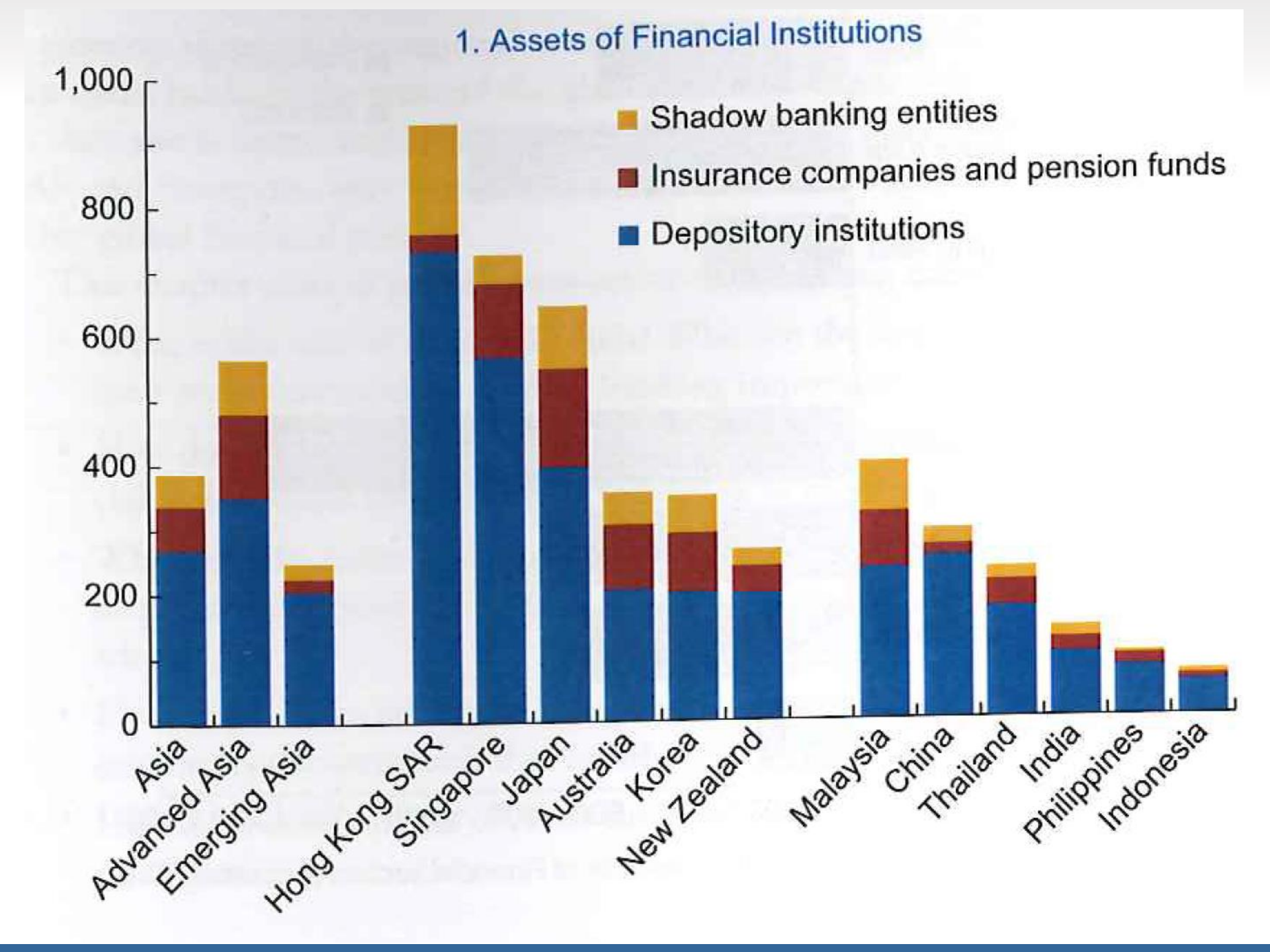
# Financial Architecture of Asia ---India and china---

**Naoyuki Yoshino**

**Dean, Asian Development Bank Institute (ADBI)**

Professor Emeritus Keio University

nyoshino@adbi.org


1. Assets of Financial Institutions
1,000
800
600
400
200
0
Shadow banking entities
Insurance companies and pension funds
Depository institutions
Asia
Advanced Asia
Emerging Asia
Hong Kong SAR
Singapore
Japan
Australia
Korea
New Zealand
Malaysia
China
Thailand
India
Philippines
Indonesia

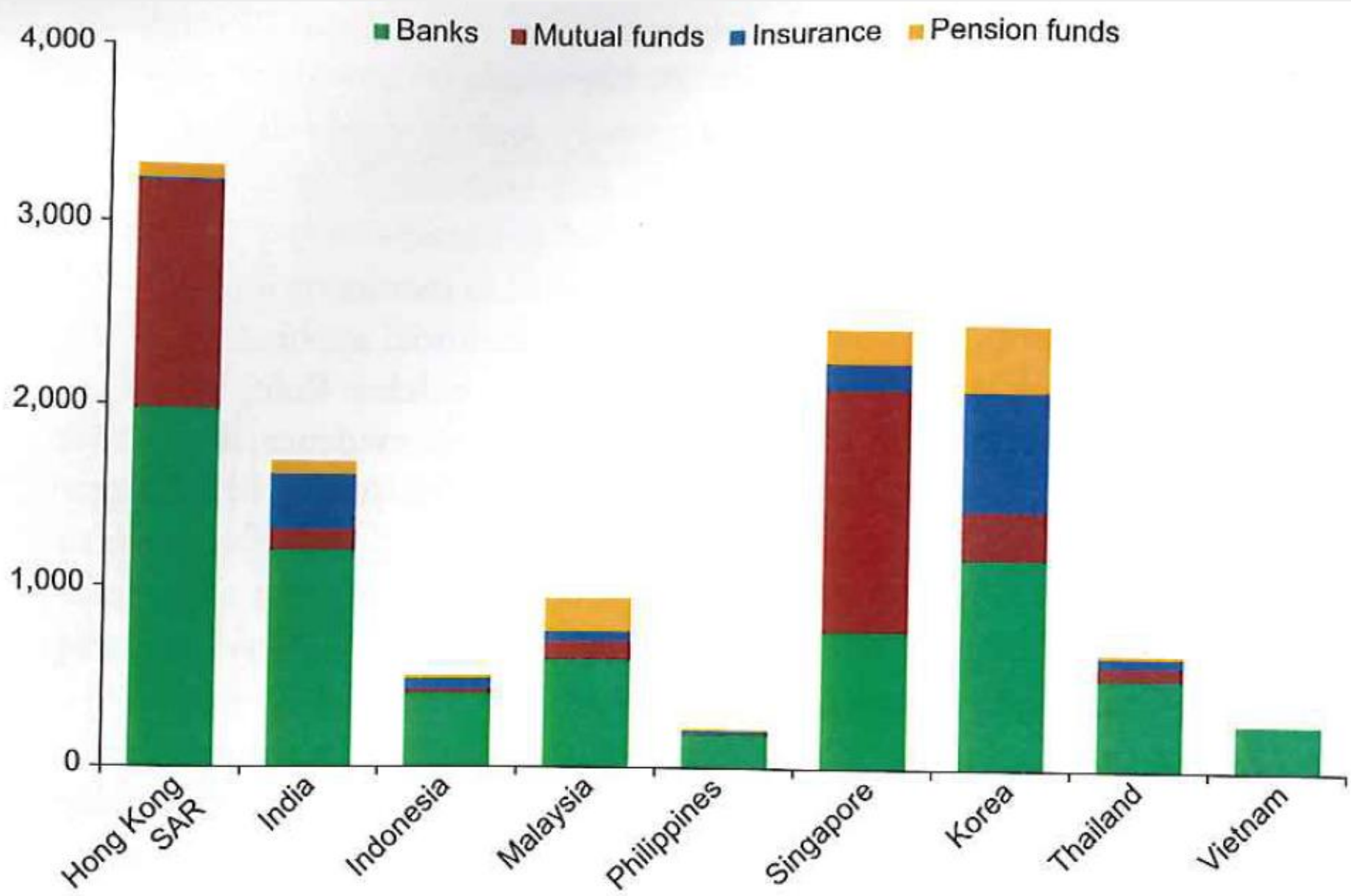



**Figure 4.6** A More Diverse Investor Base in Emerging Asia (*Domestic investor base, billions of U.S. dollars*)

# Characteristics of Financial Market

**1, Bank based financial market**

**2, Small share of institutional investors**

**(Insurance and Pension funds)**

**→Lack of long term investors**

**3, Access to finance is limited in certain countries**

**Utilize post office and internet banking**

**4, Money lenders charge very high interest rate**

**5, Small share of mutual funds**

**6, Lack of venture capital**

**7, Huge Needs for Infrastructure Investment**

# India's characteristic of Savings

**Strong preference on gold and jeweries**

**Domestic Savings → does not circulate**

**Lack of domestic investment**

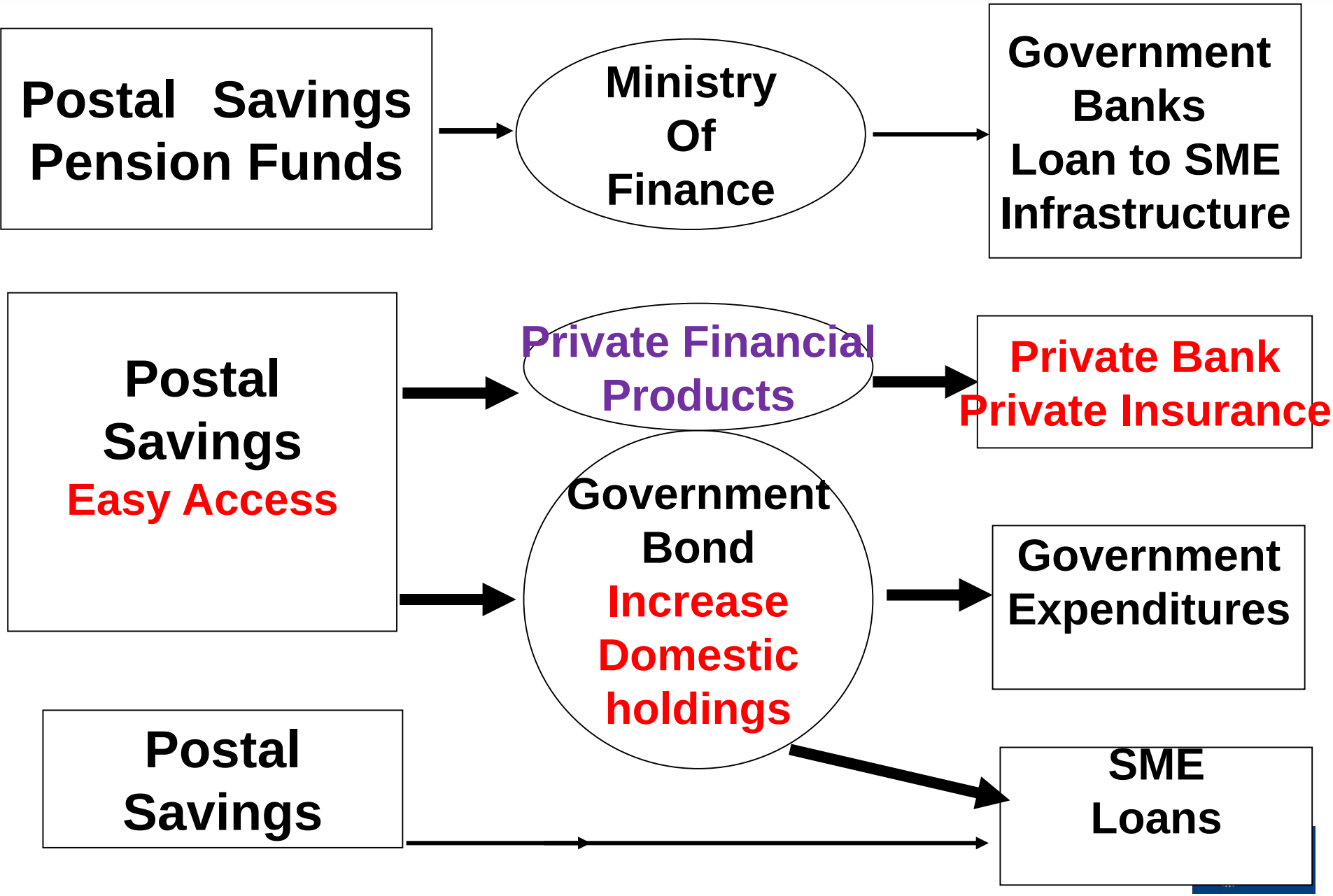
**Lack of finance for infrastructure investment**

**Financial Education for investment**

## Chinese: Strong Preference of Stocks

**Investments in real estate and stocks by individual investors**

# Financial Inclusion in India (Use of Post Office)



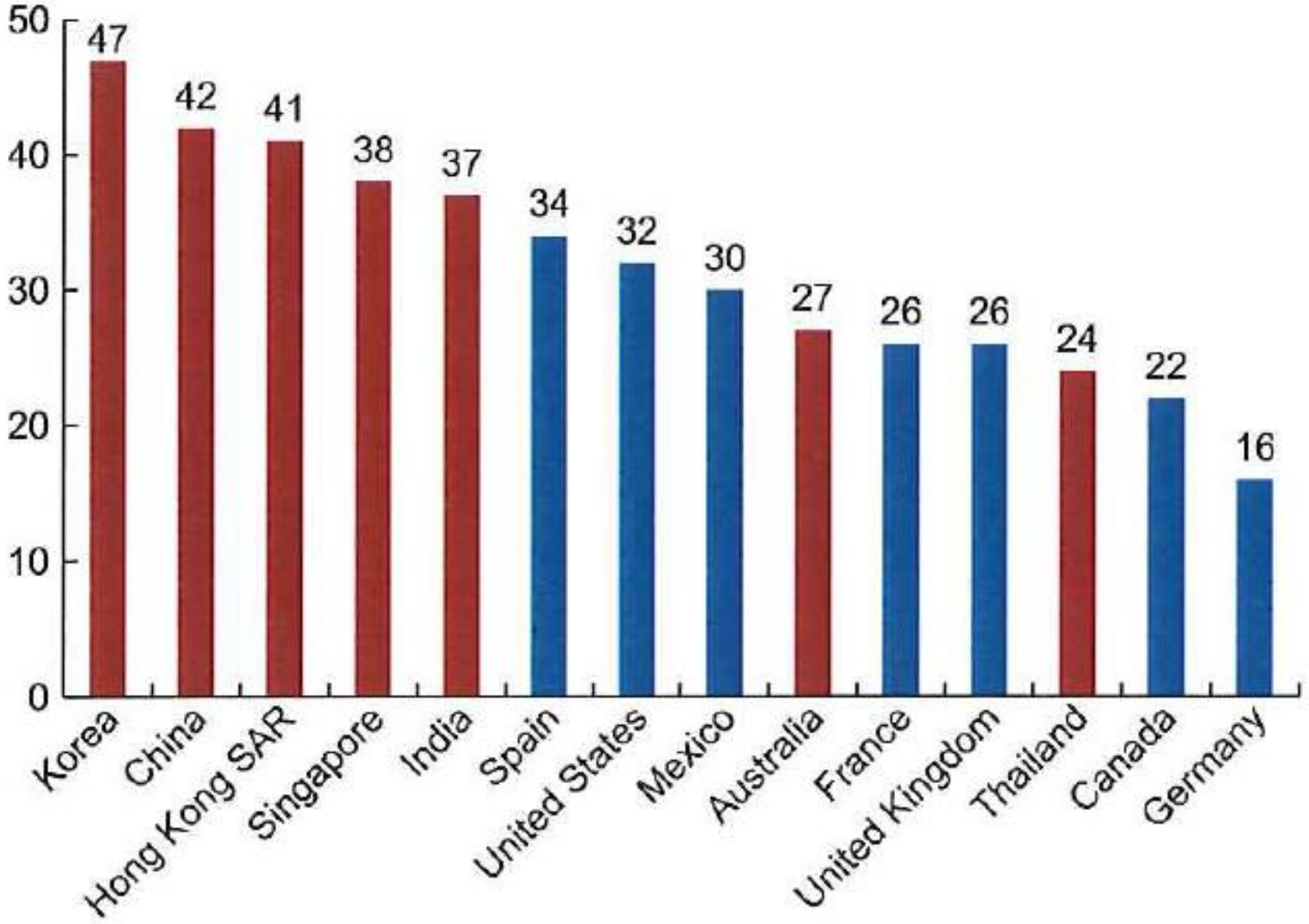



**Figure 2.12** Selected Economies: **Mobile Banking Penetration** (*Percent of respondents reporting mobile banking transactions in the last three months, 2012*)

# Financial Education in Schools

**1, Primary School, Postal Savings by children**

**Each month students put some money,**

**At the end of the 6th year → huge amount**

**2, Secondary School and High School**

**taught in the courses of "Civics, Home-economics"**

**3, Financial education in Japan's primary school**

**is taught at "Home making courses".**

**Lack of expertise in school**

**4, Retiree from financial institutions could teach**

**financial economics to students.**

**Video lectures**

# Financial Education Promotion Council

## What kind of subjects and items should be taught at each level of school education ?

**Chair Person, Naoyuki YOSHINO**

**Central Bank of Japan**

**Financial Services Agency (FSA)**

**Ministry of Education**

**Consumer Protection Agency (Government of Japan)**

**Bankers Association of Japan**

**Securities Dealers Association**

**Insurance Association**

**Trust Bank Association**

**Investment Trust Association**

**Financial Planners Association**

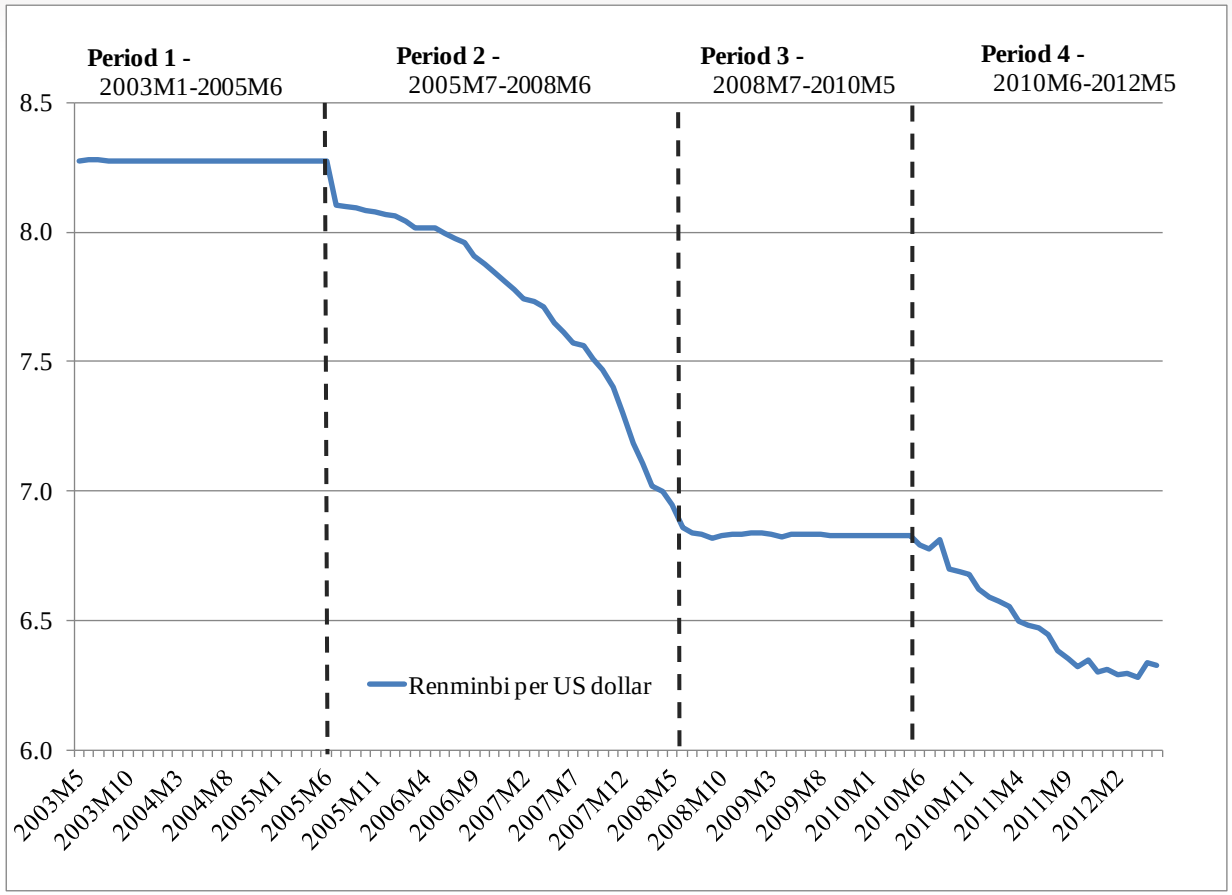
China & World Economy

*China & World Economy* / 36–55, Vol. 22, No. 3, 2014

# Dynamic Transition of Exchange Rate Regime in China

*Naoyuki Yoshino, Sahoko Kaji, Tamon Asonuma**

# Chinese Exchange Rate (RMB) Fluctuations




Sources: IMF IFS.

$$CNY_t = (b_{0,1} + \sum_{i=\{2,3,4\}} b_{0,1} D_i) + \sum_{j \in C} (b_{j,1} + \sum_{i=\{2,3,4\}} b_{j,i} D_i) X_{j,t} + u_t, \qquad (1)$$

Table 1. Estimates of Weights on the US Dollar Rate

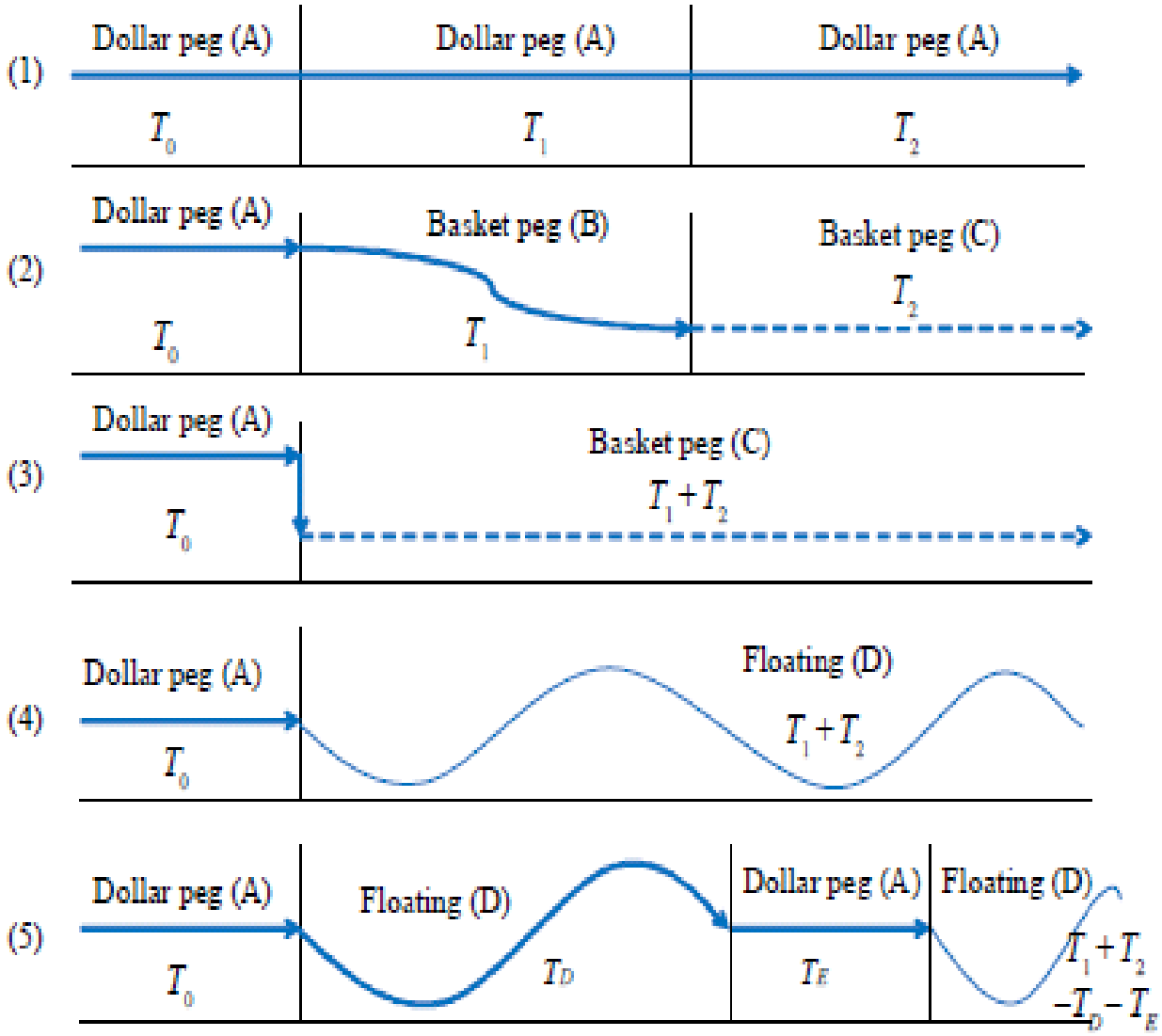
| Sample period | Period 1<br>7 May 2003–<br>22 July 2005 | Period 2<br>25 July 2005–<br>30 June 2008 | Period 3<br>1 July 2008–<br>28 May 2010 | Period 4<br>1 June 2010–<br>1 June 2012 |
|---|---|---|---|---|
| Estimated weights on the US dollar rate | 0.999**<br>(0.001) | 0.842**<br>(0.036) | 0.918**<br>(0.017) | 0.819**<br>(0.039) |

$$CNY_t = (b_{0,1} + \sum_{i=\{2,3,4\}} b_{0,1} D_i) + \sum_{j \in C} (b_{j,1} + \sum_{i=\{2,3,4\}} b_{j,i} D_i) X_{j,t} + u_t, \quad (1)$$

Table 1. Estimates of Weights on the US Dollar Rate

| | Period 1 | Period 2 | Period 3 | Period 4 |
|---|---|---|---|---|
| Sample period | 7 May 2003–22 July 2005 | 25 July 2005–30 June 2008 | 1 July 2008–28 May 2010 | 1 June 2010–1 June 2012 |
| Estimated weights on the US dollar rate | 0.999** | 0.842** | 0.918** | 0.819** |
| | (0.001) | (0.036) | (0.017) | (0.039) |

Figure 3. Five Policies to Follow in the Transition to Stable Regimes



# Quantitative analysis

- Cumulative losses : $T_0=0$, $T_1=18$, & $T_2=18$

$$L(T_1, T_2) \equiv \sum_{t=1}^{T_0+T_1+T_2} \beta^{t-1}(y_t - \bar{y}')^2$$

Table 8. Cumulative Losses and Optimal Values of Instruments

| Stable regime | Policy (1) Dollar peg | Policy (2) Basket peg | Policy (3) Basket peg | Policy (4) Floating | Policy (5)[b] Managed floating |
|---|---|---|---|---|---|
| Adjustment | — | Gradual | Sudden | Sudden | Sudden |
| Instrument value | $i^* = 4.34$ | $v^* = 0.58$ | $v^{**} = 0.68$ | $m^* = 0.016$ | $m^{**} = 0.017$ |
| Cumulative loss (value) | 17.04 | 1.80 | 1.91 | 2.67 | 2.31 |
| Cumulative loss (percent of $(\bar{y}^2)^*$)[a] | 23.4 | 2.4 | 2.6 | 3.7 | 3.2 |

Source: Authors' calculations

Note: [a]We calculate the value of $\bar{y}^2$ shown in Section IV and obtain $\bar{y}^2 = 72.8$. [b]For $T = 7$, the cumulative loss is 3.54 ($m^{**} = 0.017$).

# *Policy Implications*

**1, For a country like China, gradually adjusting to a basket peg regime is superior to the other proposed transition policies.**

- Advantage : it can minimize the negative influence of both interest rates and exchange rates on output

**2,A sudden shift to a basket peg is the second best solution, and is superior to a sudden shift to floating.**

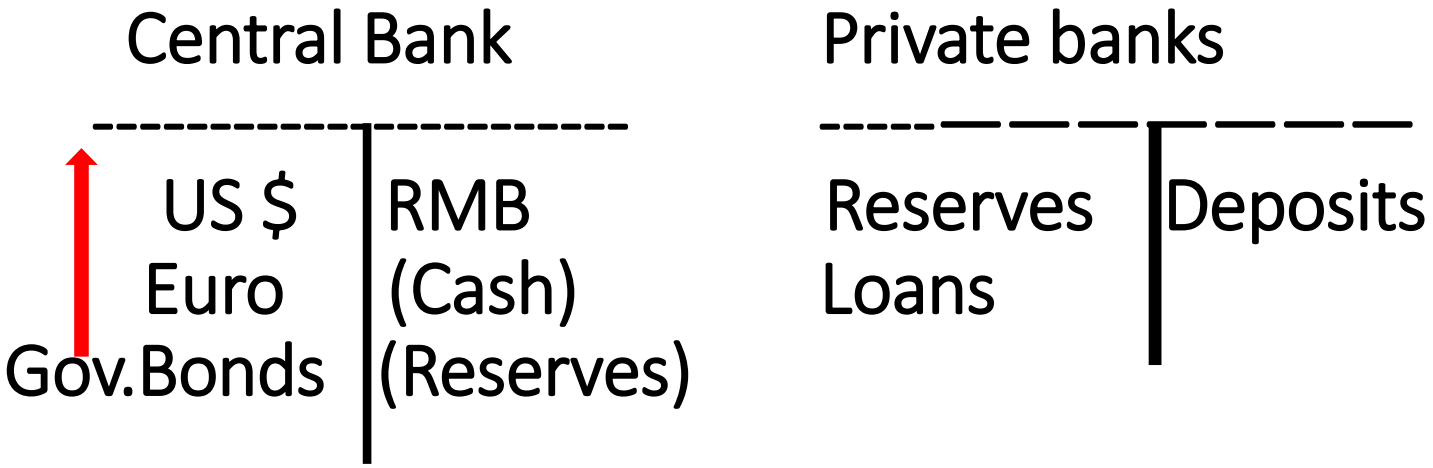
- Drawback : a lack of control over the negative influence of interest rates and exchange rates during the shift.

- Advantage : it can still assign optimal weights to currencies to stabilize output fluctuations once it has adopted a basket peg regime.

# 1 Chinese Exchange Rate (RMB)

Dollar Peg → Imbalance in Current Account

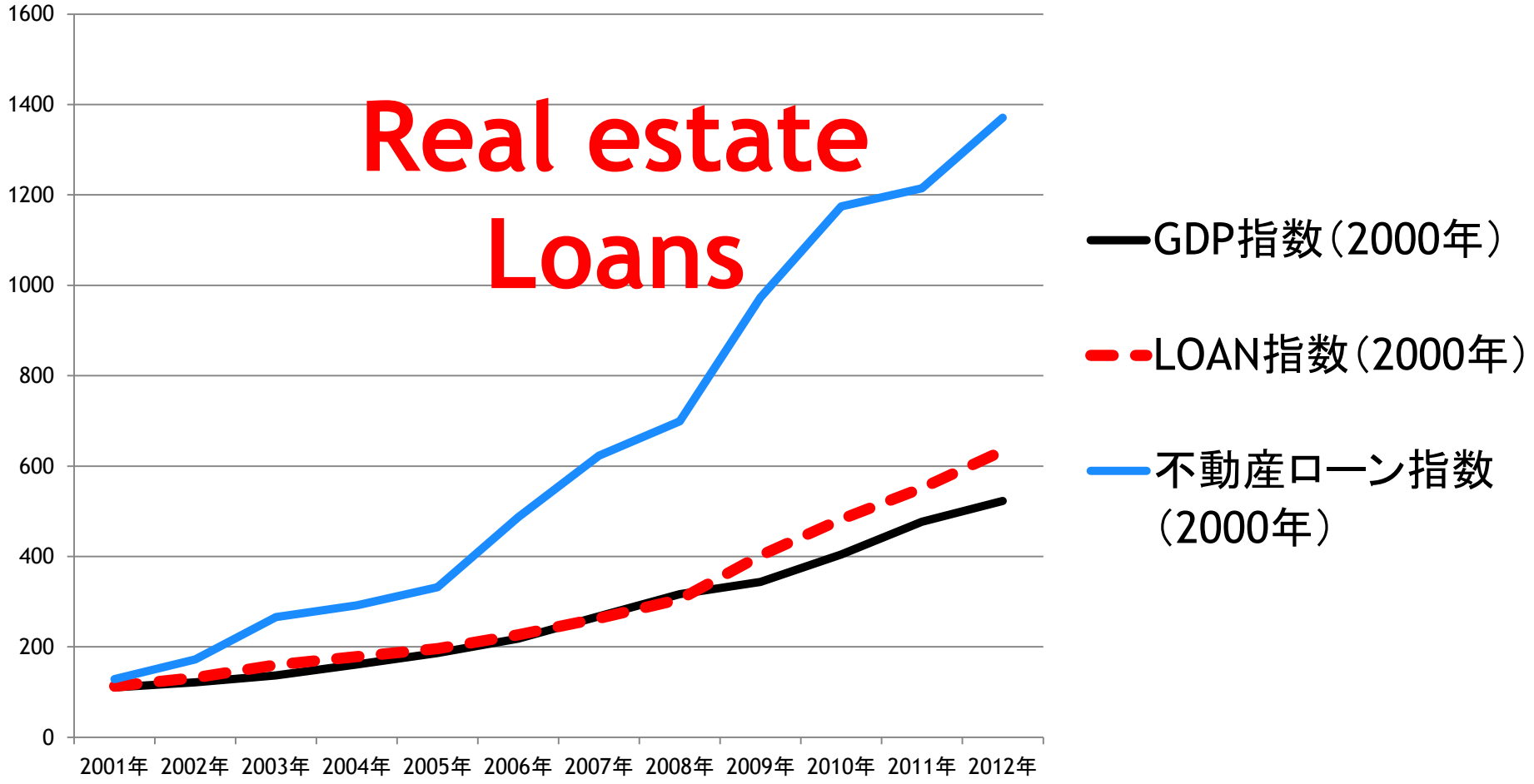
Stability of Employment




## 2, Bubble

Bank loans to real estate and housing

# CHINA GDP, Bank Loan, and Real estate Loan



# RMB Money Supply in China and Exchange Rate

**1, Export driven recovery**

**depreciation of RMB**

**2, Domestic Demand lead recovery**

**middle income class → Consumption**

**3, Local government relies on property tax**

**higher real estate prices are welcome**

**4, Shanghai stock crush**

**Professional investors left the market**

**Individual investors kept on putting money**

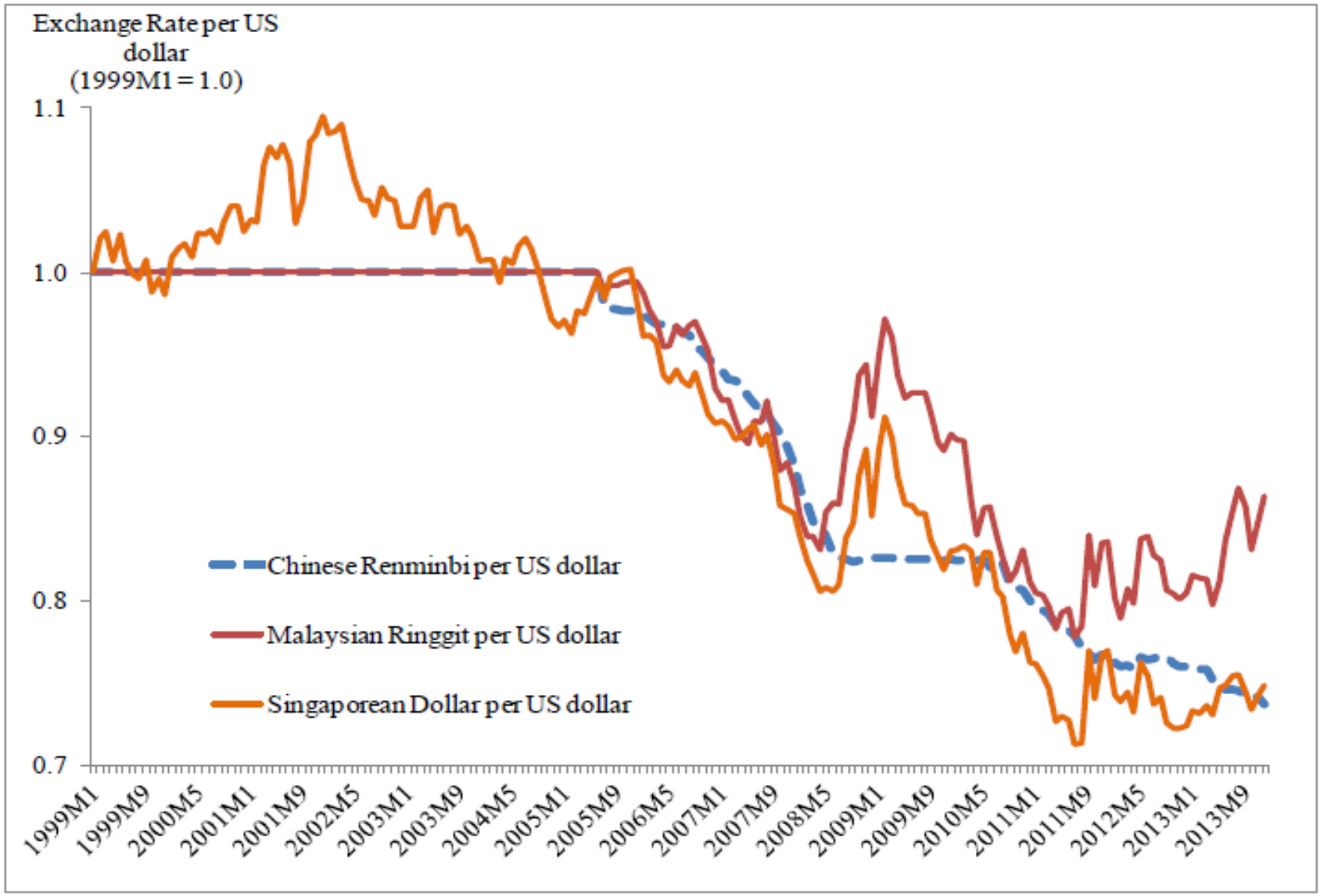
**stock price keeping operation**

*Review of Development Economics*, 19(3), 624–637, 2015
DOI:10.1111/rode.12163

# Dynamic Analysis of the Exchange Rate Regime: Policy Implications for Emerging Countries in East Asia

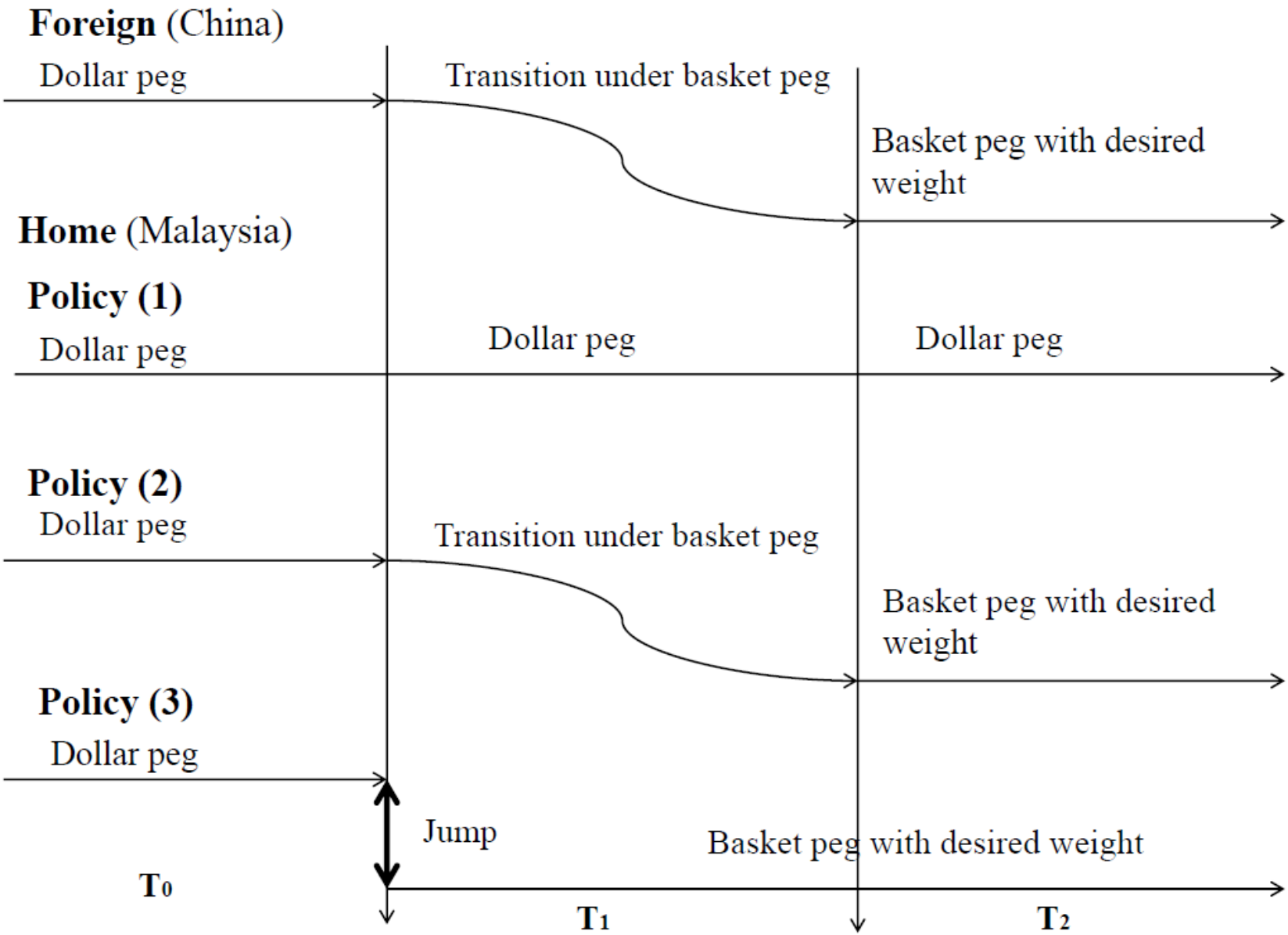
*Naoyuki Yoshino, Sahoko Kaji, and Tamon Asonuma**

# *Motivation*

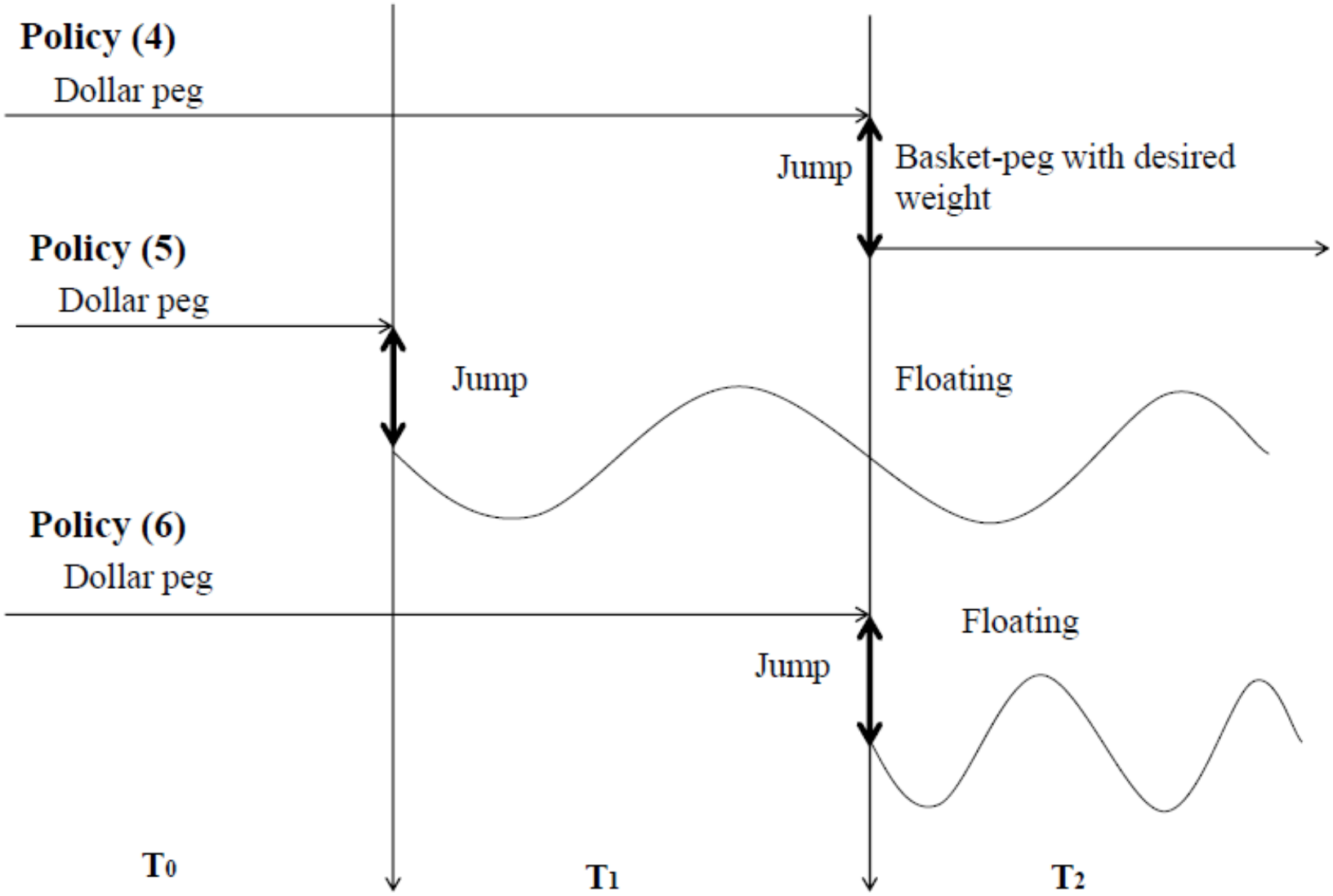



Sources: IMF IFS.

# *Transition Policies*



# *Transition Policies (cont.)*



# *Quantitative analysis*

## (1) Malaysia

| | Policy (1) | Policy (2) | Policy (3) | Policy (4) | Policy (5) | Policy (6) |
|---|---|---|---|---|---|---|
| Stable regime | Dollar peg | Basket peg | Basket peg | Basket peg | Floating | Floating |
| Adjustment | - | Gradual | Sudden | Sudden | Sudden | Sudden |
| Basket weight | 1.00 | 0.40 | 0.54 | 0.45 | - | - |
| Cumulative loss (%) | 17.51 | 17.35 | 17.46 | 17.46 | 24.31 | 25.93 |

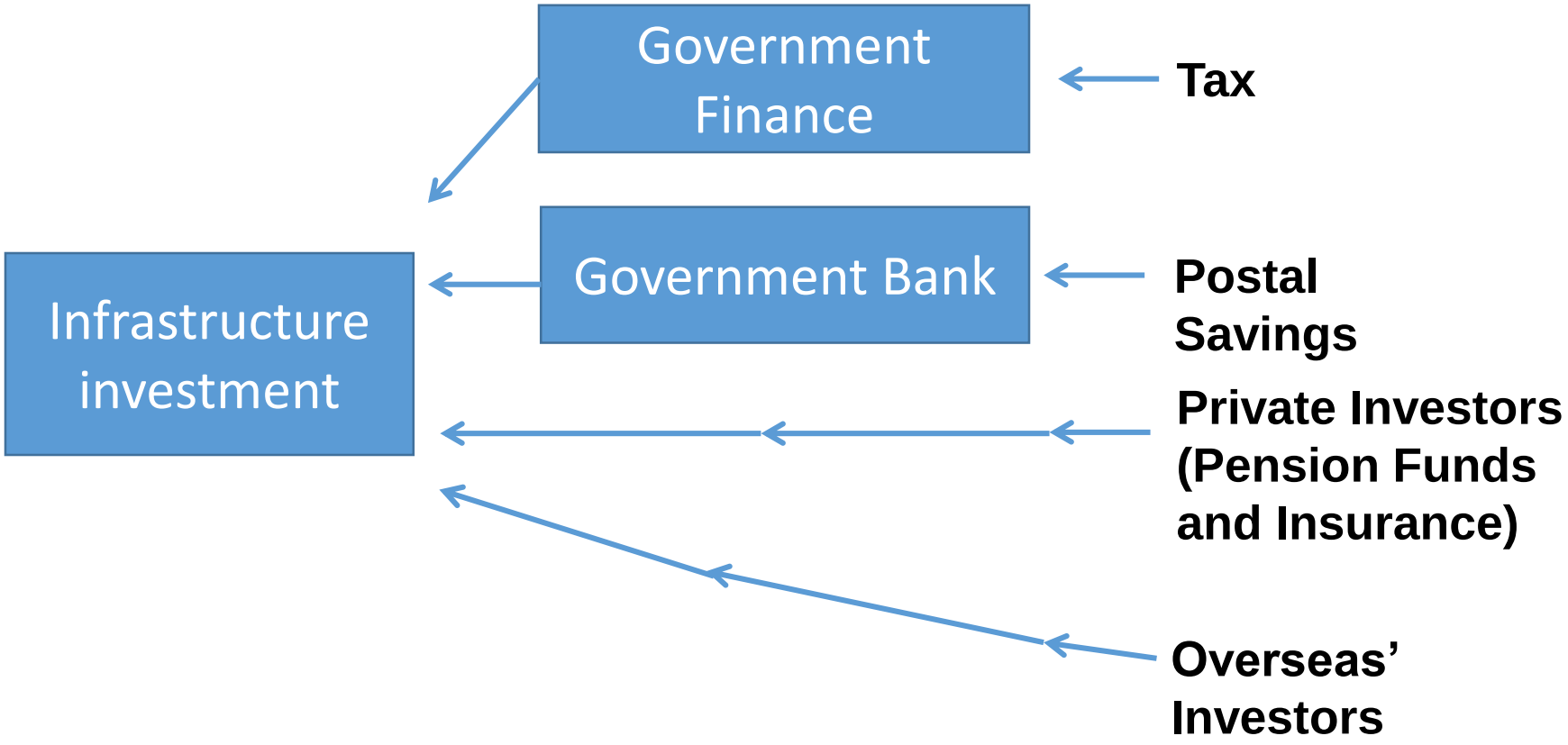
Sources: Authors' calculations

## (2) Singapore

| | Policy (1) | Policy (2) | Policy (3) | Policy (4) | Policy (5) | Policy (6) |
|---|---|---|---|---|---|---|
| Stable regime | Dollar peg | Basket peg | Basket peg | Basket peg | Floating | Floating |
| Adjustment | - | Gradual | Sudden | Sudden | Sudden | Sudden |
| Basket weight | 1.00 | 0.67 | 0.9 | 0.85 | - | - |
| Cumulative loss (%) | 45.60 | 45.56 | 45.64 | 45.61 | 60.51 | 64.18 |

Sources: Authors' calculations

# Huge Infrastructure Needs and Its Finance



# Large Projects by Professional Investors

Pension Funds

Insurance companies

Mutual Funds

## Community Type Infrastructure

→ Hometown Investment Trust Funds

Wind power Generator Funds

Japanese Wine Fund

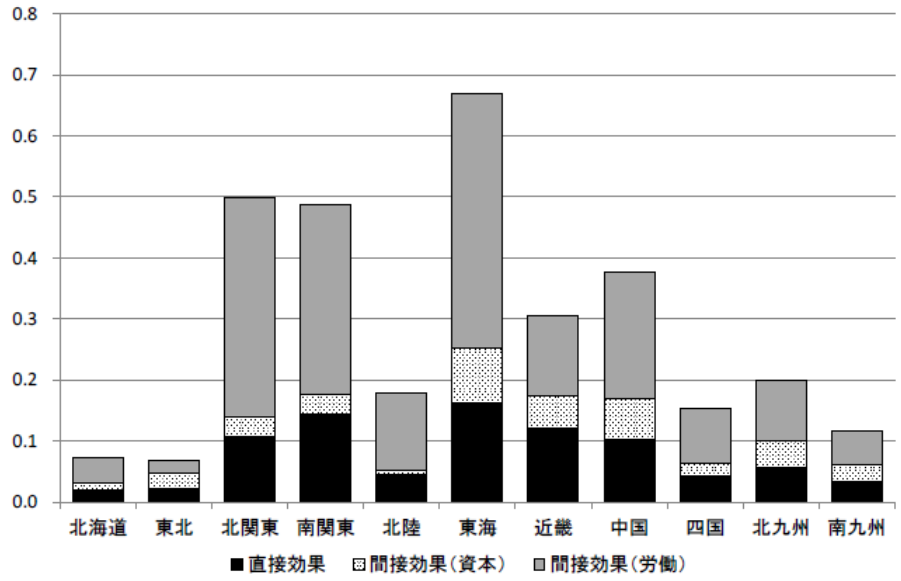
Local Airport

Agricultural Farmers' Fund

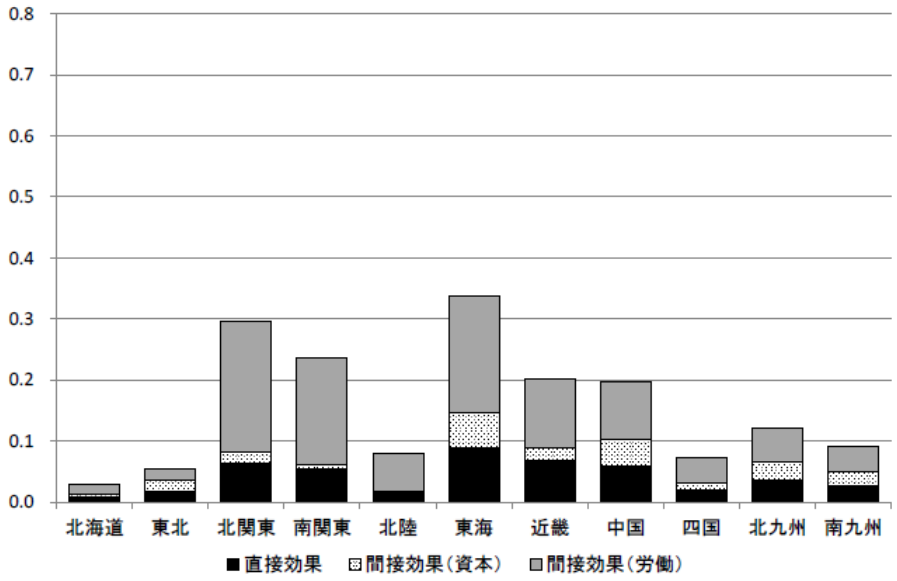
# Economic Effect of Infrastructure Investment Regional Disparities (Manufacturing Industry)

図 1　第 2 次産業における社会資本の生産力効果の変化

(1) 1990 年度




(2) 2010 年度

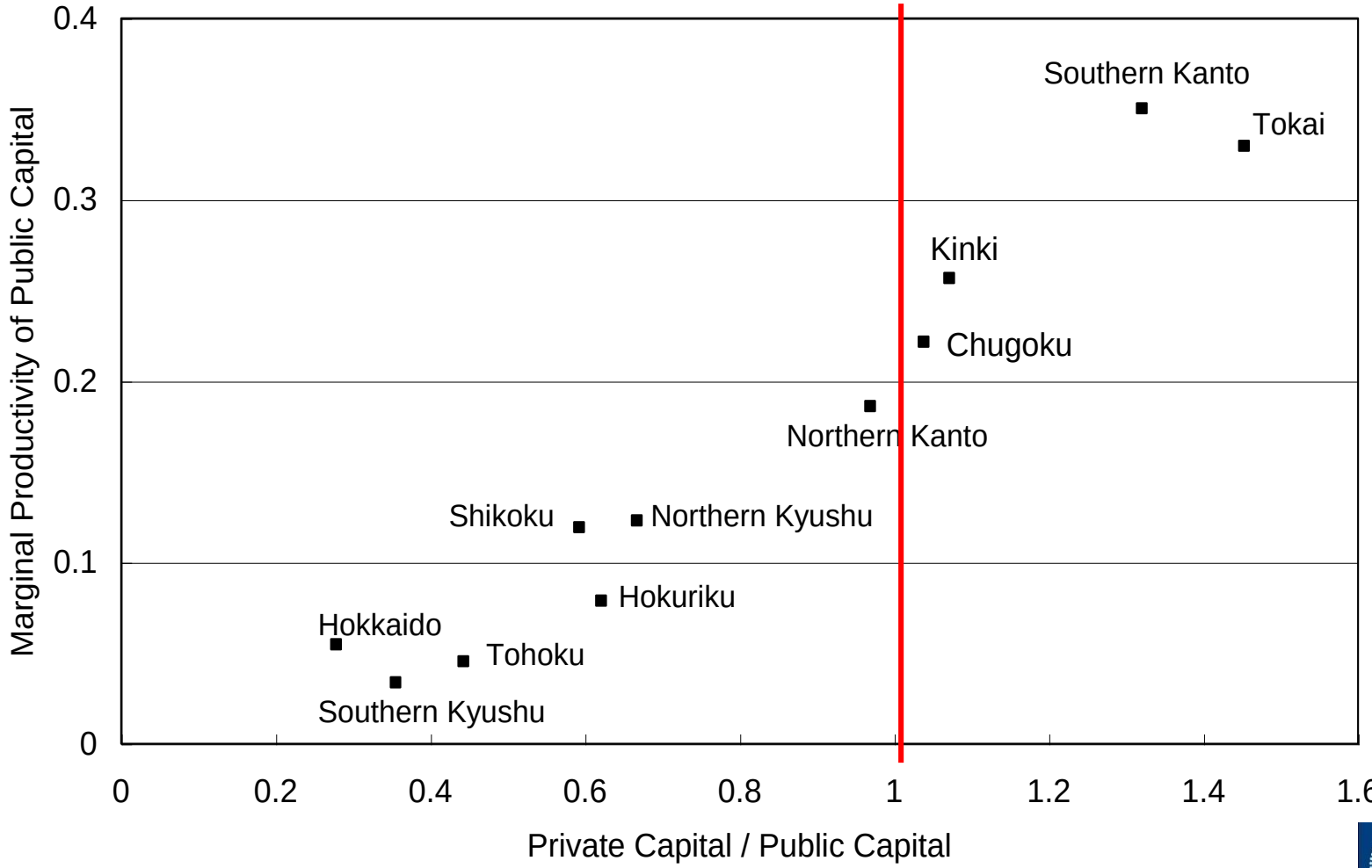



（出所） Nakahigashi-Yoshino (2015)

# Effectiveness of Public Investment

- "Private capital/Public capital ratio" to "Marginal productivity of Public capital" -

## Secondary Industry (Industrial Sector)








ADBInstitute

# Thailand (Effectiveness of Infrastructure)

| | | Private capital | Public capital | Direct effect | Indirect effect | |
|---|---|---|---|---|---|---|
| | | | | | Capital | Labor |
| **Agriculture,** forest, hunting and fishing | | | | | | |
| | 1971-1980 | 0.971 | 0.778 | 0.086 | 0.618 | 0.074 |
| | 1981-1990 | 0.912 | 0.516 | 0.107 | 0.323 | 0.087 |
| | 1991-2000 | 0.859 | 0.101 | 0.068 | -0.059 | 0.092 |
| | 2001-2012 | 0.814 | -0.185 | 0.018 | -0.293 | 0.090 |
| **Manufacturing** | | | | | | |
| | 1971-1980 | 0.710 | 0.526 | 0.191 | 0.111 | 0.224 |
| | 1981-1990 | 0.623 | 0.426 | 0.163 | -0.004 | 0.266 |
| | 1991-2000 | 0.554 | 0.409 | 0.135 | 0.190 | 0.083 |
| | 2001-2012 | 0.631 | 0.902 | 0.173 | 1.081 | -0.351 |

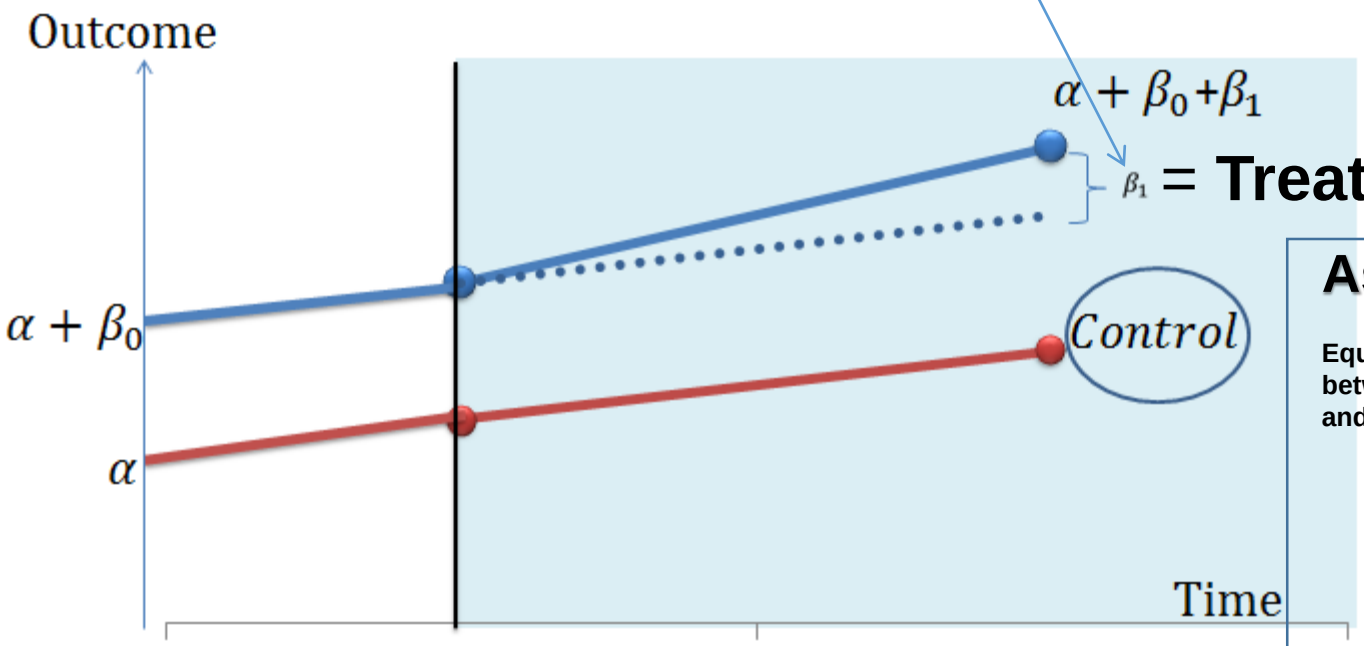
# Case Study: Southern Tagalog Arterial Road (STAR) , Philippineses

- The Southern Tagalog Arterial Road (STAR) project in Batangas province, Philippines (south of Metro Manila) is a modified Built-Operate-Transfer (BOT) project.
- The 41.9 km STAR tollway was built to improve road linkage between Metro Manila and Batangas City, provide easy access to the Batangas International Port, and thereby accelerate industrial development in Batangas and nearby provinces.

# Method: Difference-in-Difference (DiD) Analysis

$$\text{Outcome} = \alpha + \beta_0 D + \sum_{t+2}^{t-4} \beta_1 D \times T + \varepsilon$$

where: D = 1 (Treatment group) T = Treatment period
D = 0 (Control group)




**Assumption:**

**Equal trends between Treatment and Control groups**

## Difference-in-Difference Regression: Spillover

| | (1) Property tax | (2) Property tax | (3) Business tax | (4) Business tax | (5) Regulatory fees | (6) Regulatory fees | (7) User charge | (8) User charge |
|---|---|---|---|---|---|---|---|---|
| Treatment D | 1.55535 | 0.736 | 1.067 | 0.438 | 1.372 | 0.924 | 0.990 | 0.364 |
| | (1.263) | (0.874) | (1.316) | (1.407) | (1.123) | (1.046) | (1.095) | (1.028) |
| Treatment D × $Period_{t+2}$ | 0.421** | -0.083 | 1.189*** | 0.991** | 0.248*** | -0.019 | 0.408*** | -0.010 |
| | (0.150) | (0.301) | (0.391) | (0.450) | (0.084) | (0.248) | (0.132) | (0.250) |
| Treatment D × $Period_{t+1}$ | 0.447** | 0.574*** | 1.264*** | 1.502*** | 0.449** | 0.515*** | 0.317** | 0.434** |
| | (0.160) | (0.118) | (0.415) | (0.542) | (0.142) | (0.169) | (0.164) | (0.167) |
| Treatment D × $Period_{t0}$ | 0.497*** | 0.570** | 1.440*** | 1.641*** | 0.604** | 0.642*** | 0.350 | 0.422 |
| | (0.128) | (0.223) | (0.417) | (0.482) | (0.183) | (0.181) | (0.271) | (0.158) |
| Treatment D × $Period_{t-1}$ | 1.294** | 0.387 | 2.256** | 1.779** | 1.318** | 0.838* | 0.959 | 0.197 |
| | (0.674) | (0.728) | (0.957) | (0.470) | (0.649) | (0.448) | (0.714) | (0.560) |
| Treatment D × $Period_{t-2}$ | 1.163* | 0.336 | 2.226** | 1.804** | 1.482** | 1.044** | 0.941 | 0.247 |
| | (0.645) | (0.594) | (0.971) | (0.531) | (0.634) | (0.413) | (0.704) | (0.531) |
| Treatment D × $Period_{t-3}$ | 1.702* | 0.450 | 2.785** | 2.070*** | 1.901*** | 1.238*** | 1.732*** | 0.676 |
| | (0.980) | (0.578) | (1.081) | (0.544) | (0.630) | (0.369) | (0.598) | (0.515) |
| Treatment D × $Period_{t-4,}$ forward | 2.573*** | 1.100 | 3.428*** | 2.560*** | 2.288*** | 1.509*** | 2.030*** | 0.787 |
| | (0.900) | (0.758) | (0.928) | (0.350) | (0.563) | (0.452) | (0.607) | (0.745) |
| Construction | | 2.283** | | 1.577 | | 1.207 | | 1.942* |
| | | (1.172) | | (1.196) | | (0.855) | | (1.028) |
| Constant | 14.69*** | -2.499 | 14.18*** | 2.230 | 13.66*** | 4.597 | 13.08*** | -1.612 |
| | (0.408) | (8.839) | (0.991) | (9.094) | (0.879) | (6.566) | (0.649) | (7.84) |
| *N* | 80 | 73 | 79 | 73 | 80 | 73 | 77 | 73 |
| $R^2$ | 0.29 | 0.41 | 0.37 | 0.44 | 0.43 | 0.50 | 0.26 | 0.39 |

Clustered standard errors, corrected for small number of clusters; * Significant at 10%. ** Significant at 5%. *** Significant at 1%.

# The Southern Tagalog Arterial Road (STAR)

## 1. Philippines, Manila

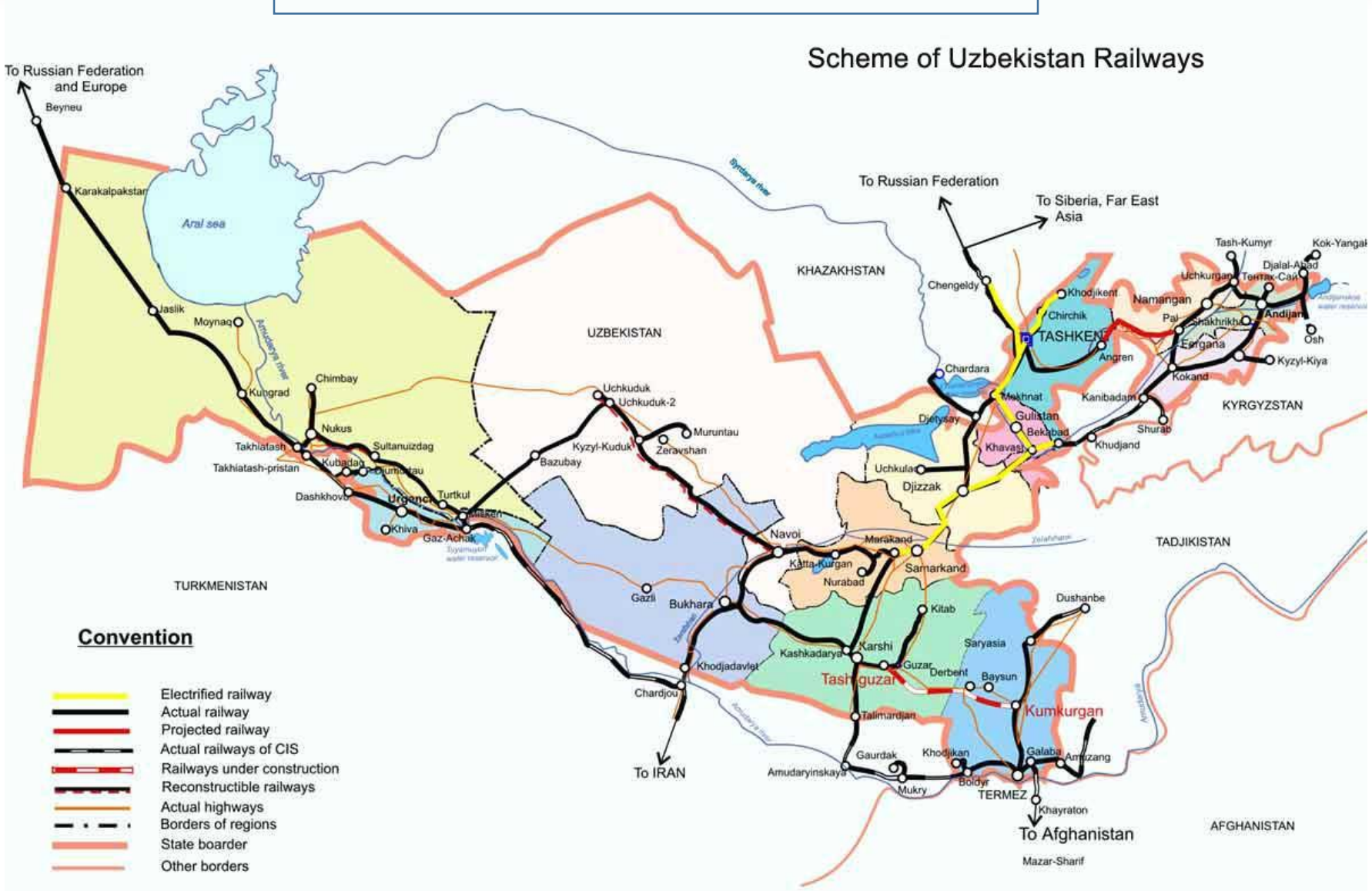
表 8　フィリピンの STAR 高速道路の影響のない地域と比較した事業税の増加額

（単位：100 万ペソ）

| | $t_{-2}$ | $t_{-1}$ | $t_0$ | $t_{+1}$ | $t_{+2}$ | $t_{+3}$ | $t_{+4}$以降 |
|---|---|---|---|---|---|---|---|
| Lipa 市 | 134.36 | 173.50 | 249.70 | 184.47 | 191.81 | 257.35 | 371.93 |
| Ibaan 市 | 5.84 | 7.04 | 7.97 | 6.80 | 5.46 | 10.05 | 12.94 |
| Batangas 市 | 490.90 | 622.65 | 652.83 | 637.89 | 599.49 | 742.28 | 1208.61 |

（出所）Yoshino and Pontines (2015)より筆者作成

# Uzbekistan: Railway

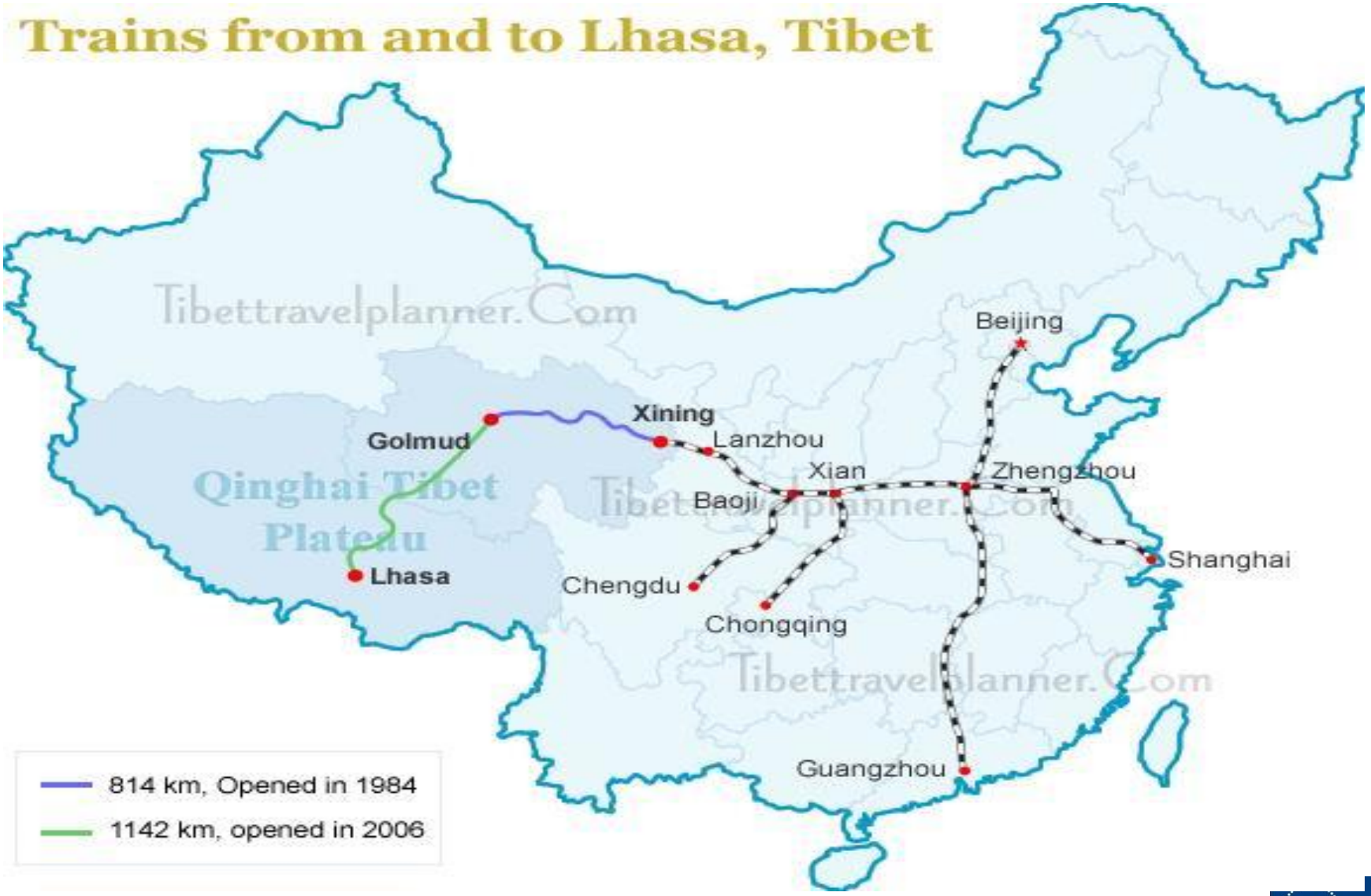





ADBInstitute

| Regions | Out come | Pre-railway period | Post-railway period | Diffe rence |
|---|---|---|---|---|
| Non-affected group | GDP growth rate | 8.3 | 8.5 | 0.2 |
| Affected Group | GDP growth rate | 7.2 | 9.4 | 2.2 |

# Qinghai-Tibet Railway Map



# Tibet Railway

$R^2 =$

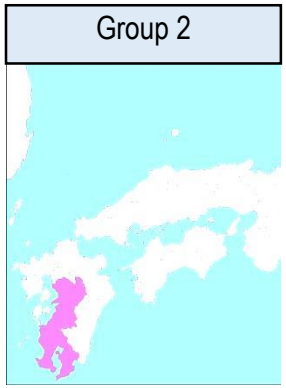

ADBInstitute

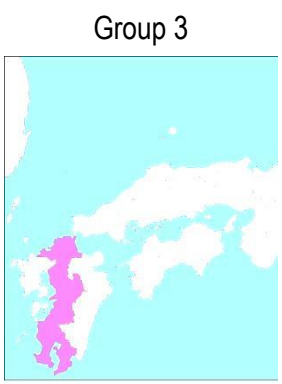
| Source | SS | df | MS | | |
|---|---|---|---|---|---|
| Model | 8.28173613 | 6 | 1.38028935 | Number of obs = | 72 |
| Residual | 11.6075298 | 65 | .178577382 | F( 6, 65) = | 7.73 |
| | | | | Prob > F = | 0.0000 |
| Total | 19.8892659 | 71 | .280130506 | R-squared = | 0.4164 |
| | | | | Adj R-squared = | 0.3625 |
| | | | | Root MSE = | .42258 |

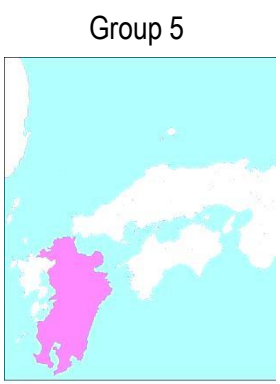
| difference1 | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| govspending1 | .0118414 | .0028554 | 4.15 | 0.000 | .0061389 | .017544 |
| population1 | .0034233 | .0013616 | 2.51 | 0.014 | .000704 | .0061426 |
| population0 | -.0102002 | .0037957 | -2.69 | 0.009 | -.0177808 | -.0026196 |
| govspending0 | -.0206841 | .0055783 | -3.71 | 0.000 | -.0318248 | -.0095435 |
| Dummy | .0924005 | .2097625 | 0.44 | 0.661 | -.3265242 | .5113252 |
| Dummy2 | .061252 | .1937049 | 0.32 | 0.753 | -.3256034 | .4481074 |
| _cons | .4984291 | .2045091 | 2.44 | 0.018 | .0899961 | .906862 |

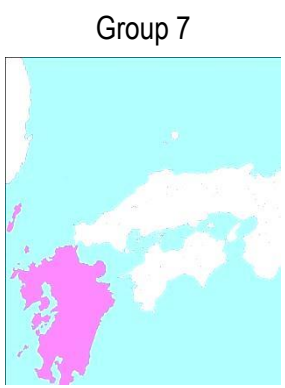
# Japanese Bullet Train
# Kyushu Shinkansen

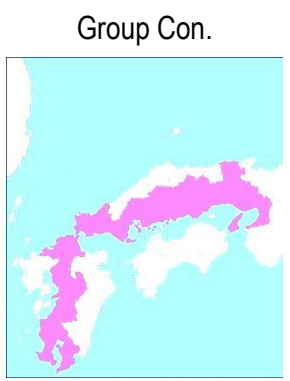
# Japanese Bullet Train
# Estimation results by group of prefectures

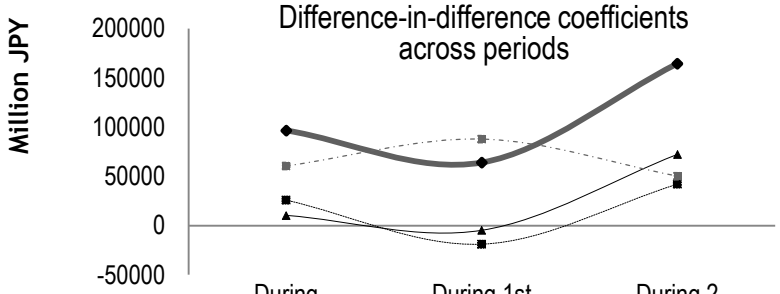


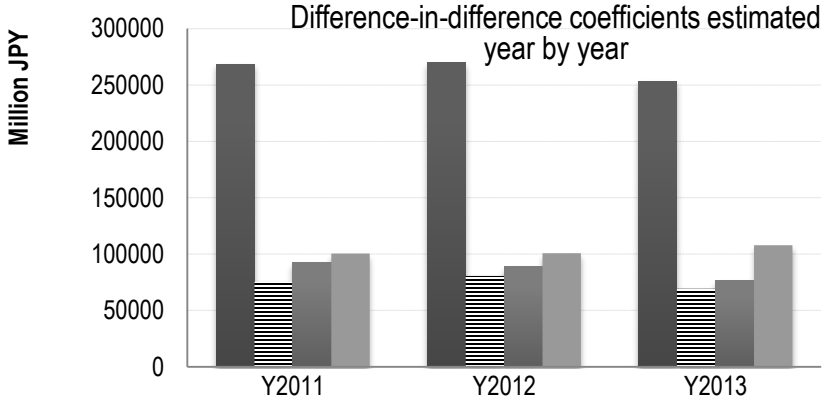




| | During Construction Period [1991-2003] | During 1st Phase of Operation [2004-2010] | During 2 Phase of Operation [2011-2013] |
|---|---|---|---|
| Total Tax | 96603 | 64067 | 164541 |
| Personal Income Tax | 25723 | -19033 | 42035 |
| Corporate Tax | 10350 | -4772 | 72330 |
| Other Taxes | 60529 | 87872 | 50176 |




| | Y2011 | Y2012 | Y2013 |
|---|---|---|---|
| Total Tax | 268644 | 270262 | 253343 |
| Personal Income Tax | 75582 | 80472 | 69234 |
| Corporate Tax | 92720 | 89082 | 76302 |
| Other Taxes | 100341 | 100707 | 107805 |

**Note**: Numbers for tax revenue amount adjusted for CPI with base year 1982. Pre-shinkansen construction period covers years from 1982 to 1990. Non-affected groups include rest of the prefectures
Treated groups: Group 2: Kagoshima, Kumamoto
Group 3: Kagoshima, Kumamoto, Fukuoka
Group 5: Kagoshima, Kumamoto, Fukuoka, Oita, Miyazaki
Group 7: Kagoshima, Kumamoto, Fukuoka, Oita, Miyazaki, Saga, Nagasaki
Group Con.: Kagoshima, Kumamoto, Fukuoka, Yamaguchi, Hiroshima, Okayama, Hyogo, Osaka

# Impact of Kyushu Shinkansen Rail on CORPORATE TAX revenue during 2nd PHASE OF OPERATION period

{2011-2013} , mln. JPY (adjusted for CPI, base 1982)

| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 19 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 94 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 |  | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 |  | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 |

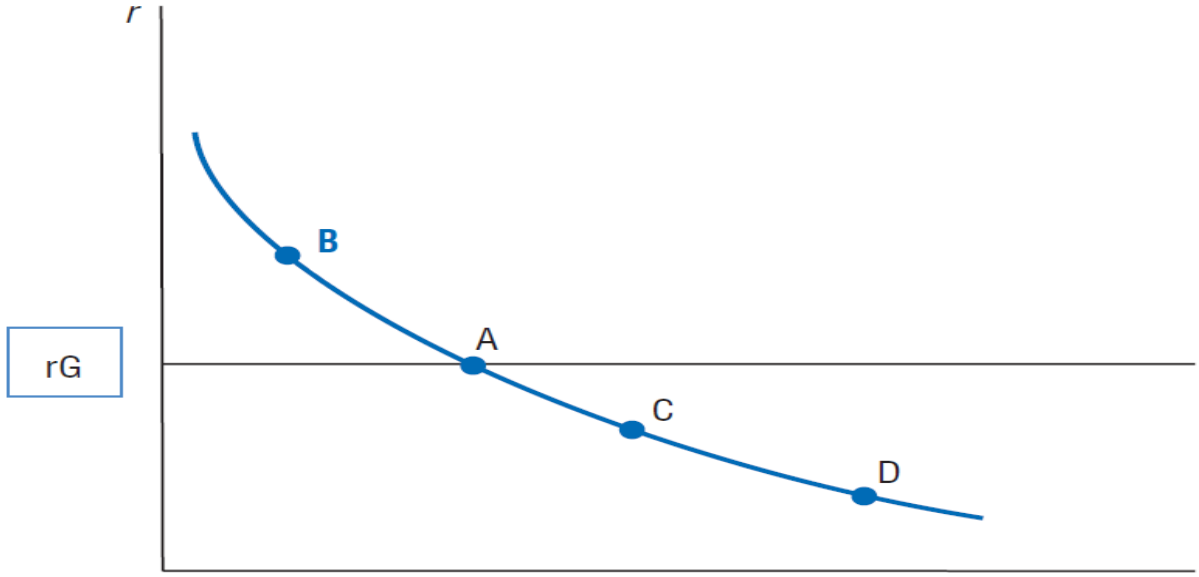
| Variable | Regression 1 | Regression 2 | Regression 3 | Regression 4 | Regression 5 |
|---|---|---|---|---|---|
| Treatment2 | 72330.012** | | | | |
| | [2.2] | | | | |
| Number of tax payers | 5.5277056*** | 5.5585431*** | 5.558603*** | 5.5706545*** | 5.9640287*** |
| | [3.13] | [3.14] | [3.14] | [3.14] | [3.07] |
| Treatment3 | | 104664.34* | | | |
| | | [2] | | | |
| Treatment5 | | | 82729.673** | | |
| | | | [2.1] | | |
| Treatment7 | | | | 80998.365** | |
| | | | | [2.34] | |
| TreatmentCon | | | | | 179632 |
| | | | | | [1.58] |
| Constant | -568133.98** | -573747.28** | -574245.87** | -576867.56** | -642138.87** |
| | [-2.07] | [-2.08] | [-2.08] | [-2.09] | [-2.1] |
| N | 611 | 611 | 611 | 611 | 611 |
| R2 | 0.350653 | 0.352058 | 0.352144 | 0.352874 | 0.364088 |
| F | 5.062509 | 5.486197 | 5.351791 | 5.431088 | 16.55518 |

**COMPOSITION OF GROUPS**

| Group2 | Group5 |
|---|---|
| Kagoshima | Kagoshima |
| Kumamoto | Kumamoto |
| | Fukuoka |
| **Group3** | Oita |
| Kagoshima | Miyazaki |
| Kumamoto | |
| Fukuoka | |
| | **GroupCon** |
| **Group7** | Kagoshima |
| Kagoshima | Kumamoto |
| Kumamoto | Fukuoka |
| Fukuoka | Osaka |
| Oita | Hyogo |
| Miyazaki | Okayama |
| Saga | Hiroshima |
| Nagasaki | Yamaguchi |

**Note**: Treatment2 = Time Dummy {1991-2003} x Group2. etc. t-values are in parenthesis. Legend: * p<.1; ** p<.05; *** p<.01. Clustering standard errors are used, allowing for heteroscedasticity and arbitrary autocorrelation within a prefecture, but treating the errors as uncorrelated across prefectures

# Expected rates of return on project bonds vs. benchmark yield




| | No Efforts | Efforts to improve |
|---|---|---|
| **No Efforts** | (50, *r*)<br>Operating Company Investors | (50, *αr*)<br>Operating Company Investors |
| **Efforts to improve** | (100, *r*)<br>Operating Company Investors | (100, αr)<br>Operating Company Investors |

# *Risks Associated with Infrastructure*

1、**Risk sharing between private and public**

Various Risks (political risk, operational risk, demand risk, ex-post risk, maintenance risk, earthquakes, natural disaster risk)

2、**too much reliance on overseas' money**

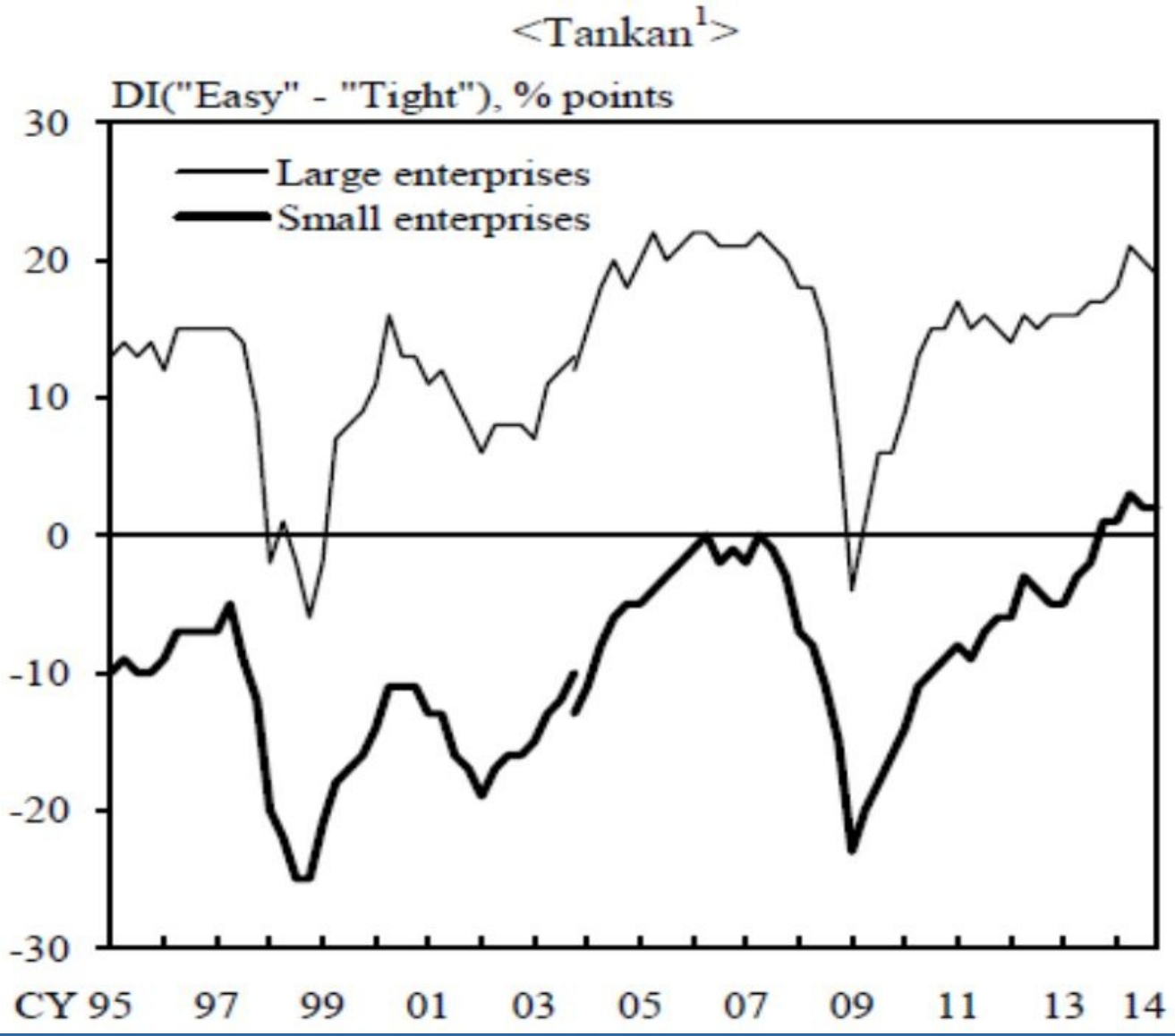
→ future burden for the country

→ Increase domestic savings

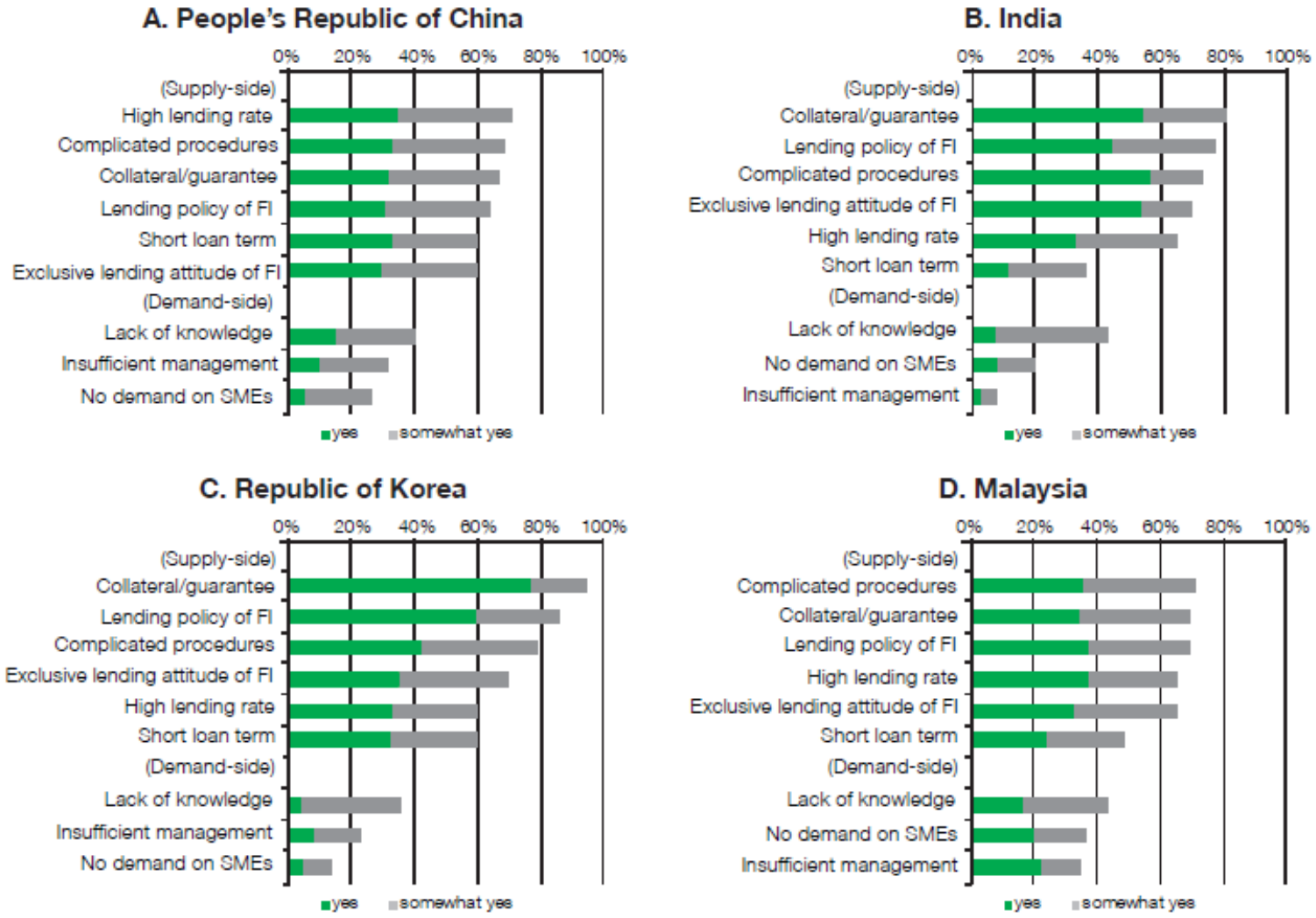
3, **bankable projects or not ?**

4, **long term investment**

# Access to Finance by SMEs and Large Firms in Japan



# Barriers for SMEs in Accessing Financial Institutions




**Source**: ADB–OECD study on enhancing financial accessibility for SMEs: Lessons from recent crises. Mandaluyong City, Philippines: Asian Development Bank, 2013

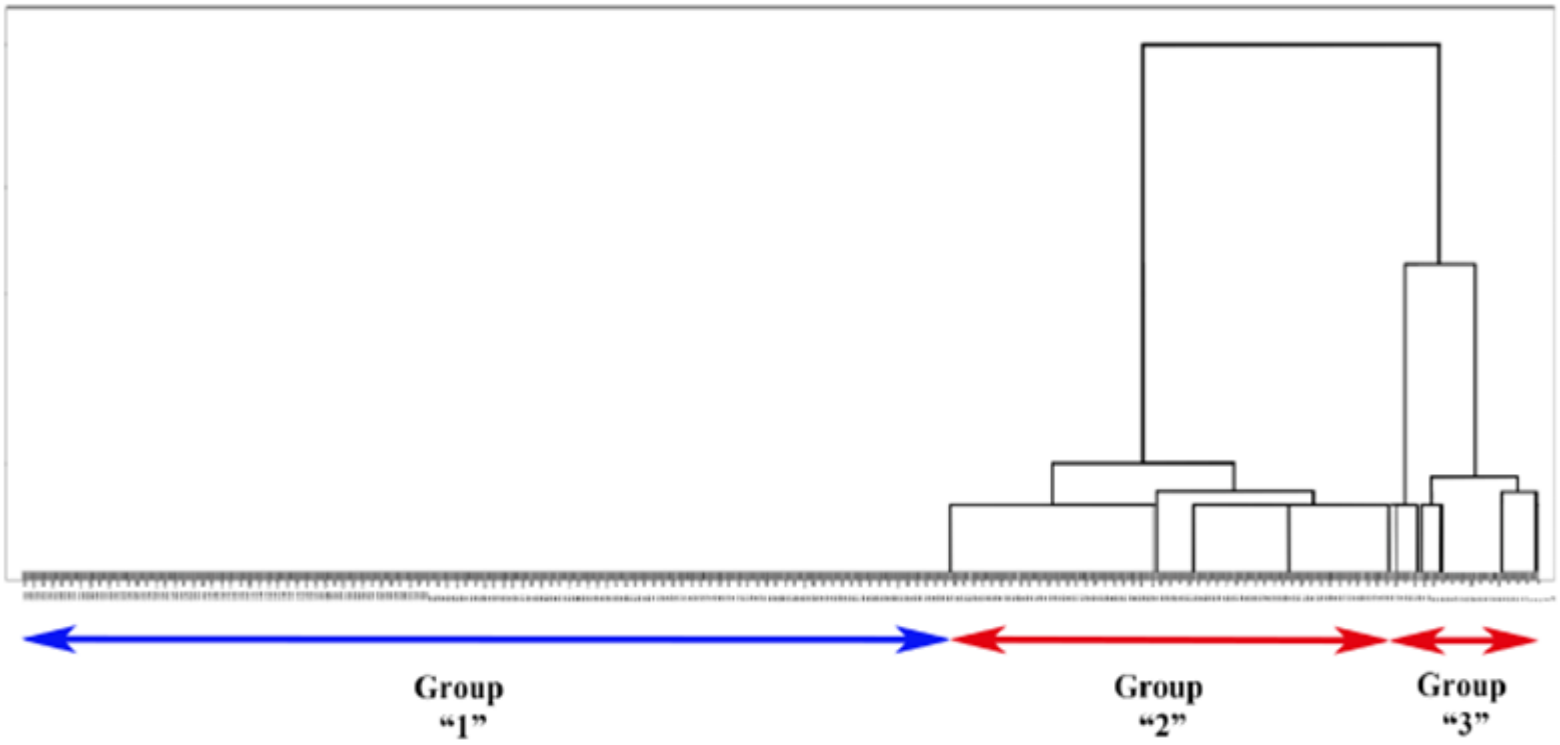
# Examined Variable

| No. | Symbol | Definition | Category |
|---|---|---|---|
| 1 | Equity_TL | Equity (book value)/total liabilities | Leverage |
| 2 | TL_Tassets | Total liabilities/total assets | |
| 3 | Cash_Tassets | Cash/total assets | Liquidity |
| 4 | WoC_Tassets | Working capital/total assets | |
| 5 | Cash_Sales | Cash/net sales | |
| 6 | EBIT_Sales | Ebit/sales | Profitability |
| 7 | Rinc_Tassets | Retained earnings/total assets | |
| 8 | Ninc_Sales | Net income/sales | |
| 9 | EBIT_IE | Ebit/interest expenses | Coverage |
| 10 | AP_Sales | Account payable/sales | Activity |
| 11 | AR_TL | Account receivable/total liabilities | |

*Note:* Retained earnings = the percentage of net earnings not paid out as dividends, but retained by the company to be reinvested in its core business or to pay debt. It is recorded under shareholders' equity in the balance sheet. Ebit = earnings before interest and taxes. Account payable = an accounting entry that represents an entity's obligation to pay off a short-term debt to its creditors. The accounts payable entry is found on a balance sheet under current liabilities. Account receivable = money owed by customers (individuals or corporations) to another entity in exchange for goods or services that have been delivered or used, but not yet paid for. Receivables usually come in the form of operating lines of credit and are usually due within a relatively short time period, ranging from a few days to a year.

# Cluster analysis: the average linkage method

## Dendogram Using Average Linkage



# Factor Loadings of Financial Variables after Direct Oblimin Rotation

| Variables (Financial Ratios) | Component | | | |
|---|---|---|---|---|
| | Z1 | Z2 | Z3 | Z4 |
| Equity_TL | 0.009 | 0.068 | 0.113 | **0.705** |
| TL_Tassets | -0.032 | **-0.878** | 0.069 | -0.034 |
| Cash_Tassets | -0.034 | -0.061 | **0.811** | 0.098 |
| WoC_Tassets | -0.05 | **0.762** | 0.044 | 0.179 |
| Cash_Sales | **-0.937** | 0.021 | 0.083 | 0.009 |
| EBIT_Sales | **0.962** | 0.008 | 0.024 | -0.004 |
| Rinc_Tassets | 0.014 | **0.877** | 0.015 | -0.178 |
| Ninc_Sales | **0.971** | -0.012 | 0.015 | 0.014 |
| EBIT_IE | 0.035 | 0.045 | **0.766** | -0.098 |
| AP_Sales | **-0.731** | -0.017 | -0.037 | -0.016 |
| AR_TL | 0.009 | -0.041 | -0.104 | **0.725** |

*Note:* The extraction method was principal component analysis, The rotation method was direct oblimin with Kaiser normalization.

# Credit Rating of SMEs using Asian Data

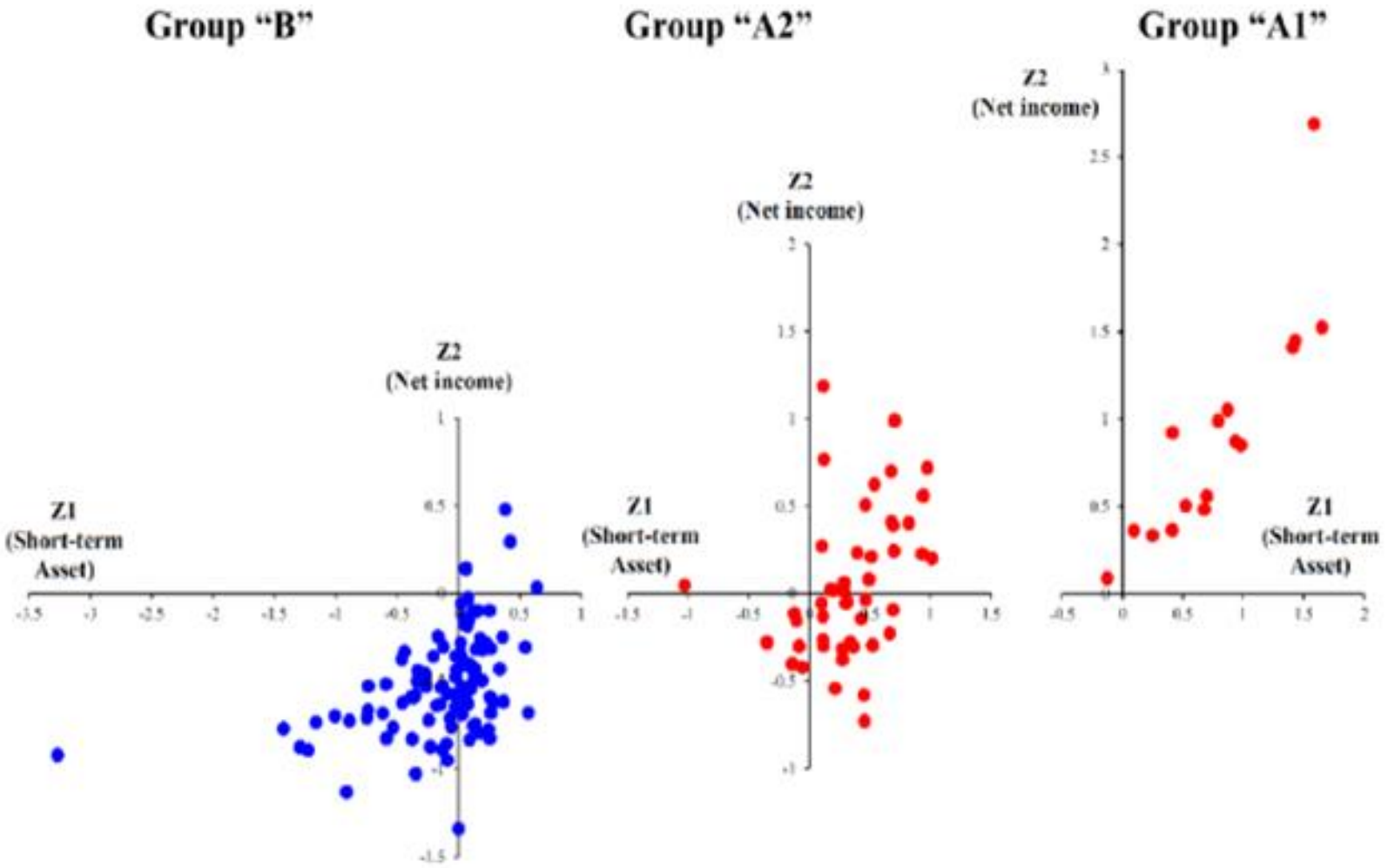
**(i) Sales**

**(ii) Assets**

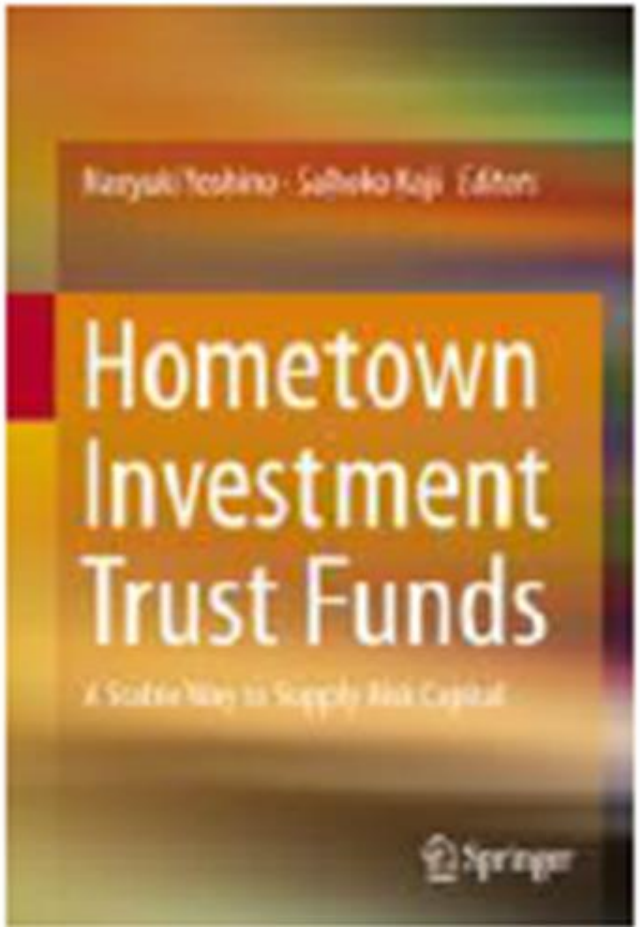
**(iii) Liquidity (Cash)**

**(iv) Total Debt**

# Grouping Based on Principal Component (Z1-Z2) and Cluster Analysis



# Possible Solutions
## Start up businesses, farmers




**Hometown Investment Trust Funds**

---

**A Stable Way to Supply Risk Capital**

**Yoshino, Naoyuki; Kaji Sahoko (Eds.)**
**2013, IX, 98 p. 41 illus.,20 illus. in color**

**Available Formats:**

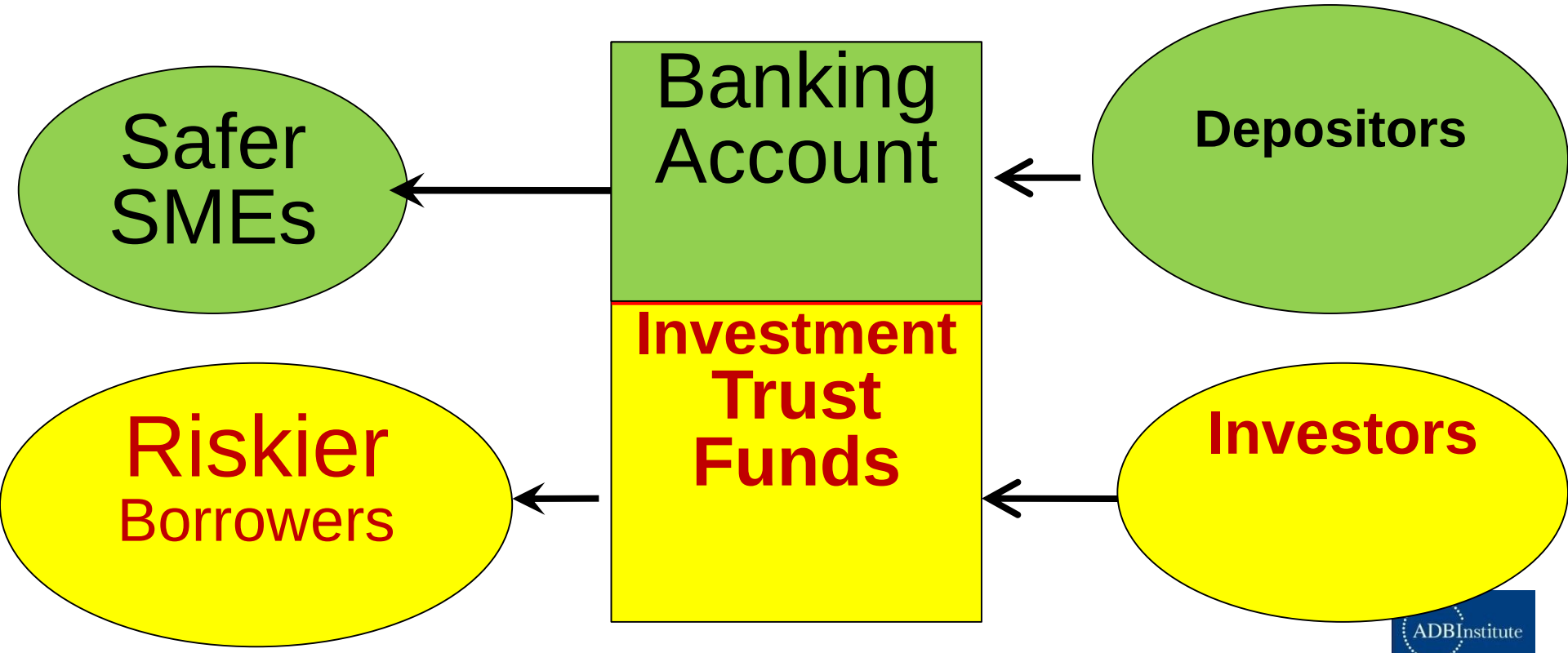
**ebook**
**Hardcover**
**Springer**

**Japan, Cambodia Vietnam, Peru**

# Bank-based SME financing and regional financing to riskier borrowers

1. Bank Loans to relatively safer borrower
2. Hometown Investment Trust Funds/

**E-Finance, Internet financing**



# Investment in SMEs and start up businesses

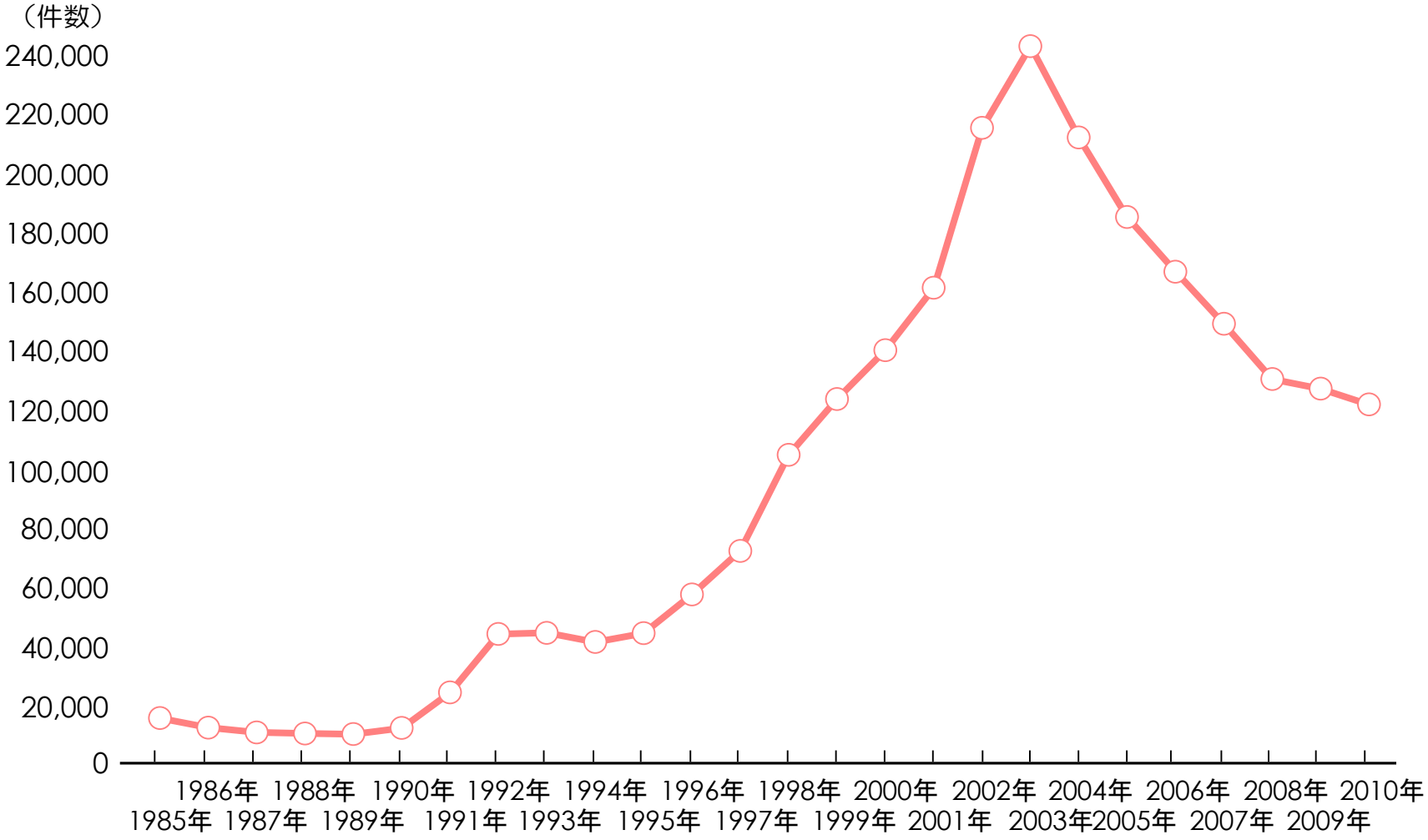

すべてを失い再起を断念しそうになった時。

# Agricultural Funds

## Beans and Wine

ADBInstitute

# Number of Households' Default in Japan



# Full picture of Users, money lenders and market, surrounding the consumer credit

Hardships of life

Spendthrift

Healthy borrowers

Short-term bridge finance
New enterprises

Entry method (Registration system)
(Such as introducing paper test)

User (borrower)

Money lenders

Credit information agency

Public assistance, pre-counseling (Municipal consultation counter)

Conduct Control

Maximum interest rate

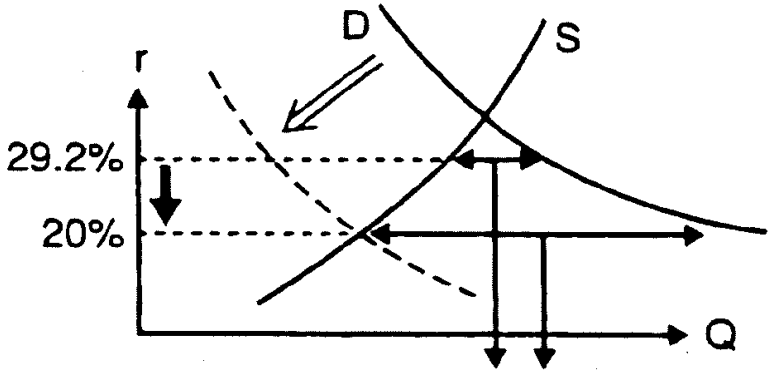
Collection
Delivery of Written Documents
Over lending

Strengthening supervision

- Business improvement order
- On-site inspection
- Submitting career report

<Consultation counter>
Ex-post counseling

Financial economy education
Consumer education




To black market?
(Tightening penalties to loan sharks)

ADBInstitute

# New Law – Microcredit Regulation hotline from Consumers (FSA)

**1, Total Amount of Borrowing < 1/3 of Income**

**2, Ceiling Interest Rate = 20%**

**more than 96% → 29% → 20%**

**3, Borrowers Information**

**Aggregated total individual borrowings**

**4, Paper examination to be a money lender**

**5, Minimum capital requirement**

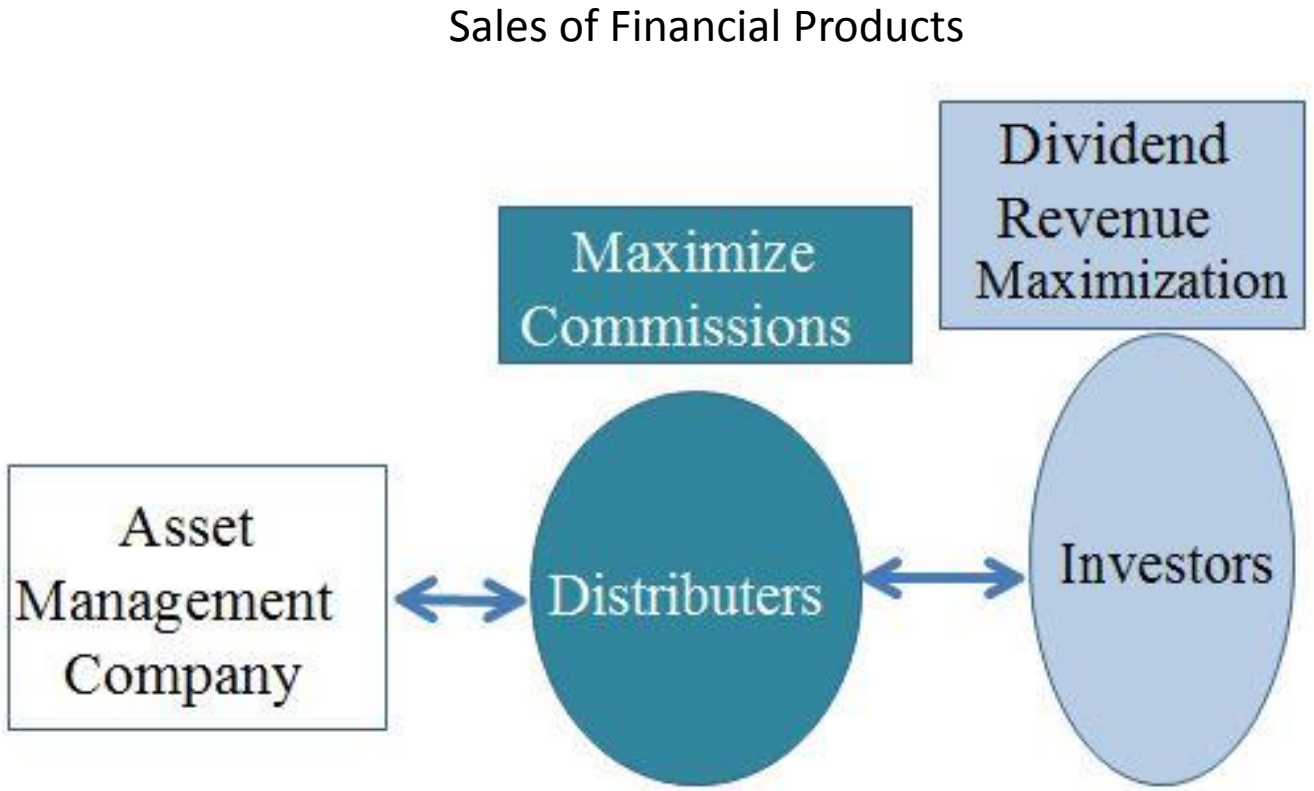
**6, Set up of Self regulatory organization**

**7, Consumer hotline**

**(FSA, Money lenders association)**

# Commissions and Fees of Distributors

## Necessity for Review of Asset Management Fees




Source: Yoshino (2013)

# Longer term Investment achieves higher rate of return

A0=100

| | Gross return on investment | | Net return of investors | | Sales Charges | | Trust Remunerations |
|---|---|---|---|---|---|---|---|
| No transaction during the period | R 28.87 | = | π 10.70 | + | τ 2.45 | + | ε 15.72 |
| Switching funds every 2.9 years | R 28.19 | = | π 3.29 | + | τ 9.86 | + | ε 15.04 |
| Switching funds every 2.5 years | R 28.19 | = | π 1.33 | + | τ 11.82 | + | ε 15.04 |
| Switching funds every 2.0 years | R 27.8 | = | π −0.26 | + | τ 13.41 | + | ε 14.65 |

Period 2000.1 ~ 2013.12

ADBInstitute

# Purpose of holding mutual funds (Survey 2014)

USA (i) 91% Retirement
(ii) 49% Reduce taxable income
(iii) 49% Emergency

Japan (i) 36.7% No specific reason, Recommended by retailers
(ii) 30.4% Prepare for after retirement
(iii) 17.7% Asset Diversification

# Period of holding mutual funds

(Survey USA2004, JPN2014)

| | | |
|---|---|---|
| USA | 42% | Longer than 10years |
| | 27% | 6 to 10 years |
| | 27% | 1 to 5 years |
| Japan | 40.7% | No specific period |
| | 21.0% | 3 years- 5 years |
| | 14.8% | 2 years- 3 years |

## References


**Sahay, Schiff, Lom, Sumi and Walsh, Edition (2015) The Future of Asian Finance, International Monetary Fund, Washington DC.**

**Yoshino N. Kaji, S. (2013) *Hometown Investment Trust Funds*, Springer, March 2013**

Yoshino,N and T. Hirano (2012) "Counter-Cyclical Buffer of the Basel Capital Requirement and Its Empirical Analysis" , chapter in ***Current Developments in Monetary and Financial Law*** (Vol. 6): Restoring Financial Stability—The Legal Response, edited by the International Monetary Fund (IMF, 2012).

Yoshino, N and Farhad Taghizadeh (2015), "An Analysis of Challenges Faced by Japan's Economy and Abenomics" ***The Journal of Japanese Political Economy***, Taylor and Frances.

***Yoshino, N., Taghizadeh Hesary, F. (2014), 'Analytical Framework on Credit Risks for Financing SMEs in Asia'. Asia-Pacific Development Journal. United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP)***

# References


Yoshino, Naoyuki（2010）“Financing Transport Infrastructure Investment”, OECD（ed.）, Southeast Asian Economic Outlook 2010, OECD Publishing.

Yoshino, Naoyuki（2012）“Global Imbalances and the Development of Capital Flows among Asian Countries”, OECD Journal: Financial Market Trends, Vol. 2012/1

Yoshino, Naoyuki and Masaki Nakahigashi（2004）“The Role of Infrastructure in Economic Development”, ICFAI Journal of Managerial Economics, 2, pp. 7-24

Yoshino, Naoyuki and Victor Pontines（2015）“The Highway Effect on Public Finance: Case of the STAR Highway in the Philippines”, Asian Development Bank Institute（ADBI）Working Paper, forthcoming.

Yoshino, Naoyuki, Victor Pontines and Umid Abidhadjaev（2015）“Impact Evaluation of Infrastructure Provision on Public Finance and Economic Performance: Empirical Evidence from Philippines and Uzbekistan”, Asian Development Bank Institute（ADBI）, Working Paper, forthcoming


ADBInstitute