# GROWTH SLOWDOWN AND THE MIDDLE INCOME TRAP IN ASIA

EE 462 Development Macroeconomics

Semester 1/2019

Reference: Riedel, J. (2019). Growth slowdown and the middle income trap in Asia. *Thailand and the World Economy*, *37(1)*, 1-16.

# Intro

- A middle-income trap is associated with a slowdown of long-term growth somewhere in the middle-income range.

- But what are the causes of this growth slowdown?
  - Policies that inhibit growth or other policies govt fail to take
  - External constraints that prevented authorities from taking necessary measures to restore growth to its long-run potential

- This paper proposes a hypothesis as to why middle-income countries may be particularly vulnerable to a middle-income trap.

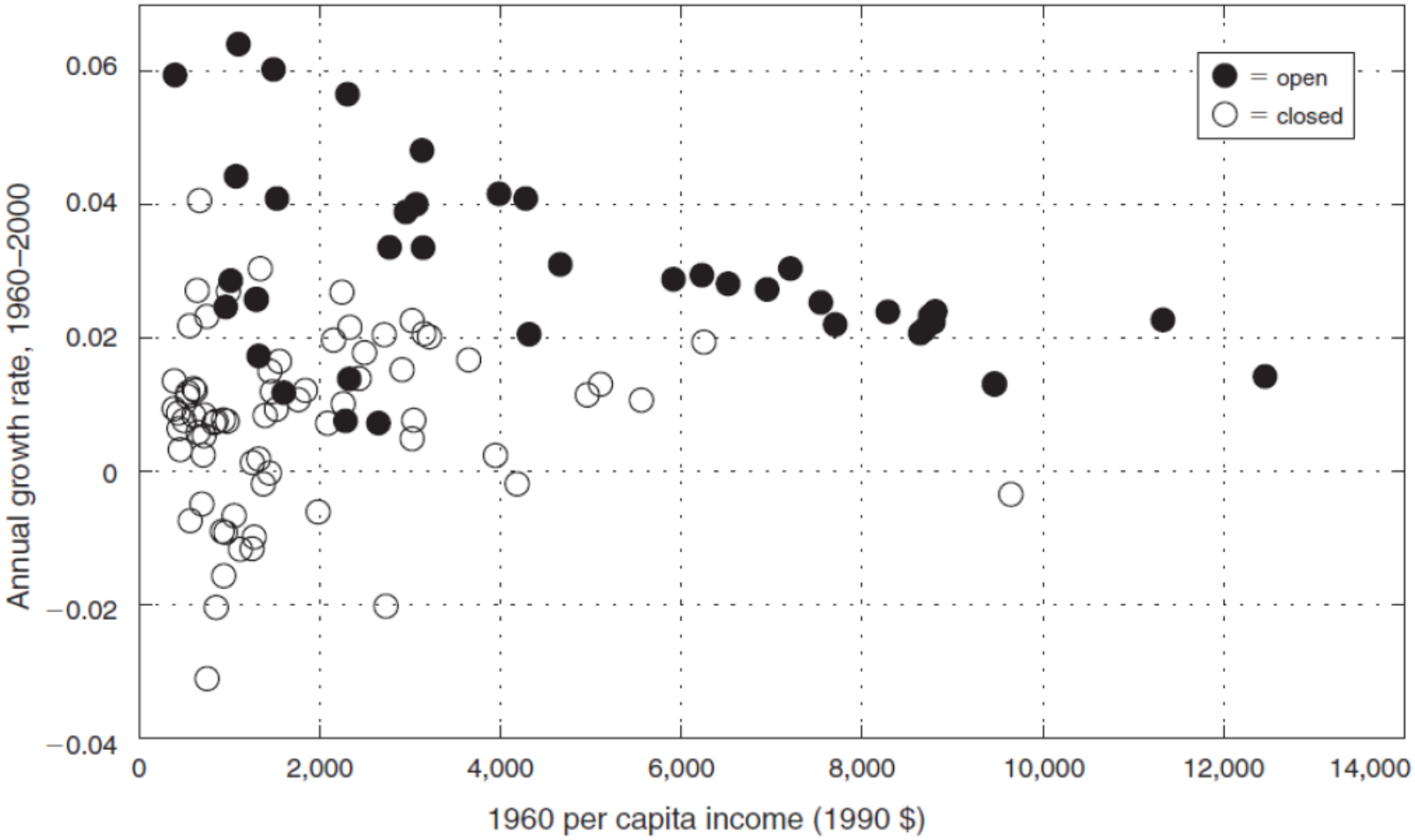
# The economies of middle-income growth slowdown

- Solow growth model – convergence occurs due to diminishing returns to capital-deepening.

- But the Solow model growth slowdown (i.e. convergence) is not confined to countries in the middle income range.

- Usually, the steady state is reached at a high-income level.
- Examples: S.Korea & Taiwan vs. Malaysia & Thailand

Figure 1: Convergence in 112 Open and Closed Economies

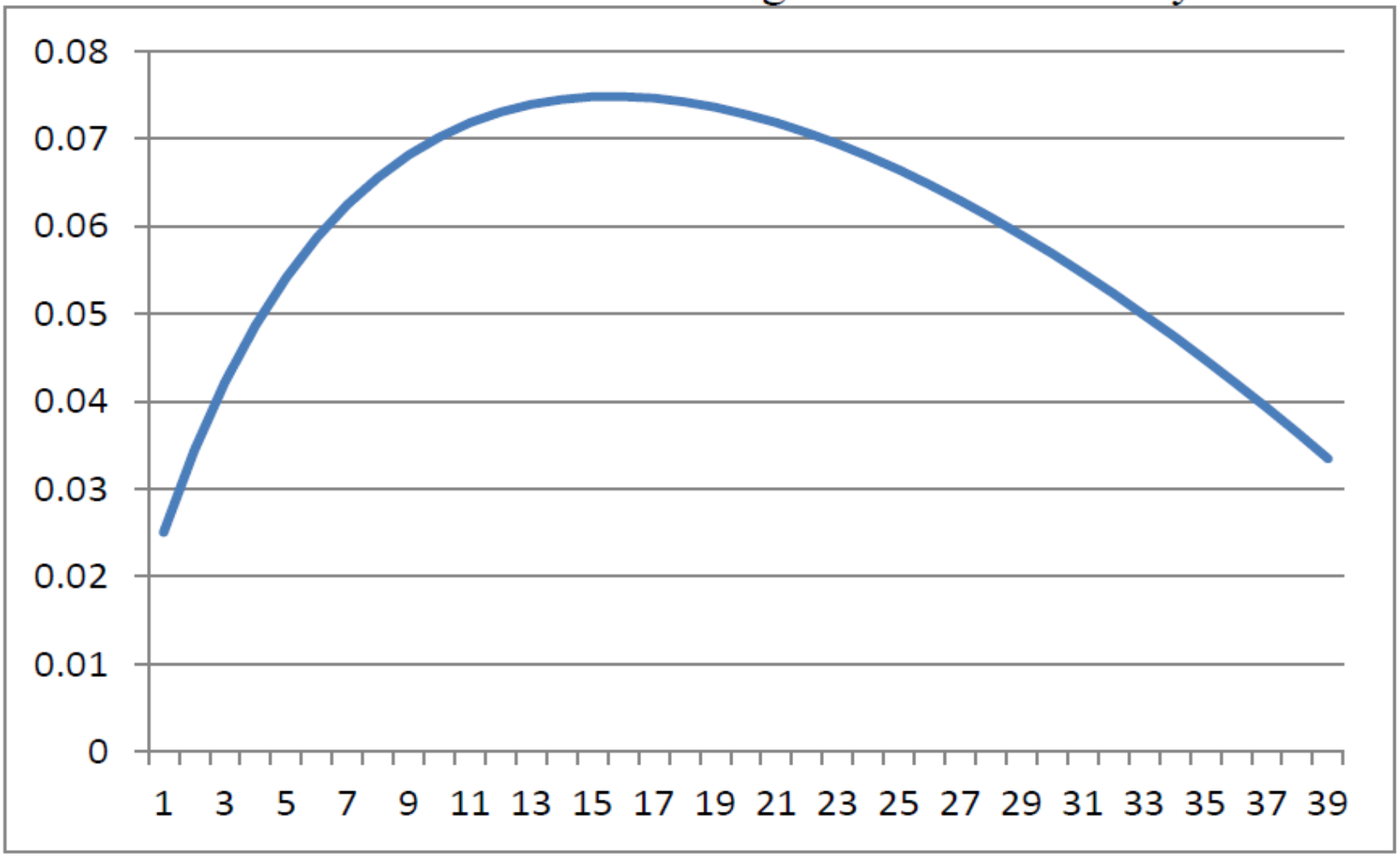



Source: Lucas, 2009 (p. 4)

# 3 elements of growth process in “successful” developing countries

- Openness
- Technology catch up
- Labor reallocation

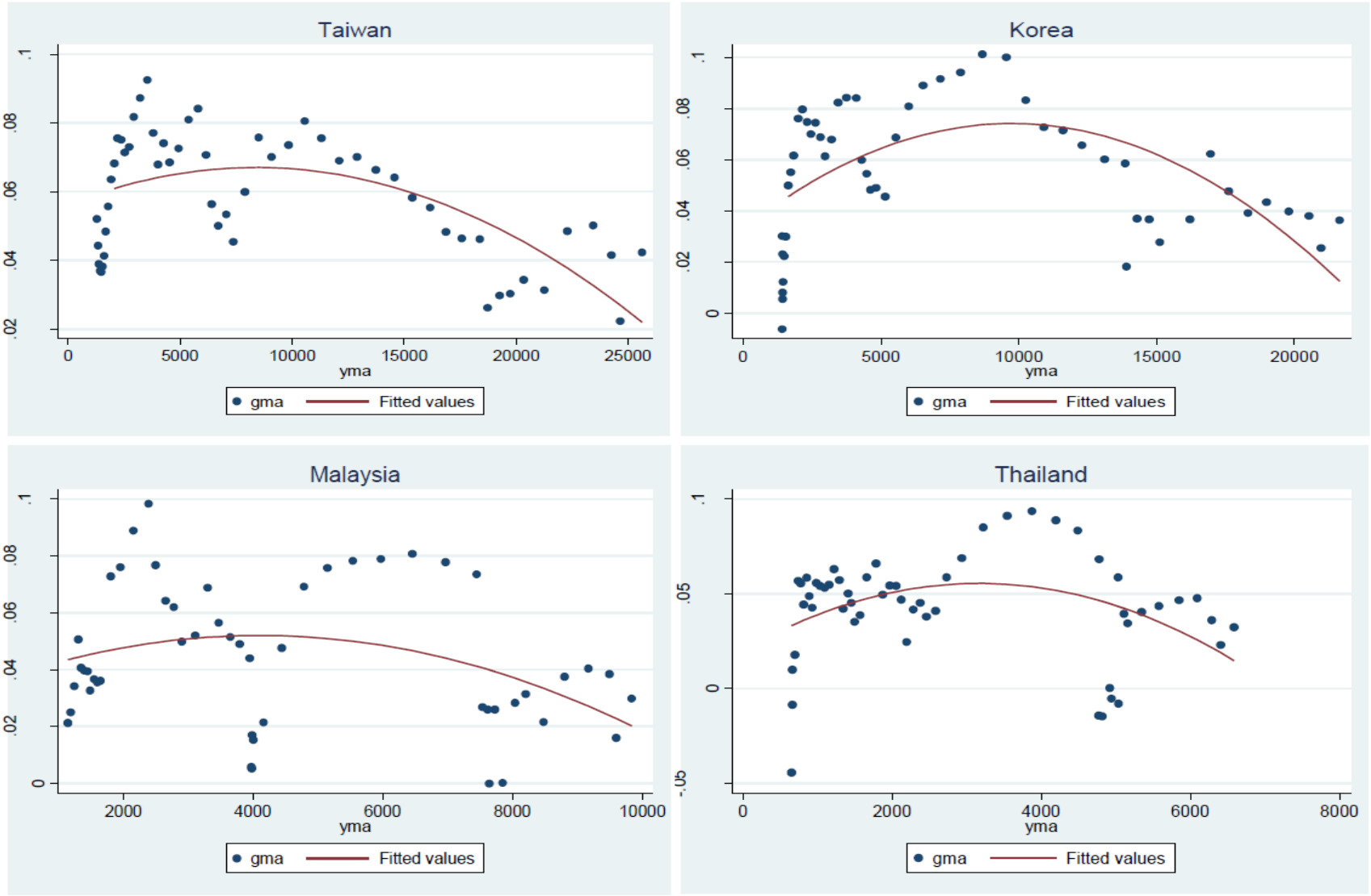
Figure 2: Simulated Growth Pattern with Technology Catch Up and Labor Reallocation from Agriculture to Industry




Source: Author's calculations.

# The empirics: Growth slowdown

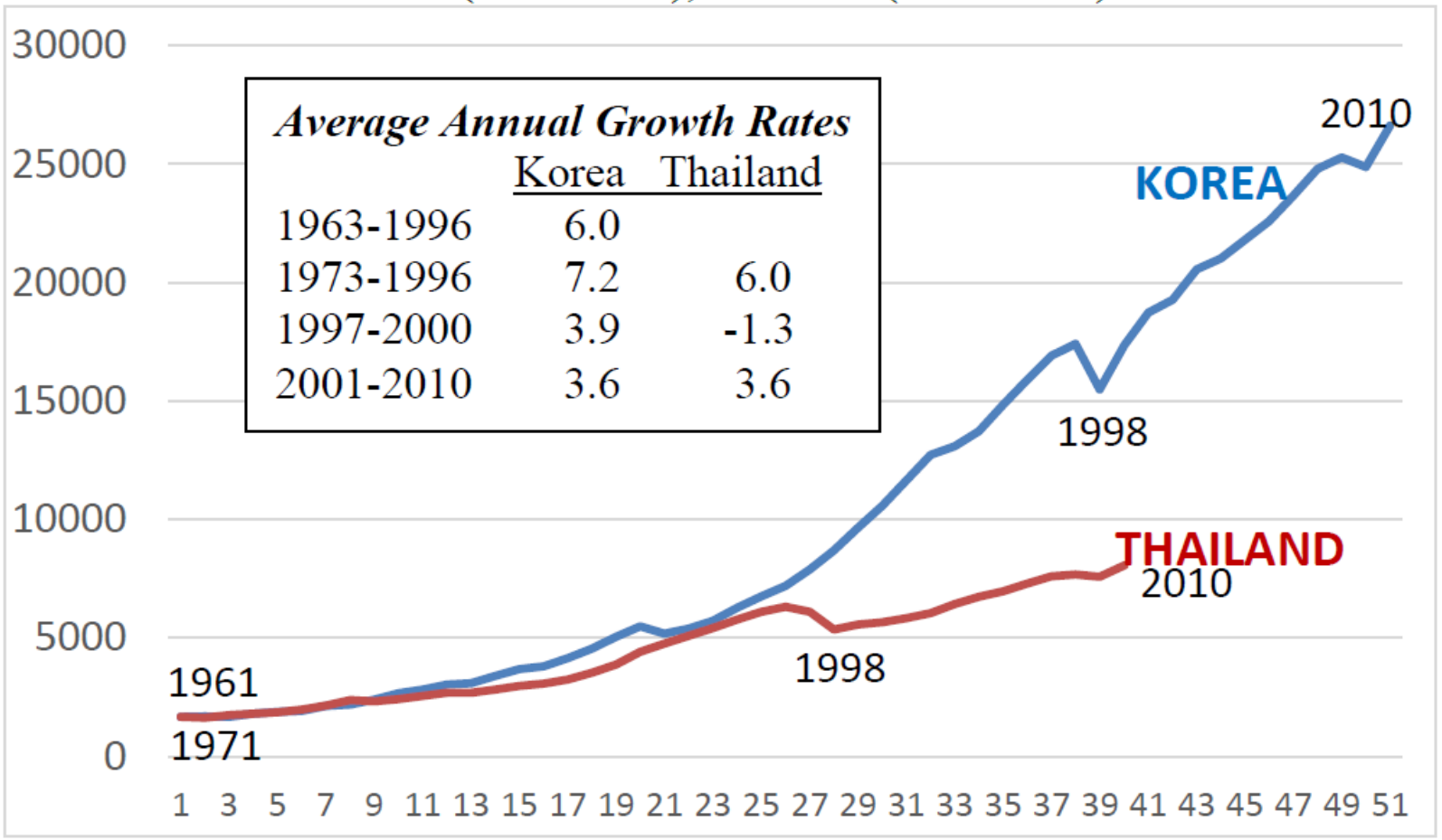
Figure 3: Five-year moving averages of actual and estimated real per capita income growth rates (gma) plotted against the level of real per capita income (yma): 1955-2011




Source: Penn World Tables

# The empirics: Timing matters

Figure 4: Per capita income in constant 2005 PPP U.S. dollars: Korea (1961-2010), Thailand (1971-2010)




***Average Annual Growth Rates***

| | Korea | Thailand |
|---|---|---|
| 1963-1996 | 6.0 | |
| 1973-1996 | 7.2 | 6.0 |
| 1997-2000 | 3.9 | -1.3 |
| 2001-2010 | 3.6 | 3.6 |

Source: Penn World Tables

# MIT and Dynamics of Comparative Advantage

- Heckscher-Ohlin trade theory

- Revealed comparative advantages:

$$RCA_{i,j,t} = \alpha_{j,t} + \beta_{j,t} \cdot k_i + \varepsilon_{i,j,t},$$

Figure 6

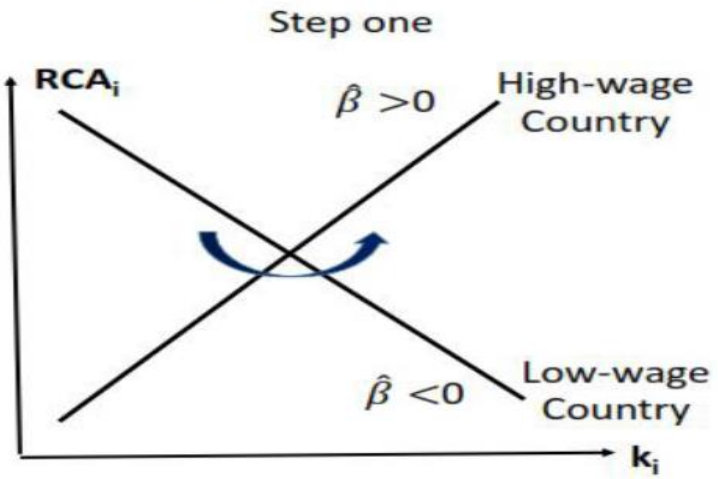



Figure 7

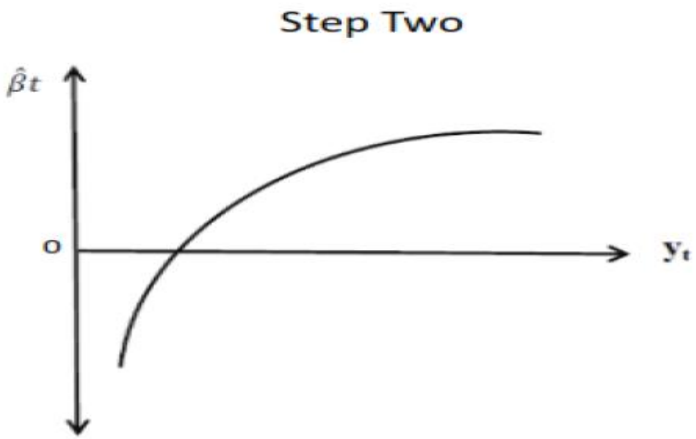
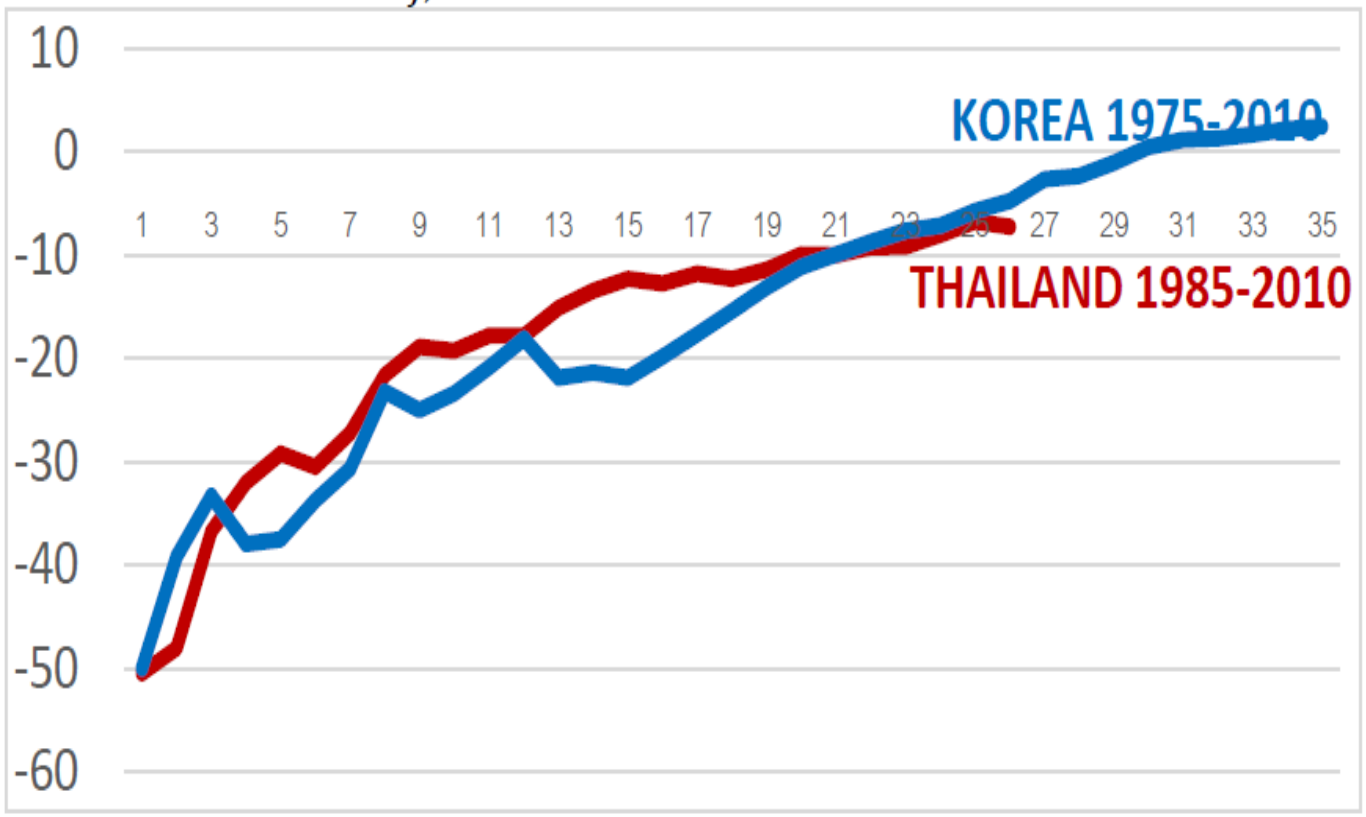


Figure 8: Estimates of $\hat{\beta}_{j,t}$ for manufactured exports of Korea and Thailand*

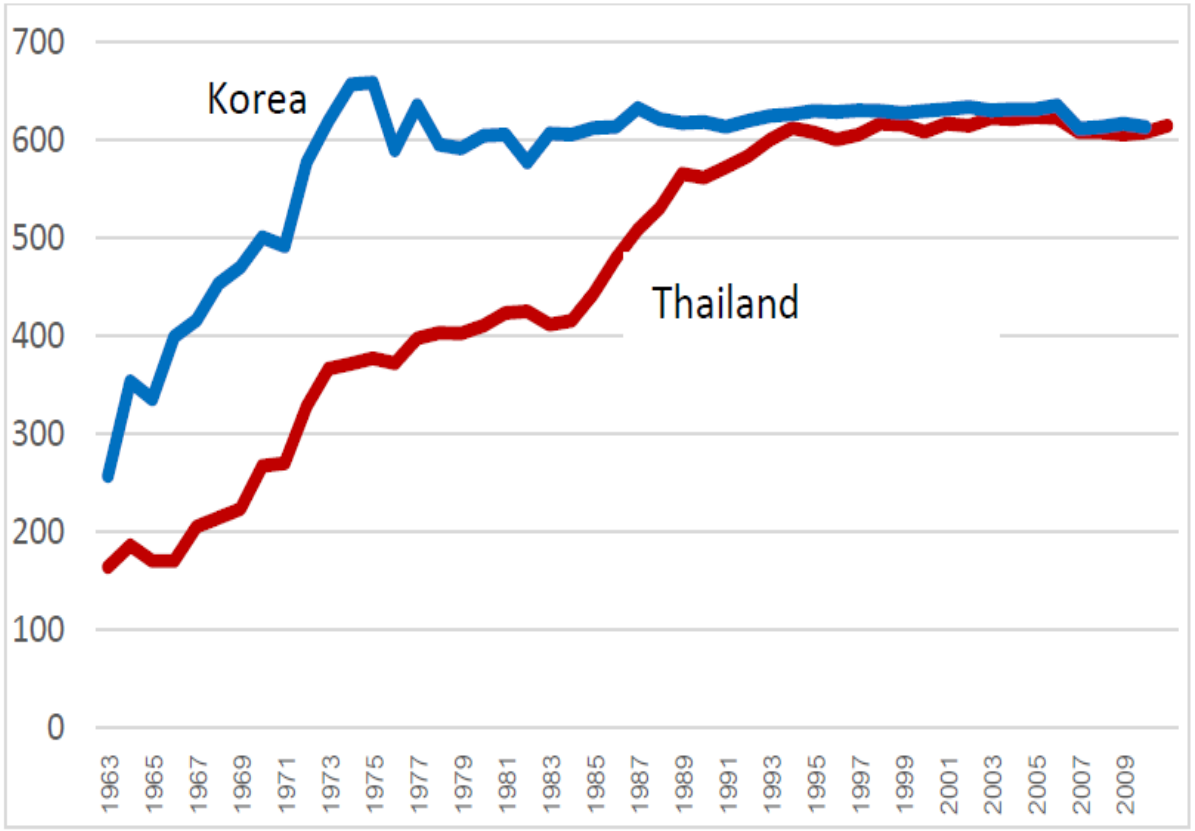



Note:* Regression analysis of the parametric relation between $\hat{\beta}$ and per capita income in Thailand and Korea is given in Appendix A.

Source: World Bank, WITS, U.N COMTRADE data.

# Export Diversification

Figure 9: Number of manufactured products exported (at the 5-digit STIC level) in Korea and Thailand: 1963-2010




Source: WITS COMTRADE data. Author's calculation

# Possible causes of “trap”

- Trapped by policies

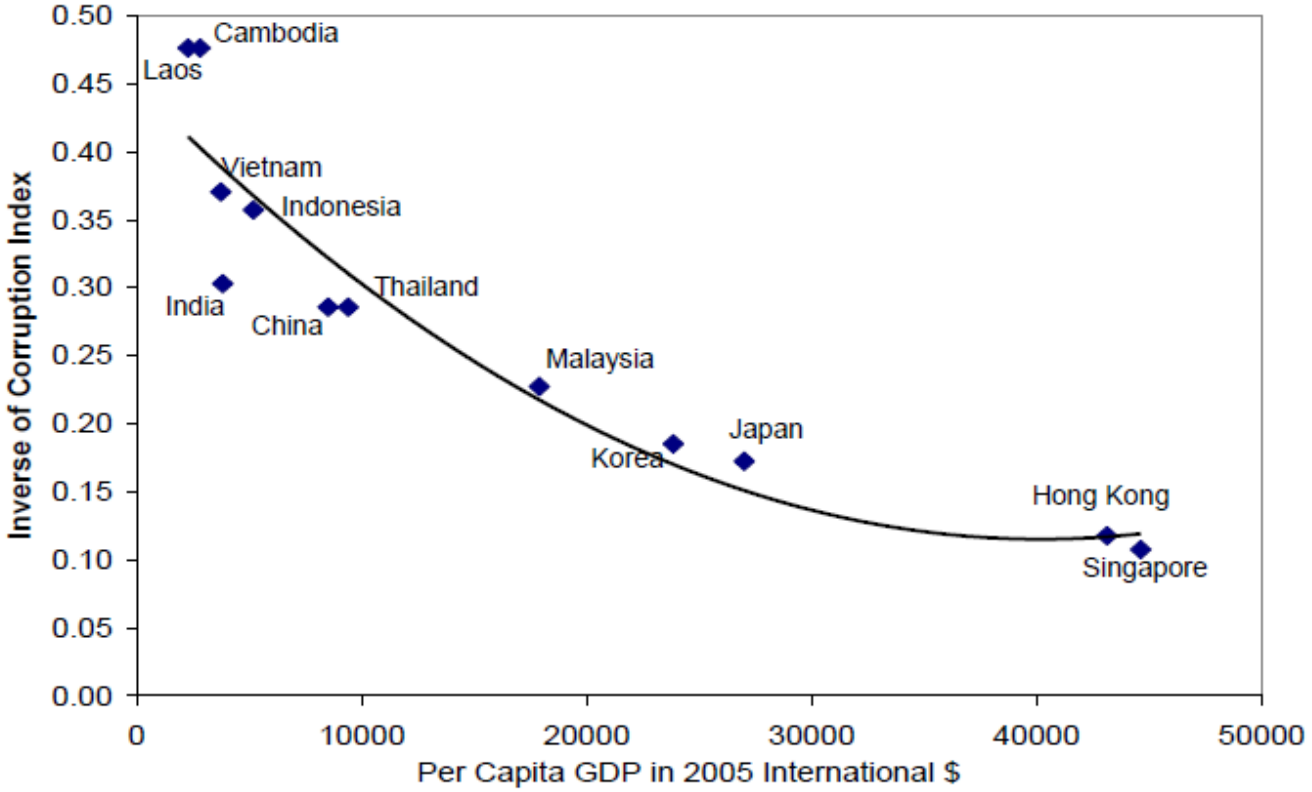
- Trapped by politics – rent seeking behavior

$$R = R(Y(P), P) \quad R'_Y > 0 \quad Y'_P > 0 \quad R'_P < 0$$

f a change in policy ($dR/dP$) is ambiguous:

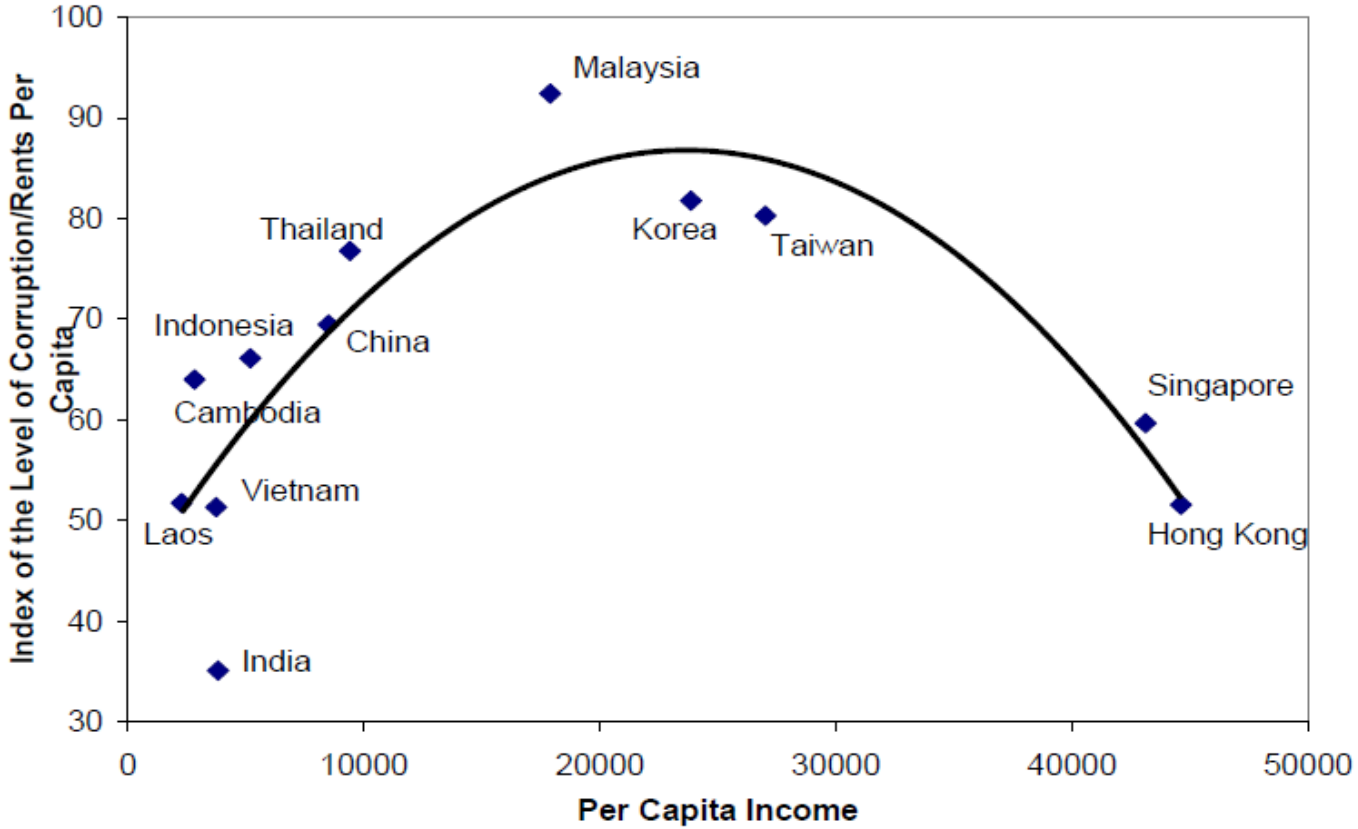
$$dR/dP = R'_Y \cdot Y'_P + R'_P.$$

Figure 11: The relation between corruption and per capita income




Source: Transparency International, 2011 and Penn World Tables

# Figure 12: The Level of Corruption/Rent-Seeking and Per Capita Income*




Note: * The level is $((1/CPI^2) \times real\ per\ capita\ income)/100$.
Source: Transparency International, 2011 and Penn World Tables.