Comments on
Estimates of the Long-run Economic Growth of Taiwan Based on Revised SNA Statistics

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National Taiwan University

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Prof. Mizoguchi’s paper:

- Summarizing Taiwan’s long-run GDP estimation
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- Revising Mizoguchi and Umemura (1988) and other series
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- Summarizing Taiwan’s long-run GDP estimation
- Revising Mizoguchi and Umemura (1988) and other series
- GDP time series are extended to 1901–2000 (was 1903–1938)
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- Provide an interpretation of why the estimates are important. It is also a way of checking the estimates.
- Suggest a data set that might improve on the estimation.
Taiwan’s Per Capita GDP (1960 NT$)
Per capita GDP increase by 29.3 times

- Per capita GDP was 2,466 dollars in 1905 (in 1960 NT$), it increased to 72,264.7 dollars in 2000. An increase of 29.3 times.
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- The link of pre-WWII GDP series to the post-War series makes it possible for international comparison.
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- Per capita GDP was 2,466 dollars in 1905 (in 1960 NT$), it increased to 72,264.7 dollars in 2000. An increase of 29.3 times.
- The link of pre-WWII GDP series to the post-War series makes it possible for international comparison.
- Converting the unit to Maddison’s (2001) GDP data set [1951–1999], per capita GDP in 1905 was 536.5 dollars (in 1990 international dollars).
A traditional agricultural economy

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- Lucas (2002): 600 dollars plus or minus 200 dollars
- Pritchett (1997): the lowest subsistence level in any human society was about 300 dollars. For example, Tanzania in 1998: 553 dollars.
- Per capita GDP was 536.5 dollars in 1905, so Taiwan was a traditional agriculture economy in 1900
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- Growth rate of per capita GDP is near zero for a traditional economy. So …
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- Assuming that per capita GDP in 1624 (Dutch period) was 500 dollars, then the average growth rate from 1624 to 1900 was 0.026%.
Per capita GDP and growth

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- There was **A structural change in 1900** (or modern economic growth) in the beginning of the Japanese administration
- How did it happen?
Per capita GDP
Comparing with Fukien or Kwangtung

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Comparing with Fukien or Kwangtung

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- In 1940, Taiwan was twice of Fukien or Kwangtung
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- In 1940, Taiwan was twice of Fukien or Kwangtung
- In 2000, Taiwan was four times of Fukien or Kwangtung
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A data set

- The above interpretation depends on the accuracy of the GDP estimation
- Mizoguchi (2005): “Data are scarce and less reliable for period [1901–1911], so our estimates here remain preliminary.”
Land Tax Reform: 1898–1904

► Taiwan was ceded to Japan in 1895
► Land Survey Bureau was established in 1898
► To assign a tax rate to a land, the Bureau had to estimate the crop value of the land
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- Taiwan was ceded to Japan in 1895
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- To assign a tax rate to a land, the Bureau had to estimate the crop value of the land
- Survey was done in 1903–1904, price data from 1898–1902, and we have crop value of each paddy and dry field in Taiwan
Comparing crop production of 1904

<table>
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<tr>
<th></th>
<th>total</th>
<th>paddy field</th>
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<tr>
<td>Mizoguchi (2005)</td>
<td>36.13</td>
<td></td>
<td></td>
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<tr>
<td>Wu (2001)</td>
<td>38.58</td>
<td>23.90*</td>
<td>–</td>
</tr>
<tr>
<td>Land survey</td>
<td>50.72</td>
<td>33.13</td>
<td>17.60</td>
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- Both Mizoguchi (2005) and Wu (2001) use *Annual Statistics of TGG*

- A puzzle: Why Land survey estimate was so much bigger?
How the interpretation affected?

- Using the estimate of Land Survey Bureau for crop value, per capita GDP in 1905 would be 606.7 dollars. So the interpretation about the structural change is still valid.
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- Using the estimate of Land Survey Bureau for crop value, per capita GDP in 1905 would be 606.7 dollars. So the interpretation about the structural change is still valid.

- There were four surveys in 1898–1945, and the data might be used to improve the GDP estimation.