Logging off: Searching for new growth drivers for Solomon Islands

By
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Research Questions

1. What is the impact of the decline in logging output on the economy of Solomon Islands?

2. What industry or sector can replace logging as a new engine of growth for Solomon Islands?
Outline

- Introduction to Solomon Islands
- Motivation and Research Background
- Methodology
- Initial Findings
- Future work
- Policy Recommendations
Introduction to Solomon Islands

- Melanesian country in the South Pacific
- Population: 721,455 in 2019
- 2.7% pop’n growth rate (2009 – 2019)
- 74.4% of population live in rural areas
- 10 provinces including Honiara, capital
- GDP per capita: $2,067 in 2022
- Low-income country (to graduate in 2024)
GDP Growth

Source: Solomon Islands National Statistics Office, International Monetary Fund, Authors’ estimates.
Economic structure, 2020

Population and labor structure, 2017

% of population

- Students and children below 10; 327,612; 51%
- Own-account/Subsistence; 166,117; 26%
- Unpaid Worker; 42,712; 7%
- Employer; 3,167; 1%
- Employed: Public; 17,617; 3%
- Employed: Private; 27,853; 4%
- Others; 54,249; 8%

% of working age population

- Farming; 189,276; 61%
- Missing; 10,262; 3%
- Others; 90,052; 29%
- Fishing; 10,506; 3%
- Livestock; 6,562; 2%
- Forestry; 2,085; 1%
- Handicrafts; 2,971; 1%

Logging output and exports

Source: Central Bank of Solomon Islands, Authors’ estimates.
Exports

Source: Central Bank of Solomon Islands, Authors’ estimates.
Domestic revenues

Source: Central Bank of Solomon Islands, Authors’ estimates.
Methodology

• Macroeconomic Monitoring and Forecasting Model
  • Developed by ADB’s Economic Research and Regional Cooperation Department
  • Simple, excel-based framework
  • Mainly for short-term forecasting and monitoring
  • Frameworks customized for each economy
  • Accommodates different approaches to forecasting
  • Mainly based on average growth rates of key variables
  • Provides consistency check across sectors (real, monetary, external)

• “Forecasts” are driven by story set by user
  • Need to identify key drivers of forecast
  • For Solomon Islands: logging output, government spending and investment
Methodology
Methodology

1. Set-up the baseline
   • Log output growth: seasonally-adjusted forecast by MS Excel (forecast.est) based on quarterly data from 2006 to 2022
   • GDP growth: based on 3-year average growth of each subsector (2023 and 2024 mainly based on *Asian Development Outlook 2023*)

   • Log output
     • GDP: Forestry, manufacturing, wholesale and retail trade, transportation
     • Fiscal: Log duty on exports
     • BOP/ Trade balance: Exports

2. Create different scenarios

3. Find alternative growth drivers
## Methodology: Baseline

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Log output (thousand m³)</td>
<td>2,270</td>
<td>1,976</td>
<td>1,044</td>
</tr>
<tr>
<td>Change in log output (%) average</td>
<td>11.0</td>
<td>-16.3</td>
<td>-9.4</td>
</tr>
<tr>
<td>Log exports ($ million, average)</td>
<td>269</td>
<td>219</td>
<td>130</td>
</tr>
<tr>
<td>% of exports</td>
<td>59.4</td>
<td>56.6</td>
<td>30.3</td>
</tr>
<tr>
<td>Real GDP growth rate (%) avg.</td>
<td>4.1</td>
<td>-2.7</td>
<td>2.5</td>
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<tr>
<td>Nominal GDP growth rate (%) avg.</td>
<td>7.4</td>
<td>-0.1</td>
<td>3.1</td>
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<tr>
<td>GDP (US$ million eop)</td>
<td>1,620</td>
<td>1,616</td>
<td>2,258</td>
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<tr>
<td>GDP per capita, current ($ eop)</td>
<td>2,245</td>
<td>2,067</td>
<td>2,155</td>
</tr>
<tr>
<td>GDP per capita, constant ($ eop)</td>
<td>1,821</td>
<td>1,551</td>
<td>1,516</td>
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<tr>
<td>Inflation (%) avg.</td>
<td>3.0</td>
<td>2.8</td>
<td>2.5</td>
</tr>
<tr>
<td>Trade balance (% of GDP, avg.</td>
<td>-1.4</td>
<td>-6.8</td>
<td>-7.8</td>
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<tr>
<td>Fiscal balance (% of GDP, avg.</td>
<td>1.9</td>
<td>-3.2</td>
<td>-3.7</td>
</tr>
</tbody>
</table>

Source: Authors’ estimates
Methodology

2. Create different scenarios
   • Different rates of log output decline
   • Sustainable level of 250,000 cubic meters

3. Find new industries as alternative growth drivers
   • Fishing (including aquaculture)
   • Crop production (kava, palm oil, copra, cocoa)
   • Tourism
## Initial Findings

<table>
<thead>
<tr>
<th></th>
<th>Pre-COVID 19</th>
<th>COVID-19 2020 – 2022</th>
<th>Baseline 2023-2033</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
<th>Counterfactual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log output (thousand m³, avg.)</td>
<td>2,270</td>
<td>1,976</td>
<td>1,044</td>
<td>660</td>
<td>409</td>
<td>250</td>
<td>2,902</td>
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<tr>
<td>Change in log output (% avg.)</td>
<td>11.0</td>
<td>-16.3</td>
<td>-9.4</td>
<td>-15.4</td>
<td>-25.0</td>
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<tr>
<td>Log exports (USD million, avg.)</td>
<td>269</td>
<td>219</td>
<td>130</td>
<td>82</td>
<td>51</td>
<td>31</td>
<td>362</td>
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<tr>
<td>% of exports</td>
<td>59.4</td>
<td>56.6</td>
<td>30.3</td>
<td>21.7</td>
<td>14.8</td>
<td>9.9</td>
<td>53.3</td>
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<tr>
<td>Real GDP growth rate (%) avg.</td>
<td>4.1</td>
<td>-2.7</td>
<td>2.5</td>
<td>2.1</td>
<td>1.7</td>
<td>1.4</td>
<td>4.1</td>
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<td>3.1</td>
<td>2.6</td>
<td>2.1</td>
<td>1.7</td>
<td>5.3</td>
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<tr>
<td>GDP (USD billion eop)</td>
<td>1.62</td>
<td>1.62</td>
<td>2.26</td>
<td>2.15</td>
<td>2.04</td>
<td>1.95</td>
<td>2.85</td>
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<td>GDP per capita, current (USD eop)</td>
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<td>2,067</td>
<td>2,155</td>
<td>2,051</td>
<td>1,945</td>
<td>1,861</td>
<td>2,722</td>
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<td>GDP per capita, constant (USD eop)</td>
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<td>1,551</td>
<td>1,516</td>
<td>1,458</td>
<td>1,395</td>
<td>1,342</td>
<td>1,793</td>
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<td>Inflation (%) avg.</td>
<td>3.0</td>
<td>2.8</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
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</tr>
<tr>
<td>Trade balance (% of GDP, avg.)</td>
<td>-1.4</td>
<td>-6.8</td>
<td>-7.8</td>
<td>-10.7</td>
<td>-12.7</td>
<td>-14.3</td>
<td>2.5</td>
</tr>
<tr>
<td>Fiscal balance (% of GDP, avg.)</td>
<td>1.9</td>
<td>-3.2</td>
<td>-3.7</td>
<td>-4.3</td>
<td>-4.8</td>
<td>-5.1</td>
<td>-1.7</td>
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<tr>
<td>Public debt (% of GDP, eop)</td>
<td>7.9</td>
<td>15.0</td>
<td>46.0</td>
<td>52.7</td>
<td>58.6</td>
<td>63.2</td>
<td>20.4</td>
</tr>
</tbody>
</table>

avg = average, eop = end of period, m³ = cubic meters, USD = United States dollar.
Source: Authors’ estimates.
Impacts of reducing log output to 250,000 m\(^3\)

<table>
<thead>
<tr>
<th>Level in 2033</th>
<th>From 2022</th>
<th>From Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log output (%)</td>
<td>-87.3</td>
<td>-76.0</td>
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<tr>
<td>Change in log output (pp)</td>
<td>122.0</td>
<td>284.7</td>
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<tr>
<td>Log exports (%)</td>
<td>-85.8</td>
<td>-76.2</td>
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<tr>
<td>Real GDP growth rate (pp)</td>
<td>4.1</td>
<td>-1.1</td>
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<tr>
<td>Nominal GDP growth rate (pp)</td>
<td>1.8</td>
<td>-1.4</td>
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<tr>
<td>GDP (%)</td>
<td>20.7</td>
<td>-13.6</td>
</tr>
<tr>
<td>GDP per capita, current (%)</td>
<td>-10.0</td>
<td>-13.6</td>
</tr>
<tr>
<td>GDP per capita, constant (%)</td>
<td>-13.5</td>
<td>-11.5</td>
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<tr>
<td>Inflation (pp)</td>
<td>0.0</td>
<td>0.0</td>
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<tr>
<td>Trade balance (pp)</td>
<td>-7.5</td>
<td>-6.5</td>
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<td>-1.4</td>
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<tr>
<td>Public debt (%)</td>
<td>48.3</td>
<td>17.2</td>
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</tbody>
</table>

pp = percentage points.
Source: Authors’ estimates.
Initial Findings

• Numerous challenges and obstacles
• Economy must grow faster than the population
Future work

• Finding other growth drivers
  • How much should an industry grow to be able to reach an average real GDP growth rate of 4.0%?
  • Crop production
  • Fishing (including aquaculture)
  • Tourism
Policy recommendations

• Invest on integrated, sustainable, and multi-sectoral or multi-use developments;

• Involve local governments, communities, and the private sector in the development from conceptualization to implementation;

• Focus on long-term projects that can benefit multiple generations by ensuring developments and projects are climate-proofed; and

• Unleash the potentials of digital connectivity in searching for partners, investors, and customers.
Tagio Tumas!