

# EE460: Fiscal Policy for Growth and Stability

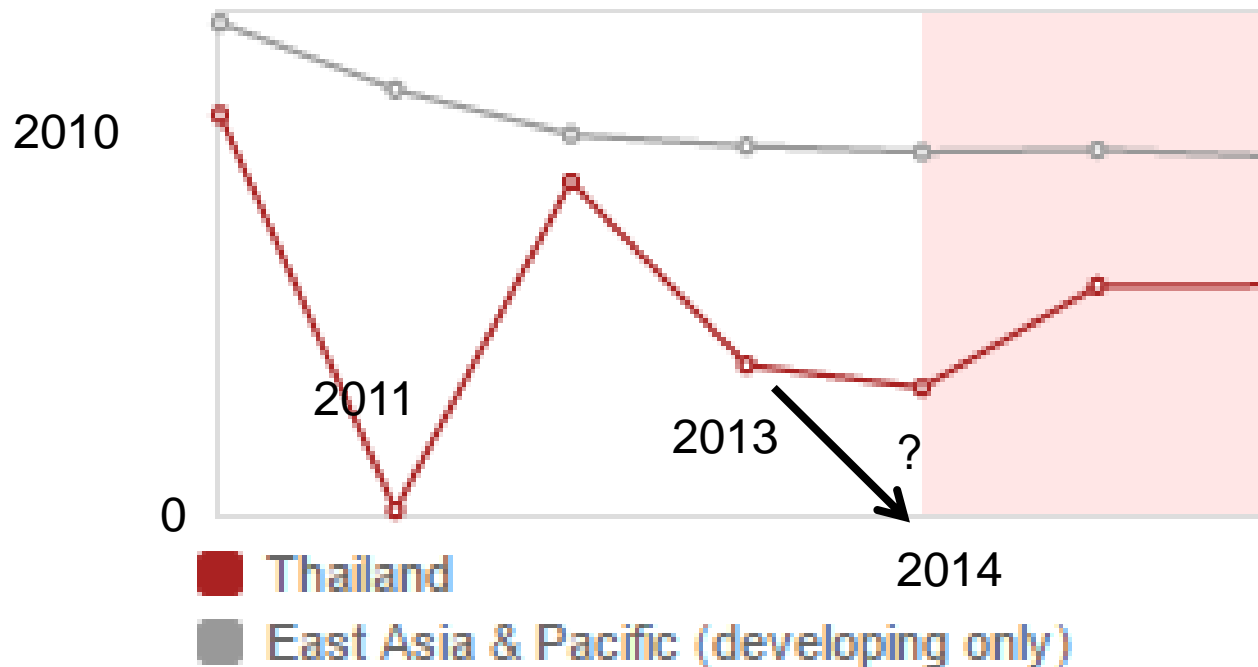
Bhanupong  
Lecture 25

# Outline

- **Fiscal stimulus and recession**
- **Spending and taxation: long-term relationship**
- **Rules for fiscal sustainability**
- **Automatic fiscal stabilizers**
- **Fiscal policy and economic growth**

# World Bank's Forecast

## Annual GDP Growth (%)



Forecast (2014, 2015, 2016)

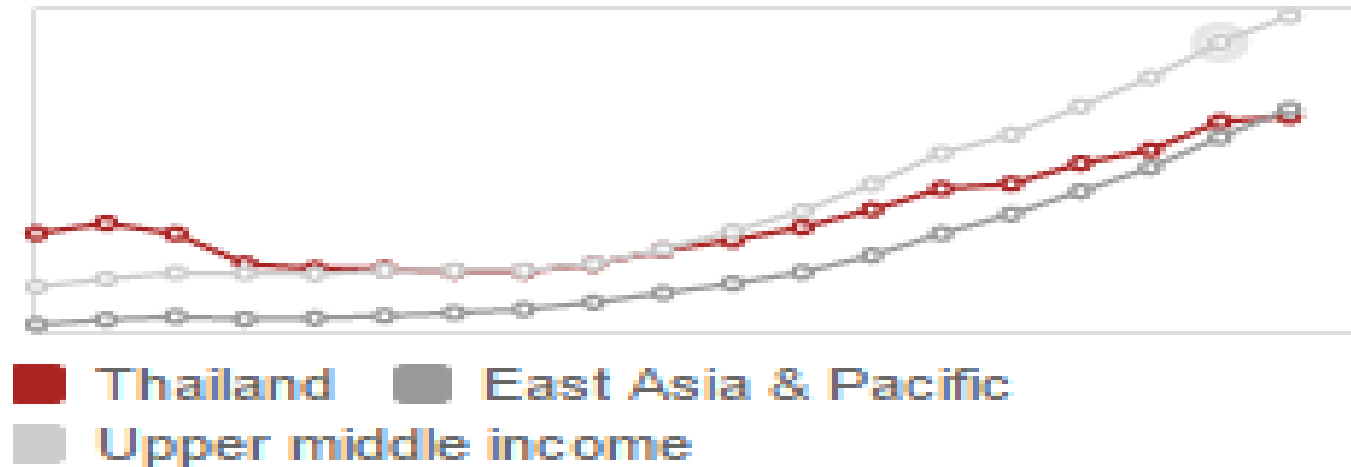
# Middle Income Trap

## 1995 - 2013

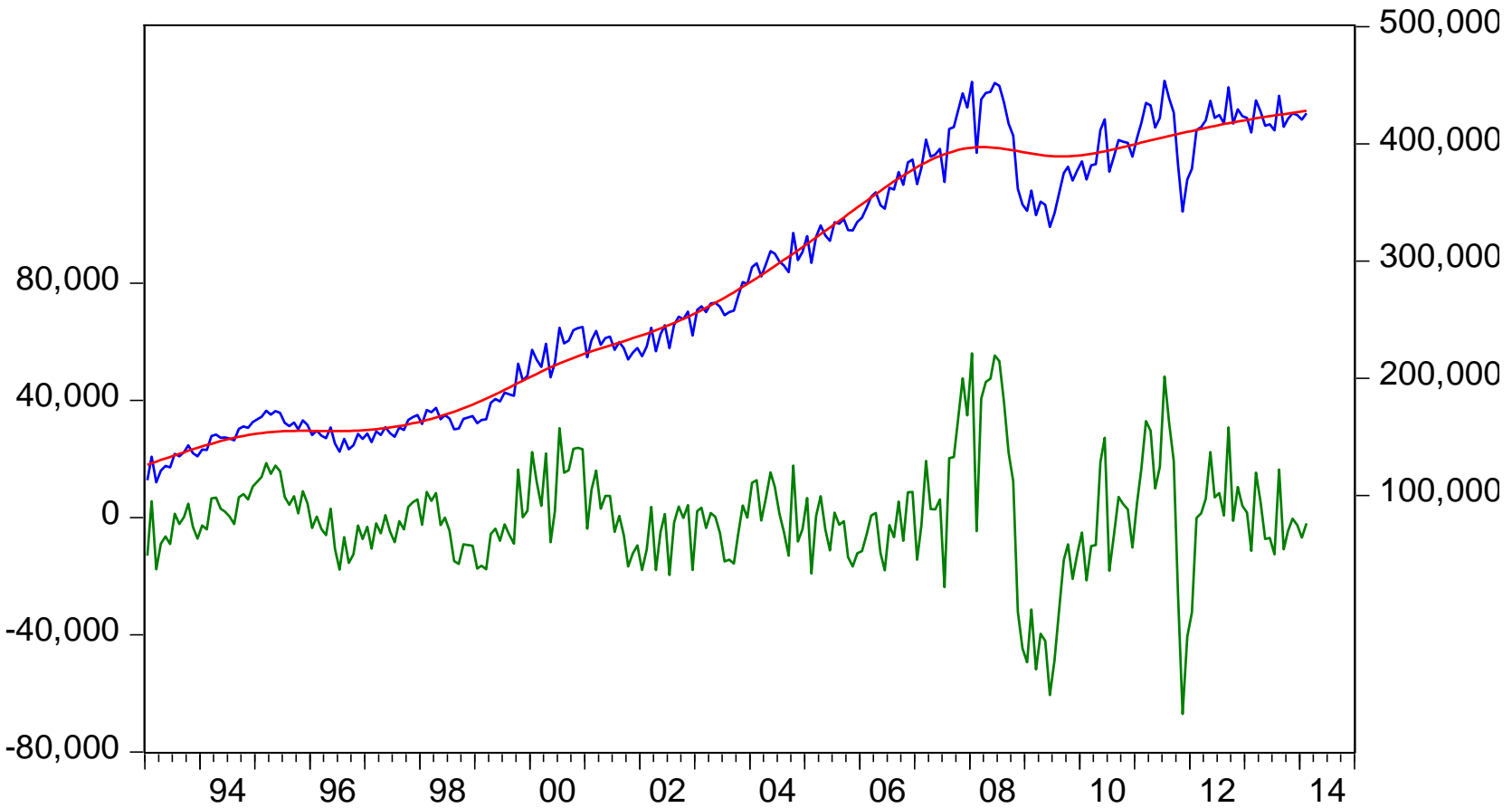
GNI per capita, Atlas method (current US\$)

---

**\$5,370** 2013

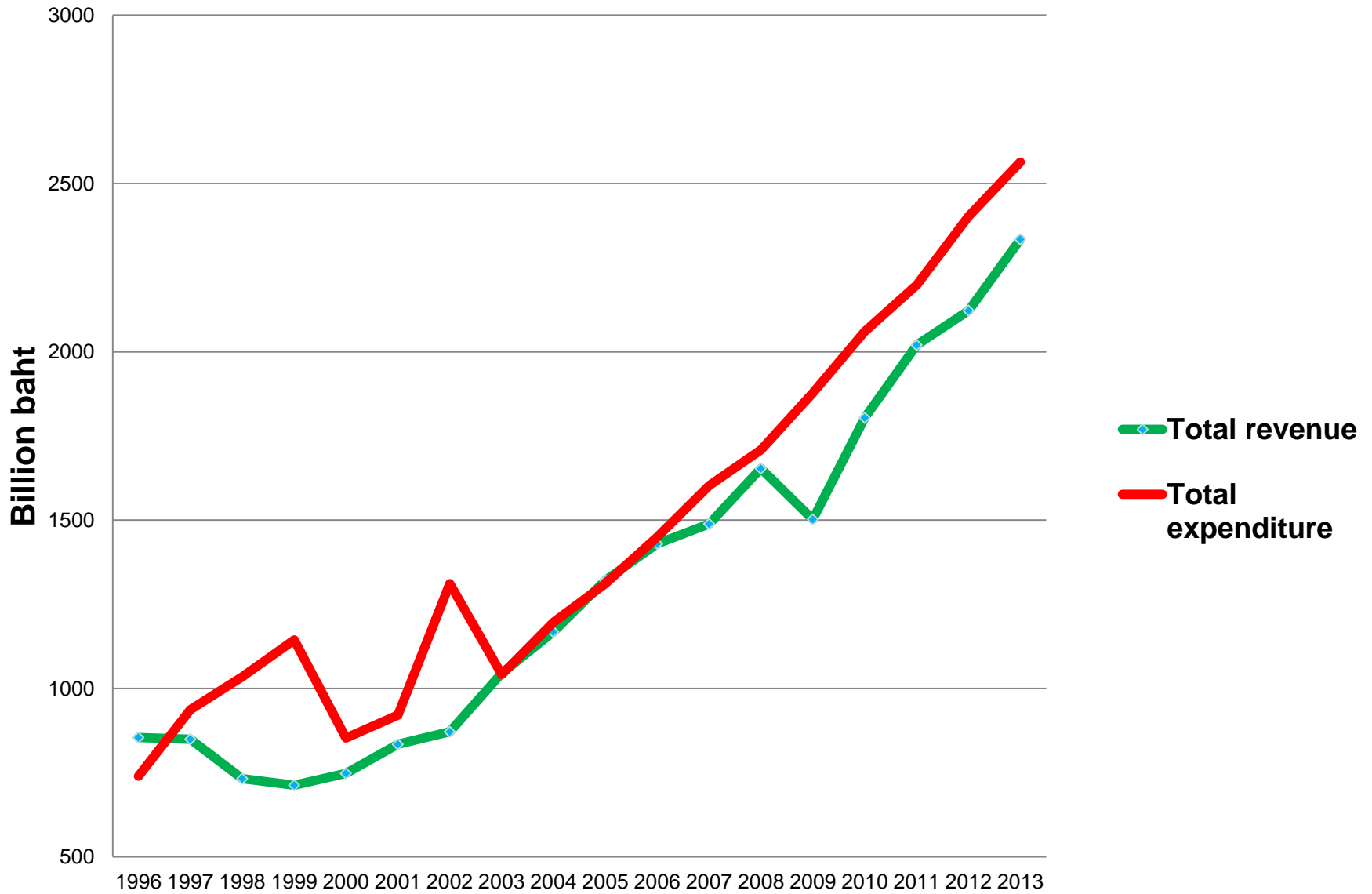


# Hodrick-Prescott Filter (lambda=14400)



— EXPORTS — Trend — Cycle

# Central Government Finance



# Public revenue and spending

- Why are tax revenue and government spending positively related?
- Three possible explanations
- Remember that correlation does not mean causation.
- There can also be other factors contributing to the relationship.

# Competing hypotheses

- (1) Buchanan and Wagner (1978): Higher taxes lead to more government spending.
- (2) Peacock and Wiseman (1979): Temporary increases in government spending lead to permanent tax increases (spend-and-tax hypothesis).
- (3) Meltzer and Richard (1981): Fiscal synchronization hypothesis: spending and taxes adjust as the public chooses an optimal package of taxes and government spending.

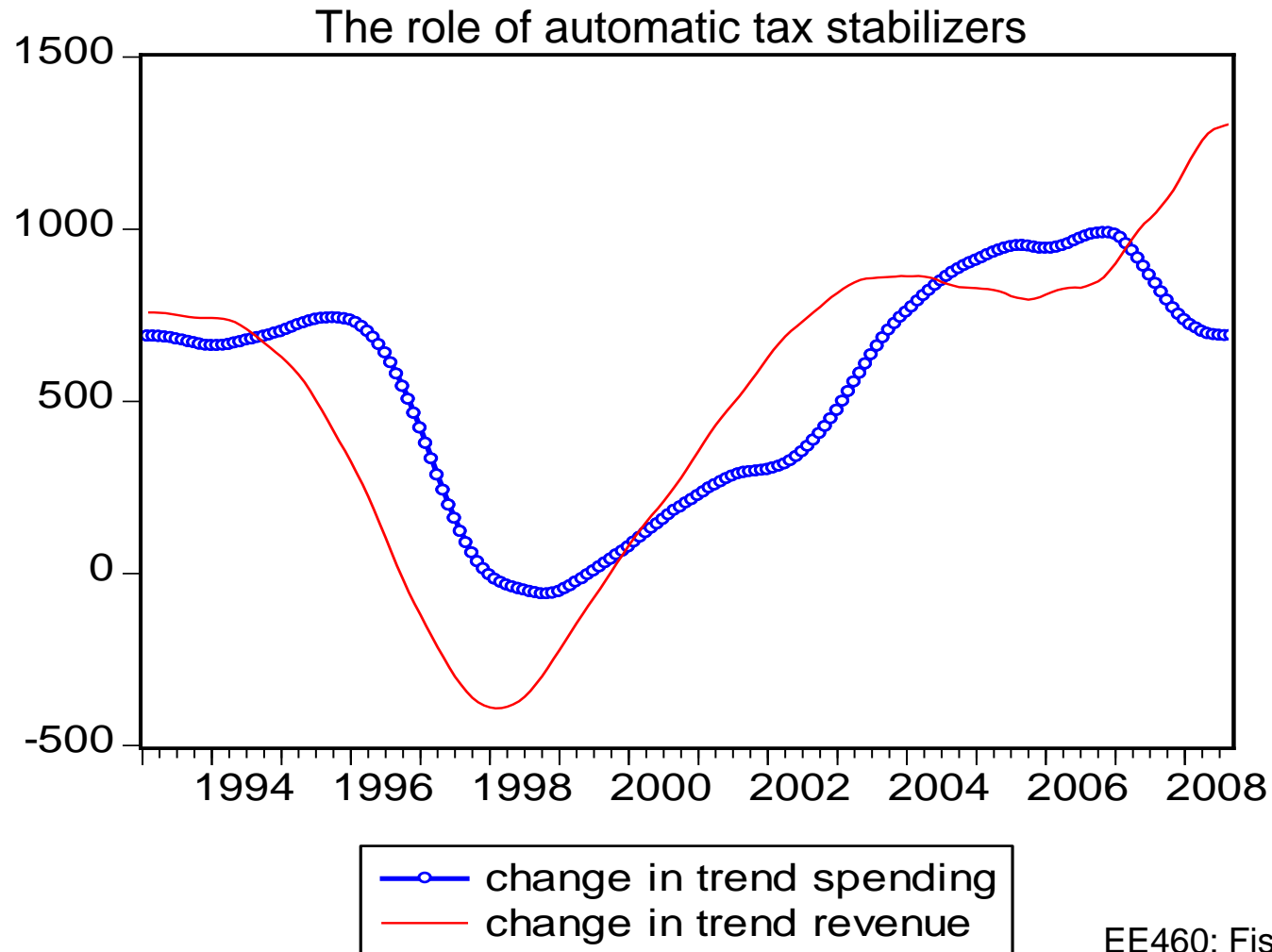
# Plausible Causality

$$R \rightarrow G \quad (1)$$

$$G \rightarrow R \quad (2)$$

$$G \Leftrightarrow R \quad (3)$$

# Fiscal stance shown by structural budget deficit



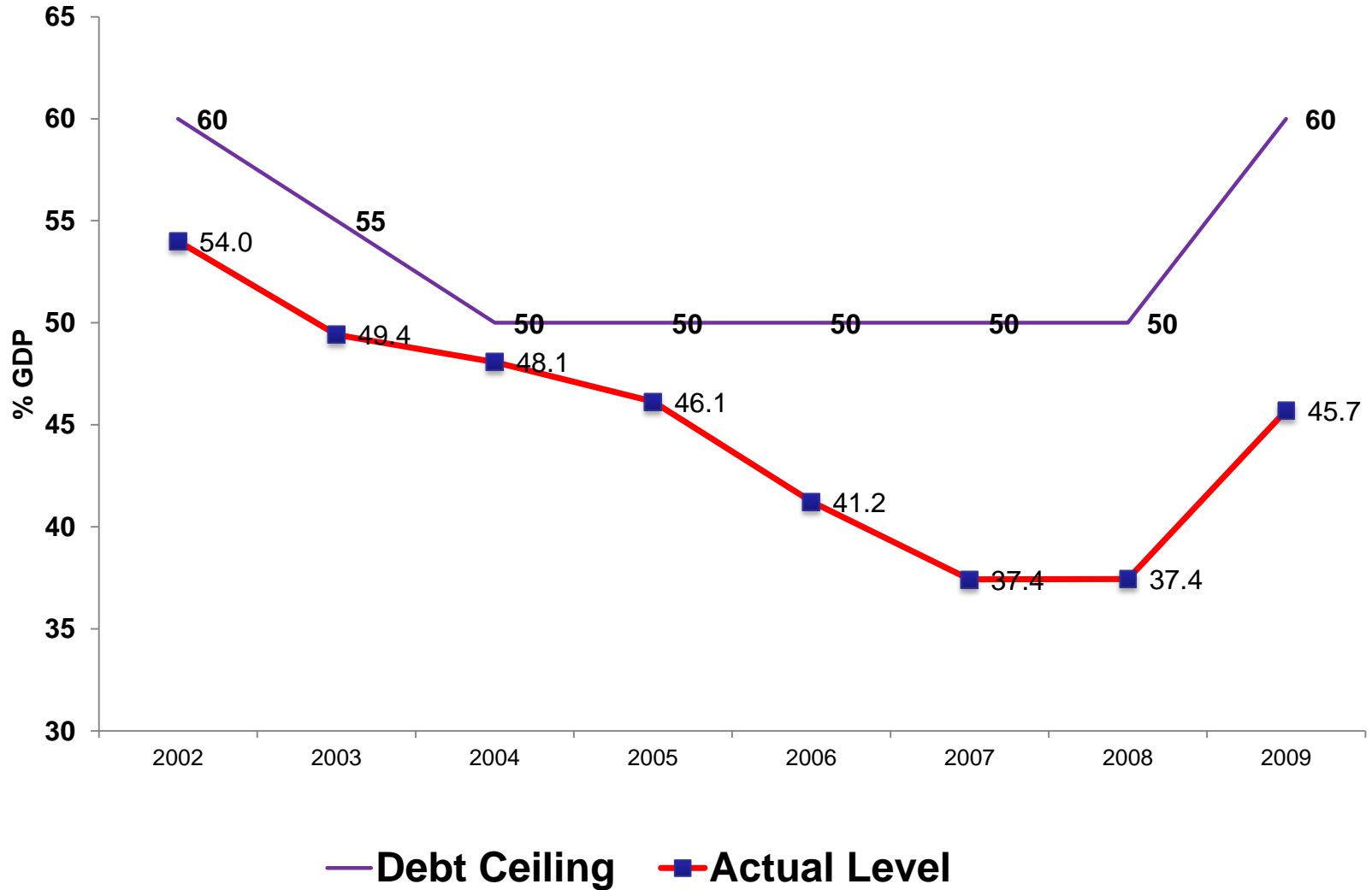
# Budget deficit and economic growth

- High deficits are associated with periods of low growth.
- High deficits are proxies for high public debt which imply **higher** taxes and **lower** public capital spending in the future.
- Large deficits are a symptom of macroeconomic **instability** which is detrimental to growth.

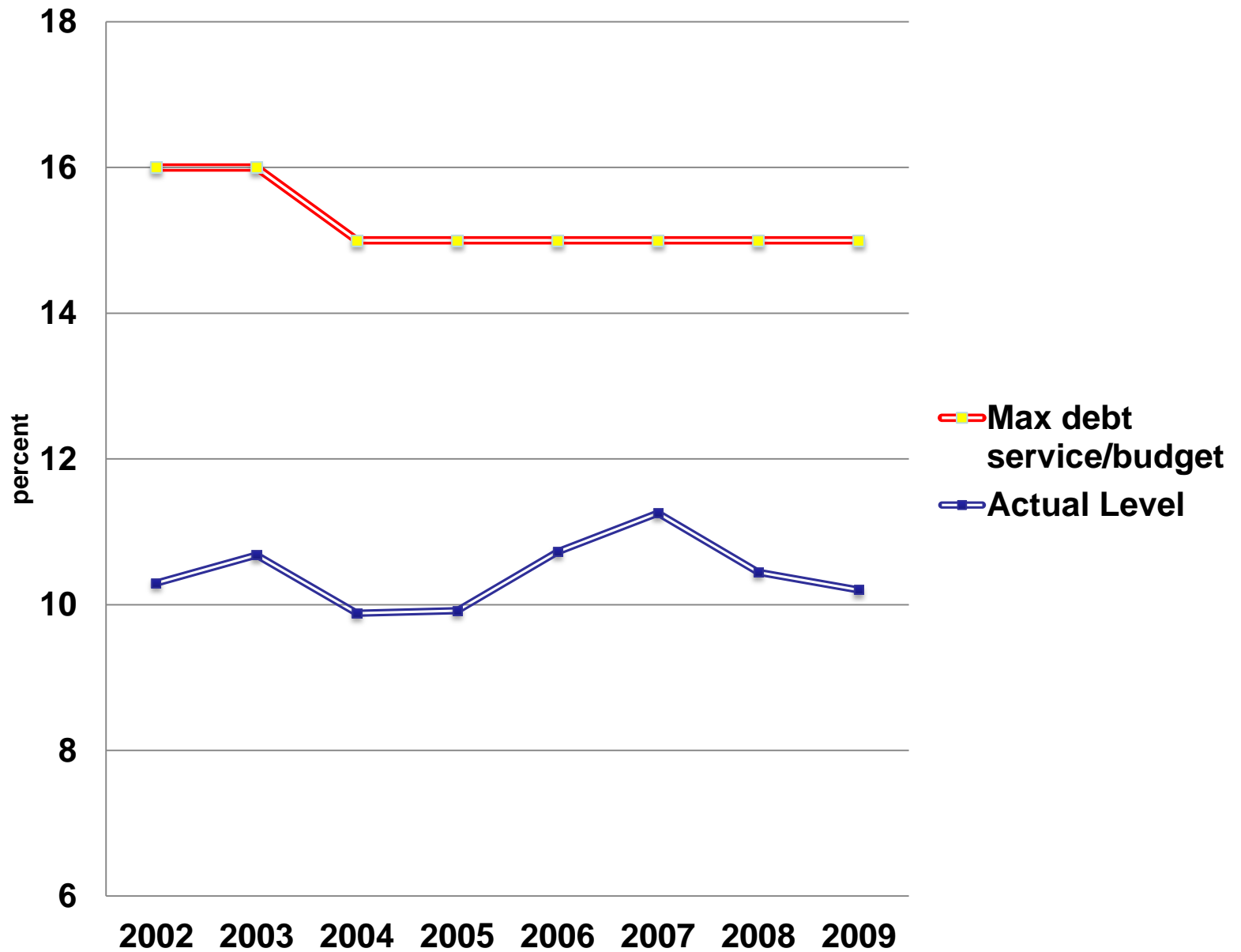
# Rules of fiscal sustainability

- Size of public debt (below 60% of GDP)
- Size of debt service (below 15% of total budget)
- Public capital spending (above 25% of total budget)
- Ratio of foreign debt-service to exports

# Regulation on Public Debt

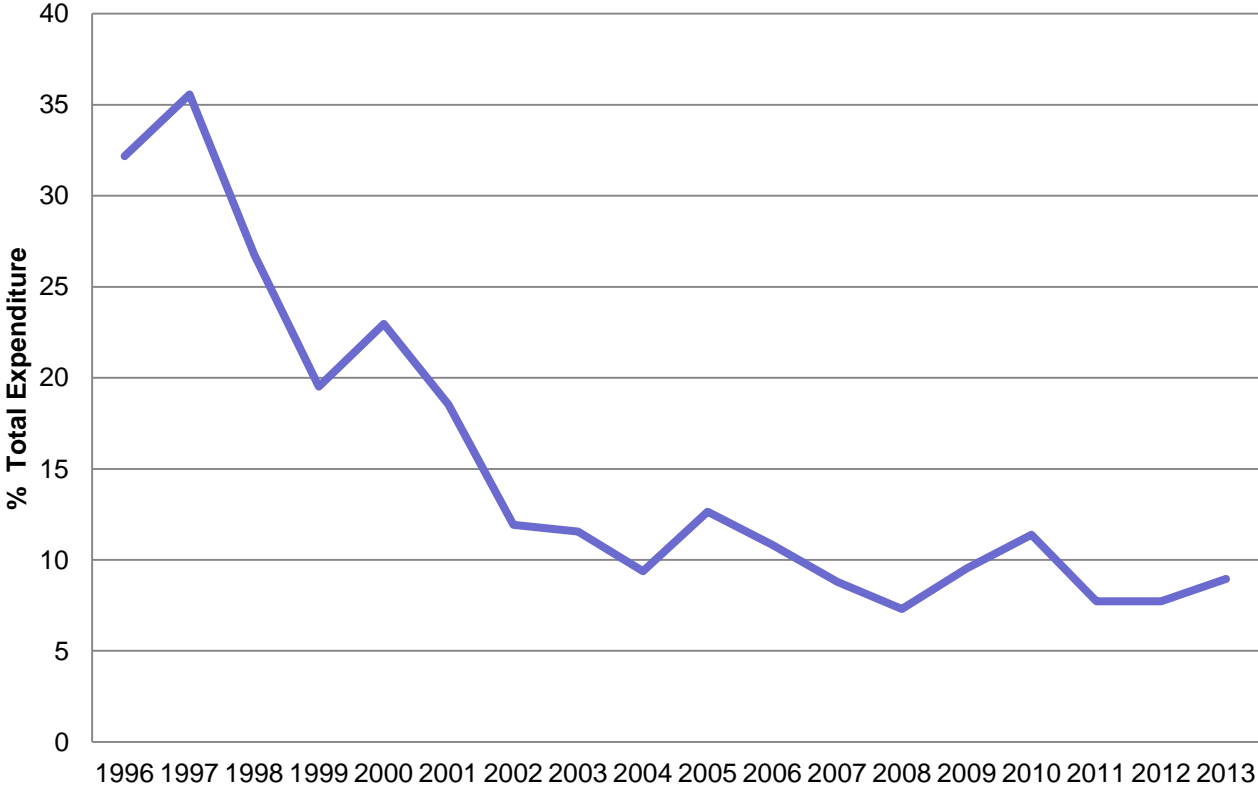


# Debt Service to Total Planned Spending

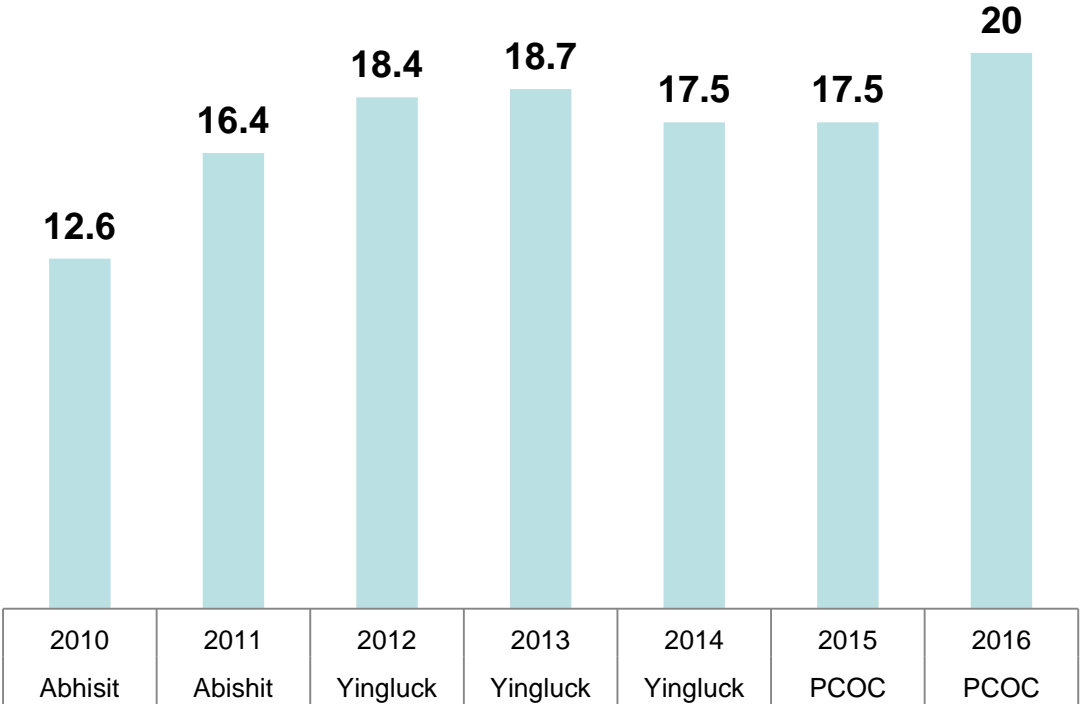


*Capital spending must not fall below 25% of total budget*

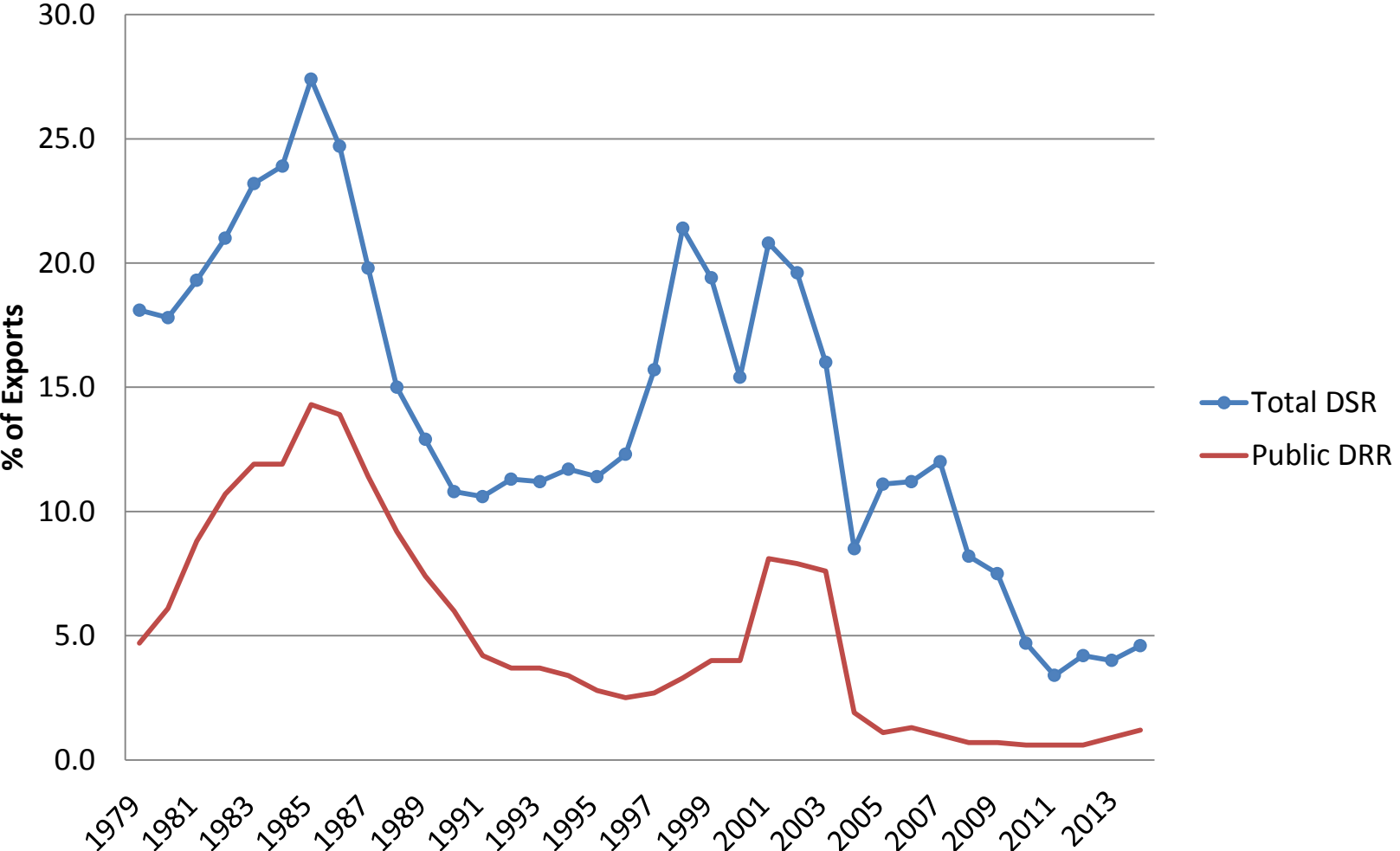
**Share of capital expenditure**



# Share of public investment (% total budget)



# Thailand's Debt Service Ratio



# ***Fiscal variables, growth and output nexus***

$$(1) \quad \text{Log}(R) = \alpha + \beta \cdot \log(Y) + \gamma \cdot \log(P)$$

$$(2) \quad \text{Log}(G) = \delta + \eta \cdot \log(Y) + \theta \cdot \log(P)$$

$$(1)-(2) \quad \text{Log}(R/G) = (\alpha - \delta) + \\ + (\beta - \eta) \log(Y) \\ + (\gamma - \theta) \log(P)$$

# Inflation tax

- Public spending must be controlled during high inflation to avoid fueling inflationary pressure.
- Inflation can be spiraling if the government insists on maintaining the level of real expenditure during the time of high inflation.

# Automatic fiscal stabilizers

- Revenue elasticity with respect to output is ***greater*** than expenditure elasticity.
- Increasing tendency for budget surplus (deficit) during booms (slump)
- Inflation reduces tax revenue, but it does not significantly increase public spending.
- The government cannot rely on inflation tax.
- There is a deep-seeded belief that public investment can contribute to growth during stagnation.

# A caveat after recovery

- If a country has established fiscal automatic stabilizers, fiscal policy can be stabilizing and it does not have to depend on a long-delayed budgetary process.
- Expansionary fiscal policy employed to counteract short-term fluctuations must be withdrawn after the economy is on its recovery path.

# Addicted to populism

- If not, it can be a burden to the government and result in adverse impact on the economy.
- The risk and adverse consequences of withdrawal of fiscal spending consequences must be considered before implementing fiscal expansion in response to insufficient aggregate demand.

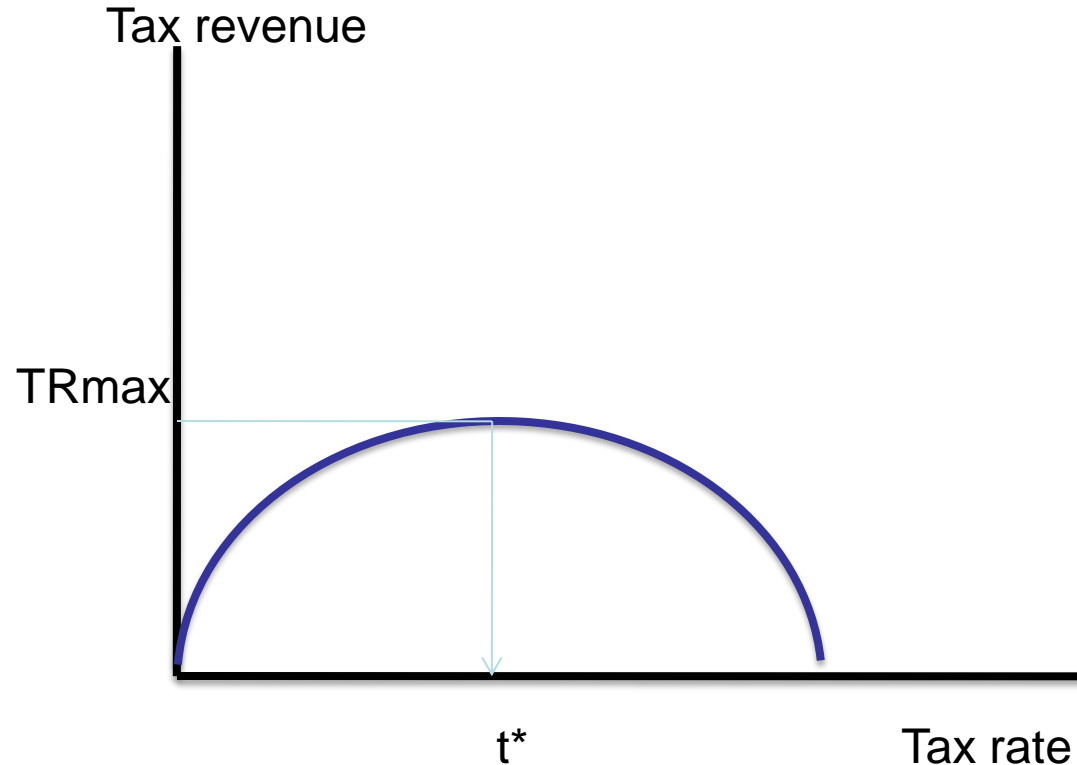
# Public consumption vs. public investment

- Taxes on investment and income have a detrimental effect on growth since taxes reduce the private return to accumulation.
- **Government consumption has no permanent impact on growth** since the productivity of the private sector is unaffected.
- **Public investment** has positive impact since it enhances the productivity of the private sector.

# Capital vs. current spending

- Structure of public expenditure matters for long-term growth.
- Rising share of current spending is detrimental to long-term growth in the long-run.
- How to finance capital and current spending

# Laffer curve: tax rate and tax revenue relationship



# Can a tax reduction increase tax revenue?

- The shape of the Laffer curve is determined by the elasticity of labor with respect to the net wage.
- Critics of supply-side economics argue that tax reductions can lead to increased revenue is absurd.
- Which side on the Laffer curve (left or right of the point  $t^*$ ) the economy is operating?
- Even if tax revenues fail to increase when tax rates fall, it does not mean that tax reduction is necessarily undesirable.

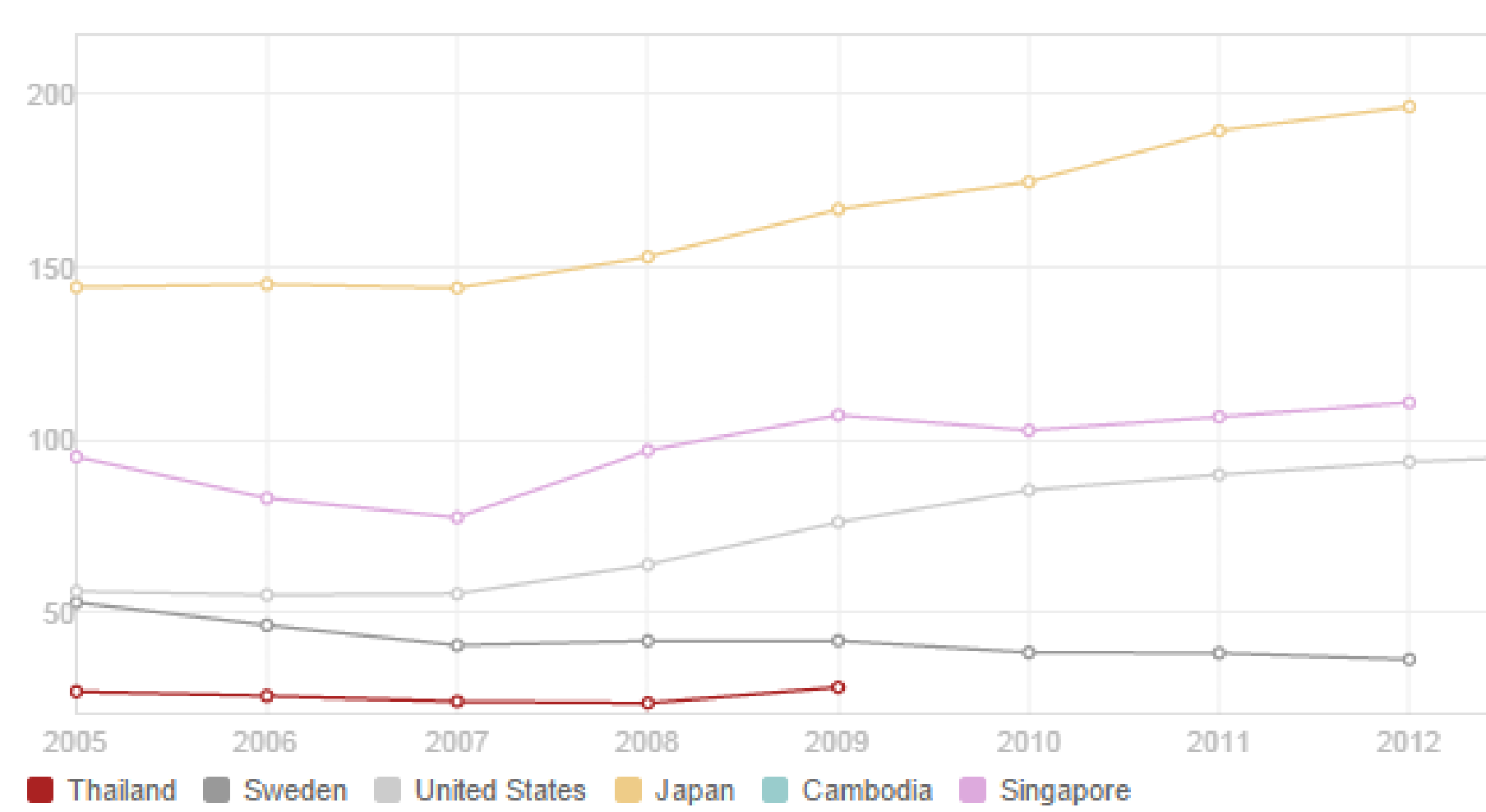
# Stylized facts

- The level of development is related to fiscal structure: poor countries rely more on trade taxes, developed countries rely on income taxes.
- Fiscal policy is influenced by the size of the economy (population and GDP level).
- Investment in transport and communication is consistently correlated with growth.
- Public spending on infrastructure has supernormal returns.

# Further questions

- Because the effects of taxation on growth are difficult to insolate,
- Should the government raise the value added tax?
- Is there any limit to government spending?
- Fiscal space is impaired by high debt-GDP ratio.
- The small fiscal space reduce the government's ability to counteract recession.

# Central government debt (% GDP)



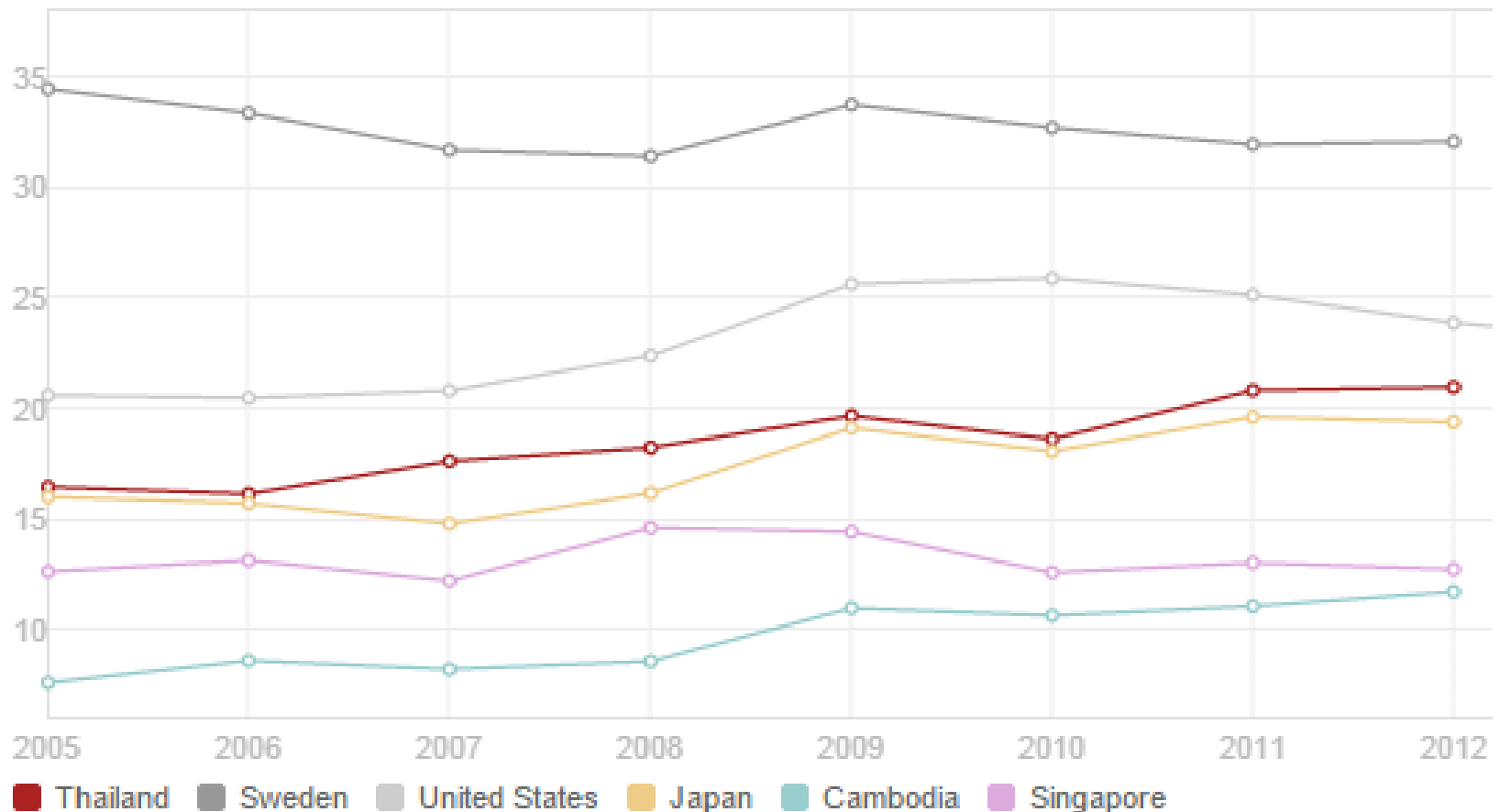
# To stabilize the public debt

- To keep the Debt-to-GDP constant, the government must increase its primary surplus in line with the increase in  $(r-g)$ .
- The spending cuts or tax increases are likely to prove politically costly, generating even more political uncertainty and the need for an even higher interest rate.
- A sharp fiscal contraction is likely to lead to a recession, decreasing the growth rate.

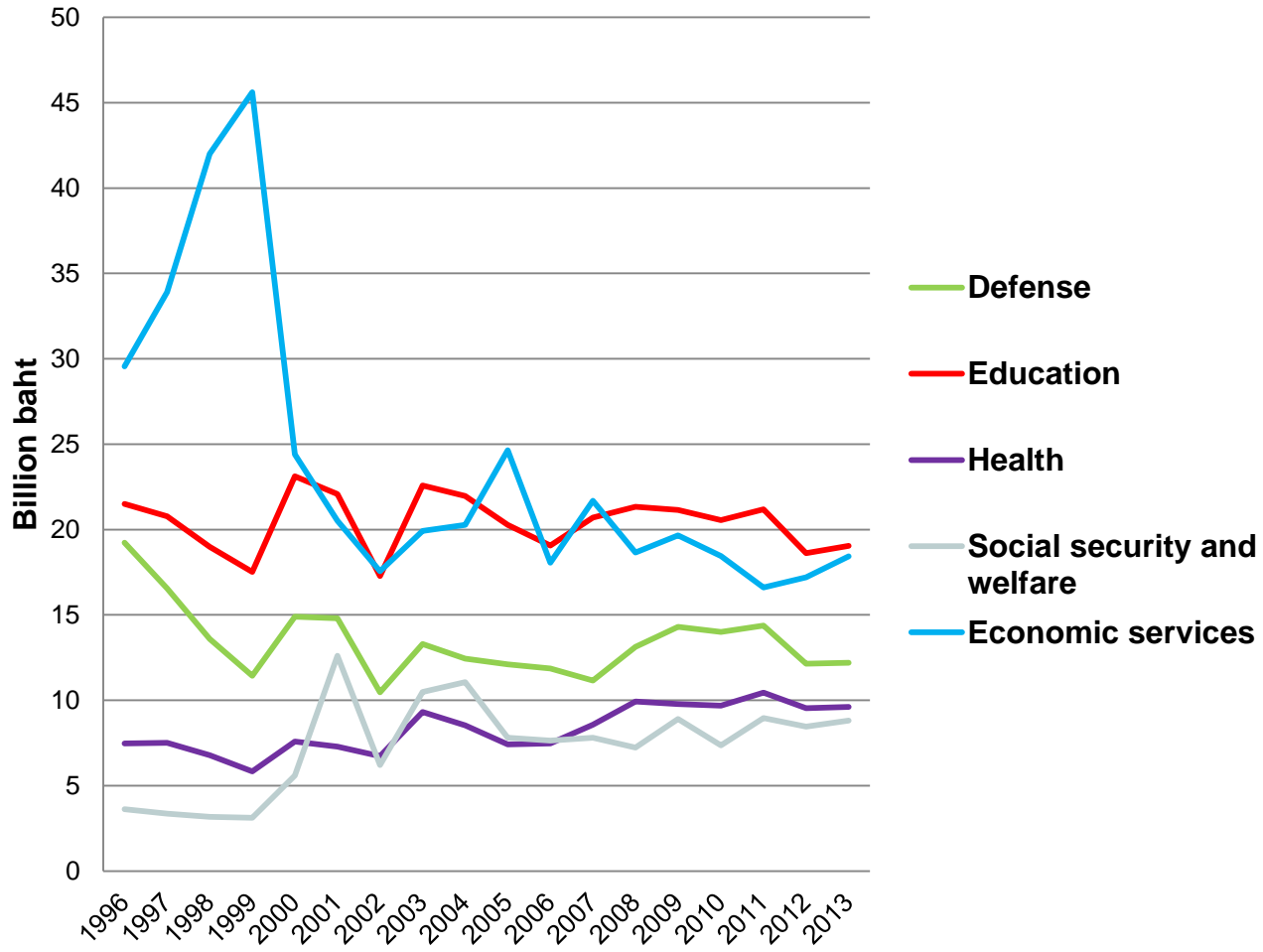
$$\frac{B_t}{Y_t} - \frac{B_{t-1}}{Y_{t-1}} = (r - g) \left( \frac{B_{t-1}}{Y_{t-1}} \right) + \frac{(G_t - T_t)}{Y_t}$$

- The increase in the ratio of debt (B) to GDP will be larger,
- The higher the real interest rate (r)
- The lower the growth rate of output (g)
- The higher the initial debt ratio (B/Y)<sub>t-1</sub>
- The higher the ratio of the *primary deficit* to GDP (G-T)/Y

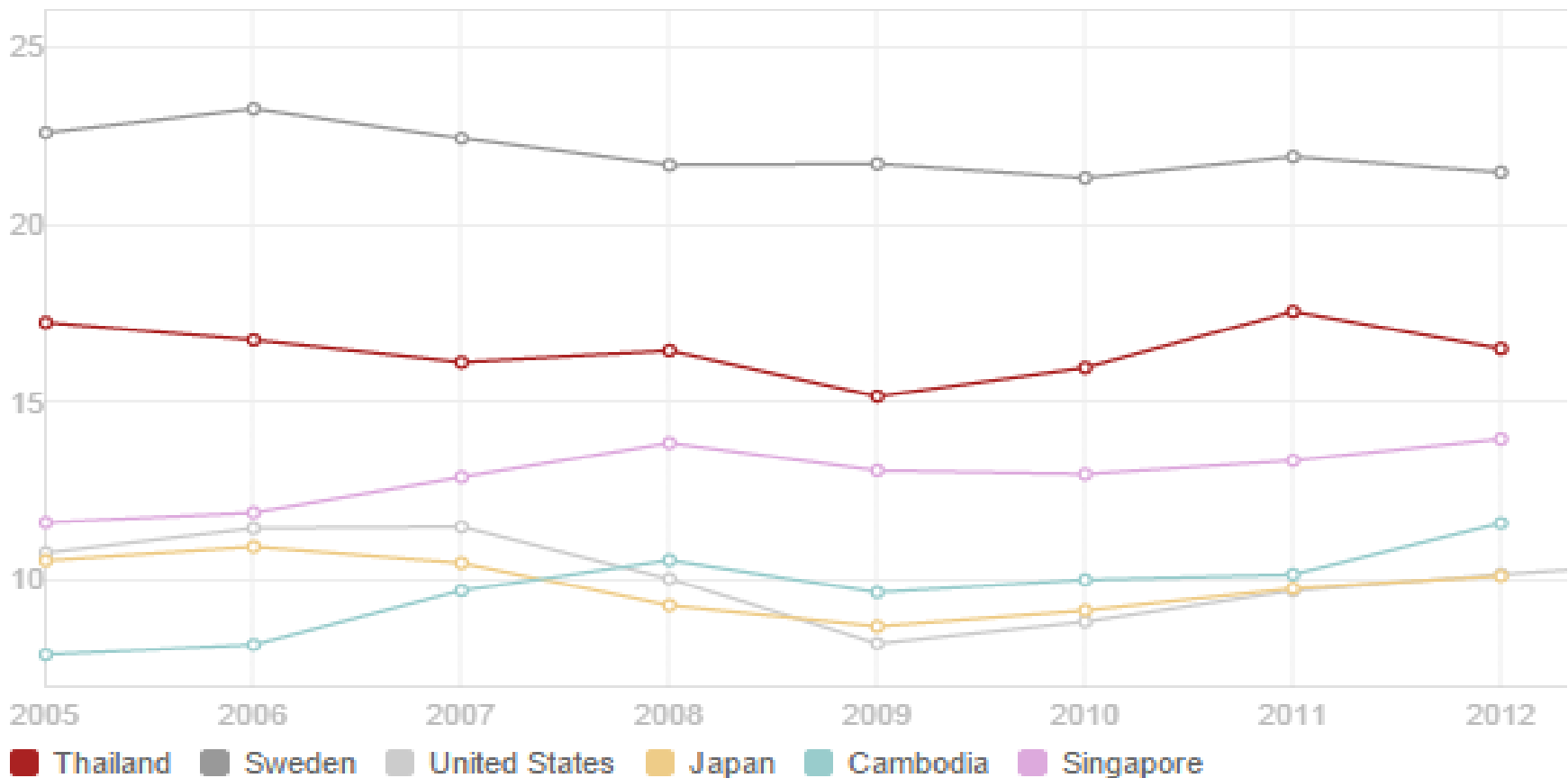
# Public expense (%GDP)



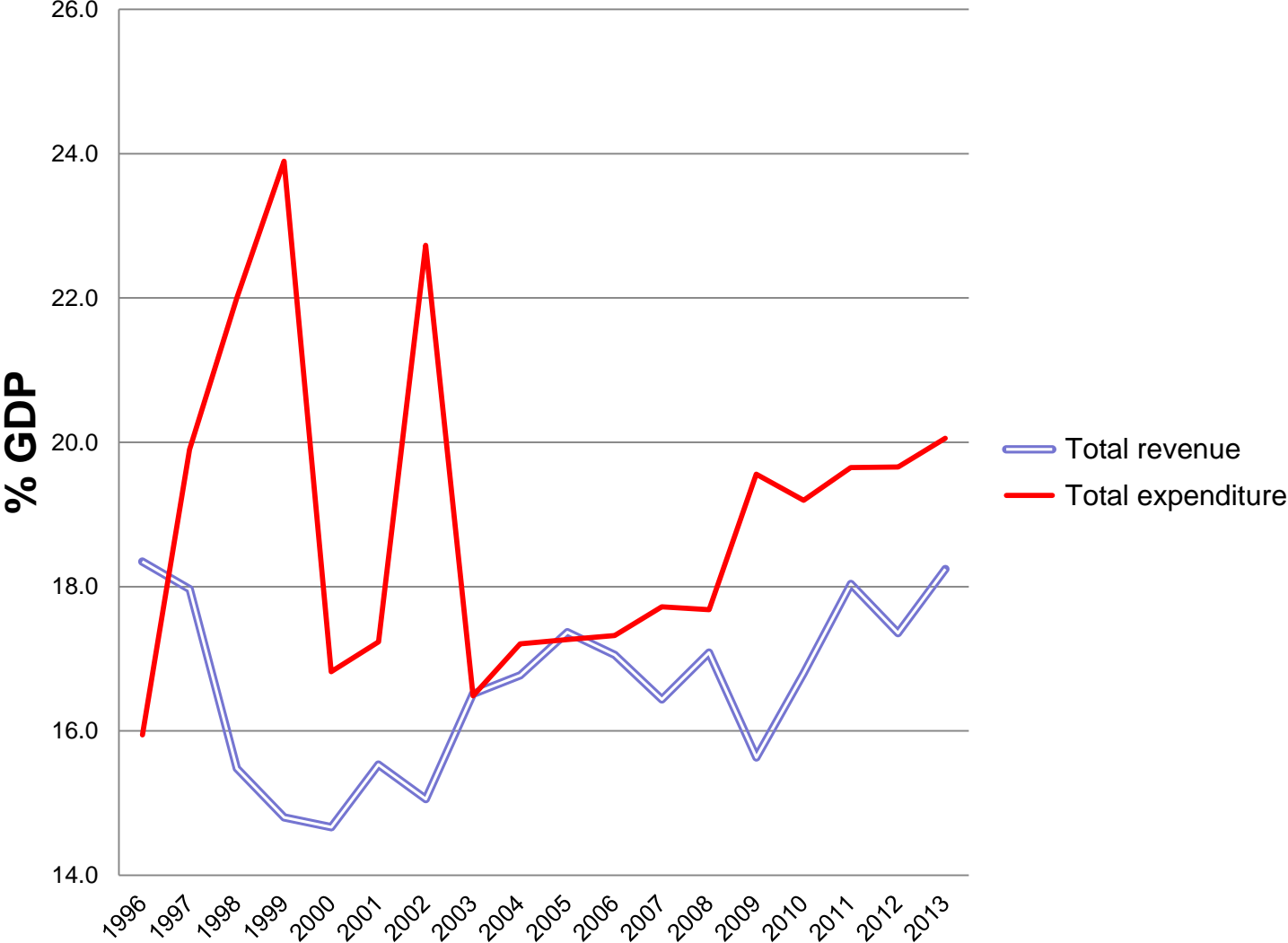
# Public Expenditure by Functions



# Tax revenue (% GDP)

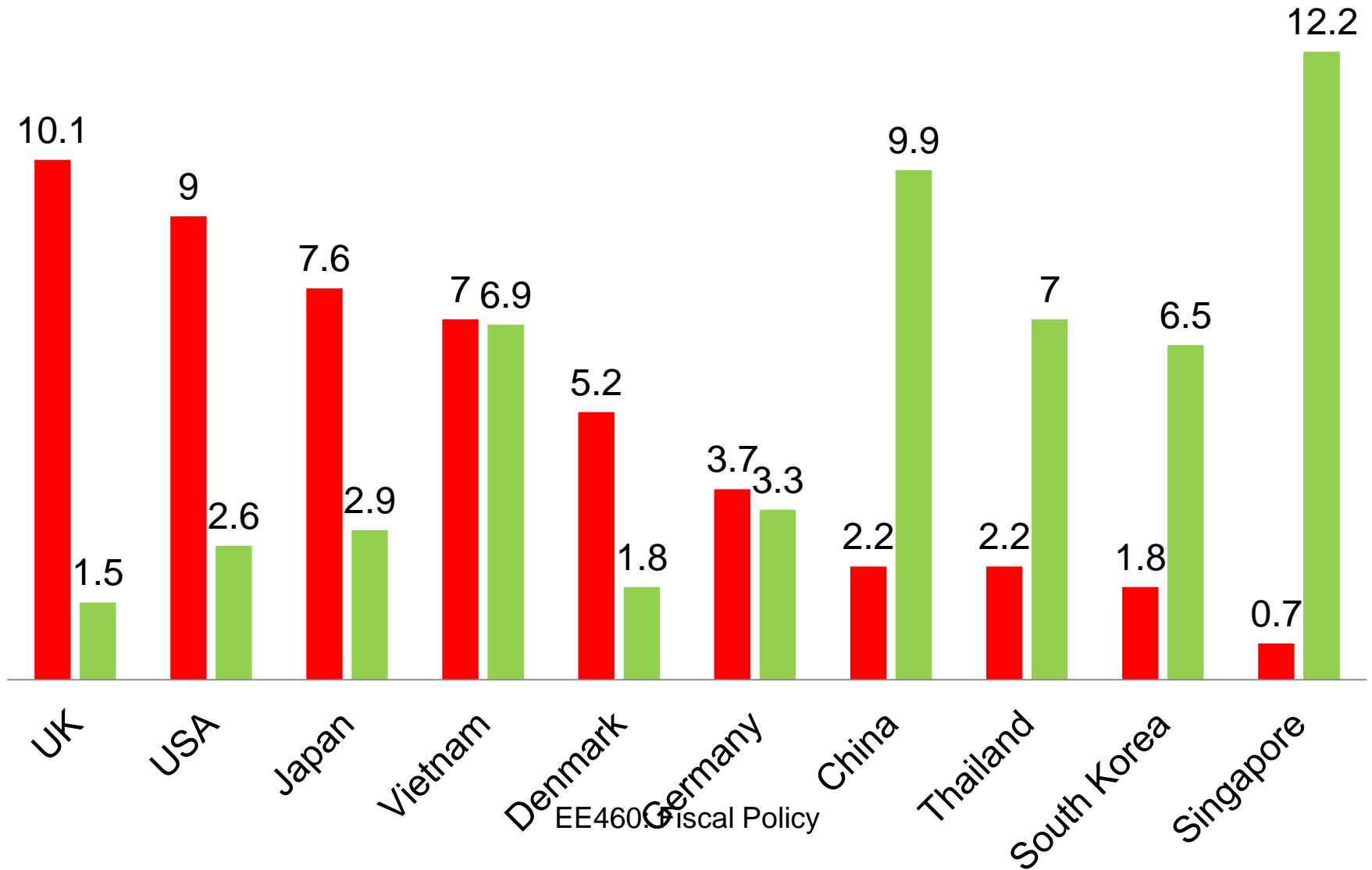


# Public Revenue and Expenditure



# Budget deficit and GDP growth: 2010

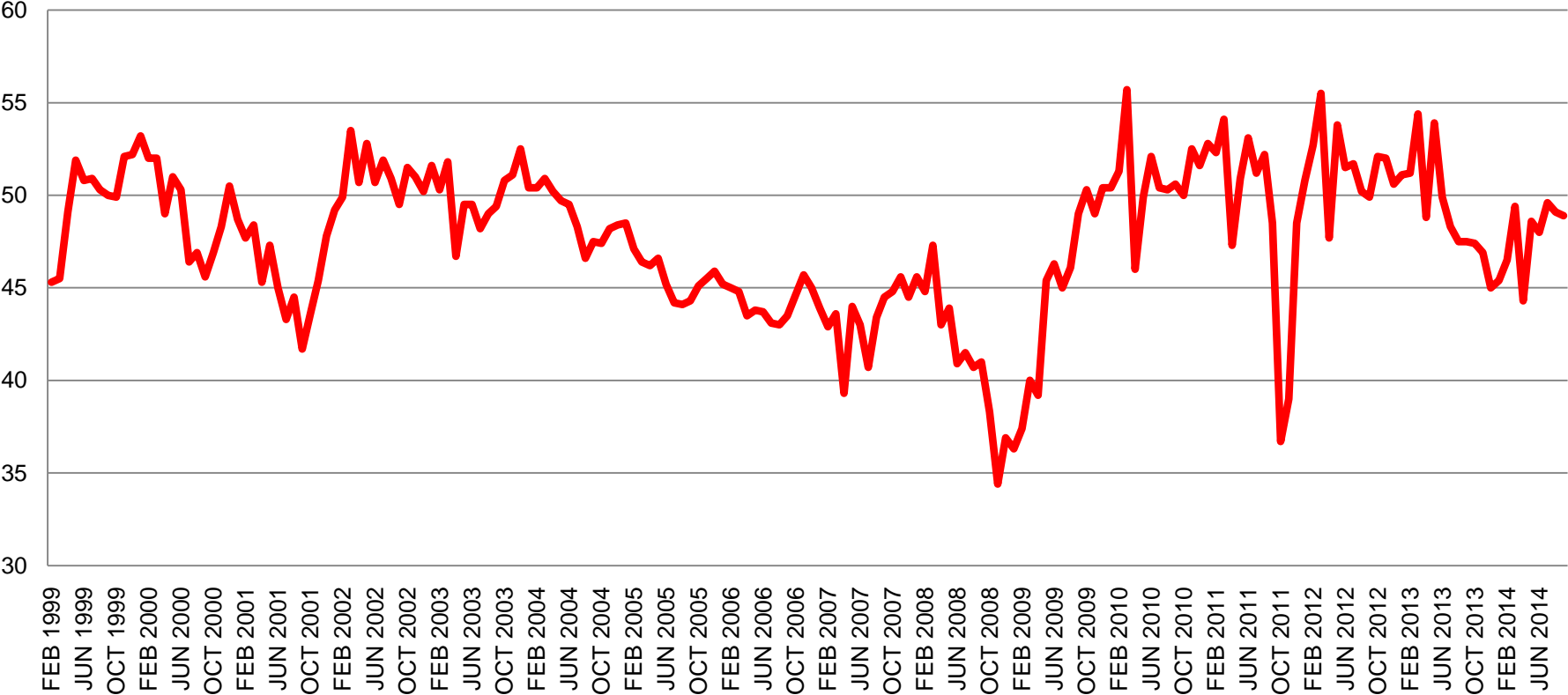
■ budget deficit/GDP ■ growth



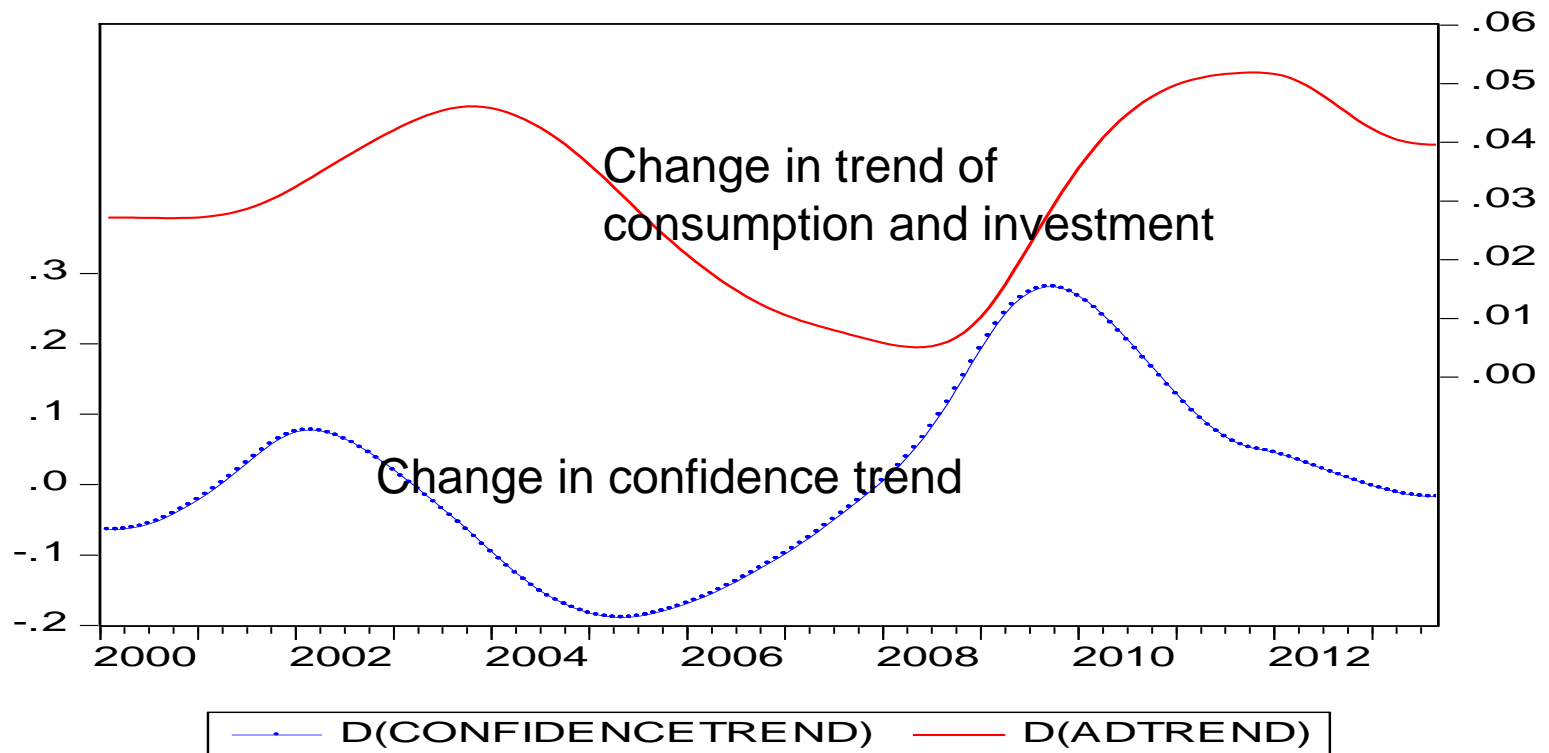
# Will fiscal stimulus work?

- Fiscal policy was the only option left during uncertain time.
- Multiplier effect might be limited if the income transfer is regarded as transient.
- In a mild cycle, pessimistic expectations can turn a mild recession into a deep economic depression.

# Business Sentiment Index



# Confidence and Private Aggregate Demand



# Conditions for effective fiscal stimulus

- Well-timed
- Macroeconomic stability
- Fiscal sustainability to offset precautionary savings
- Well-targeted spending to ensure the largest demand impact
- Pervasive liquidity constraints

## Those who pay income tax

- Personal income tax collections at just 2% of GDP are particularly low, partly because only ***one-tenth*** of the workforce pays tax, while the corporate income tax base has been eroded through excessive exemptions and deductions.
- The IMF recommended the government remain committed to its plan of tax reform as tax revenue is too low.

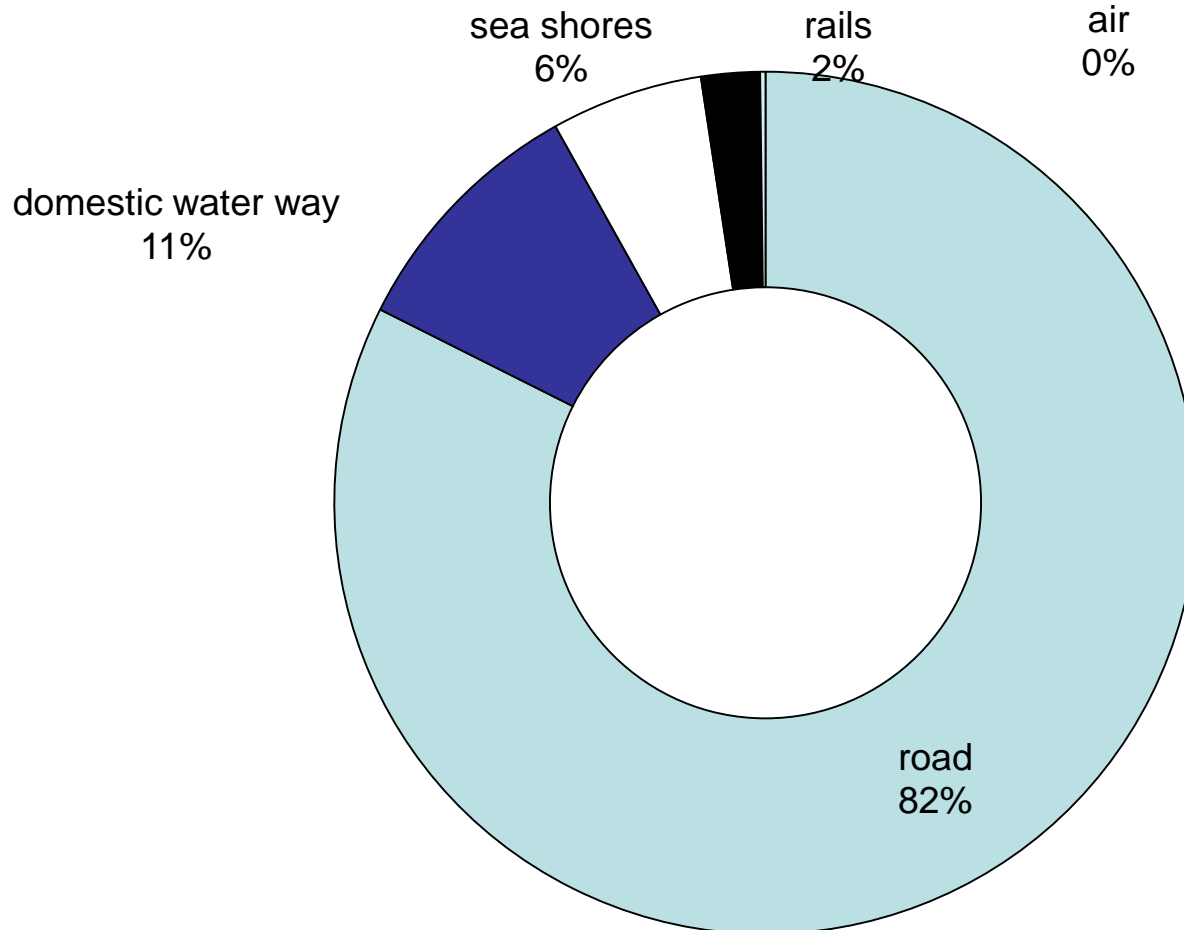
# Fiscal space

- Thailand's fiscal policy was conservative because spending was constrained by tax capacity.
- The reason behind this fiscal prudence is related to conservative budgetary laws. Debt-to-GDP is low, providing fiscal space for the government to counteract the future external shocks.

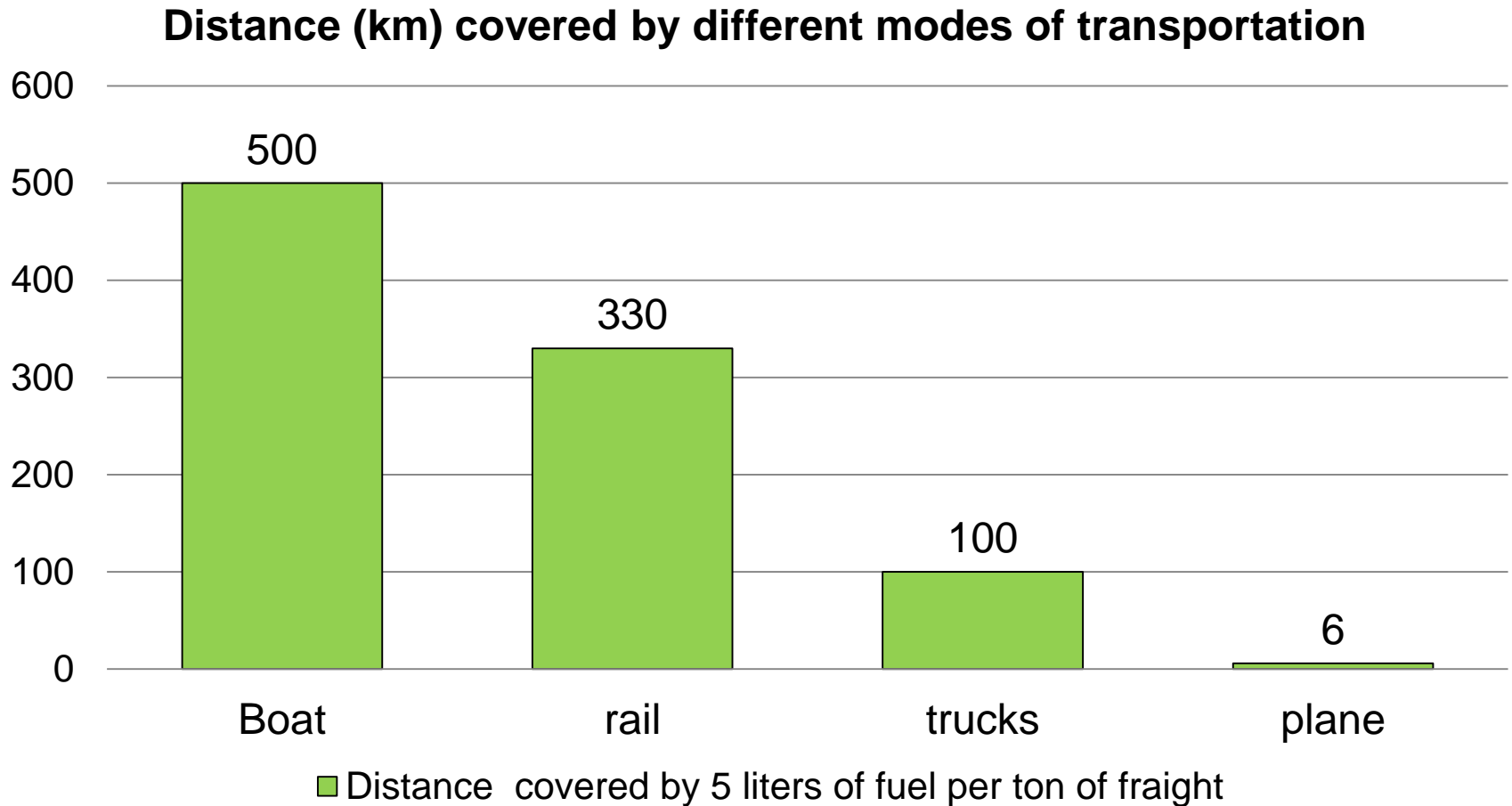
# Fiscal strategies for long-term growth

- Role of automatic stabilizers cannot be underestimated
- Contemporaneous tax finances only current expenditure, while capital expenditure can be financed by issuing government bonds
- MC and MB principle applies

# Thailand's mode of transportation % share



# Efficiency of different modes



# Conclusion

- Fiscal policy can become an effective means to spur growth during the time when consumer and investor confidence is strong.
- When business sentiment is low, expansionary impact of fiscal deficit will have minimal impact on the economy.

# Conclusion

- Rules of fiscal sustainability must be strictly obeyed.
- Tax instruments have become an important stabilizing tools, while public spending did not exhibit counter-cyclical response.
- Tax-financed budget deficit is less inflationary than bond financing deficit.

# Concluding remarks

- A sharp fiscal contraction is likely to lead to a recession, decreasing the growth rate.
- Private consumption and business confidence are crucial to sustainable recovery.
- Long-term growth is adversely affected by the slowdown in public investment.

# Discussion questions

- In response to a triple-dip global recession, how should the Thai government conduct its fiscal policy?
- For distribution and revenue purposes, should the government employ inheritance and property taxes?
- What are likely impacts of 3.3 trillion baht mega infrastructure spending programs on output, price levels and current account?

# The glistering dollar

January 3rd 2012=100



Sources: Bank of England; Thomson Reuters

# Which emerging market countries are most vulnerable?

- If the Fed tightens its monetary policy too soon
- If some new global debt crisis begins
- We can predict the next crisis based on vulnerability of each country.

# Resilience Indicator

- How indebted a nation is
- How reliant the nation is on external funding
- How much scope a nation has to fight the markets in case things go wrong

# A resilience index can be constructed based on the following information:

- CA Deficit/GDP
- External debt/GDP (both private and public)
- Short-term external debt/International reserve
- Fiscal Balance/ GDP
- Public debt/GDP
- $(\pi - \pi^*)^2$  Squared Deviation from inflation target, measuring How constrained the central bank is to respond to crisis with countercyclical policy?
- Fiscal fragility: The presence of credit booms and busts

# If there were a big financial shock, which country will be the worst hit?

