Macroeconomic perspective on the Thai Economy: 1961-1990

Bhanupong

Lecture 3

The first three decades of Thailand's economic development

We learn from history

"Whoever wishes to foresee the future must consult the past; for human events ever resemble those of preceding times.

This arises from the fact that they are produced by men who ever have been, and ever shall be, animated by the same passions, and thus they necessarily have the same results."

Machiavelli

Course Syllabus

The first three decades: 1961-1990

- What can we ***learn*** from the historical path of Thailand's economic development?
- What were factors contributing to the ***rapid and stable growth*** in the first three decades of Thailand's development planning?
- *Reading1: "Thailand" in **Asia Rising**, Hal Hill and Maria Socorro Gochoco-Bautista (eds.) Cheltenham: Edward Elgar and ADB, pp. 345-384. 2013*.
- *Reading 2*: Chapter 1, Nidhiprabha (2019)

Main Themes

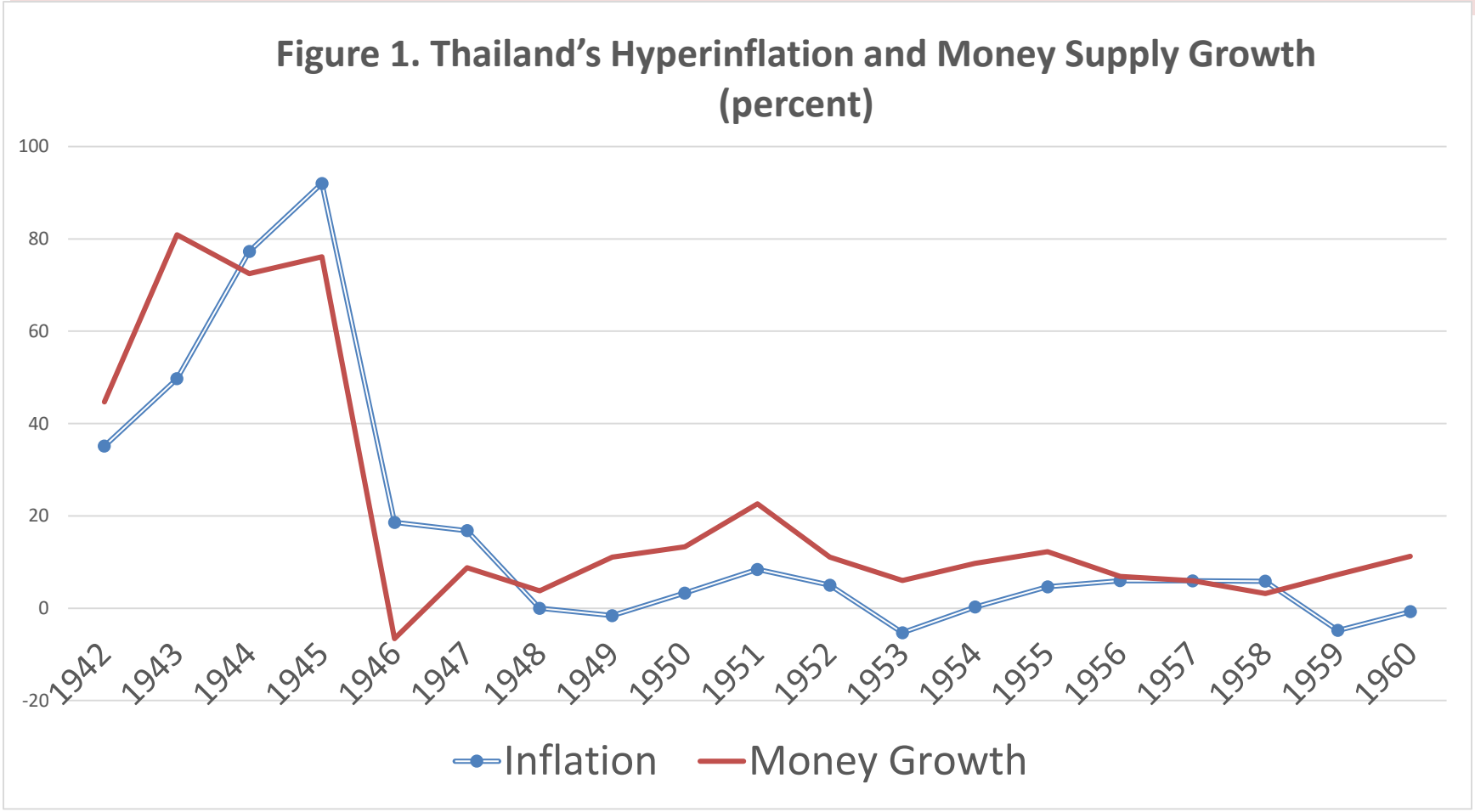
1. Hyperinflation
2. Multiple exchange rates
3. Stable growth path and growth deviations
4. Growth accounting framework
5. Exports and economic growth
6. Twin Deficits Hypothesis and devaluations: 1981 and 1984
7. Conservative fiscal policy
8. Financial deepening and financial openness

1. Hyperinflation

- During World War II, huge spending of Japanese military force in Thailand was financed by printing money
- The rapidly growing money supply led to hyperinflation
- Inflation peaked at 92 % in 1945 when money supply grew at 76 %

Monetarist view:

Inflation is always and every where a monetary phenomenon (Milton Friedman)



Velocity rises during hyperinflation

$$\dot{x} = d\log(x)/dt = \frac{dx}{dt}(1/x) = \frac{\Delta x}{x}$$

$$MV = PQ$$

$$\dot{M} + \dot{V} = \dot{P} + \dot{Q}$$

$$\dot{P} = \dot{M} + \dot{V} - \dot{Q}$$

During hyperinflation, $\dot{\mathrm{P}} \longleftrightarrow \dot{\mathrm{V}}$

Phillip Cagan (1956)

The monetary dynamics of hyperinflation

- During hyperinflation, expected rate of inflation increases.
- The increased opportunity cost of holding real money balances reduces the demand for them.
- The elasticity of the demand for real balances with respect to the expected rate of inflation: η

Cagan's demand for real money balances during hyperinflation

$$\left(\frac{M}{P}\right)^d = AY^{\beta}\pi^{\eta}$$

π = expected rate of inflation

$$\ln\left(\frac{M}{P}\right)^d = \alpha + \beta \ln Y + \eta \ln \pi$$

β = Income elasticity of demand for real money balances

η = Inflation elasticity of demand for real money balances

The monetary dynamics of hyperinflation

- If $|\eta| > 1$, the demand for money would be a ***destabilizing*** factor; causing people to spend money on goods in their attempt to reduce their real money balances when they expect inflation to rise further.
- ***Velocity of money (V) rises during hyperinflation***
- ***V is not constant as in the quantity theory of money)***
- Inflationary process would be self-perpetuating.

Where did the 1939 hyperinflation take place?

Wholesale Price Index	
July 1914	1.0
Jan 1919	2.6
July 1919	3.4
Jan 1920	12.6
Jan 1921	14.4
July 1921	14.3
Jan 1922	36.7
July 1922	100.6
Jan 1923	2785.0
July 1923	194,000.0
Nov 1923	726,000,000,000.0

History of super hyperinflation

- Yugoslavia 1992-1994: 3.13 billion %
- Zimbabwe 2006-2008: 7.96×10^{10}%

  and in 2009: 500,000,000,000%
- **Currency reform and dollarization** are required: A new currency to wipe out past inflationary expectations

Zimbabwe's hyperinflation

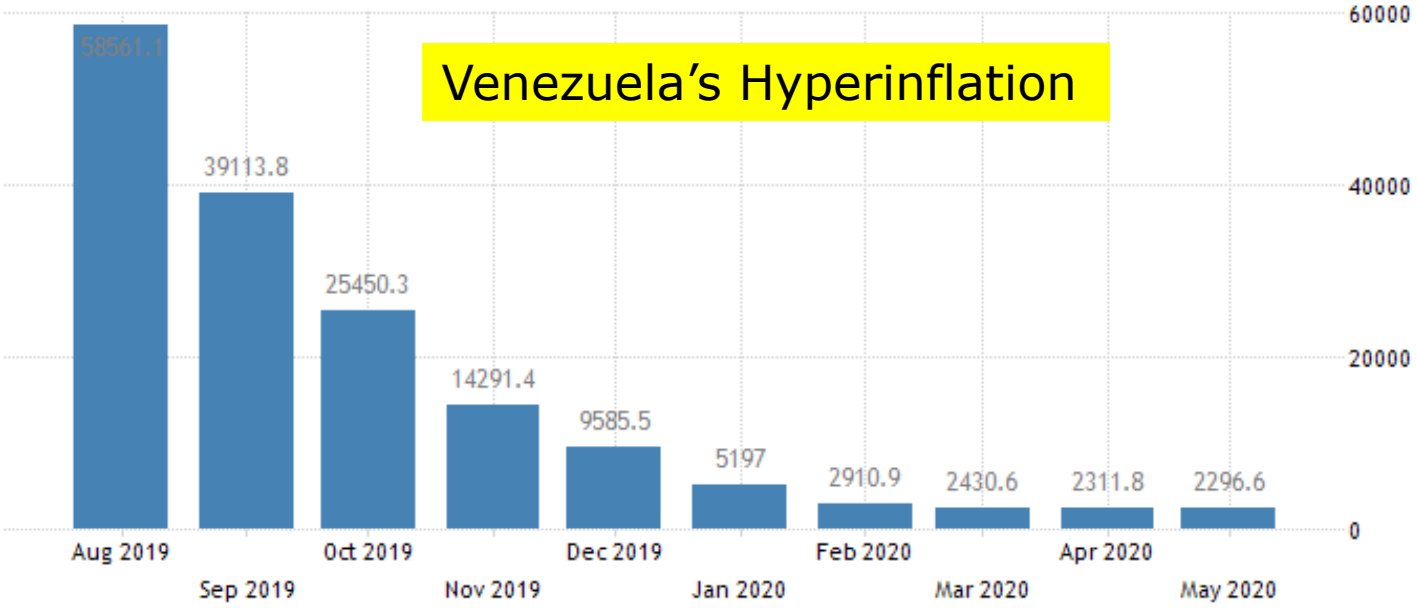
- The economy is in shambles, and a drought has left 4m people hungry. Anti-government protests are continuing despite brutal police crackdowns.
- Citizens are already wary about "bond notes", introduced by the central bank to ease cash shortages.
- While not officially a currency, they look an awful lot like the old Zimbabwe dollar, abandoned in 2009 after inflation hit ***500,000,000,000***%.
- Since then the country has relied mainly on American dollars: ***Dollarization*** is used to curb hyperinflation.

The annual inflation rate in Venezuela fell to **2296.6** percent in May 2020 from 2311.8 percent in the previous month, according to the Central Bank.

The government announced new price controls on food products on April 24th, the first time in two years, as the coronavirus outbreak and an acute gasoline shortage cause inflation to accelerate.

The government relaxed almost two decades of stringent economic regulation last year, abandoning enforcement of price controls and ***allowing dollar transactions***.

Also, the government has sharply ***curtailed circulation of the domestic currency***, which helped limit prices but left many people struggling to obtain bolivars.

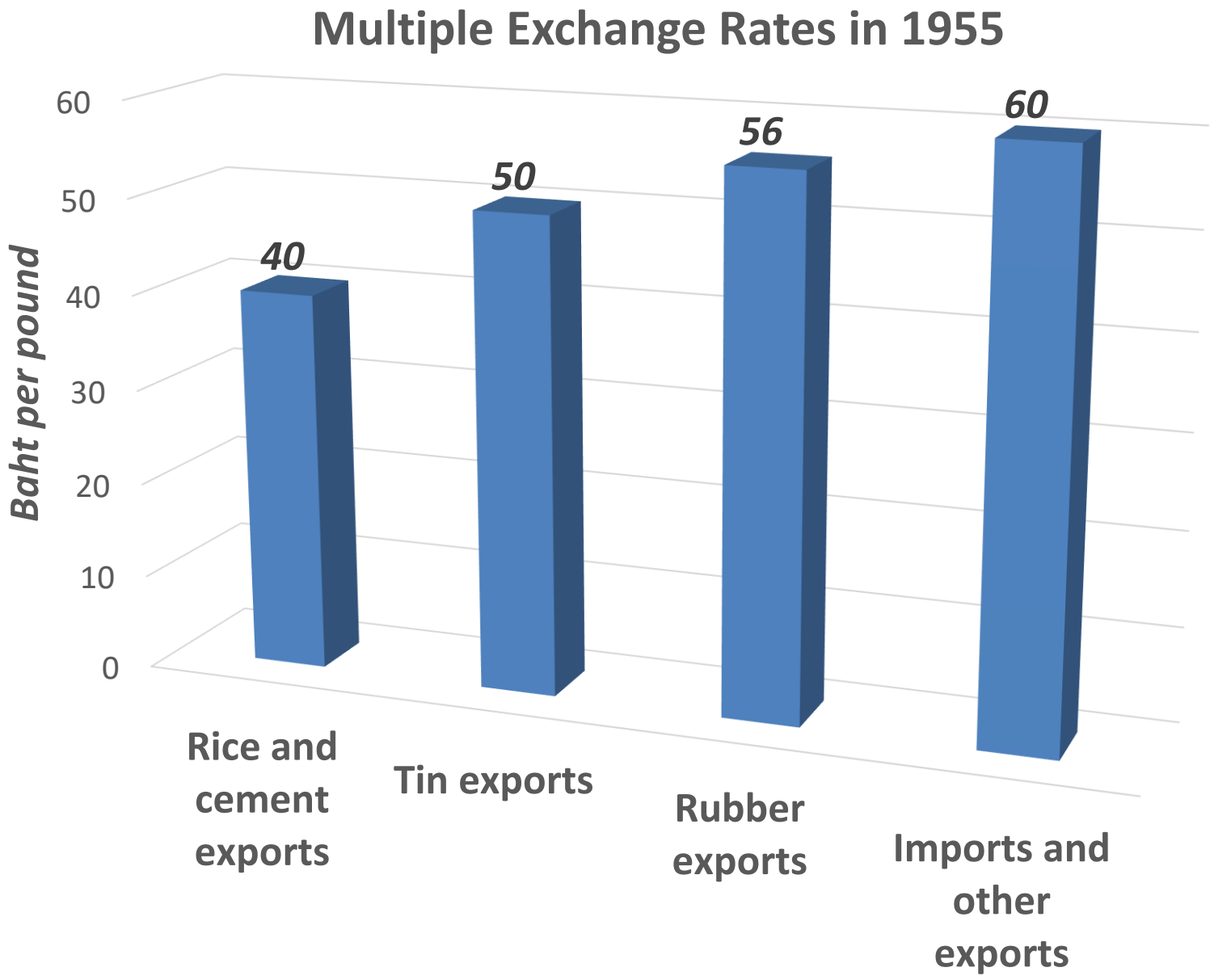


How did Thailand deal with the hyperinflation?

- After the WWII, excessive growth of money supply was contained by the issuance of long-term bonds to absorb the money supply.
- Negative growth rate of money supply was observed in 1946 together with a plunge in inflation.
- Controlling the money supply is necessary to curb hyperinflation.
- But curbing inflationary expectations was also equally important via ***multiple exchange rates***

2. Multiple exchange rates

- The external value of the baht was unstable prior to 1955.
- The shortage of foreign exchanges led the government to adopt a multiple exchange rate system, in which exporters and importers of commodities were subjected to different exchange rates.
- **Source:** Yang, Shu-Chin (1957) A multiple exchange rate system: An appraisal of Thailand experience 1946-1955, Madison: The University of Wisconsin Press


Multiple Exchange Rates in 1955
Baht per pound
60
50
40
30
20
10
0
40
50
56
60
Rice and cement exports
Tin exports
Rubber exports
Imports and other exports

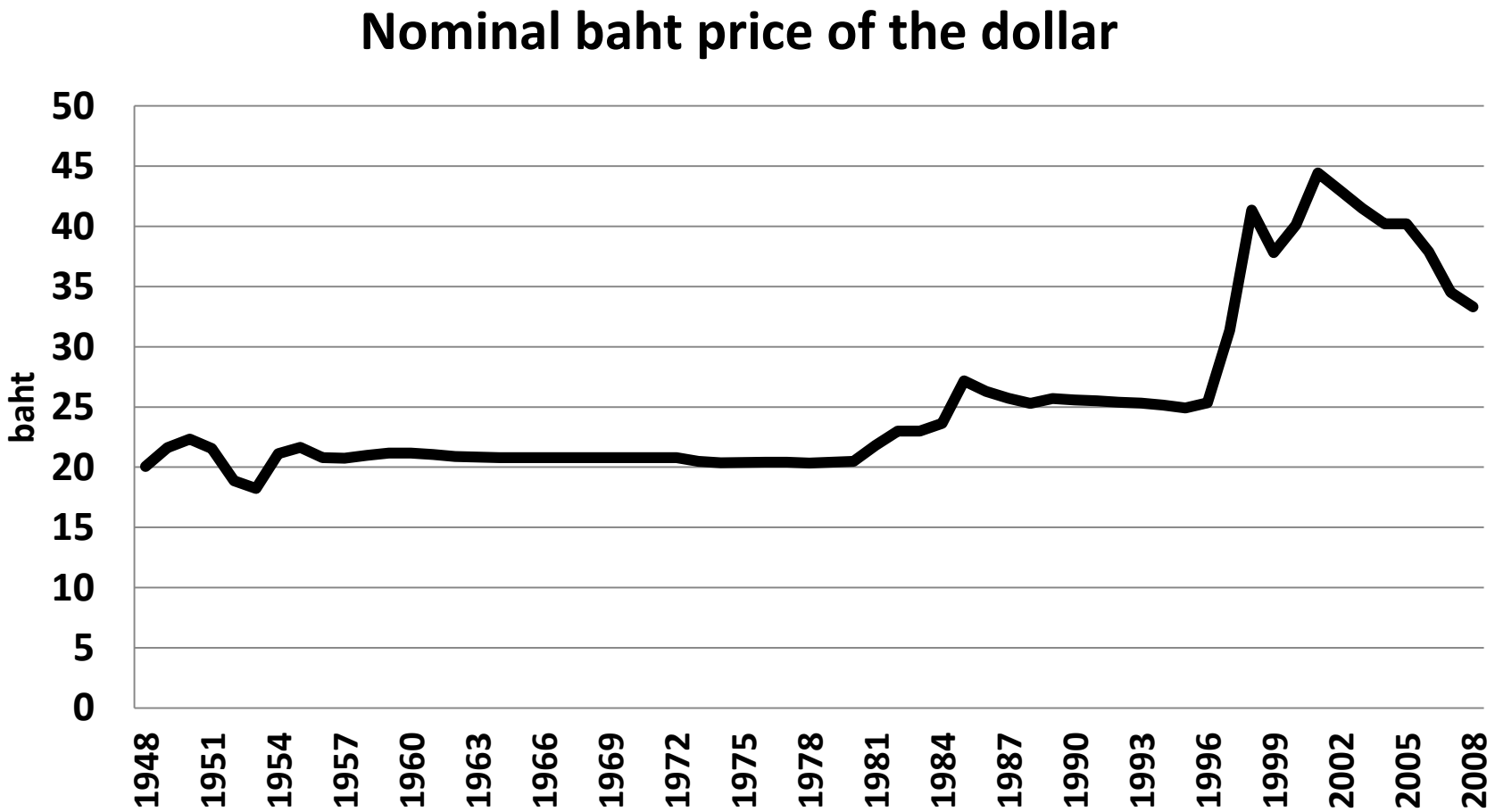
Price stability was the key objective of the multiple exchange rate system

- The multiple exchange rate system helped restore price stability, as **inflationary expectations** were subdued.
- Price stability is the key to build confidence in holding the baht
- Inflationary expectations can be controlled by fiscal disciplinary: No more printing money to finance budget deficit (i.e., selling government bonds to the central bank) .

When prices are stable, and so is the exchange rate

- As a result of a unification of multiple exchange rates into a single and stable exchange rate in 1955, the exchange rate remained stable throughout the period 1955-1960.
- The speculation of the foreign exchanges and the **black market** was eliminated after the exchange rate unification.
- A stable financial environment provides a necessary condition for a ***stable demand for money*** in response to expanding economic activities.

The baht-dollar exchange rate



Pre-conditions for taking-off

- Price stability
- Exchange rate stability
- Stable financial environment: stable demand for money
- Infrastructure investment: dams, airport, seaports, railways and highways
- Recall the Big Push Theory

3. Stable Growth path and deviation

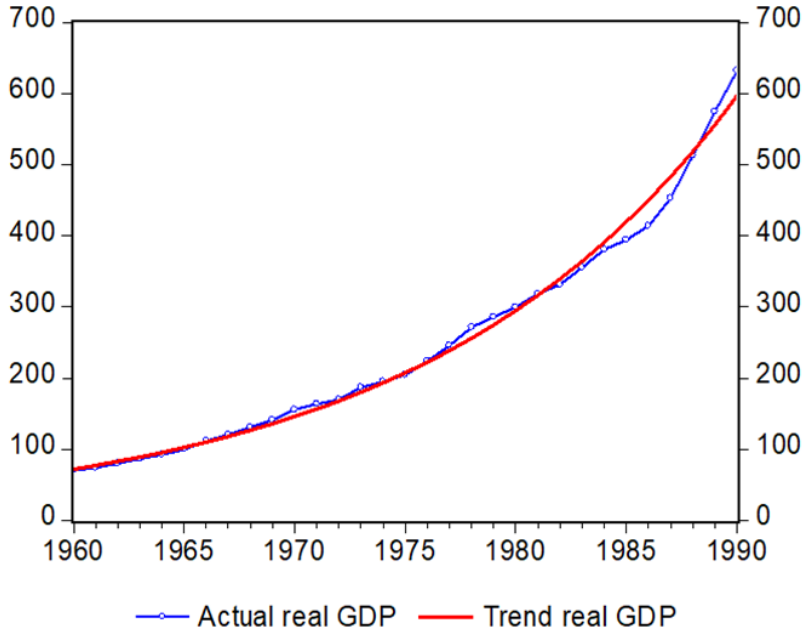
Income level doubled within ten years at the stable 7.2 % growth

$$Y_t = Y_0 e^{gt}$$

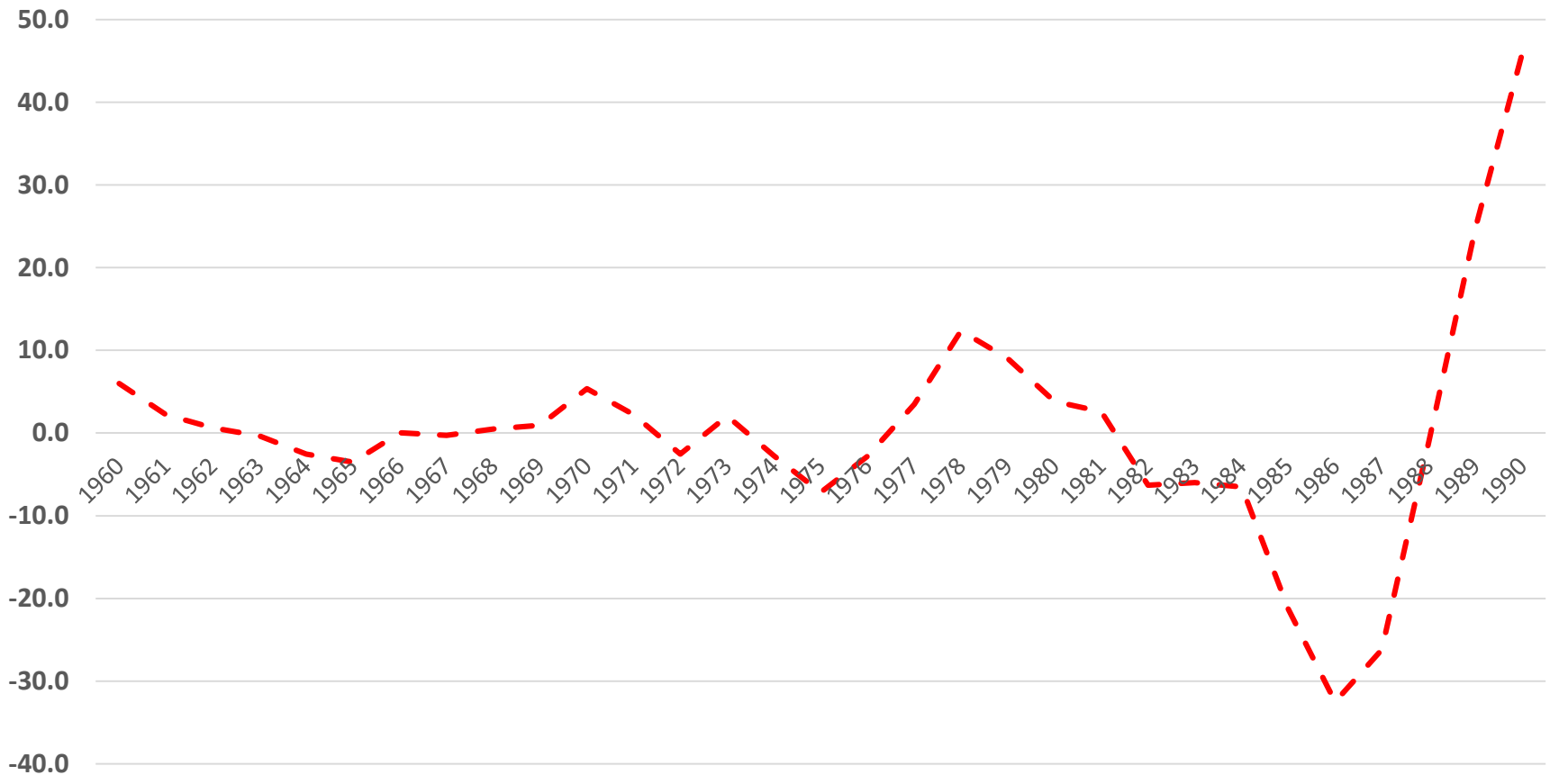
$$\ln Y_t = \hat{\alpha} + \hat{g}t$$

$$g = \text{long-term exponential growth rate}$$

$$t = \text{time trend}$$



Real GDP and deviation from the trend path: 1960-1990



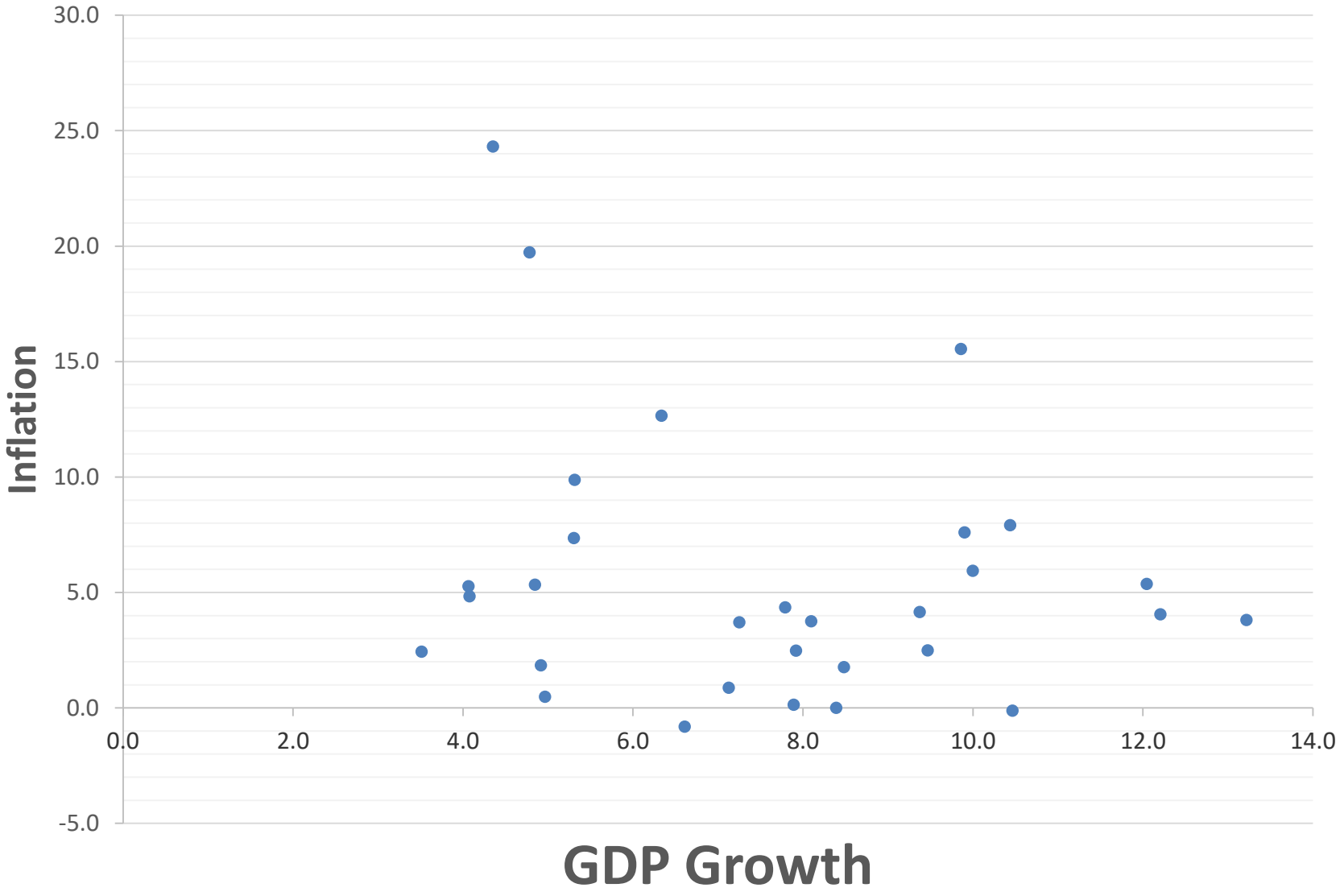
Deviations from the trend growth path

- From 1961 to 1990, output increased at the trend growth path of 7.2 %. (Remember Rule 72?)
- There were some episodes that actual GDP was above the trend, as ***new engine*** of growth had emerged.
- Growth rate dropped below the trend growth path due to the two oil price shocks during 1973-1974 and 1979-1980.

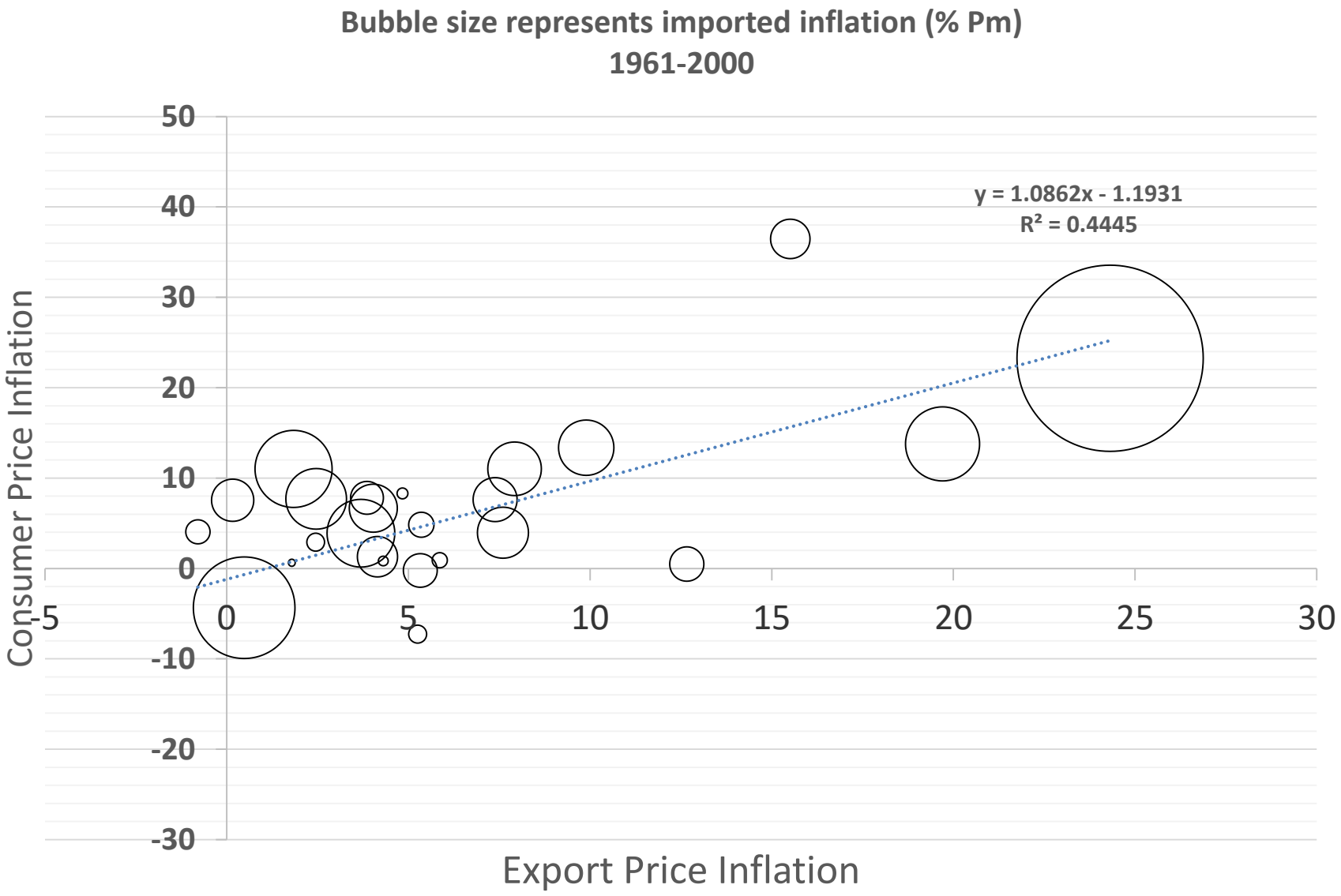
No inflationary spiral

- After the oil shocks (cost-push inflation), inflation rate was subsided within a year.
- External shocks did not cause a run-away inflation as monetary growth rate was moderate.
- Aside from the four years of double-digit inflation, faster growth was achieved without inflation acceleration.

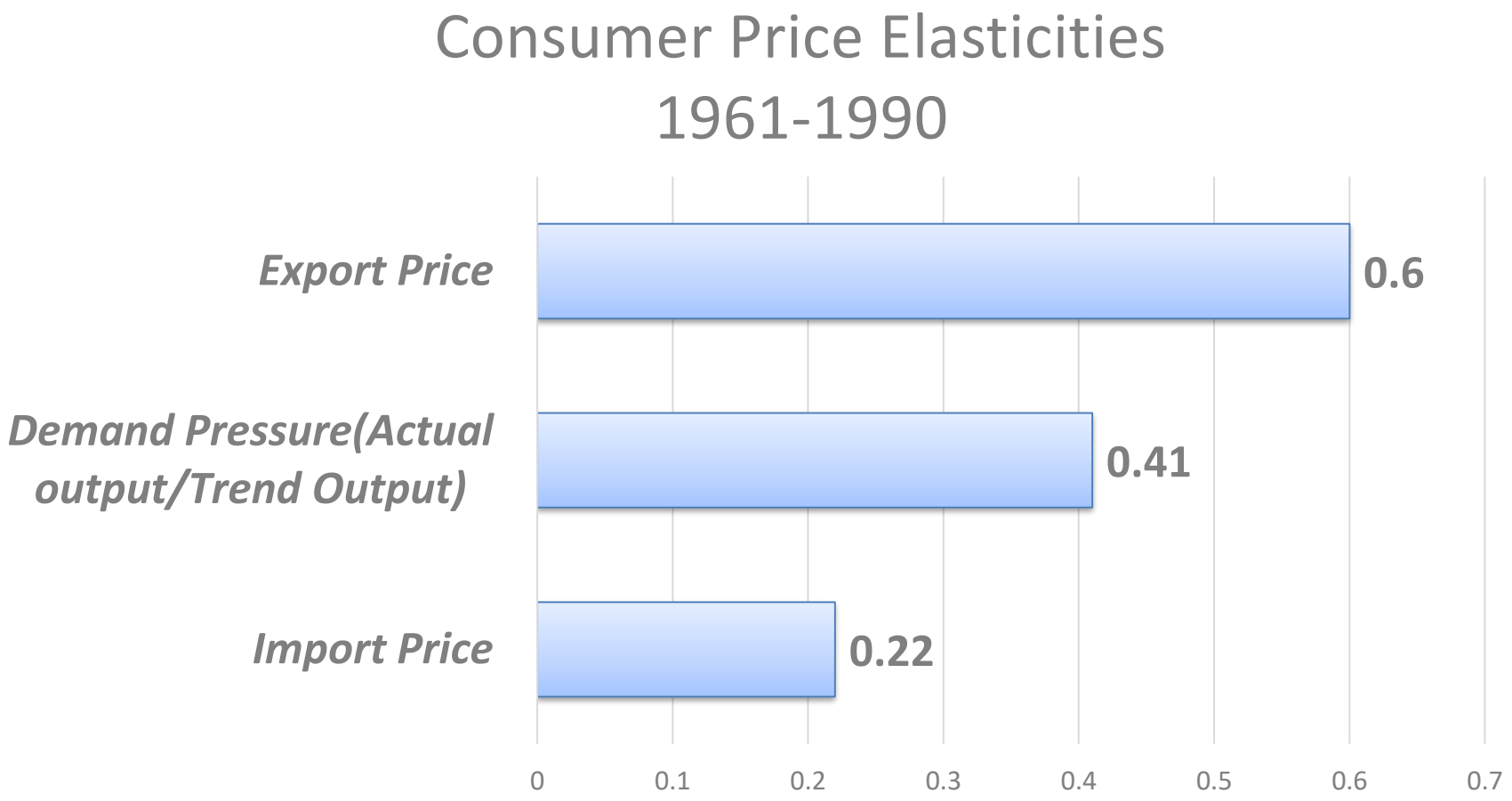
Inflation-growth trade-off?



Domestic inflation and external price pressures



Inflationary Pressure



4. Growth Accounting Framework

Accounting identity: Identify growth drivers

$$\Delta Y = \Delta C + \Delta I + \Delta G + \Delta X - \Delta M$$

$$\frac{\Delta Y}{Y} = \frac{\Delta C}{Y} + \frac{\Delta I}{Y} + \frac{\Delta G}{Y} + \frac{\Delta X}{Y} - \frac{\Delta M}{Y}$$

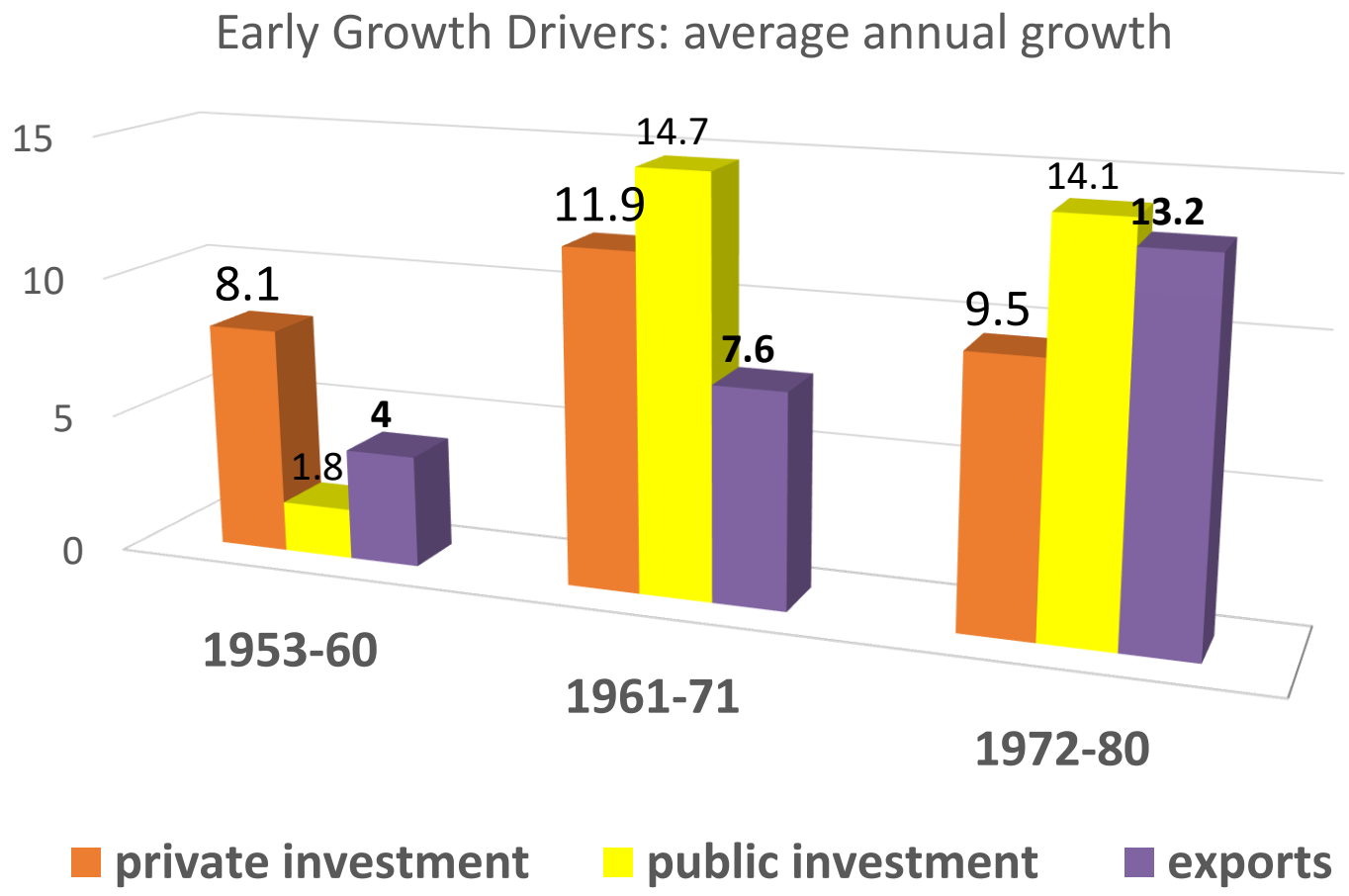
$$g = \frac{\Delta C}{C}(C/Y) + \frac{\Delta I}{I}(I/Y) + \frac{\Delta G}{G}(G/Y) + \frac{\Delta X}{X}(X/Y) - \frac{\Delta M}{M}(M/Y)$$

$$g = \dot{C}(C/Y) + \dot{I}(I/Y) + \dot{G}(G/Y) + \dot{X}(X/Y) - \dot{M}(M/Y)$$

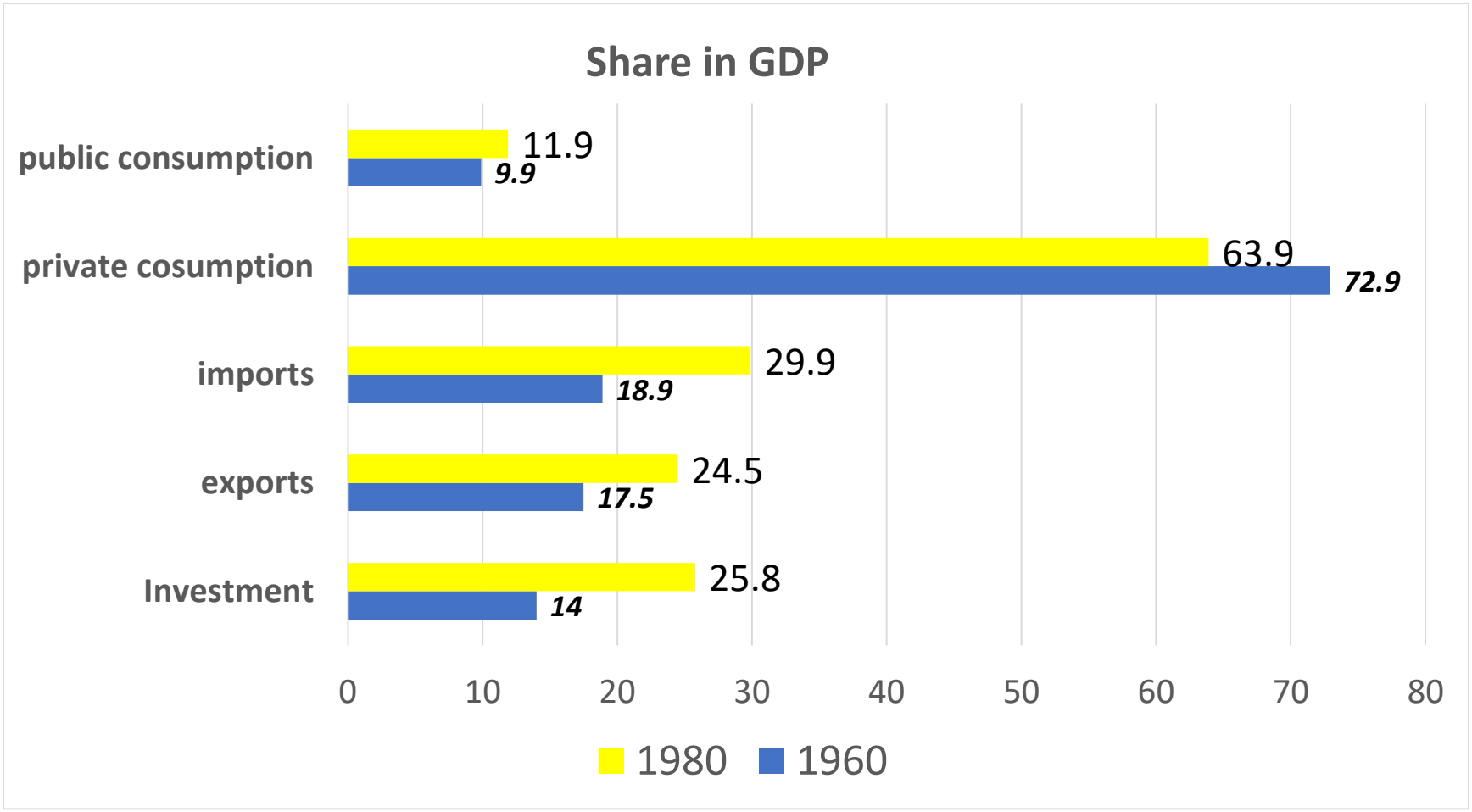
Momentum of Consumer spending

Speed of investment

Speed of expansion in each demand components



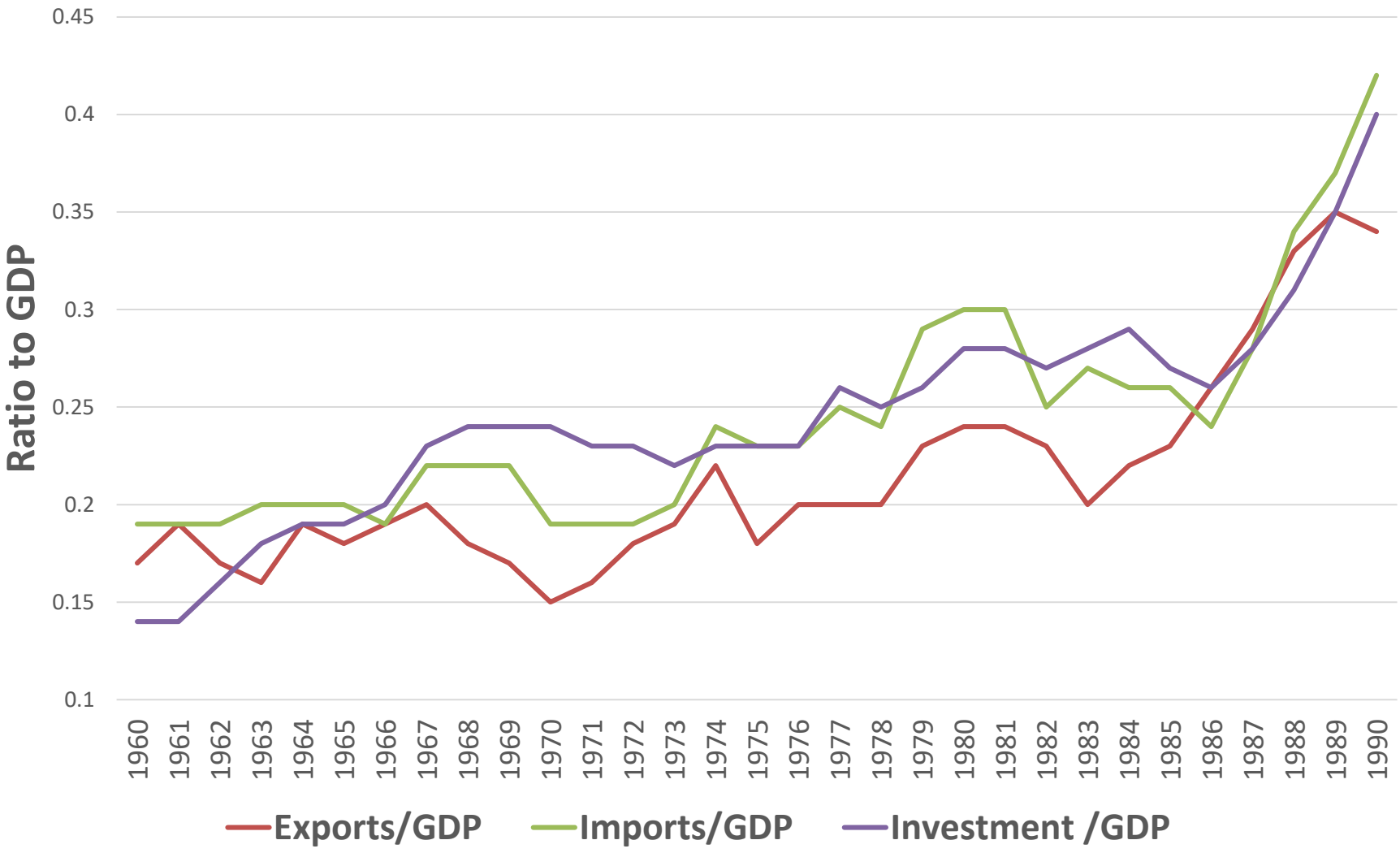
Momentum of each aggregate demand components



Growth was driven by investment and exports

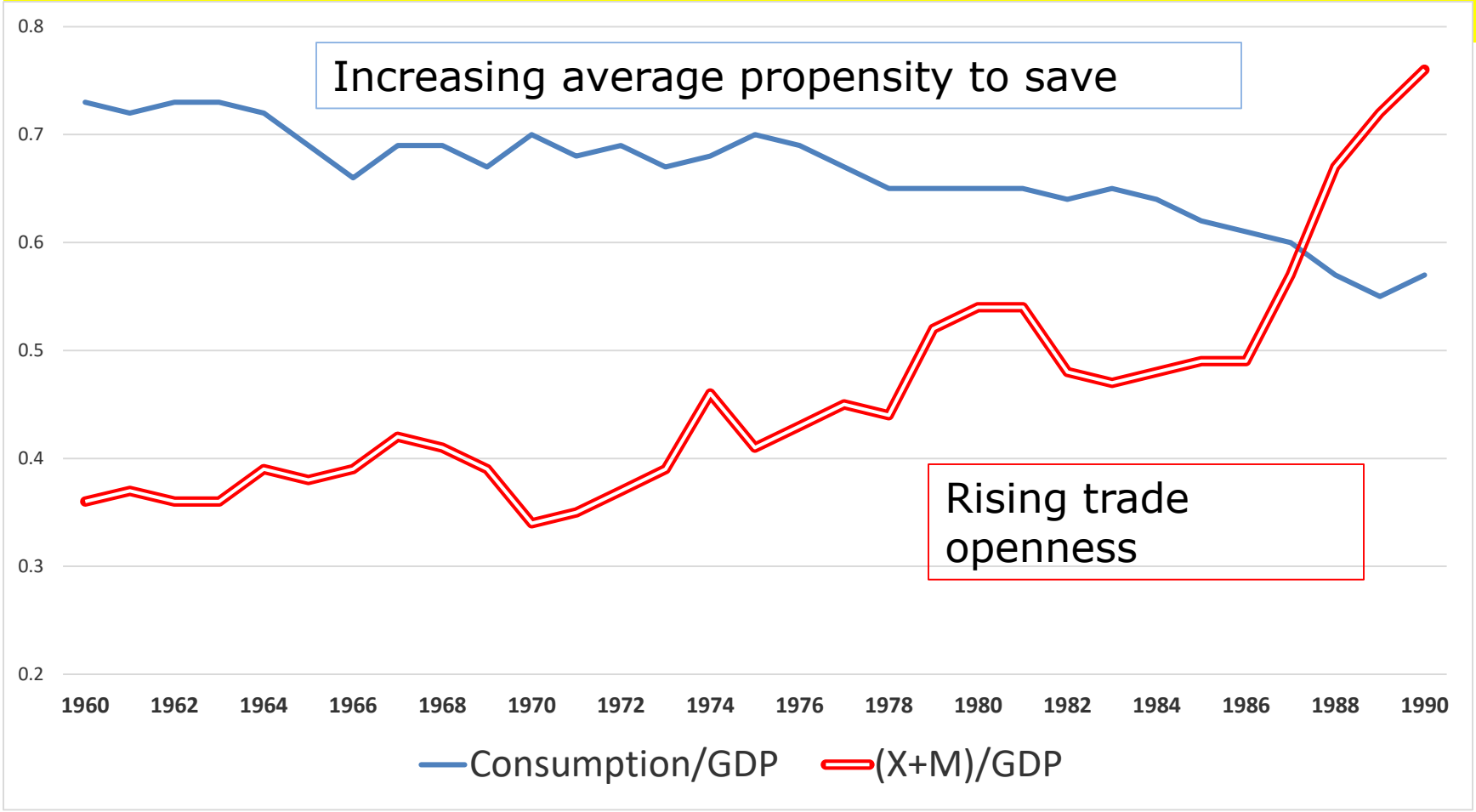
- The share of investment in GDP increased rapidly to 25 % in 1980.
- Investment and imports were highly correlated.
- A large part of imports was capital goods, which contributed to productivity improvement in the manufacturing sector, giving rise to competitiveness and enhanced export capacity.
- But imports also rose sharply during the oil shocks.

Growth Drivers



Pro-trade Biased Growth

The sum of exports (X) and Imports (M) indicates international trade activities



5. Exports and economic growth

- The share of foreign trade (the sum of values of imports and exports) to GDP increased from 35% in 1960 to 75 % in 1990.
- Trade openness was related to output growth (Rodrik's deep determinants: Trade Integration).
- ***How do exports contribute to economic growth?***

Bela Balassa: Export-led Growth Hypothesis

The rationale for the above hypothesis is that these export-oriented policies provide five important merits:

(1) ***Better resource allocation*** according to comparative advantage (recall the impact of Bowring Treaty),

(2) ***Greater capacity utilization*** due to larger market (high level of underemployment in farming sector),

Exports-led growth strategy

(3) Permission of the ***exploitation of economies*** of scale (e.g. Singapore),

(4) ***Technological improvements*** in response to ***competition aboard*** (e.g., Samsung's Note 10 Galaxy smart phone)

(5) ***Employment generation*** in labor-surplus countries (e.g. Myanmar and China in the 1980s).

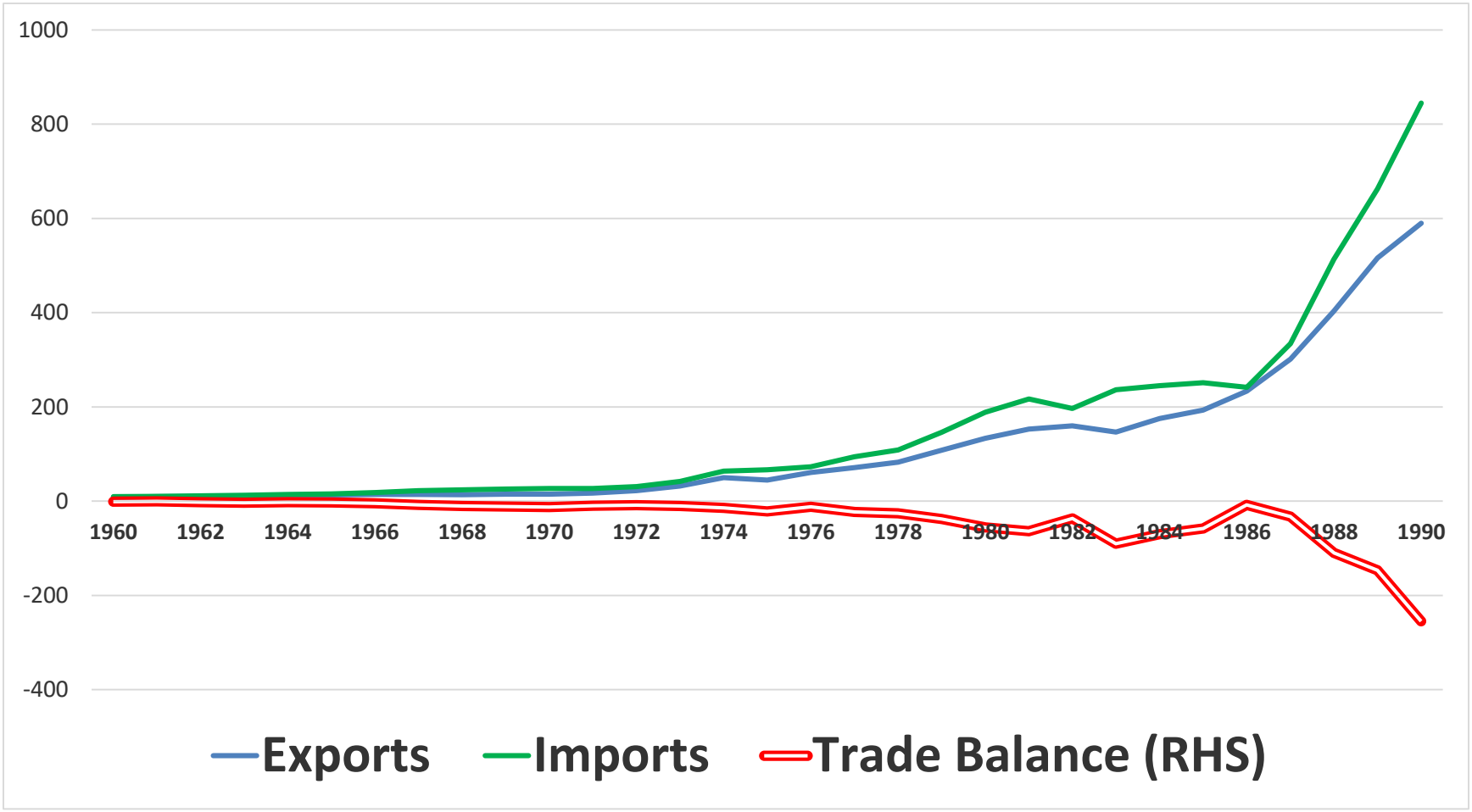
The importance of imports

- Imports also grew faster, due to high elasticity of demand for imports
- Exports generate income, which in turn raises imports
- Imported raw materials are required to produce export goods (intermediates and oil)
- Imports of capital goods (higher productivity than domestically produced capital goods)
- Imports of luxuries (e.g. super cars, Richard Mille)

6. The Twin Deficits and Devaluations

- In the first ten years of the implementation of economic development plan, trade deficit was still insignificant.
- International trade expanded as the fixed exchange rate provided favorable environment with no foreign exchange risk.
- When the trade deficit grew larger after 1978, the need for exchange rate adjustment became apparent.
- If the exchange rate is not allowed to work, we need to have other methods to solve the trade deficit.
- The twin deficits hypothesis provides a clue to cure the trade imbalance.

Deteriorating Trade Balance



The Twin Deficit Hypothesis

M-X = (I-S)+ (G-T)

- Trade deficit (M – X) is a result of (1) over consumption (under savings) and over investment, and (2) fiscal deficit (G-T)
- To reduce trade deficit, the (I-S) gap and fiscal deficit must be cut.
- The framework ***ignores*** the exchange rate and price adjustments, focusing on the income effect only—ignoring the substitution effect

Living beyond our means

- Exchange rate adjustments were necessary when the trade gap was widening.
- By 1990, the amount of trade deficit deteriorated further as the baht appreciated, in spite of fiscal surplus.
- Thus the widening trade deficit was mainly due to the investment-saving gap—not public deficit.

Blame the dollar strength

The baht was dragged up by the dollar strength against the yen

The appreciation of the US dollar against other currencies implied that the baht appreciated against the yen and other currencies, resulting in the loss of Thailand's export competitiveness in non-US markets.

$$e = \frac{B}{\$} = e^* = \text{23 baht}$$

$$e = \frac{B/Y}{\$/Y} = e^*$$

As the dollar appreciates against the yen, ($/Y) falls
The baht must also appreciate against the yen (B/Y) falls by the Same percentage to maintain the fixed e* level.
Hence Thailand's exports lost its price competitiveness in Japanese markets

Delayed devaluation: procrastination

- The number of months of covered imports international reserves declined steadily before the mid-1981 and the late 1984 devaluations.
- A ceiling was imposed on the issuance of letter of credit in 1983 and the 18% ceiling on bank lending growth was stipulated to avoid adverse political consequences of large devaluations.
- By using these indirect measures, the Bank of Thailand did not deal with the root of the problem, which was **the unrealistic exchange rate.**

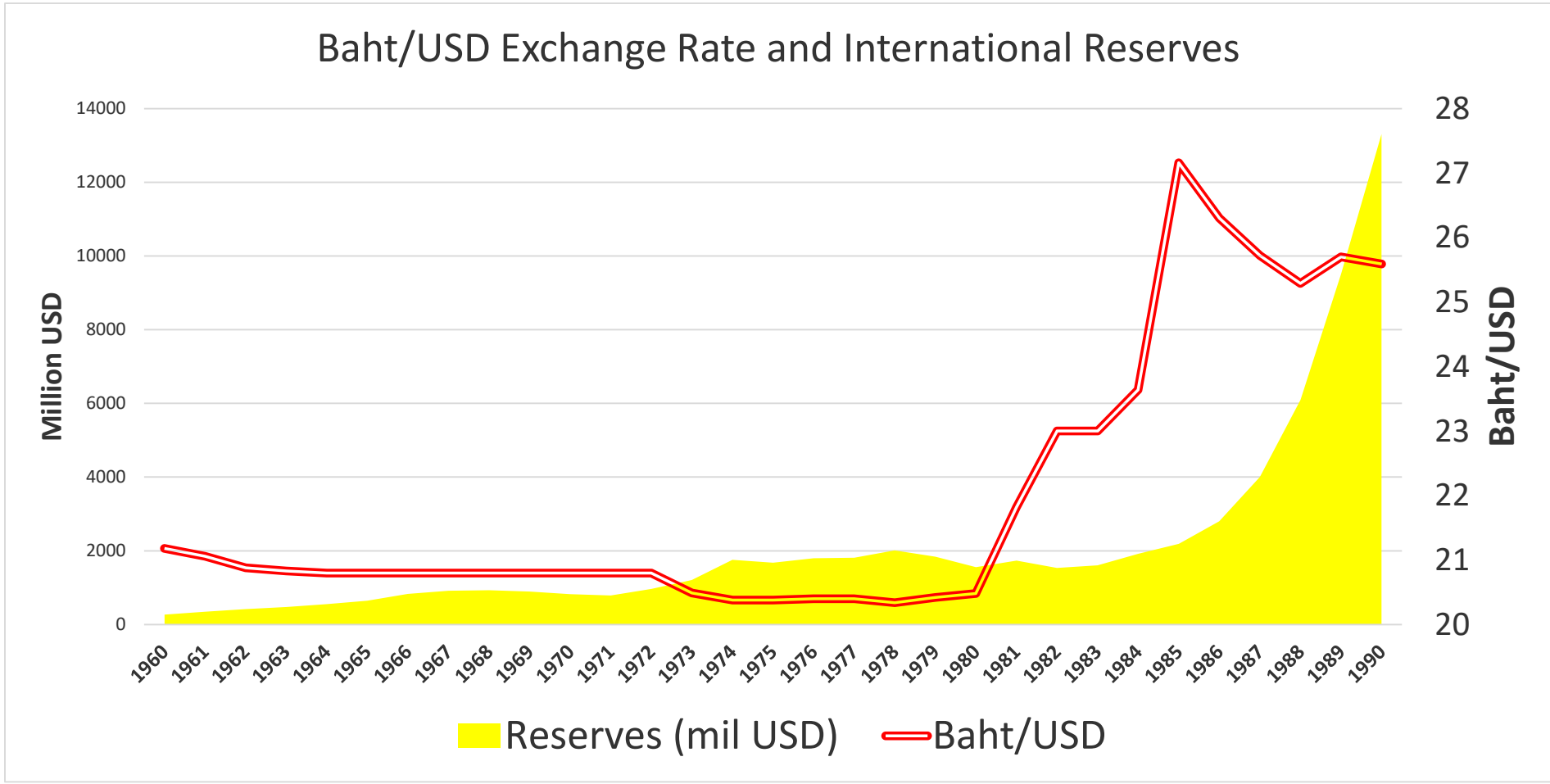
Devaluations of the baht

- In May 1981, the baht was devalued against the US dollar by 1.1 %, which was followed by another devaluation of 8.7 % in July 1981.
- Another major devaluation was undertaken in November 1984 by 14.9 %, which followed by another 1.9 % in December 1985.
- Devaluation was a political decision involving government stability and income distribution.

Successful devaluations raised international reserves

- Devaluation was quite successful as the level of international reserves increased sharply from the level of **2 billion in 1985 to more than 12 billion USD in 1990.**
- The **baskets of currency exchange rate system** of Thailand continued providing the stability of the bath-dollar exchange rate, as the weight of the US dollar in the basket was more than two-thirds and had been rising over time.
- This practice led to the problem of unsustainable current account deficit in the 1990s.

After two major devaluations



7. Conservative fiscal policy

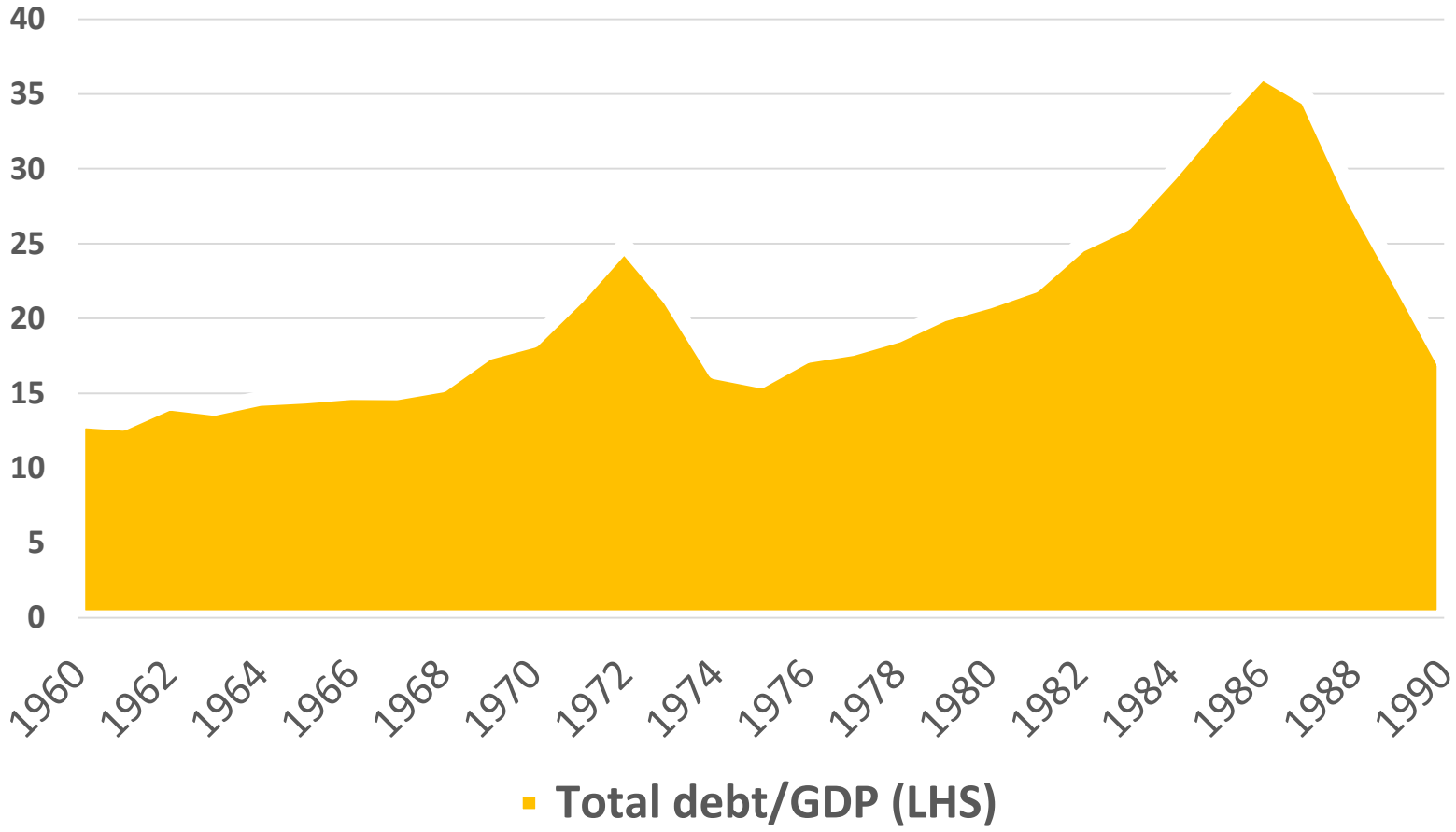
- Conservative fiscal policy was the character of Thailand's fiscal policy the early stage of development.
- The government adhered to balanced budget principle during the regime of General Thamon administration (1964-1974).
- The size of budget deficit was larger in the early 1970s but the budget deficit became surplus in 1974, because of rising trade tax revenues.

Financial discipline

- As the public debt increased gradually in the early 1960s, the public spending was curtailed to maintain manageable level of public debt.
- The share of public debt started climbing from 15 % in 1975 to above 35% of GDP in 1986.
- In 1987 the budget deficit was reduced as financial discipline was strictly obeyed

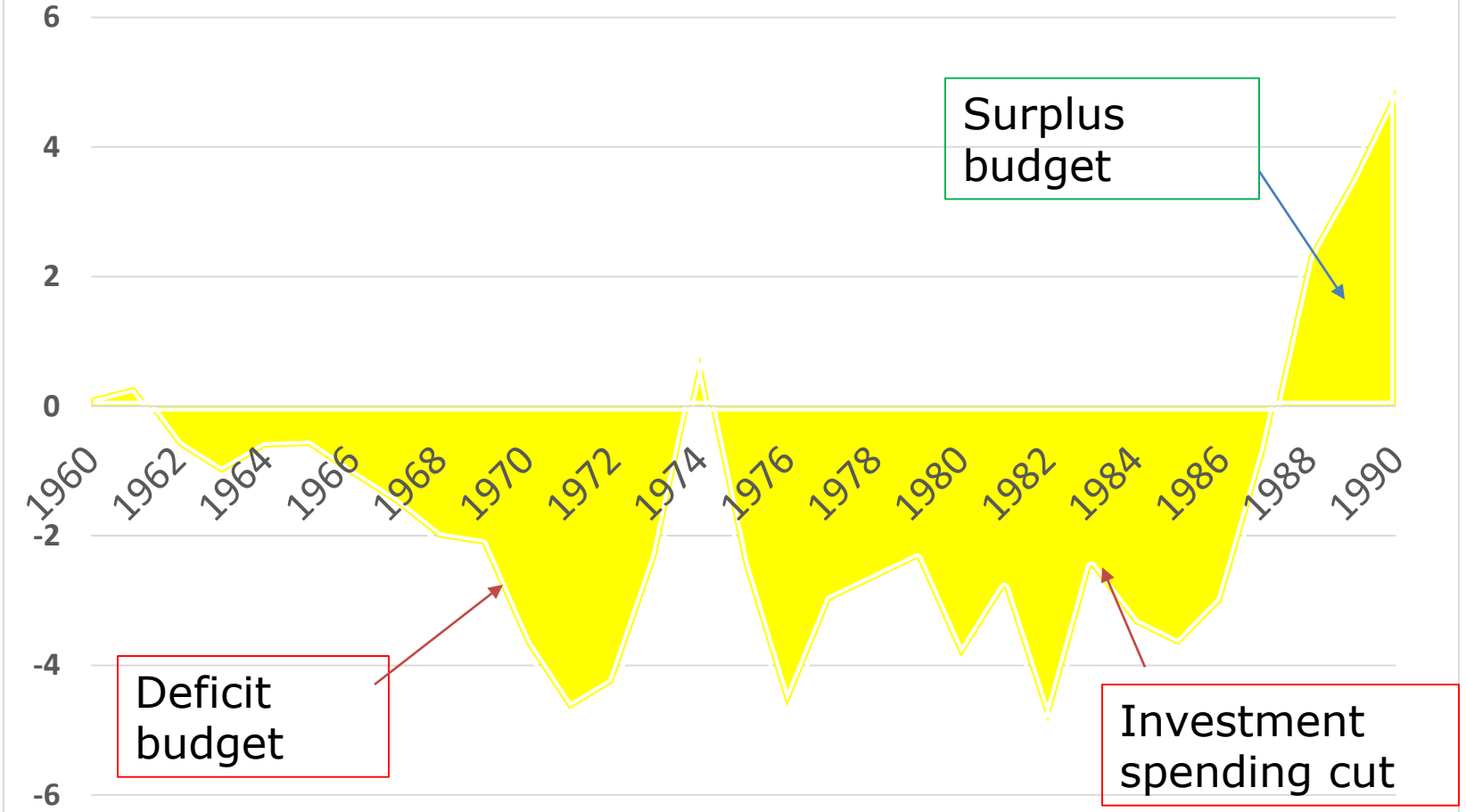
Fiscal Sustainability: 1960-1990
(Debt as % GDP)

Source: Bank of Thailand



Fiscal Budget Sustainability: 1960-1990 (surplus as % GDP)

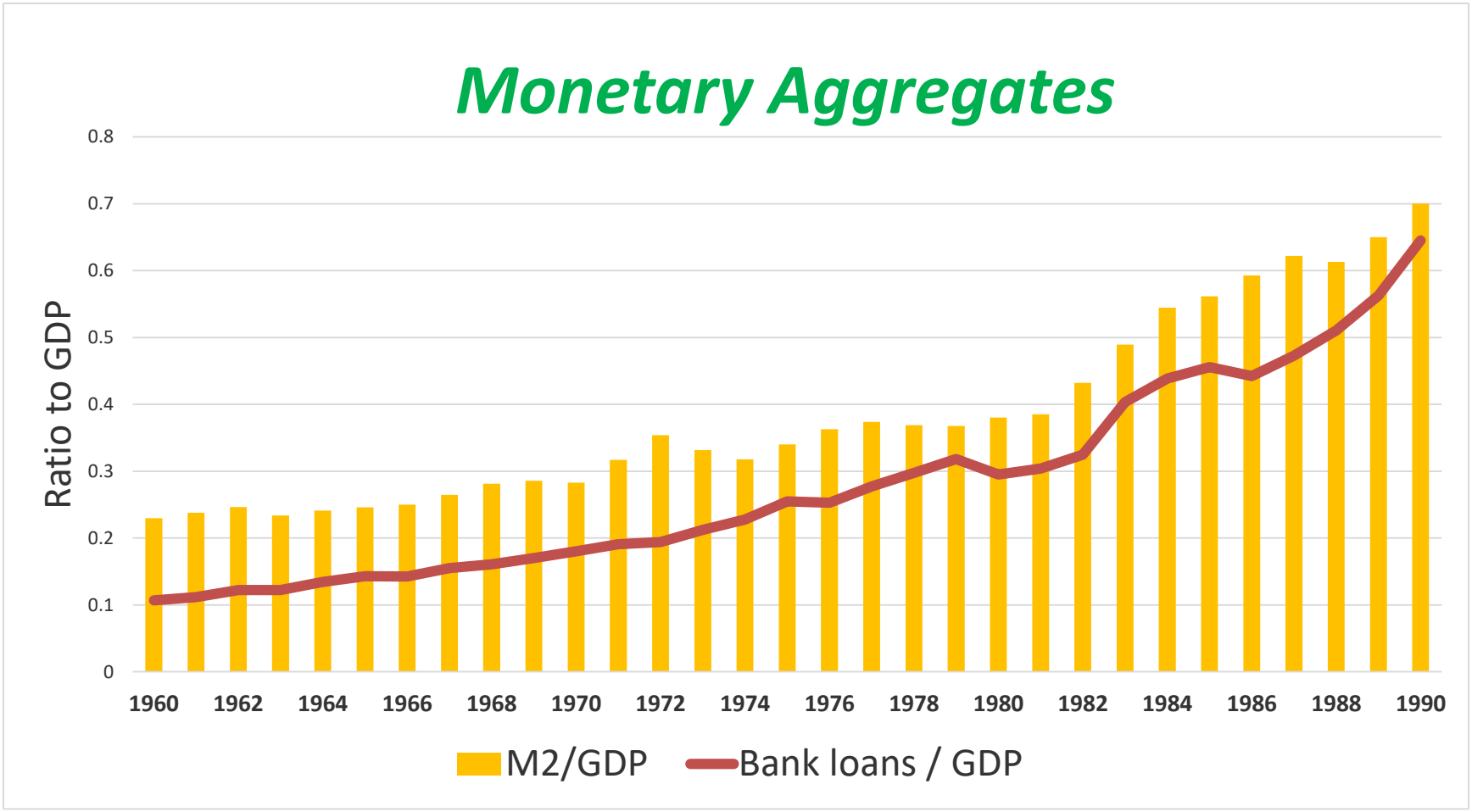
Source: Bank of Thailand

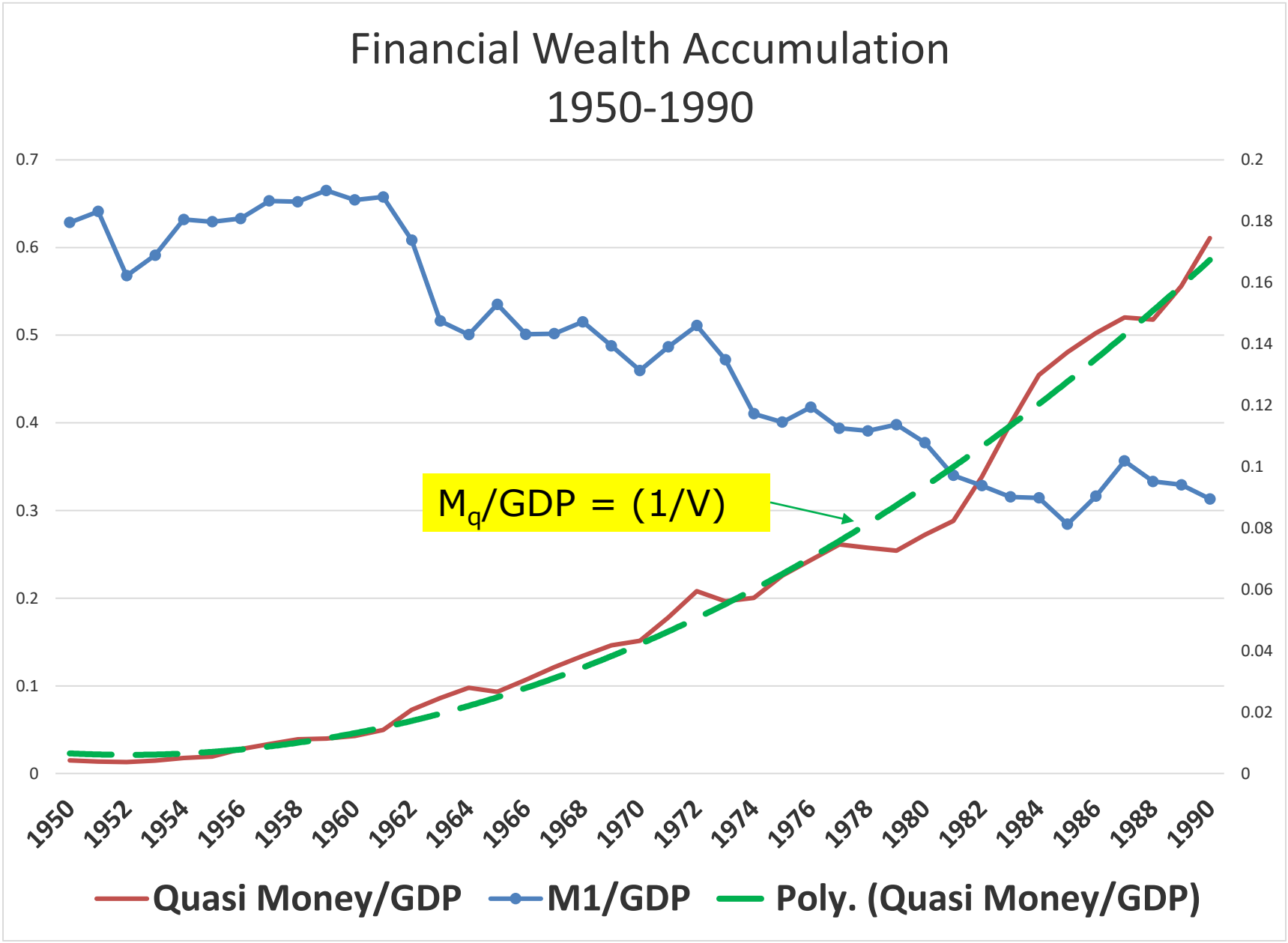


Fiscal discipline depends on political will

- The ability to cut down budget deficit led to a sharp decline in the debt to GDP ratio, as a result of the turnaround in the fiscal position.
- By 1989, the strong growth of the Thai economy generated tax revenues and the country experienced substantial surplus budget, ***enabling*** the government to undertake ***trade liberalization*** program through tariff reduction.

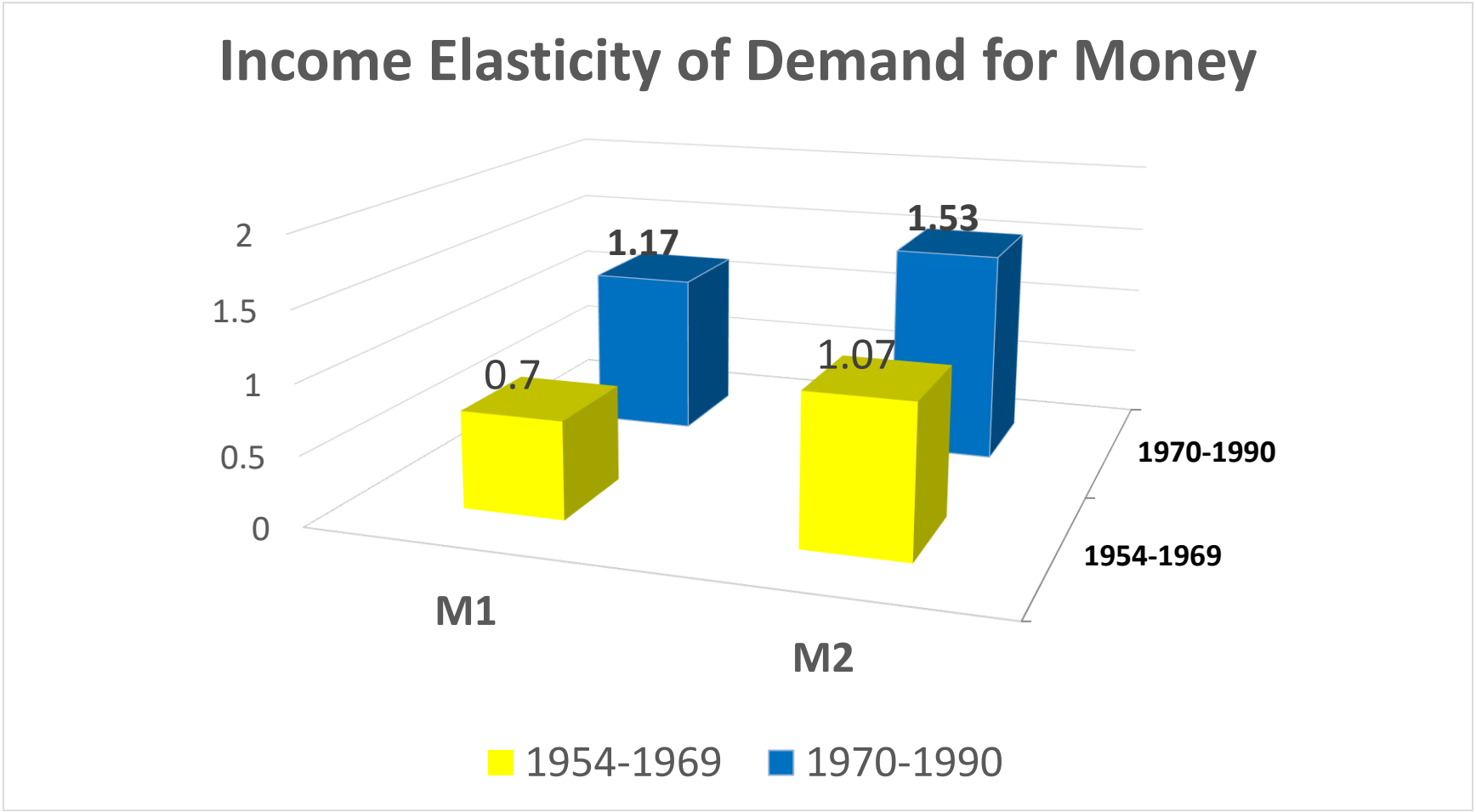
8. Financial Deepening





Quasi money = savings and time deposits

Since the demand for money rises *faster* than income, V falls



The secret of price stability

Shallow finance vs. deep finance

- Bank loans and M2 increased faster than GDP, exhibiting a steady increase in the degree of financial deepening.
- Rapid capital accumulation was permitted by availability of bank credit.
- The broad money supply moved together with bank loan in the long run (cointegrating relationship)
- *The fall in velocity crimped inflation as the government launched infrastructure development through borrowing from the world bank.*

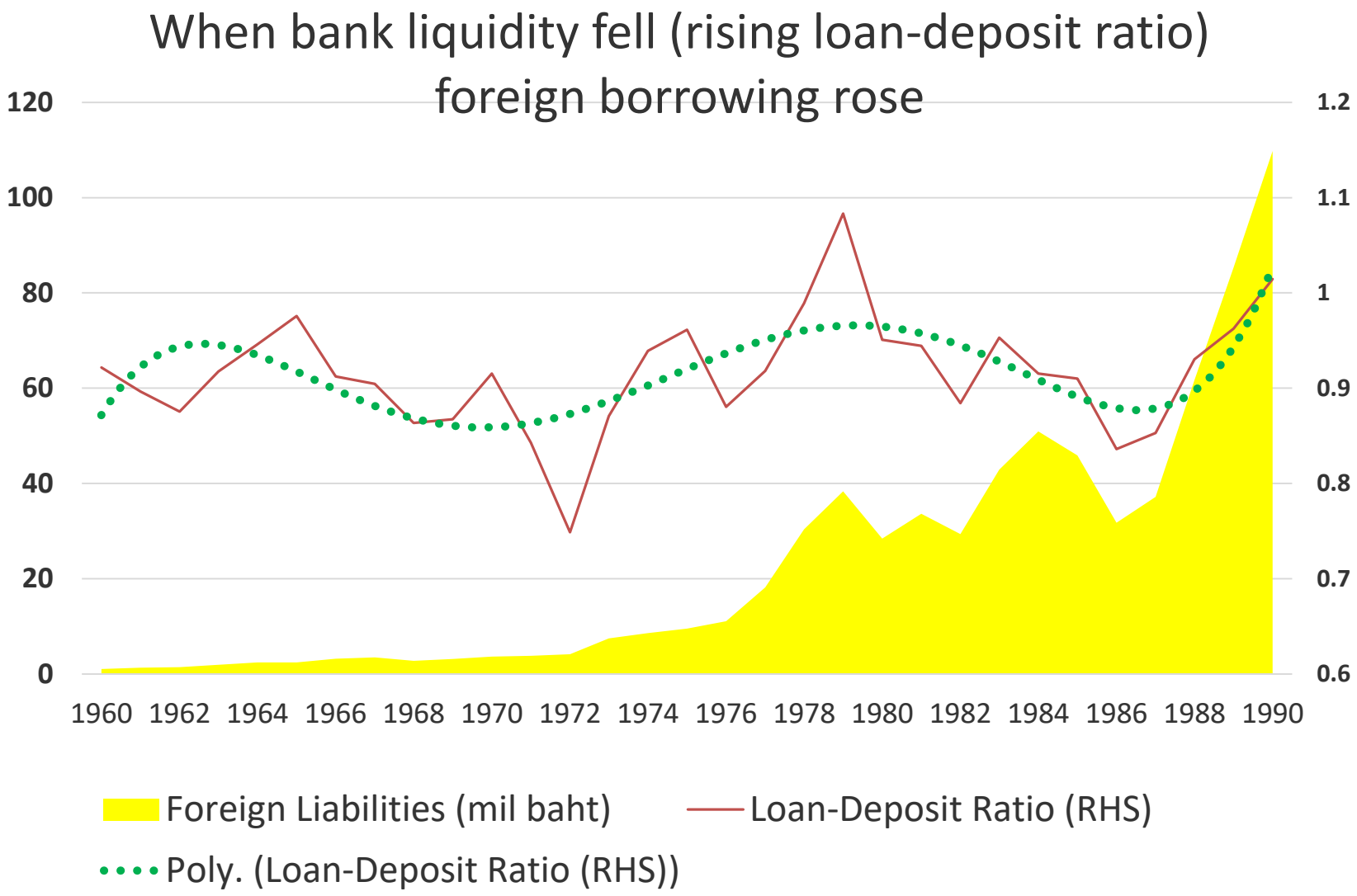
Relaxation of domestic resource constraints

- Since 1973, commercial banks had began borrowing from abroad as a new source of funds.
- The amount of foreign borrowings moved in line with the loan-deposit ratio.
- Financing domestic investment *was no longer constrained by domestic savings*.
- Economic development requires financial deepening.

Domestic investment was no longer constrained by domestic savings, thanks to foreign capital inflows

- Commercial banks borrowed from abroad to circumvent insufficient domestic savings.
- The growth of the economy was not limited by shortages of internal funds.
- International capital mobility through banks' foreign borrowing enhanced output growth.
- It was not just foreign trade openness but also financial openness through capital flows that permitted high economic growth during the first thirty years of economic development.

Foreign borrowing



Summary

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