

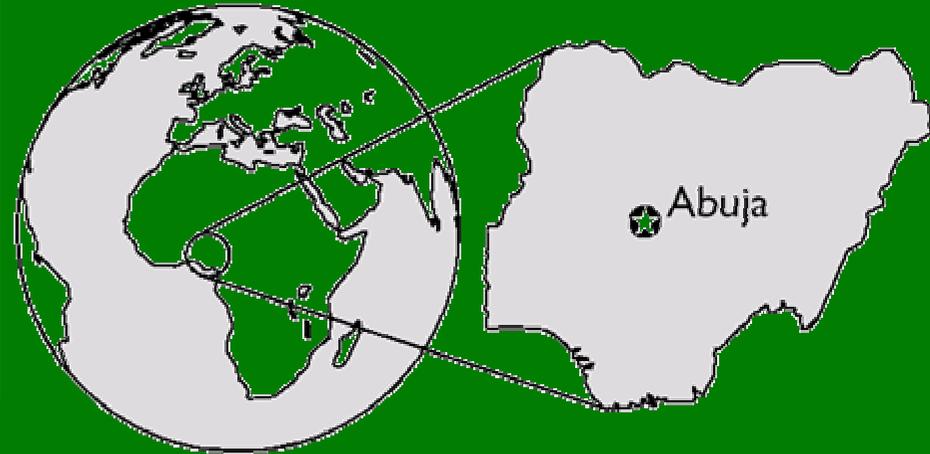
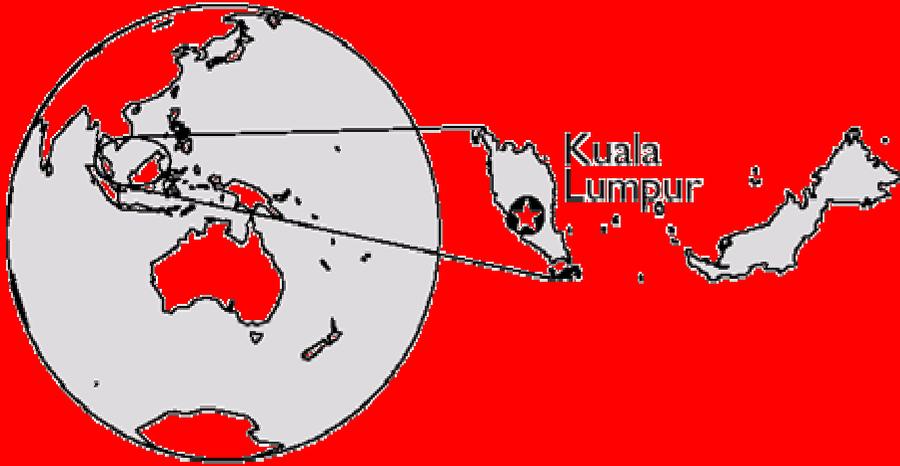
Challenges to Economic Growth in Nigeria

Michael Amati
Jose Ardavin
Jeanette Fershtman

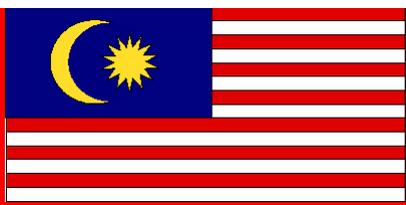
14 May 2004



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**What do these
countries have in
common?**

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In 1970,

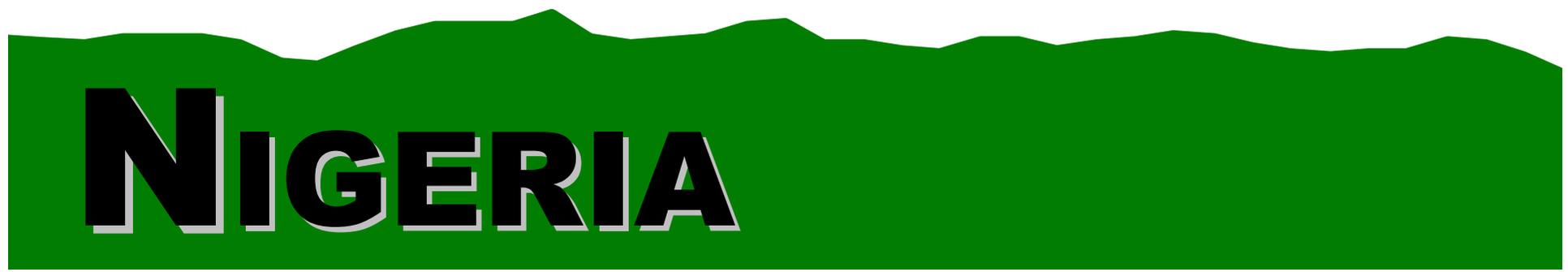
- Both hugely dependent on oil
- Both recently gained independence from the UK (1957 and 1960)
- Both with comparable GDP per capita

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But over time...



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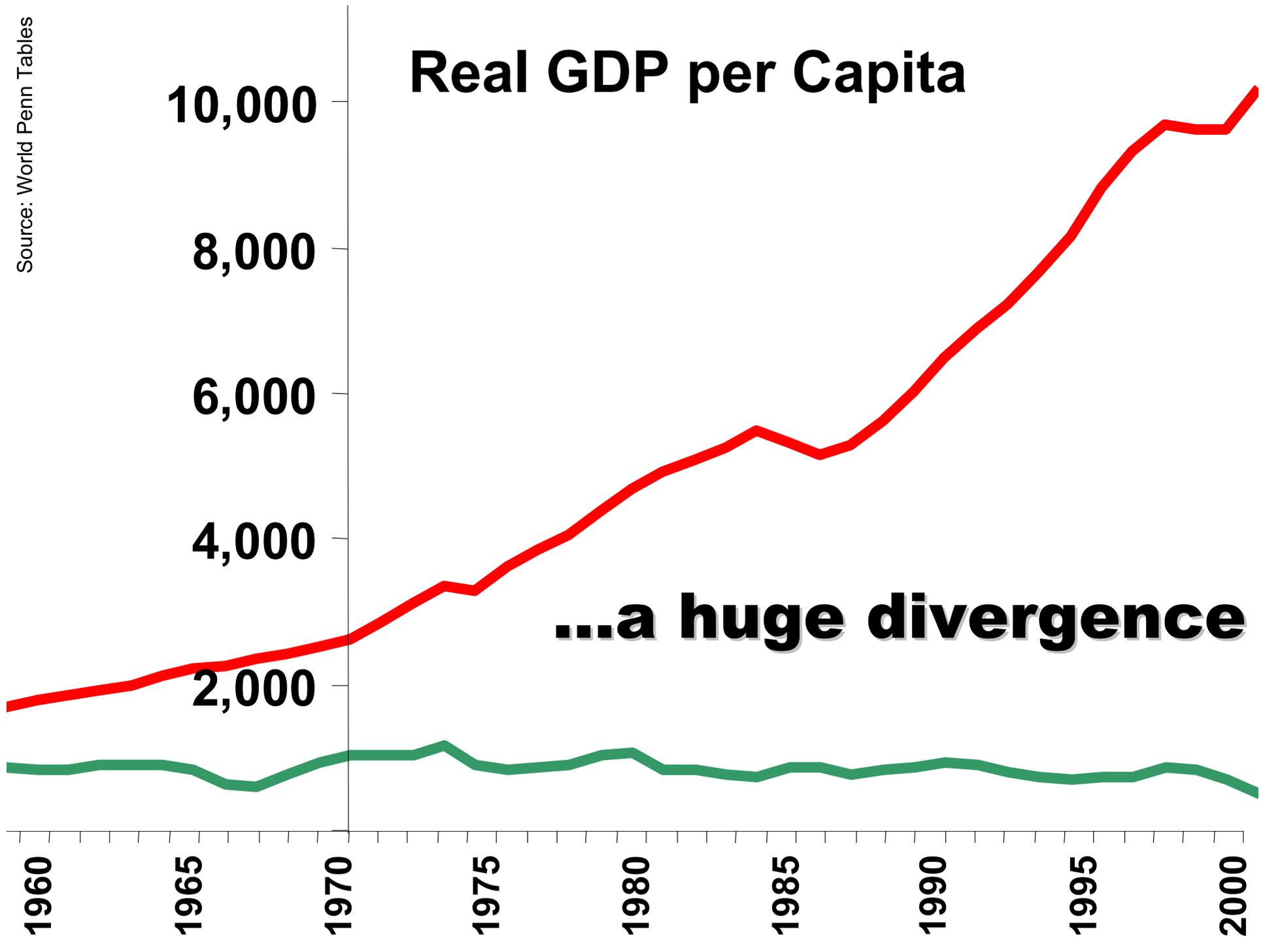
Source: World Penn Tables

Real GDP per Capita

10,000
8,000
6,000
4,000
2,000

...a huge divergence

1960 1965 1970 1975 1980 1985 1990 1995 2000



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Today

Nigeria		Malaysia
132.8m	Population	24.3m
2.12%	Population growth	1.91%
\$43.54bn (2002)	GDP (current US\$)	\$95.16bn (2002)
\$328	GDP per capita	\$3,915
\$815	GDP per capita on a purchasing price parity basis	\$8,825
37.70%	Exports of goods and services as % of GDP	113.80%

Source: FdiMagazine.com

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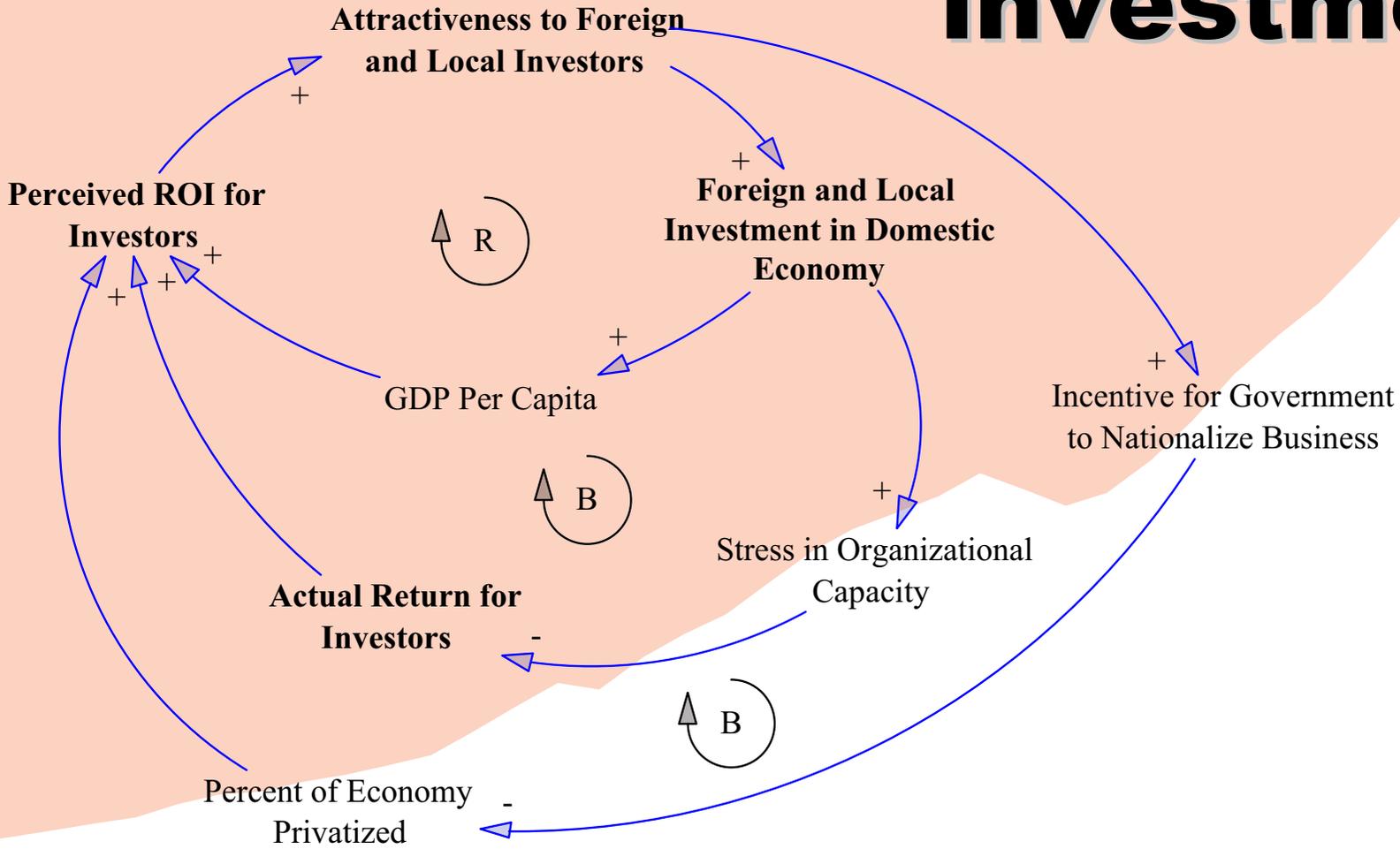
The Problem: What factors contributed to the divergence in economic, political, and social stability of these two nations?

The Method: Use system dynamics to gain insights into the problem.

The Client: Experts on the Nigerian situation

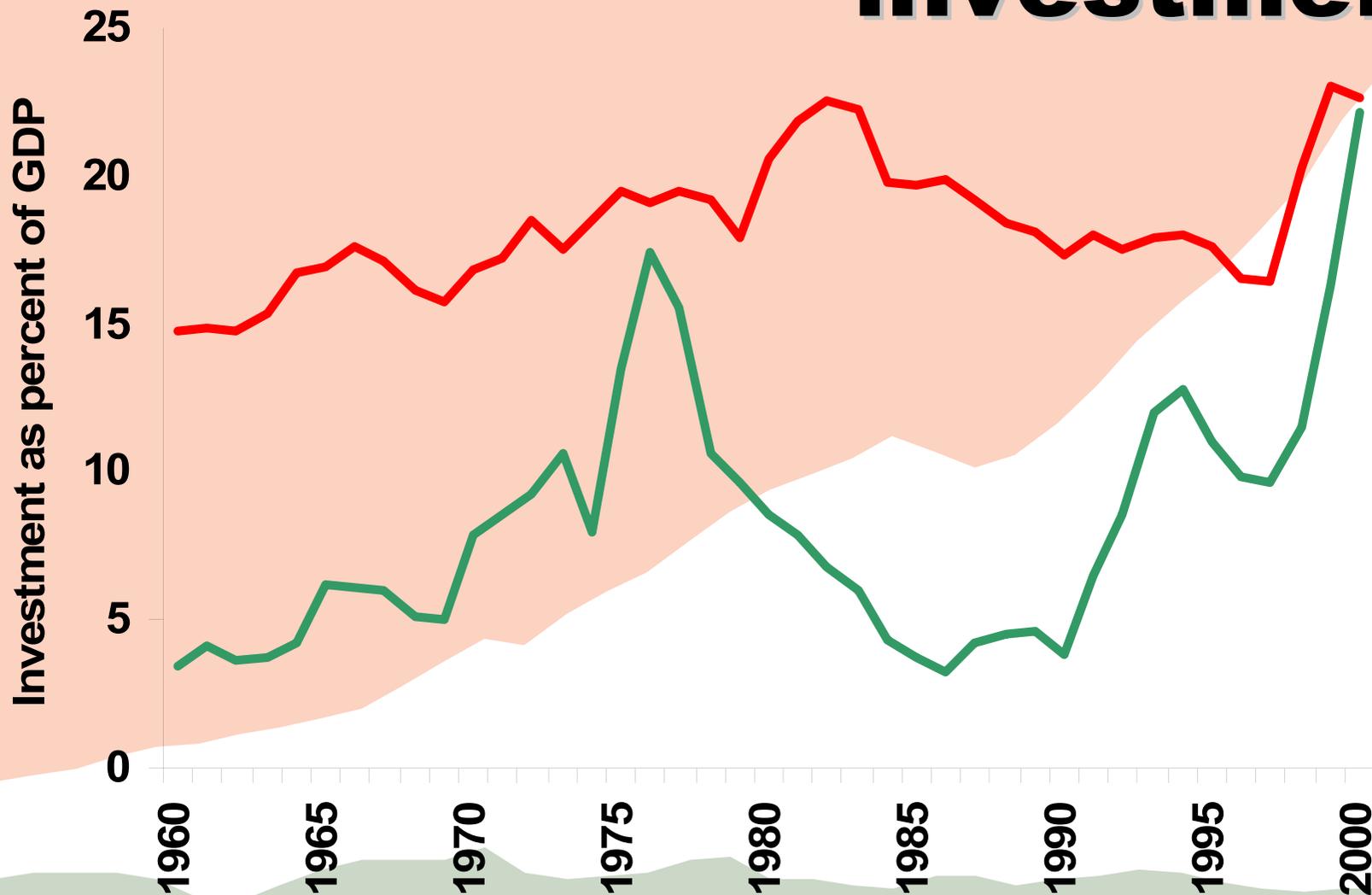
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investment



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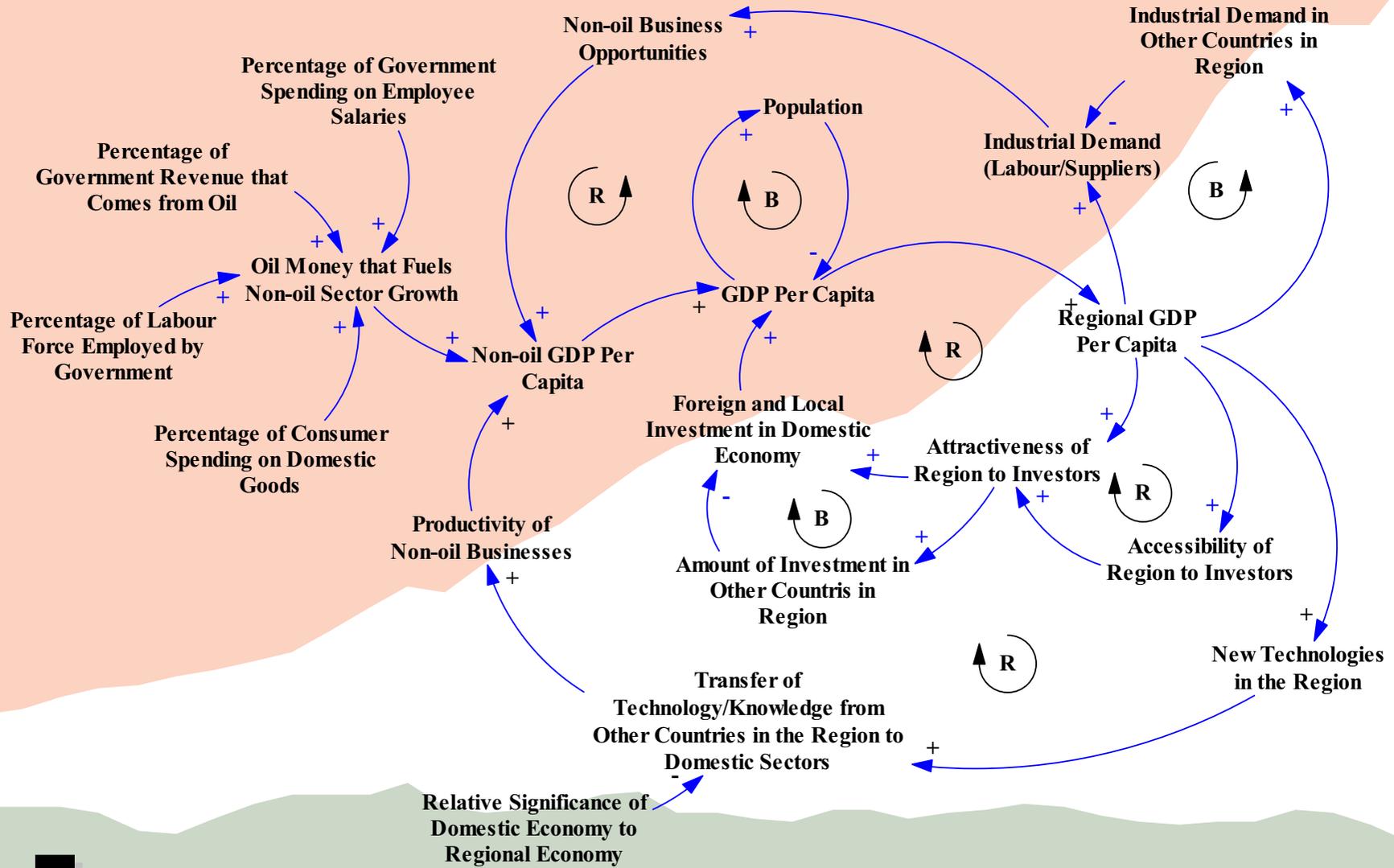
investment



Source: World Penn Tables

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regional development



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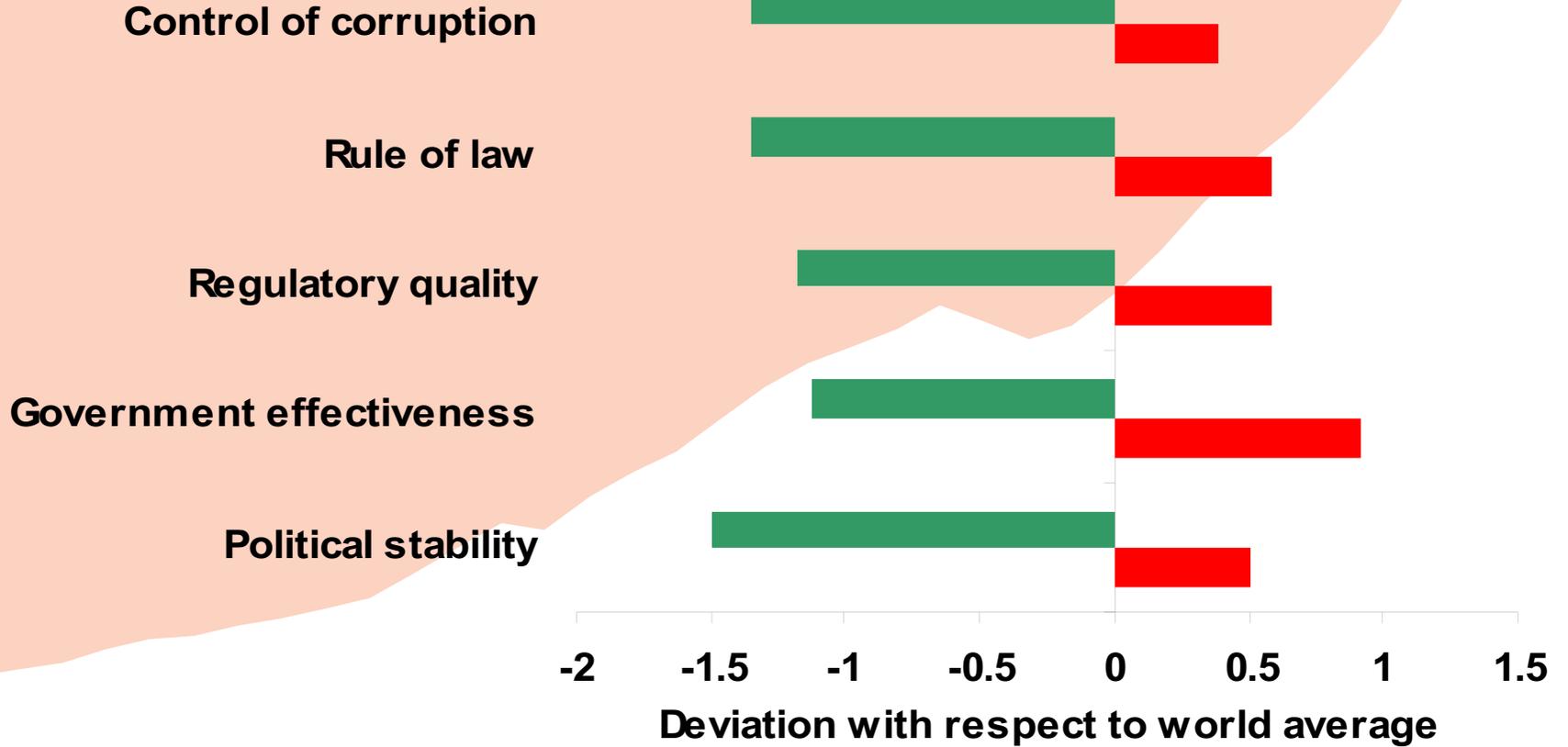
regional development

Sub-Saharan Africa	Region FDI Indicators	South East Asia
35	No.of FDI projects (Jan-Sep 2003)	181
15.00%	Market-share of projects in the region	20.00%
34.30%	Value of projects relative to GNP	93.30%
Energy, Food & Drink, Financial Services	Top 3 destination sectors	Automotive OEM, IT & Software, Chemicals
UK, Greece, USA	Top 3 source countries	USA, UK, Japan
Frigoglass, Royal Dutch Shell Group, Union Bank	Top 3 investors	Tesco, Ford, Motorola

Source: FdiMagazine.com

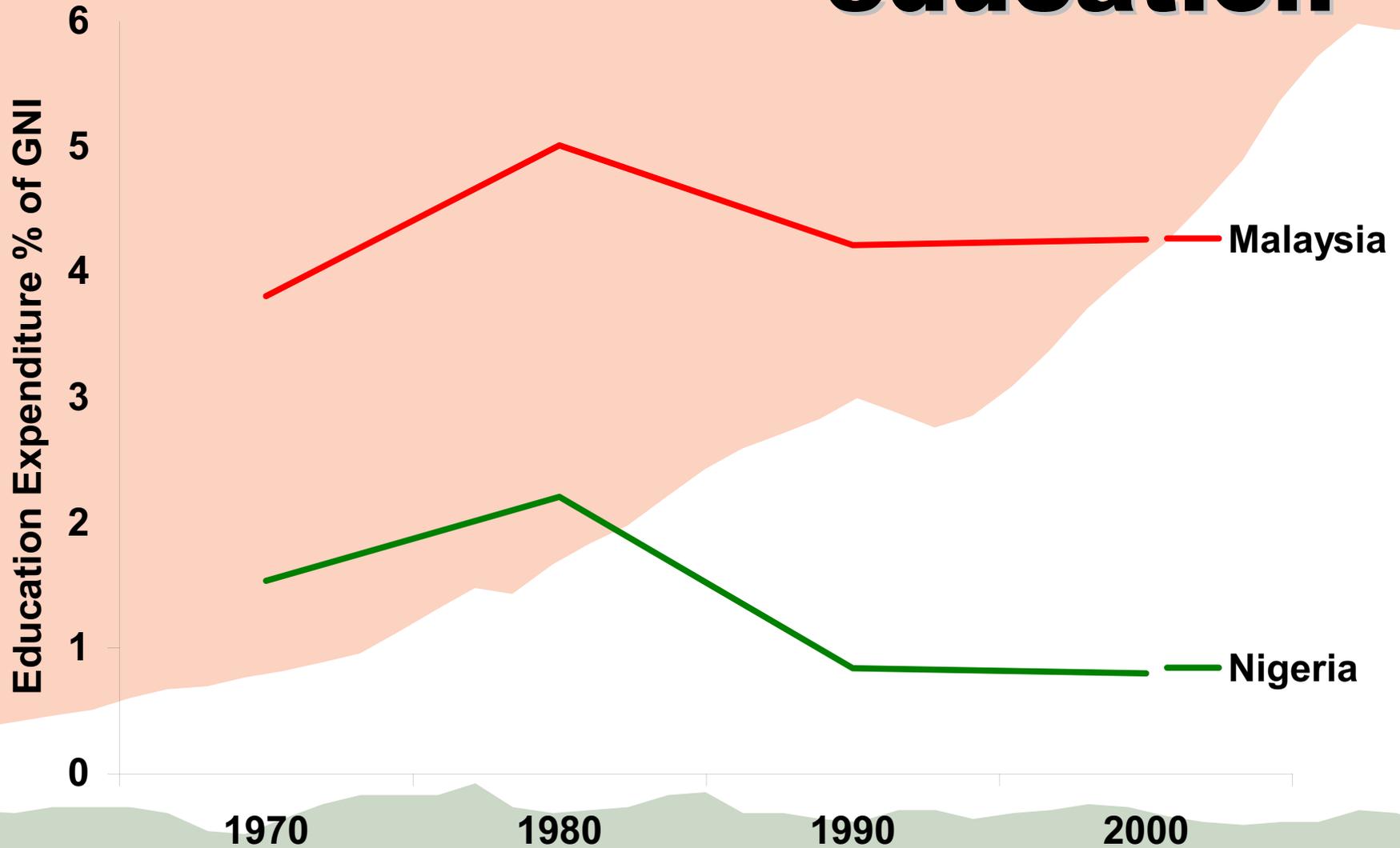
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institutions



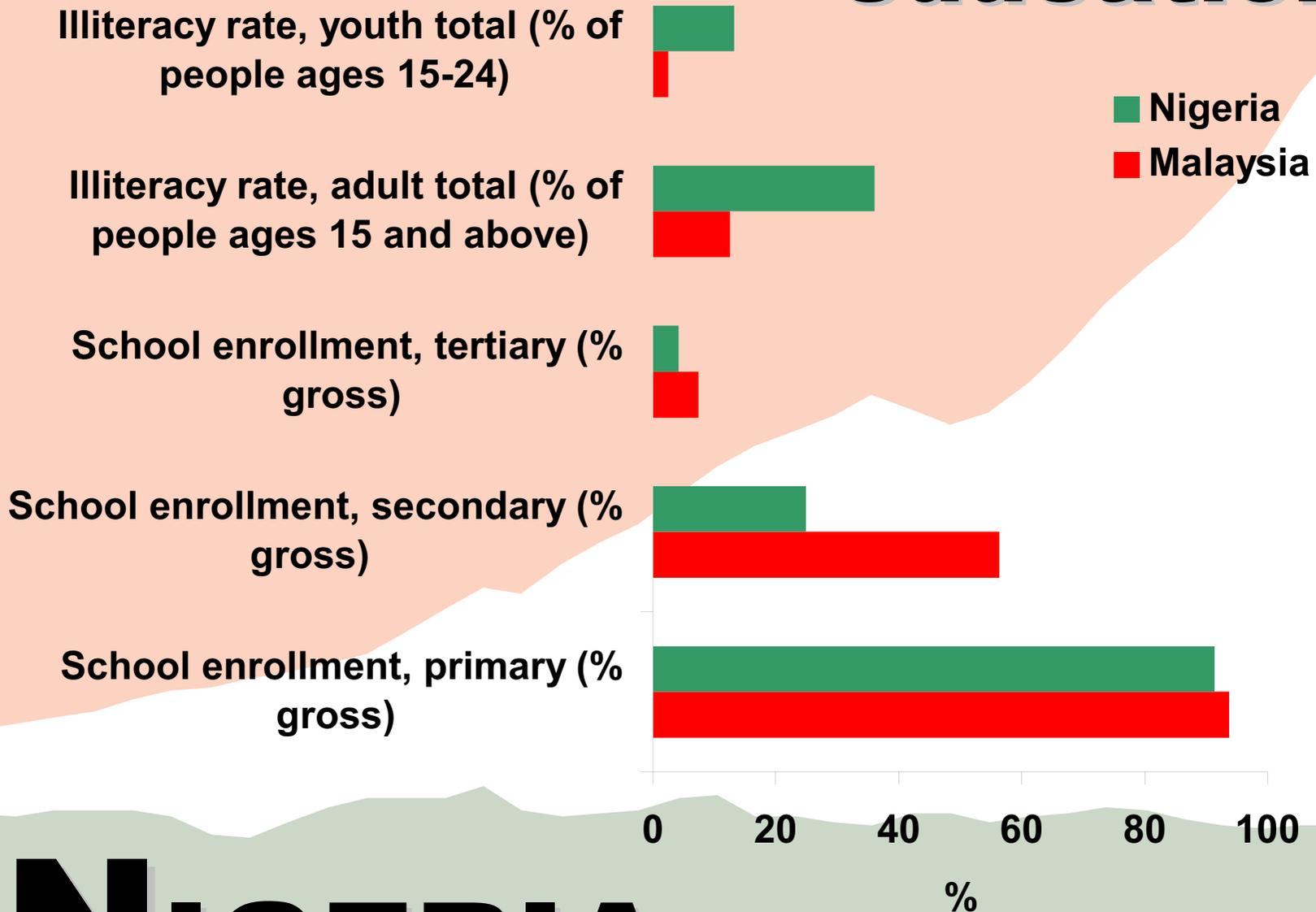
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education



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education



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insights

- Investment

- Investment, GDP growth, and the size of GDP are all strongly interdependent.

- Regional Development

- A nation's comparative status in its region of the world will impact its ability to develop.

- Institutions

- A nation must be perceived as being politically stable before it can hope to increase investment in its economy

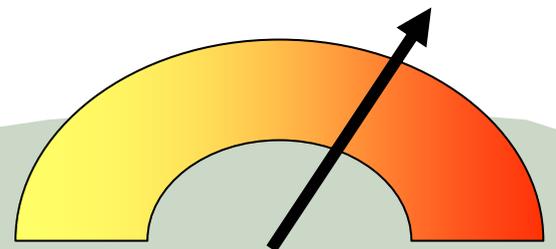
- Education

- Even the best education system will be ultimately worthless if there are not ample jobs that benefit those who are highly educated.

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Overcoming (some) Insecurities

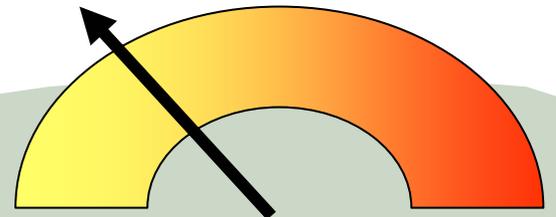
- Trust the Standard Method!
- Concentrate on Insights
- Every stage of the process has value
 - For large projects, causal loops may be the biggest the most valuable part



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...but not all of them

- Difficult to know when analysis is done
- Going slow is hard!
- “But that’s obvious!”



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System Dynamics Insights

- Equilibrium can be obtained systematically
- Smooths are everywhere
 - Learning how to use the trend molecule