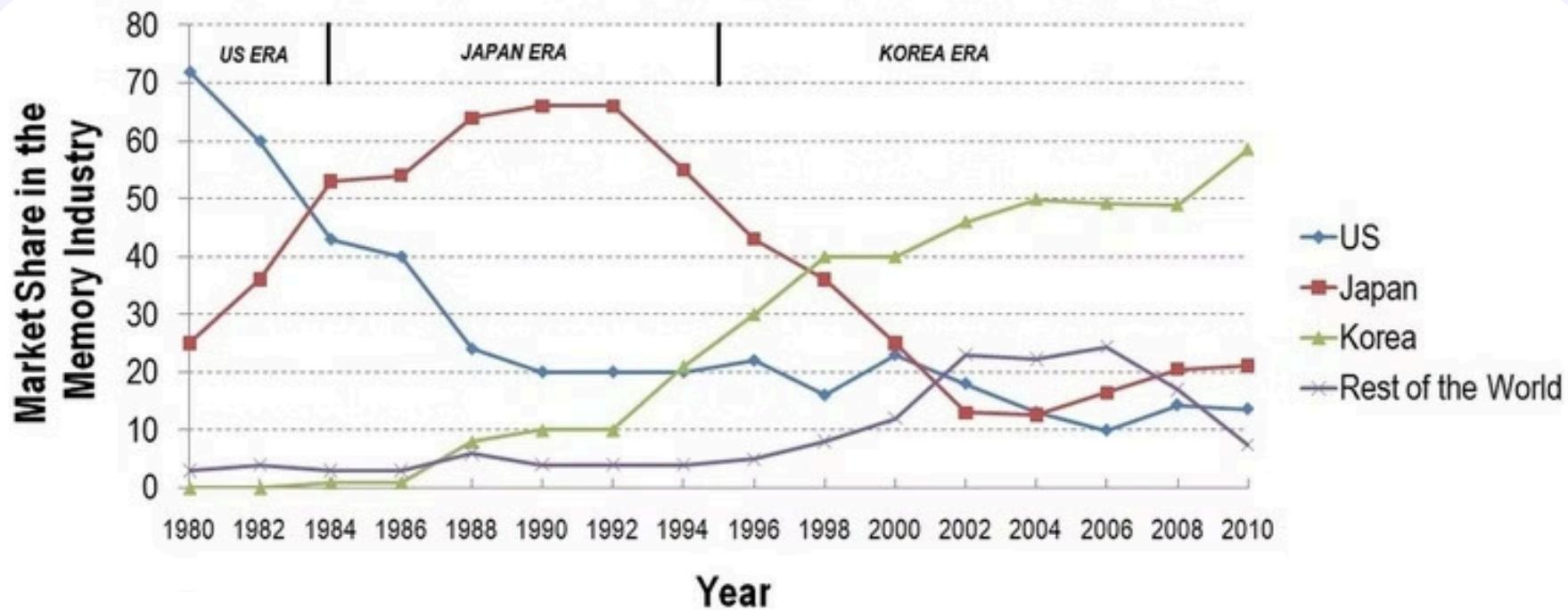
- 1 R&D-intensive industries (computers, cars, industrial robots, semiconductors)
- 2 Advanced assembly industries (telecommunications equipment, office machinery, computer-controlled machine tools)
- 3 Fashion-related industries (luxury clothing, high-end furniture, electro-acoustic instruments, electronic musical instruments)
- 4 Information industries (information processing services, information provision services, education-related industries)

Toshiba's Evolving Position in DRAM

- 1 1985: Toshiba developed 1M DRAM
- 2 1986: 1 million monthly capacity for 1M DRAM
- 3 1987: Toshiba took 17% of the World DRAM market
- 4 2002: Toshiba exited DRAM market, selling fab to Micron



US-Japan Semiconductor Competition



Why did Japanese firms dominate the DRAM industry in 1980s?

- 1 Low capital cost
- 2 Low-cost-highly-educated workers
- 3 VLSI semiconductor research project in Japan





US Trade Actions against Japanese Semiconductors

US Semiconductor Industry Association (SIA) had two complaints:

- 1 Dumping: predatory and unfair
- 2 Market access: high degree of vertical integration in Japan

1986 Semiconductor Trade Agreement

- 1 An antidumping voluntary export restraint
- 2 Encouraging greater purchases of foreign semiconductors

Why did Toshiba lose the DRAM market?

- 1 Competition from Samsung
- 2 Fail to transition to high-tech products such as CPUs
- 3 Weak basic R&D capacities



Decline in "Made-in-Japan": Why?

General lessons from this course:

1 Investment?

2 R&D?

3 Demographic changes?

4 Globalization?

5 Government?



Decline in "Made-in-Japan": Why?

Japanese-Specific Characteristics:

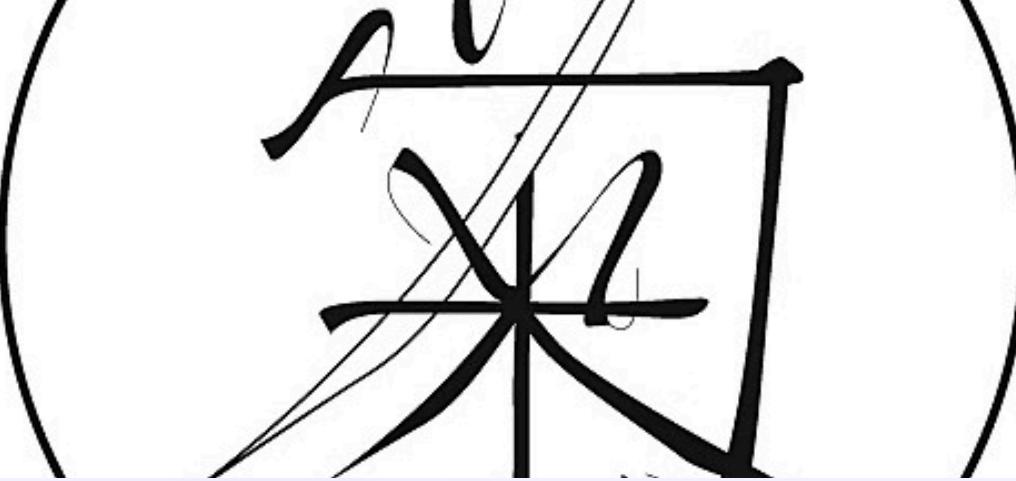
1 Labor market

2 Workplace culture



Japanese Labor Market: Nenko system

Overview	Pros/Cons?	Recent Changes
<ul style="list-style-type: none">Seniority-based employment: Wages/promotions tied to age & tenure, not performanceCore pillars: Lifetime employment, enterprise unions, company-specific trainingHistorical context: Flourished post-WWII, fostering loyalty and stability		<ul style="list-style-type: none">Hybrid models (e.g., Toyota/Sony blending seniority with performance pay)Rise of non-regular workers (~40% of workforce)Government policies promoting diversity, labor mobility, and women's participation



Japanese Workplace Culture: *The Chrysanthemum and the Sword*

Chrysanthemum: Harmony

- **Group Harmony:**
 - Consensus-driven decisions
 - Avoidance of open conflict to preserve workplace cohesion
- **Hierarchy & Respect:**
 - Seniority-based roles
 - Formal language reflecting status differences

Sword: Duty/Rigidity

- **Perfectionism in Practice:**
 - High-pressure environments to avoid mistakes (e.g., meticulous quality control)
 - Reluctance to challenge superiors publicly
- **Uniformity:**
 - Dress codes, standardized behaviors to minimize individuality.



An Outlier: Uniqlo in 2000s

New Challenges

1 Consumption downgrade

2 The rise of middle class

3 Tough competition in fast fashion industry (e.g. Zara)

4 Manufacturing cost in Japan ↑



An Outlier: Uniqlo in 2000s

Strategies

- 1 Focusing on basics and classics
- 2 Data-driven marketing and production system
- 3 Outsourcing manufacturing to China and ASEAN countries



Yanai Tadashi

Summary: Postwar "Made in Japan"

Three Drivers

- 1 Comparative advantage
- 2 Global market
- 3 Industrial policies

Industry Evolution

Automobile

Semiconductor

Consumer electronics

Data-driven manufacturing

Recent Decline

Tough competition

Closed system

Aging population