Economic Development of Japan

No.6 WW1 and 1920s
Topics for Discussion

☐ What was the impact of WW1 on the Japanese economy? Discuss industrial growth, export, import substitution and balance-of-payments.

☐ Explain industrial developments in the 1910s and 20s. What were the features of new zaibatsu groups?

☐ As Japan progressed from light manufacturing to heavy industries, what were the problems policy makers and company managers faced?

☐ Explain the different strategies adopted by Nissan and Toyota in automobile production (this was in the 1930s but touched in this lecture).

☐ Explain the achievements of Taisho Democracy in terms of people’s rights, social movements and political reform.
Export-led Bubble and Consequences

- Japanese calendar changes when a new emperor is inaugurated. Under the reign of Emperor Taisho (1912-26), Japan moved into a new phase of industrialization.

- WW1 brought a great export-led boom to Japan. While Europe was at war, Japan expanded export and promoted import substitution of textile products and even some machinery. Output, profits, prices, trade surplus and gold reserves all surged. Industrialization was greatly accelerated, but some of the achievements were artificial and short-lived.

- The bubble economy collapsed in 1920. This led to over-capacity, bad debt and weak business conditions. The Bank of Japan and government protected weak firms and banks instead of prompting their exit or cleaning up their balance sheets. This eventually led to a banking crisis of 1927 (next lecture).

- Even under a slow economy, heavy and chemical industries (HCI) started to grow during and after WW1. Power generation rose and new zaibatsu with HCI focus emerged. In the 1930s, Toyota and Nissan began car production.

- HCI required skill accumulation. Free economy and footloose workers had to be replaced by firms’ internal incentive and promotion mechanisms to retain experienced engineers and technicians (this occurred in large firms only).
Real GNE Growth

(Estimated 5-year moving average)

Japan’s machinery export was initially small but surged during WW1. After the war, it fell back and import rose again, so deficit in machinery trade returned. Data are expressed in current yen, and increased trade scale after WW1 is generated partly by inflation.

Export destinations

During WW1 (1914-18), export destinations were relatively stable though some decline occurred in shares of Asian partners.


Import sources

WW1 caused a significant reduction in import from Europe. Asian import first rose, then import from USA surged to take up the slack.

World War I and Export-led Boom

- Export demand pushed up prices, profits and production and artificially accelerated import substitution, especially in machinery and chemicals.
- The balance-of-payments crisis of late Meiji (gold reserve loss) was resolved by the export boom.
- *Narikin*, or new rich, emerged (Suzuki Shoten, ship narikins, etc.) They spent money on conspicuous consumption but their days did not last long.

### Shipping Business: Prices & Profit Jump

<table>
<thead>
<tr>
<th></th>
<th>1914</th>
<th>1917</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ship rental (yen/ton)</td>
<td>3</td>
<td>45</td>
</tr>
<tr>
<td>New ship (yen/ton)</td>
<td>50</td>
<td>1000</td>
</tr>
<tr>
<td>Nippon Yusen profit (mil yen)</td>
<td>4.84</td>
<td>86.31</td>
</tr>
</tbody>
</table>

### Export and Import

<table>
<thead>
<tr>
<th>Year</th>
<th>Export</th>
<th>Import</th>
</tr>
</thead>
<tbody>
<tr>
<td>1904</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1912</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1914</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1916</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1918</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>1920</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>1922</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>1924</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>1926</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

### Domestic Supply Ratio

<table>
<thead>
<tr>
<th>Industry</th>
<th>1913</th>
<th>1919</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron</td>
<td>47%</td>
<td>65%</td>
</tr>
<tr>
<td>Steel</td>
<td>34%</td>
<td>47%</td>
</tr>
</tbody>
</table>

### Industrial production

- Silk: +60%
- Cotton: +8%
- Iron: +193%
- Shipbuilding: +700%
- Dye: +1600%
Production of Private Machinery Industry
Output jumps during WW1


Employment Structure
Agriculture shrinks and manufacturing rises between 1914 and 1919

Power Generation
(maximum capacity)

Production of HCIs
(establishments with five or more workers)
New Zaibatsu (Konzern)

- Concentrating in Heavy & Chemical Industries rather than banking, textile or trading like traditional zaibatsu.
- Backed by political connection and support.
- Active investment in production capacities in Korea and Manchuria (Northeast China)

<table>
<thead>
<tr>
<th>Konzern</th>
<th>Features</th>
<th>Affiliated firms at present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nissan</td>
<td>Cars, chemicals, machinery, fishery, mining; Raising fund in stock market; Invest in Manchuria</td>
<td>Hitachi, Nissui, Nissan Motors, Sompo Japan, Japan Energy</td>
</tr>
<tr>
<td>Riken</td>
<td>Chemical, medical research</td>
<td>Riken (Research Inst.)</td>
</tr>
<tr>
<td>Nicchitsu</td>
<td>Fertilizer, medicine, metals</td>
<td>Chisso</td>
</tr>
<tr>
<td>Nisso</td>
<td>Sodium hydroxide</td>
<td>Nihon Soda</td>
</tr>
<tr>
<td>Mori</td>
<td>Aluminum, ammonia, iodine</td>
<td>Showa Denko</td>
</tr>
</tbody>
</table>
Nissan Konzern (Zaibatsu)

- Nissan Konzern was created by Ayukawa Yoshisuke (1880-1967) by restructuring failed Kuhara Zaibatsu.
- Initially the company was named Nihon Sangyo (Japan Industry), a holding company that actively raised funds by public offering of shares.
- Nissan’s core firms were Japan Mine (now JX) and Hitachi. Later, Kokusan Kogyo (now Hitachi Metal), Nissan Motor and Manchuria Heavy Industry (dissolved after WW2) were added.
- Strong in manufacturing but weak in trade and finance. After WW2, few group firms inherited the name except Nissan Motor Corp.

### Main Member Companies of Nissan-Hitachi Group Today

| Hitachi Manufacturing | Nissan Motor Corporation |
| Hitachi Shipbuilding   | UD Trucks               |
| Hitachi Metal          | Nissan Metal Industry   |
| Hitachi Kasei (chemical)| Sompo Japan Nipponkoa (insurance) |
| Hitachi Capital        | Nissui (fishery)        |
| Hitachi High Technologies| Nichirei (food)         |
| JX Group (mining & engineering) |                     |
The idea of Riken was proposed in 1913 by Takamine Jokichi 髙峰譲吉, the inventor of Taka-Diastase (Amylase) & Adrenaline, to secure research funds for Japanese scientists. Riken was established in 1917 with support from the Royal Family, businesses and government, but faced management and financial crisis. In 1921, Okochi Masatoshi 大河内正敏, the third Director of Riken, introduced decentralization (研究室制度), research freedom, ample budget and commercialization of invention. By 1939, Riken’s businesses grew to 63 firms and 121 factories, with large income flow (3 mil. yen/year) through patents & dividends. Yukawa Hideki & Tomonaga Shinichiro are Riken-associated Nobel laureates.

**Riken’s Main Products in the Pre-WW2 Period**

<table>
<thead>
<tr>
<th>Vitamin A</th>
<th>Machine Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almite</td>
<td>Aircraft components</td>
</tr>
<tr>
<td>Piston Ring</td>
<td>Synthetic sake</td>
</tr>
<tr>
<td>Magnesium</td>
<td>Positive image photosensitive paper</td>
</tr>
<tr>
<td>Rubber</td>
<td>Cyclotron (particle accelerator)</td>
</tr>
</tbody>
</table>

**Riken’s Offshoot Firms**

<table>
<thead>
<tr>
<th>Ricoh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riken</td>
</tr>
<tr>
<td>Kyowa Hakko</td>
</tr>
<tr>
<td>Riken Vitamin</td>
</tr>
<tr>
<td>Riken Keiki</td>
</tr>
</tbody>
</table>
Ayukawa, the founder of new zaibatsu Nissan, was an aggressive business manager who expanded his business empire through purchases, M&A, direct transfer of foreign technology, and extensive business and official connections. Car making was just one of his wide business portfolio.

His casting firm manufactured motors for boats and agricultural machines as well as components for Ford and GM cars. In 1933, Ayukawa acquired the Datsun factory of DAT Motors and combined it with his casting firm to create Nissan Motor Company.

As Nissan had no trading section, Mitsubishi Trading supported Nissan to import a whole set of latest machinery and equipment from the US to replicate mass-production assembly lines. American engineers were hired to teach advanced design, construction and operation methods for the plant.

In 1935, Ayukawa decided to move into the production of military trucks. Through its connection with GM, Nissan found an American firm willing to sell a complete truck plant together with blueprints. Mitsubishi Trading again helped Nissan to transfer the entire plant to Japan and also to purchase additional equipment.
Toyoda Kiichiro was the eldest son of Toyoda Sakichi, the founder of Toyoda Weaving Machine. He visited the massive production lines of Ford Motors in Detroit and was greatly impressed. He wanted to create a Japanese car maker.

At home, without his company’s support, Kiichiro began visiting Japanese factories, universities and government offices, purchased German and American equipment, and reverse engineered the latest GM Chevrolet. Recognizing Kiichiro’s initial results, the Toyoda Board finally approved establishment of the Automotive Department in 1933.

Kiichiro declared that the first Toyota car would roll out within one year. His engineer friends helped, US models were further analyzed, a large factory was built in what was to become Toyota City, and additional equipment was imported.

The engine was modeled after GM, the chassis was Ford-based, and the design was copied from Chrysler. After many failures, the team succeeded in casting cylinder block and cylinder head of the engine. The first Toyota car was ready in May 1935—only five months behind the schedule.

(Note: the company name was changed from Toyoda to Toyota in 1936)
### Major FDI Firms in 1910s-30s

<table>
<thead>
<tr>
<th>Year</th>
<th>Year of Establishment</th>
<th>Japanese Name</th>
<th>Foreign Partner</th>
<th>Foreign Ownership</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>1917</td>
<td>Yokohama Rubber Manuf.</td>
<td>F.B. Goodrich (US)</td>
<td>50%</td>
<td>Goodrich sale from 1912</td>
</tr>
<tr>
<td>18</td>
<td>1918</td>
<td>Japan-US Sheet Glass</td>
<td>Libby Owens Sheet Glass (US)</td>
<td>35%</td>
<td>1922, under Sumitomo</td>
</tr>
<tr>
<td>19</td>
<td>1920</td>
<td>Sumitomo Electric Cable</td>
<td>Western Electric (US)</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>1922</td>
<td>Asahi Silk Weaving</td>
<td>Vereinigte Glanzstoff Fabriken (Germany)</td>
<td>20%</td>
<td>1929, under Nicchitsu</td>
</tr>
<tr>
<td>21</td>
<td>1923</td>
<td>Fuji Electric Manufacturing</td>
<td>Siemens (Germany)</td>
<td>30%</td>
<td>J side: Furukawa</td>
</tr>
<tr>
<td>22</td>
<td>1923</td>
<td>Mitsubishi Electric</td>
<td>Westinghouse Electric (US)</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>1925</td>
<td>Japan Ford</td>
<td>Ford Motor (US)</td>
<td>100%</td>
<td>Previously, sales through agents</td>
</tr>
<tr>
<td>24</td>
<td>1927</td>
<td>Japan General Motors</td>
<td>General Motors (US)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>1927</td>
<td>Japan Victor</td>
<td>Victor Talking Machine (US)</td>
<td>100%</td>
<td>1937, under Nissan</td>
</tr>
<tr>
<td>26</td>
<td>1927</td>
<td>Daido Match</td>
<td>Sweden Match (Swe)</td>
<td>50%</td>
<td>1932, under Nissan</td>
</tr>
<tr>
<td>27</td>
<td>1928</td>
<td>Japan Columbia Phonograph</td>
<td>Columbia (UK)</td>
<td>59%</td>
<td>1935, under Nissan</td>
</tr>
<tr>
<td>28</td>
<td>1928</td>
<td>Toyo Babcock</td>
<td>Babcock &amp; Wilcox (UK)</td>
<td>71%</td>
<td>Boilers, steam turbines</td>
</tr>
<tr>
<td>29</td>
<td>1929</td>
<td>Japan Benberg Silk Fiber</td>
<td>J.P. Benberg (Germany)</td>
<td>20%</td>
<td>1933, merged with no.20</td>
</tr>
<tr>
<td>30</td>
<td>1931</td>
<td>Mitsubishi Oil</td>
<td>Associated Tidewater Oil (US)</td>
<td>50%</td>
<td>J: Mitsubishi Corporation</td>
</tr>
<tr>
<td>31</td>
<td>1931</td>
<td>Sumitomo Aluminum Smelting</td>
<td>Aluminum Co. of Canada (Can)</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>1932</td>
<td>Toyo Otis Elevators</td>
<td>Otis Elevators (US)</td>
<td>60%</td>
<td>J: Mitsui Corporation</td>
</tr>
<tr>
<td>33</td>
<td>1932</td>
<td>Japan Submarine Cable</td>
<td>Int’l Standard Electric (US)</td>
<td>12%</td>
<td>Under Sumitomo</td>
</tr>
</tbody>
</table>

Source: S.J. Bytheway (2005), pp. 166-169
## Major FDI Firms in 1910s-30s (contd.)

<table>
<thead>
<tr>
<th>Year</th>
<th>Japanese name</th>
<th>Foreign partner</th>
<th>Foreign ownshp</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>National Cash Register</td>
<td>National Cash Register (US)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Japan Watson</td>
<td>Watson Computing Tabulating Recording Machine (US)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Shibaura Kyodo Industries</td>
<td>United Engineering (US)</td>
<td>--</td>
<td>J: Shibaura</td>
</tr>
</tbody>
</table>

Source: S.J.Bytheway (2005), pp.166-169

### Compared with Meiji Period,
- The number of US FDI increases.
- FDI in automobile, electrical, machinery.
- Zaibatsu plays key role in FDI partnership or subsequent takeover.

### At the same time, Japan’s outward FDI begins:
- FDI to China: textiles (Shanghai, Qingdao), steel (Anshan)
- FDI to Korea: heavy chemical industries
Social Change and Taisho Democracy

- In the Taisho period (1912-26), Japanese people began to adopt modern urban life style and absorbed Western ideas including democracy and Marxism. Office workers began to commute by train and received monthly salary.
- Politically active citizens debated national policies and demanded people’s rights, such as rights for workers, farmers, women and the discriminated people (progenies of *eta* and *hinin* in the Edo period).
- In politics, waves of popular demonstrations in 1913-14 condemned undemocratic power transitions between Seiyukai (government party) and unelected conservative statesmen. In 1924, a three-party coalition won an election and formed a government that adopted universal male suffrage.
- From 1924 to 1932, Seiyukai and Minsei Party held power in turn as either government was dissolved. This was called *Kensei no Jodo* (normal way of constitutional politics) as distinct from the previous practice where the prime minister was simply appointed without regards to parliamentary seats.
- Minobe and Yoshino, two Tokyo University professors, each in his own way developed theories to defend the parliamentary cabinet system and the rights of the working class by interpreting the Meiji Constitution without rejecting it.
Japanese Politics from Edo to Present

**Democratic institution (Form)**
- Constitution
- Laws
- Parliament
- Election
- Court

**Full democracy**

**Political competition (Content)**
- Reform vs conservatism, big vs small government, pro- vs anti-USA, etc.

**Content**
- Meiji
- Taisho
- Showa1
- Showa2

**Form**
- Fascism 1937-45
- Edo
- US rule

**Key Events**
- 1889: Meiji Restoration, Constitution
- 1925: Male suffrage
- 1931: Democracy movement, Party cabinet
- 1937: War
- 1945-51: Democratization, New constitution
- 1951: LDP dominance, lack of policy debate
- Now: Full democracy
Early Meiji

1881

1889/90

WW1/Taisho

External military campaign

1877

Saigo
Former samurais

Top-down industrialization

Okubo
Kuroda
Okuma

Top-down democratization

Kido
Inoue
Itagaki

Bottom-up democratization

Itagaki
Ueki
Nakae

Fiscal activism & war

Japan-China War 1894-95
Japan-Russia War 1904-05
Colonize Korea 1910

Fiscal crisis

Government

Spending!

Constitution
Parliament

Yamagata
Conservatives
Military

Ito

Hoshi

Seiyukai Party

Big spenders

Opposition

Tax cuts!

Taisho Democracy

Export-led boom solves fiscal crisis

Itagaki
(Ueki
Nakae
(Liberty Party)

Expelled

1877
Taisho Democracy – Political Development

Anti-party conservatists
- Genro, military, bureaucrats

Seiyukai Party
- Big spending for securing rural votes

1913 - Popular demonstration surrounding Parliament to protect constitution

1914 - Army’s misuse of power, 1913
- Navy’s bribery scandal, 1914
- Opposed to universal suffrage
- Rice Riots, 1918

Saionji, Hara

Yamagata, Katsura

1924 - X

Pro-constitution 3-Party Cabinet
- Universal suffrage, 1925
- Army budget cuts
- Shidehara Diplomacy

Rikken Seiyukai Party

Reform Club

Kenseikai (Minsei Party)
- Belt-tightening, workers rights
Article 4 — The Emperor is the head of the Empire, combining in Himself the rights of sovereignty, and exercises them, according to the provisions of the present Constitution.

Article 55 — (1) The respective Ministers of State shall give their advice to the Emperor, and be responsible for it. (2) All Laws, Imperial Ordinances, and Imperial Rescripts of whatever kind, that relate to the affairs of the state, require the countersignature of a Minister of State.

(1) Can Emperor really make decisions or just follow advice?
(2) Is the parliamentary cabinet system possible?
Prof. Minobe Tatsukichi (1873-1948), Tokyo Univ.

<Organ Theory of the Emperor>
- The state, as a legal entity, has the sovereignty.
- The emperor is the highest organ of the state, and operates under the Constitution (not unlimited power)

<Justification for party cabinets> (Article 55)
- Cabinet must take collective responsibility ➔ Same political party
- Imperial orders must have Minister’s signature ➔ Cabinet’s power

Prof. Yoshino Sakuzo (1878-1933), Tokyo Univ.

Democracy develops in 3 steps to achieve results:
1. Parliamentary cabinet where largest party forms government
2. Universal suffrage, to expand the voter base
3. Social policies, to directly improve people’s lives

Yoshino proposed minpon shugi (民本主義), a type of democracy which accepted the emperor’s rule, to promote the rights and well-being of workers and farmers within the Meiji Constitution.
Social Movements in Taisho

- Emergence of new middle mass—professionals, office workers, students
- Universal male election (1925)
- Initiation of labor movement and May Day (1920)
- Riots by landless farmers and formation of the Farmers Union (1922)
- Women’s rights movement—establishment of Seitosha (Blue Stockings Society, 1912) and New Women’s Society (1920)
- Zenkoku Suiheisha (National Level Society, 1922) to fight discrimination against the descendants of eta and hinin, officially discriminated people in the Edo period
- The rising popularity of socialism and Marxism which competed with democracy

The first May Day in Japan, 1920

Voters vs. population

<table>
<thead>
<tr>
<th>Year</th>
<th>Voters (x 10,000 persons)</th>
<th>% of population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1889</td>
<td>45万人</td>
<td>1.1%</td>
</tr>
<tr>
<td>1900</td>
<td>98万人</td>
<td>2.2%</td>
</tr>
<tr>
<td>1919</td>
<td>307万人</td>
<td>5.5%</td>
</tr>
<tr>
<td>1925</td>
<td>1241万人</td>
<td>20.0%</td>
</tr>
<tr>
<td>1945</td>
<td>3688万人</td>
<td>100%</td>
</tr>
</tbody>
</table>
Shidehara Diplomacy

Kijuro Shidehara, 1872-1951
Foreign Minister, 1924-27, 1929-31
Prime Minister 1945-46

His policy was more moderate than before or after him

• Maintain good relations with US and UK
• Respect Washington Naval Disarmament Treaty (1921-22)
• Hamaguchi Cabinet signs London Naval Disarmament Treaty despite objection from military (1930)
• No military intervention in China; secure Japan’s economic interest through diplomacy and negotiation
• When China protests and resists, his diplomacy breaks down
• Domestically, criticized as Coward Diplomacy
• Failed to stop Manchurian Incident (1931) started by Kantogun (Japanese Army stationed in China)
Japan-US Relationship

- Largest trading partner: US share in Japan’s trade—export 44%, import 26% (in 1925)
- In China--Japan asserts its “special interests” in China, US wants open door policy (esp. for bank loans)
- Immigration Problem
  - 1890s Japanese economic immigrants to US West Coast; Anti-Japanese movement begins
  - 1907 Gentlemen’s Agreement to curb Japanese immigration
  - 1913 Anti-Japanese legislations in California
  - 1924 Ban on Japanese immigration
  - 1942 Japanese Americans are sent to concentration camps (photo)

Manzanar Camp, California