

The 14th Annual Conference of EATS
Taiwan's Economic Policies and Financial Transformation
during the Japanese Colonial Period

Japanese Industry Policies in Colonial Taiwan:
Tea and Sugar

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Export and
growth

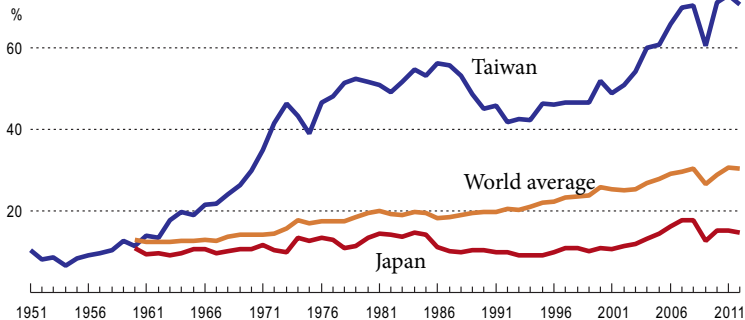
Japanese
industrial policy
on sugar

Implications on
the post-war
growth

References

- 1 Export and growth
- 2 Japanese industrial policy on sugar
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Export and growth



- Taiwan's average growth rate of GDP per capita from 1955 to 2000 was the highest in the world
- GDP per capita = income per person (quality of life)
- Why Taiwan grew so fast? No consensus, but it is agreed that ... it was an **export-led growth** after 1950s

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Taiwan's export

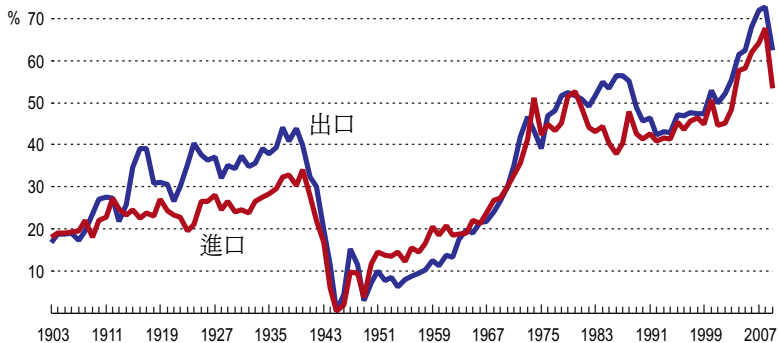


- But export to GDP ratio had been high since early Japanese period

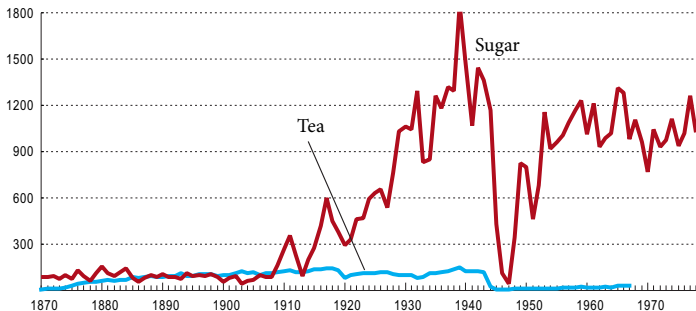
Taiwan's Export

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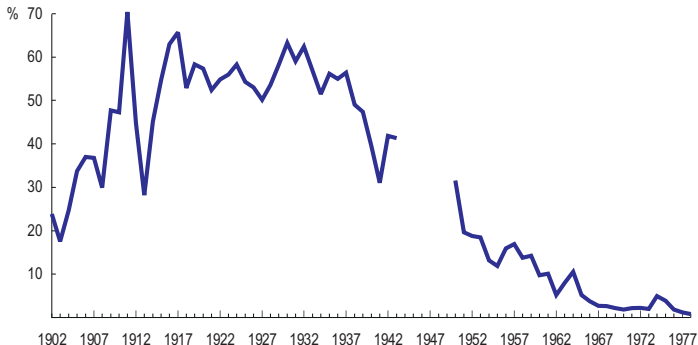
Tea and sugar



- In the early Japanese period, tea and sugar were the most important exports (export values were the same in 1906)
- During 1905–1940, there was an amazing growth in sugar, but not tea (production index, 1906 = 100)

- 矢内原忠雄 (1929) (Yanaihara):
《台灣糖業帝國》 *Taiwan sugar empire*

Sugar production



- Output ratio of sugar to the sum of the industry sector
- Sugar industry **declined after 1950s** while other industries were growing
- Two questions: rise and fall of the sugar industry

Two questions

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- The rise of the sugar empire
- The decline

Japan's sugar before 1895

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- In 1894: Japan consumed 4 million tons of sugar, 80% was imported, mostly from Dutch India
- After 1895, Taiwan became the main supplier of sugar to Japan
- This seems to imply that Taiwan had **comparative advantage** in sugar production, or Taiwan's sugar was cheaper

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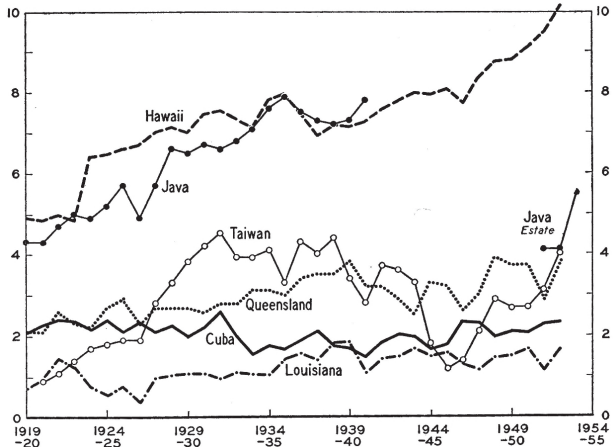
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Sugar industry

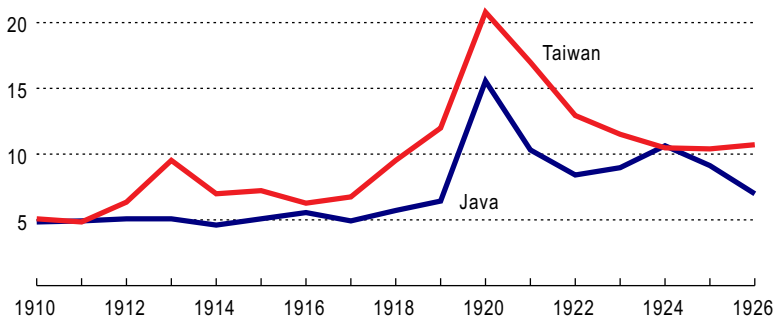
- Cane production: output of cane per hectare
- Sugar production: output of sugar per unit weight of cane

Sugar: Taiwan vs. Java



- Sugar output (short tons) per acre of cane
- Java was **much more** productive than Taiwan

Sugar production cost



- Taiwan's sugar was more expensive than Java (unit: Taiwan dollar per 60kg)
- Why after 1895, Taiwan became the main supplier of sugar to Japan?

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- Taiwan's raw sugar exported to Japan was tax free
- Heavy tariff on raw sugar imports from other countries, including Java
- An example:
Java sugar in Japan: $\$10 + \$8 \text{ (tariff)} = \$18$
Taiwan sugar in Japan: $\$16 + \$0 \text{ (tariff)} = \$16$

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- In mid-1920s, fine sugar retailed price in Japan was about 24 Yens per 60kg, about half of which was tax (矢内原忠雄, 1929, p. 307)

Industrial policy

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- Under the tariff policy, Java's sugar could not compete with Taiwan's sugar, even though it was produced at much lower cost
- Industrial policy = heavy tax on imports

The rise of the empire

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- Taiwan's sugar empire was built not on comparative advantage, but on industrial policy by the Japanese government

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- Japan was not the only country adopting sugar industrial policy
- In the early 1930s, US retail price of raw sugar was about 3 cents per pound, about 60% of which was tariff (Dalton, 1937, p. 29)

Who were benefited?

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- Who were benefited?
 - Japanese sugar factories in Taiwan
 - Taiwanese farmers

Who were benefited?

- Who were benefited?
 - Japanese sugar factories in Taiwan
 - Taiwanese farmers
- Who paid the price?
 - Japanese sugar consumers (from 12 Yens to 24 Yens)

- Taiwanese consumers also paid high price for sugar (about 90% of sugars were exported)
- Taking into account of consumers and farmers, it seemed that Taiwan was benefited from the industrial policy

Sugar policy and Taiwan

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- Taiwanese consumers also paid high price for sugar (about 90% of sugars were exported)
- Taking into account of consumers and farmers, it seemed that Taiwan was benefited from the industrial policy
- Was it?

Post-colonial development

Export and
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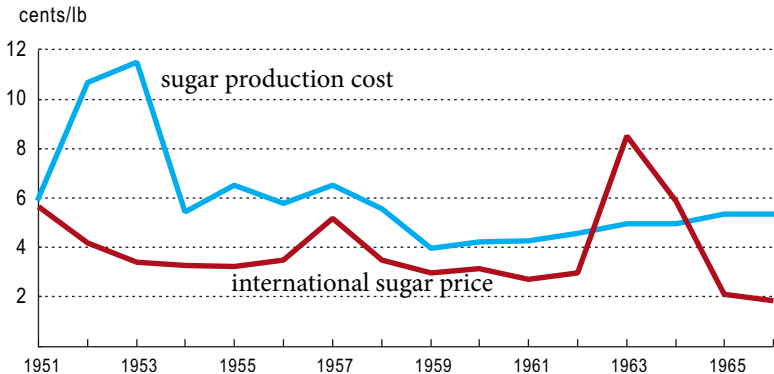
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- After 1945, Taiwan could no longer export sugar to Japan free of tax
- Taiwan had to compete with other sugar producing countries from around the world
- However, Taiwan had no comparative advantage in sugar production

Cost and price



- Cost was higher than price
- And so the sugar empire collapsed

Concluding remark

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growth

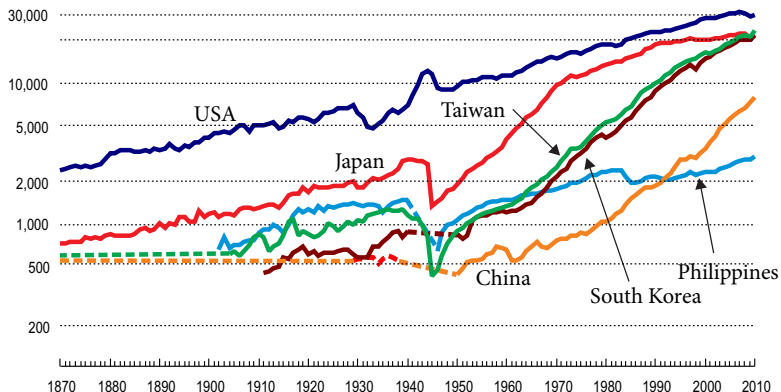
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- With the decline of the sugar industry, textile took the place of sugar and became the most important export of Taiwan
- How it was achieved?

High growth



- In 1990 US dollars

Institutions

- Institutions:
“Institutions provide the incentive structure of an economy” (North, 1991)
 - Private property rights
 - Contracts enforceable by third parties
 - Markets with responsive prices

矢内原忠雄 (1929), 《帝國主義下の台灣》, 東京: 岩波。

Dalton, John E. (1937), *Sugar: A Case Study of Government Control*,
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North, Douglass C. (1991), "Institutions," *Journal of Economic
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