

Income Inequality in Thailand

Bhanupong

Lecture 28

Outline

- Income inequality, productivity, and education
- Problems with the Gini coefficient
- Wealth gaps
- Financial inclusion

Poverty-growth-inequality triangle

Complex relationship
Growth



Inequality

Poverty

Implication of globalization

- Prices of domestic goods cannot significantly deviate from the international prices (traded goods or manufactured).
- In the long run, the law of one price states that the prices of traded goods are dictated by the international prices.
- Fluctuations in prices of traded goods affect values of marginal products of factors of production and the overall income distribution.

Neoclassical theory of wage

- The wage rate is determined by the value of marginal product of labor in the competitive market.
- The demand for labor is the derived demand from the goods produced by the labor.
- The higher the marginal productivity of labor, the higher the real wage rate.

$$\text{Wages} = (\text{MP}_L) \times \text{Prices}$$

- Income distribution between farmers in rural and labors in urban areas depends partly on relative marginal productivity as well as relative prices of the products they produce.
- Marginal productivity of each industry depends on the capital-labor ratio employed in each sector.
- The changing terms of trade among sectors also determine income distribution.

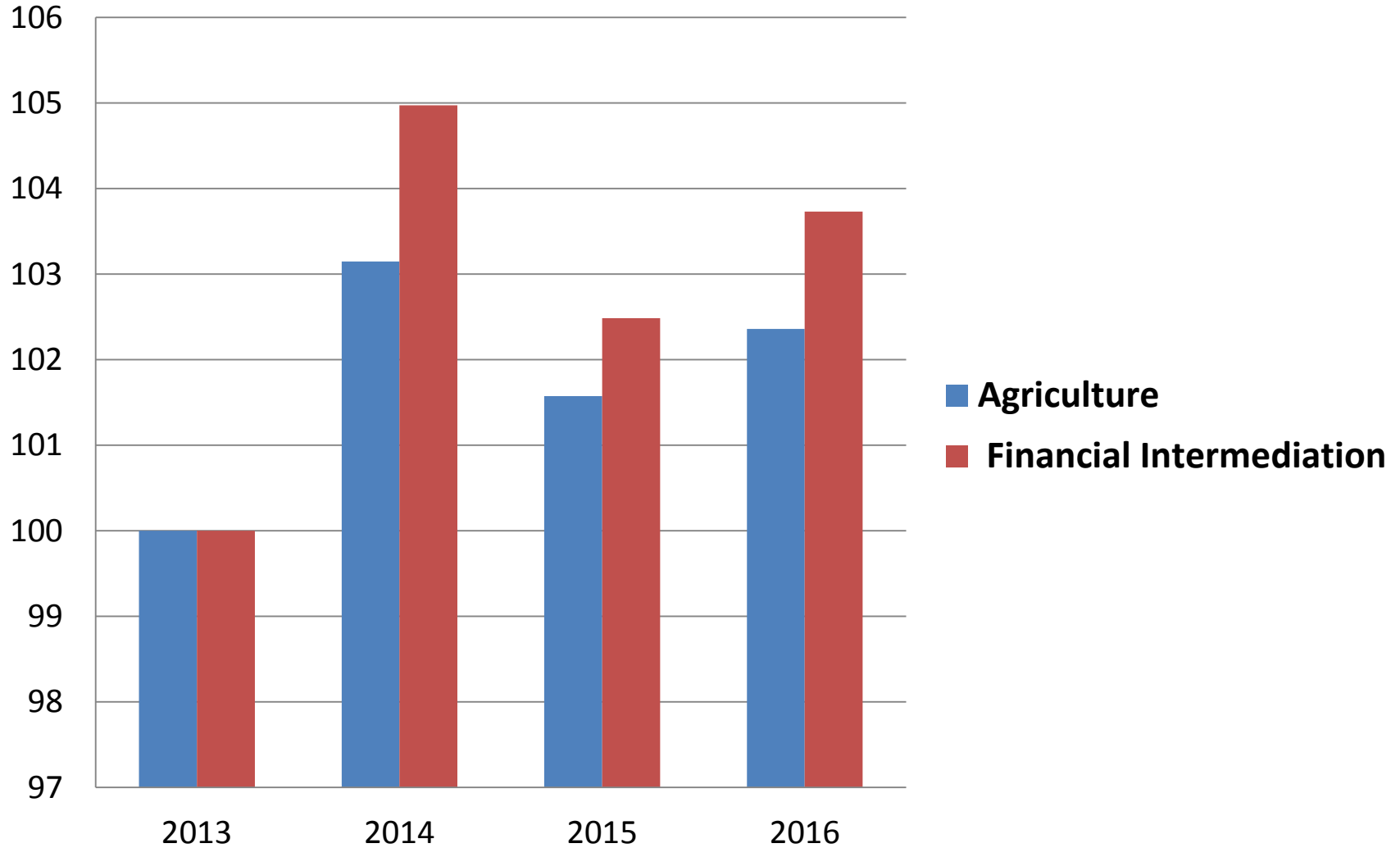
Productivity differences and the terms of trade between sectors affect income distribution

$$\frac{W_M L_M}{W_A L_A} = \text{relative income share between two sectors}$$
$$\frac{(MP_L^M P_M) L_M}{(MP_L^A P_A) L_A} = \left(\frac{MP_L^M}{MP_L^A}\right) \left(\frac{P_M}{P_A}\right) \left(\frac{L_M}{L_A}\right)$$

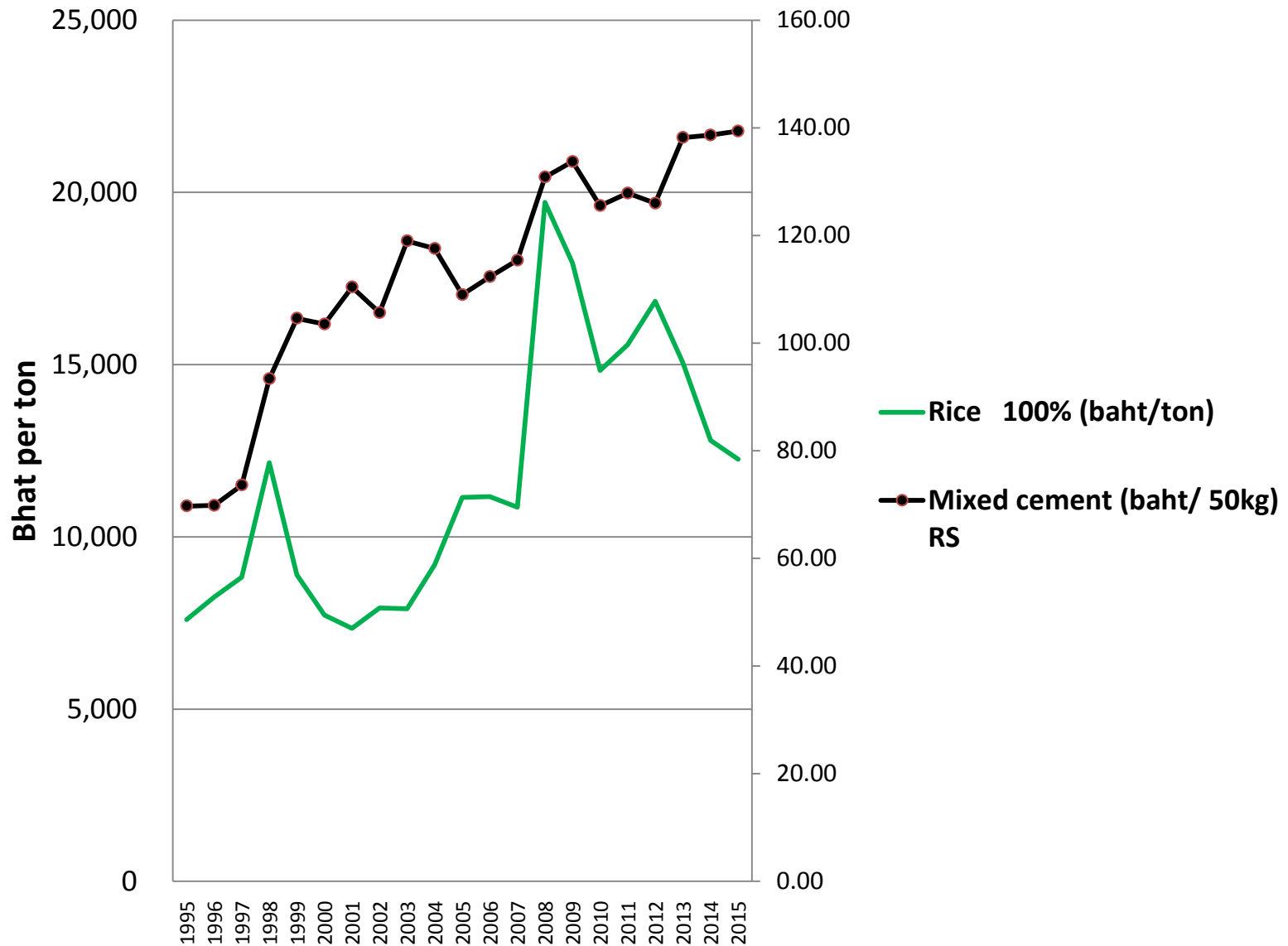
Marginal productivity of labor depends on capital labor ratio

Level of education attainment is related to labor productivity

Labor productivity index (2013=100)

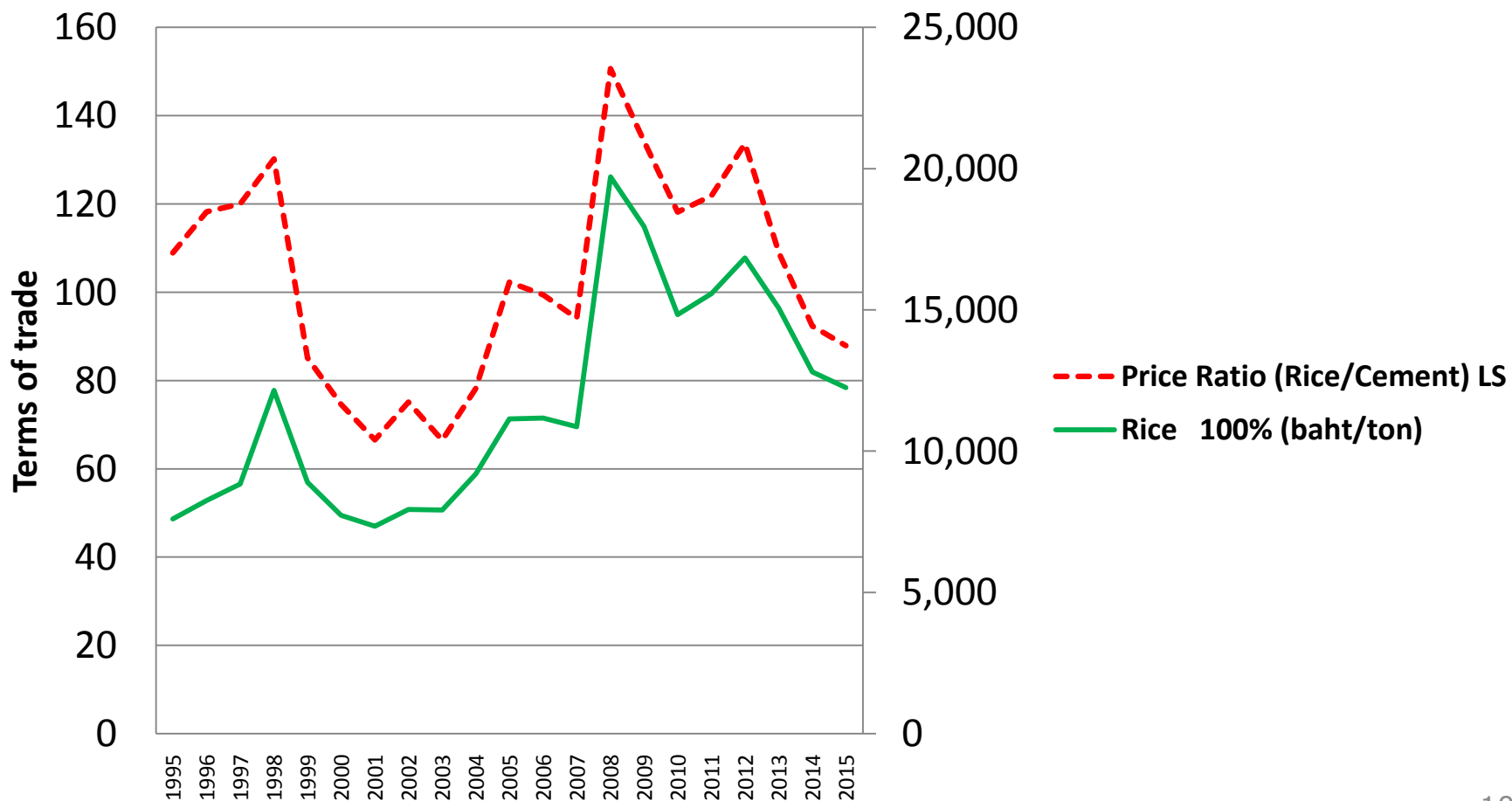


Agriculture vs manufacture prices



Relative income share between sectors depends partly on the terms of trade

Agriculture vs. Manufactured Products Prices



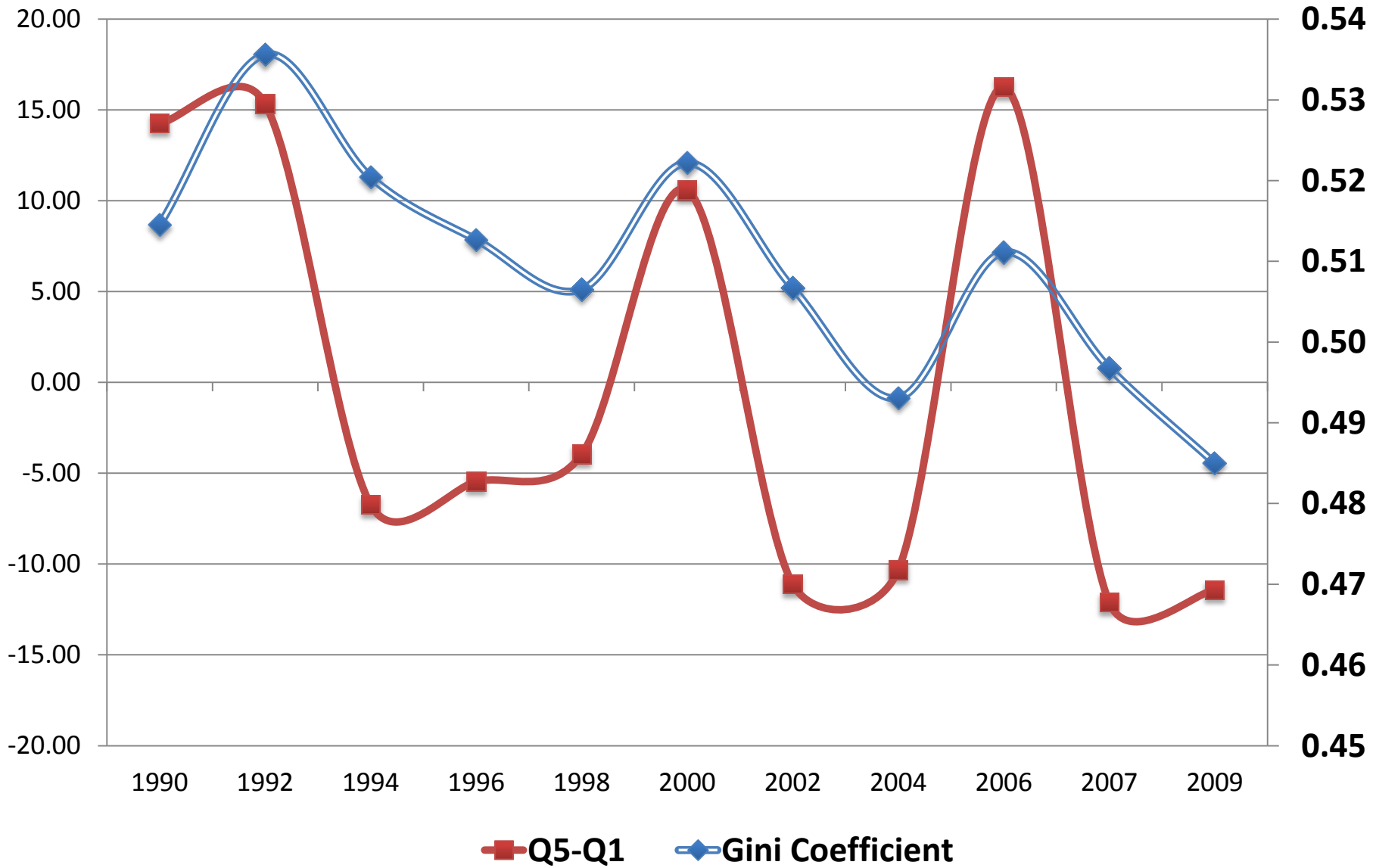
Agricultural labor income share

- The agricultural share of employment is declining relative to other sectors.
- The wage share of labor in the agricultural sector will be lower if the marginal product of other sectors rises faster than that of agricultural labors.
- If the terms of trade of agricultural goods to manufactured goods declines, income inequality will increase.

Measurement of income inequality

- The Gini coefficient is a measurement of inequality; its value ranges between zero and one.
- The higher the value of the Gini, the higher the degree of income inequality.
- Perfect equality, when the Gini is zero, may not be desirable, because efficiency will be threatened.
- At zero value of Gini, x % of the poorest will obtain x % of total income.

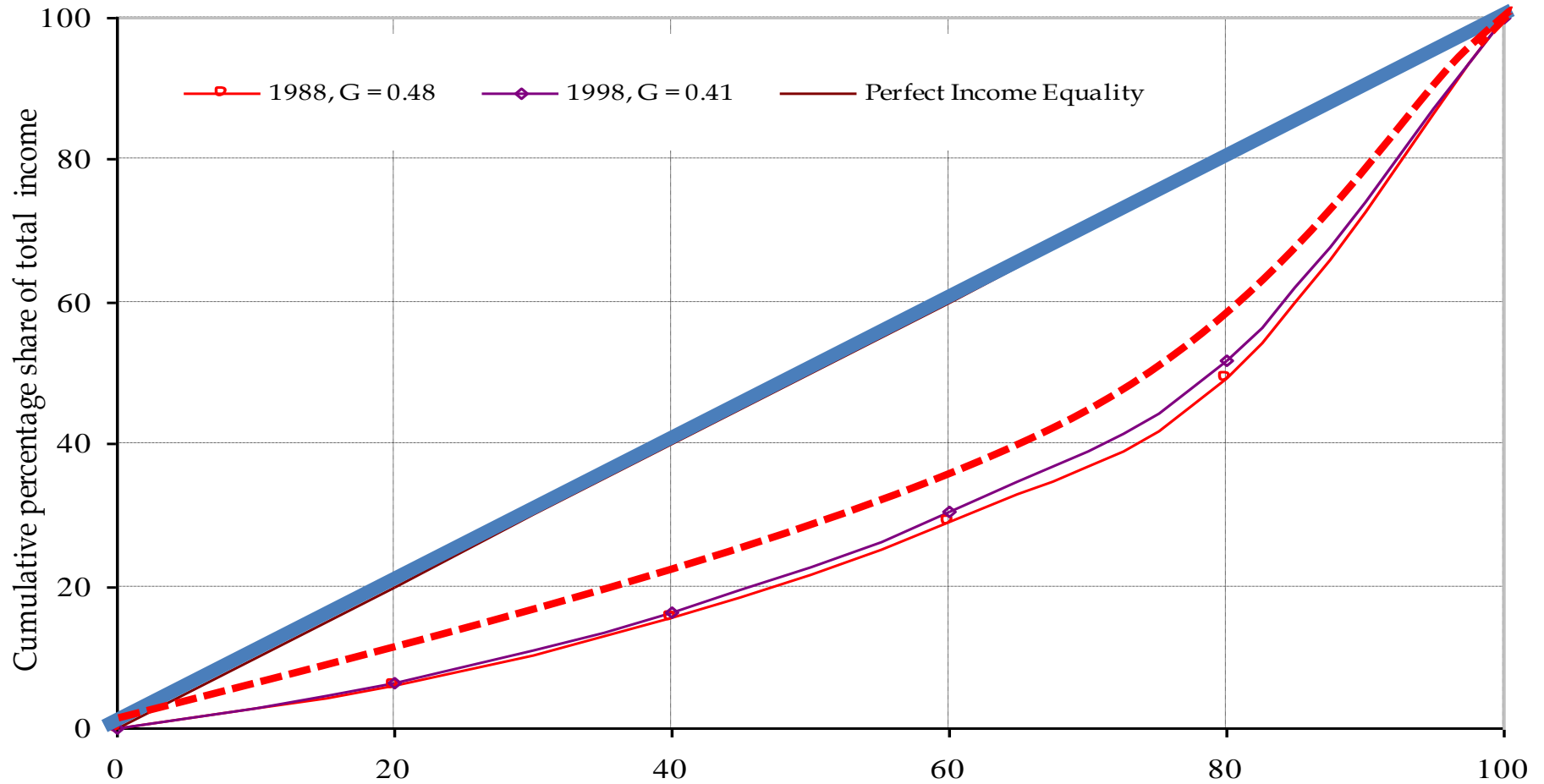
Income Growth Differentials between top and bottom quintiles (Q5-Q1) and the gini coefficient (income Inequality: Right Scale)



The importance of farm prices

- Income disparity measured by the Gini coefficient did not change substantially in the last two decades.
- Except for 1986 and 1988, the Gini coefficient ranged between 0.42 and 0.45
- ***Whenever agricultural prices rose relative to manufactured product prices, income share of the poorest 20% was enlarged.***

The Lorenz curves: 1988 (0.48) vs. 1998 (0.41)



How far can we trust the Gini?

- The Gini index is *sensitive* to the changes in the **middle of the earnings** distribution rather than the tails.
- Two different Lorenz curves with different shapes can yield the same Gini coefficient.
- *Gross income*, rather than net income, is used; thereby excluding taxation and transfer money payments.
- Underlying household surveys differ in method and in the type of data collected, the distribution data are not strictly comparable across countries.
- We must take into account of any major event affecting *transitory income* that might create distortions to the computation of income.

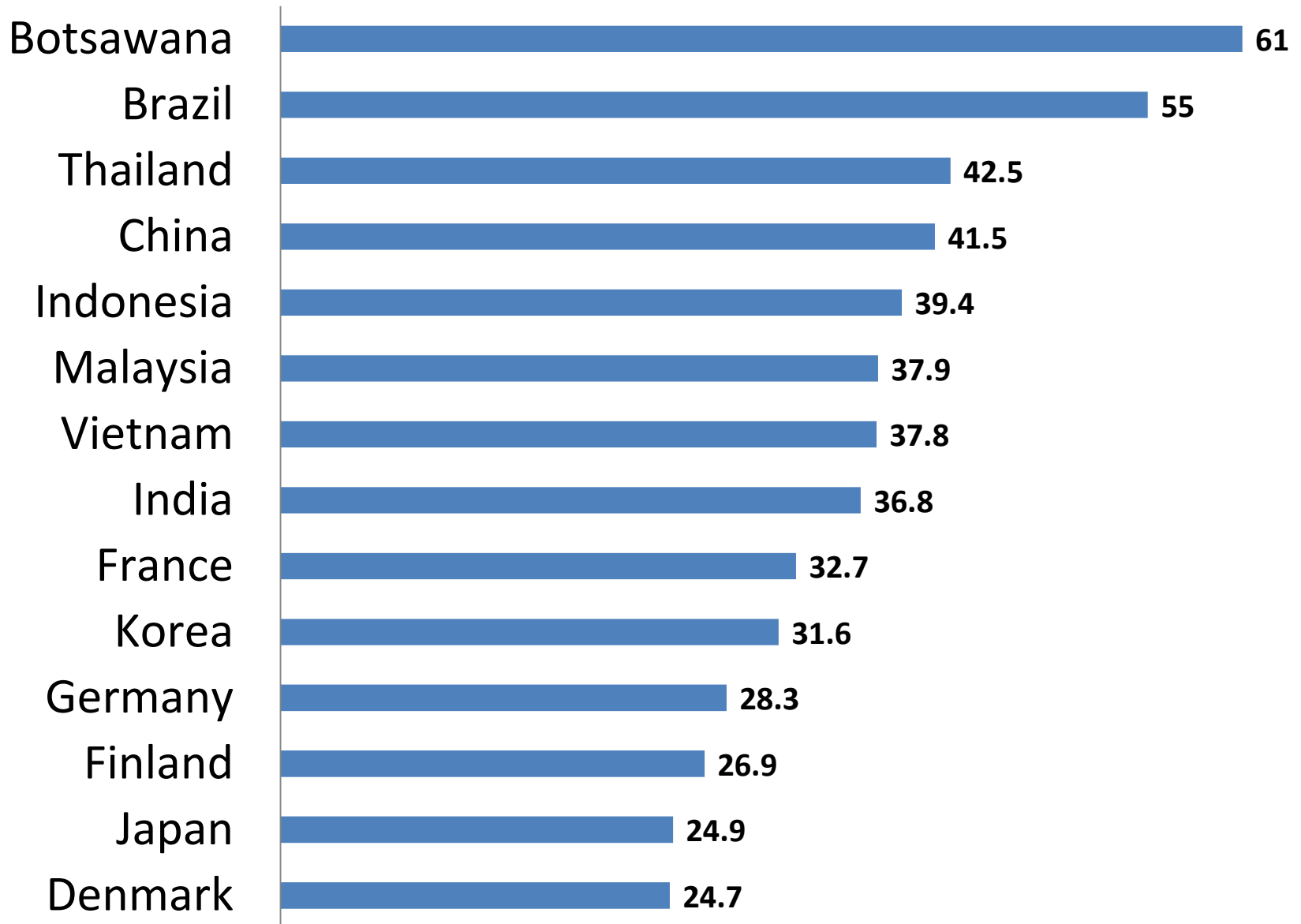
Measurement errors

- Note that the measurements of inequality and poverty are based on estimated ***monetary*** income.
- Income inequality ***does not*** deal with the issue of ***quality of life, but*** income is the best available measure of poverty.
- **Non-monetary indicators** of poverty are: infant mortality, child and adult death, literacy, and school enrollment, life expectancy, availability of safe water and medical services, caloric and protein intake.

Inequality in China and India

- There are 36 billionaires in India, according to the annual Forbes list of the world's richest people in Asia (Japan fell to No. 2 for the first time in two decades).
- **While 850 million Indians are living on \$2 or less a day.**
- Large income inequality exists in the fast growing economies like China and India (evidence supporting the Kuznets hypothesis)

Average Gini coefficient: 1992-2007

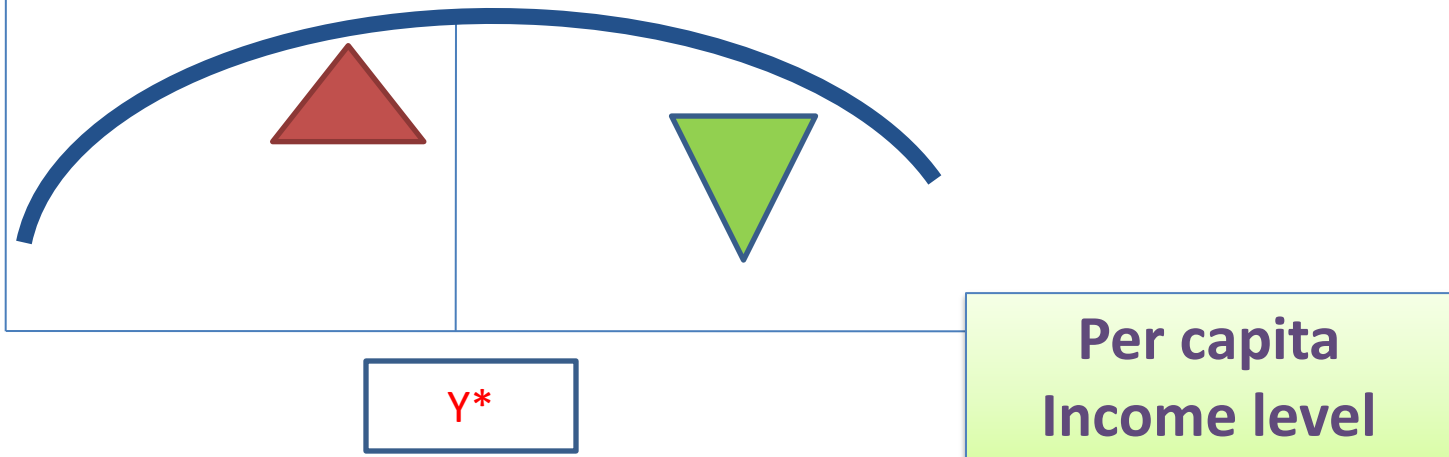


Kuznets hypothesis

The empirical evidence on the Kuznets hypothesis is far from conclusive. The inverted U-shaped curve cannot properly capture the intricate relationship between income and inequality.

"Income distribution must get worse before it gets better."

Gini



Not a simple relationship between income and inequality

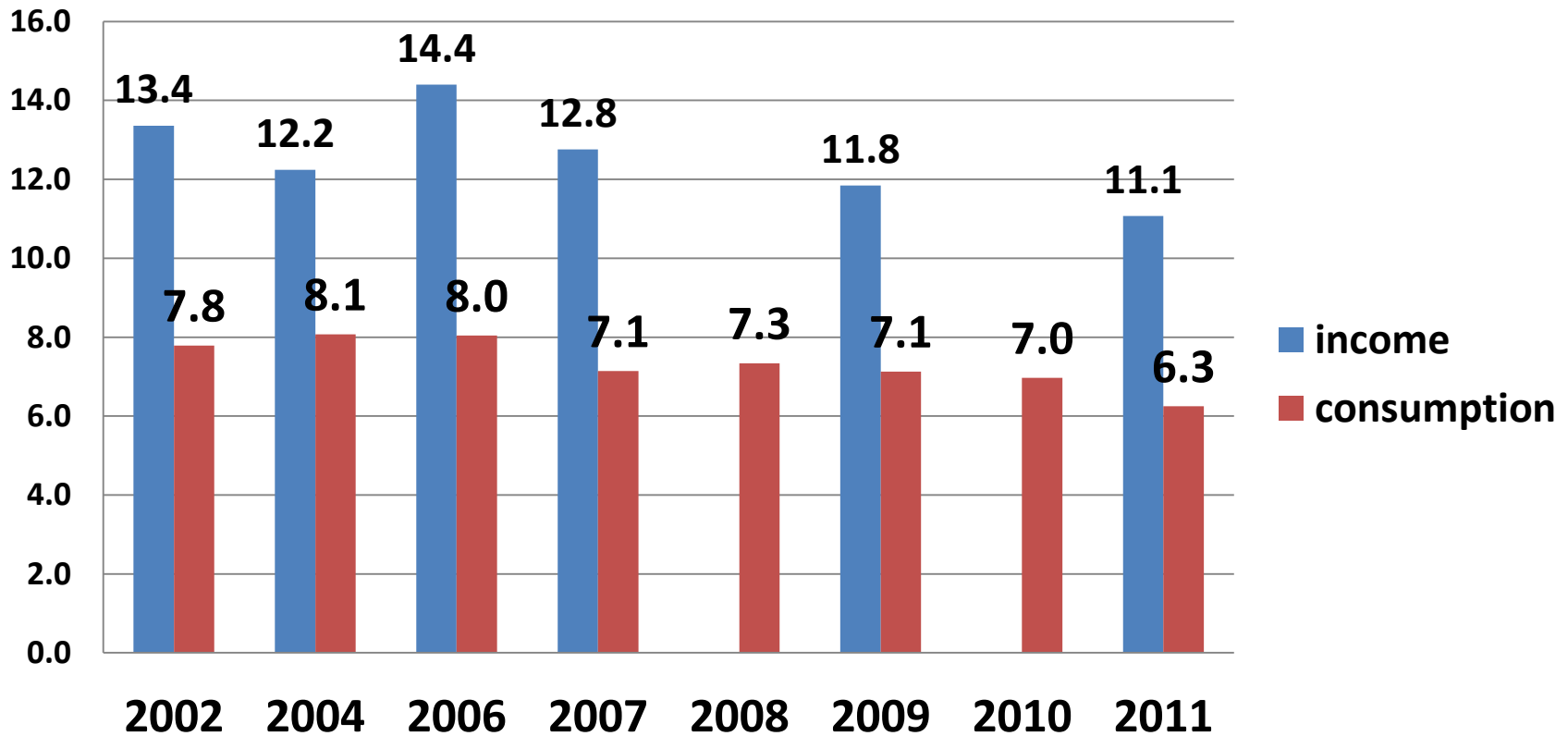
- Kutznets (1955) hypothesis states that income inequality widens in the early stage of development and narrows in later stage when income rises above certain threshold levels.
- Developing countries had greater equality in their **early** stages of development because everyone was thought to be more or less equally poor.

What the Gini does not tell

- Income measures may not adequately capture informal sector income, value of food *grown and consumed* by the family, and other economic activity that goes unreported or unestimated (the underground economy)
- **The positive relationship between equality and growth (when per capita income is above the threshold level) *does not* imply that “soak the rich” policies will improve long- term growth.**

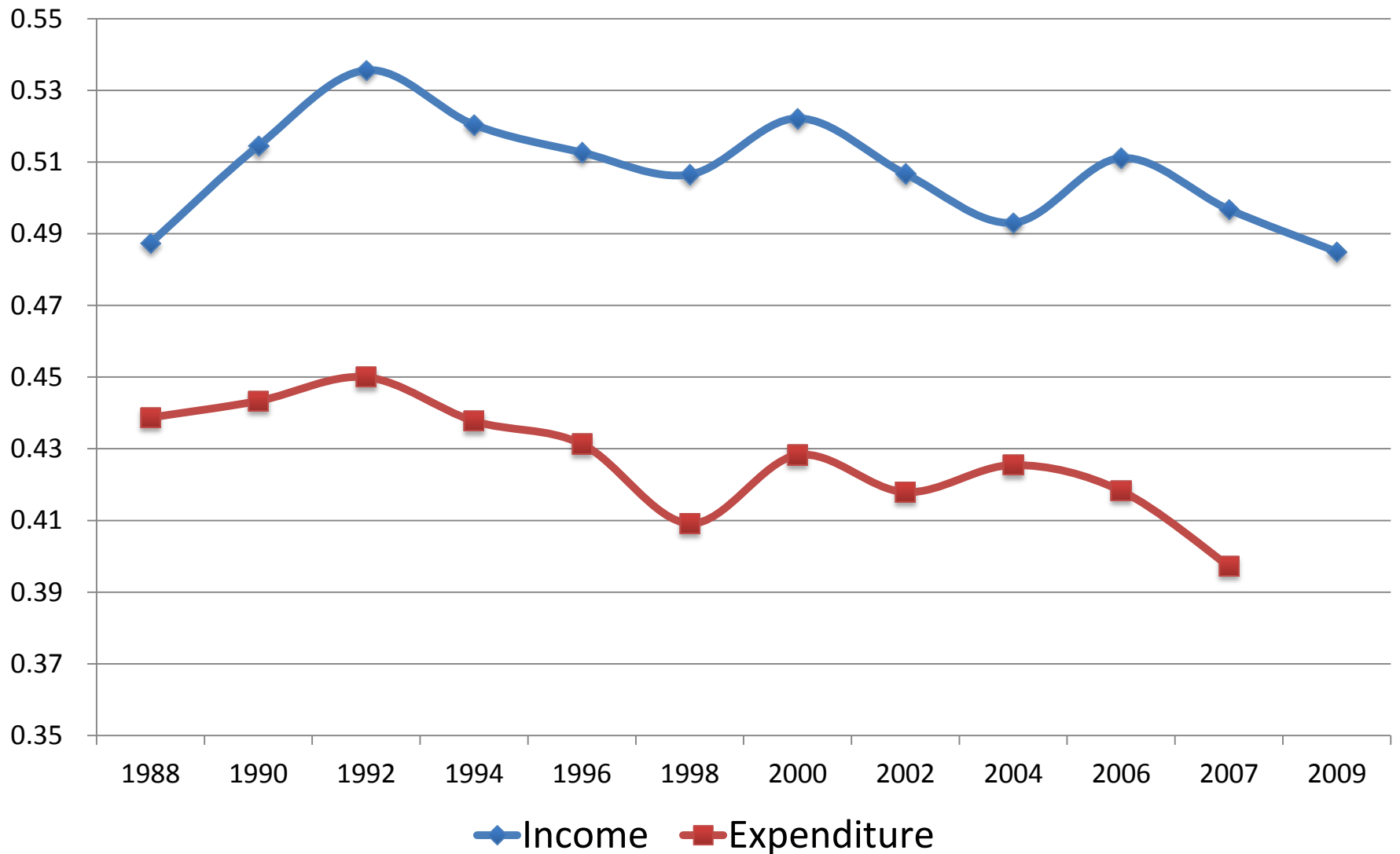
Inequality Measurement (consumption and income bases)

Ratio of Top (Q5)/Bottom (Q1) Quintile



Inequality is less severe if measured by expenditure shares

Thailand's Gini Coefficients: income and expenditure base



Should we tax the rich?

- Policies designed to decrease inequality may increase government consumption, and the cost of the greater government consumption *may outweigh* the benefits of greater equality.
- If per capita income is below the threshold level, a higher level of inequality is not a necessary precondition for growth.
- How did Korea and Taiwan manage their income equality so well?

Has Thailand's economic development led to rising income inequality?

- The bottom/top 20% of income quintiles remained remarkably stable between 1975 and 2000.
- It is premature to say that Thailand's market friendly development policy has increased income inequality.
- Income inequality is related to **asset inequality**.

Inequality in land holding

- **Ten** percent of the population own more than 100 rai of land each
- While 90 % own less than one rai.
- Rising inequality of asset holdings generates more income inequality, in particular, during the booming asset prices.

Past record: Before and after the financial crisis in 1998

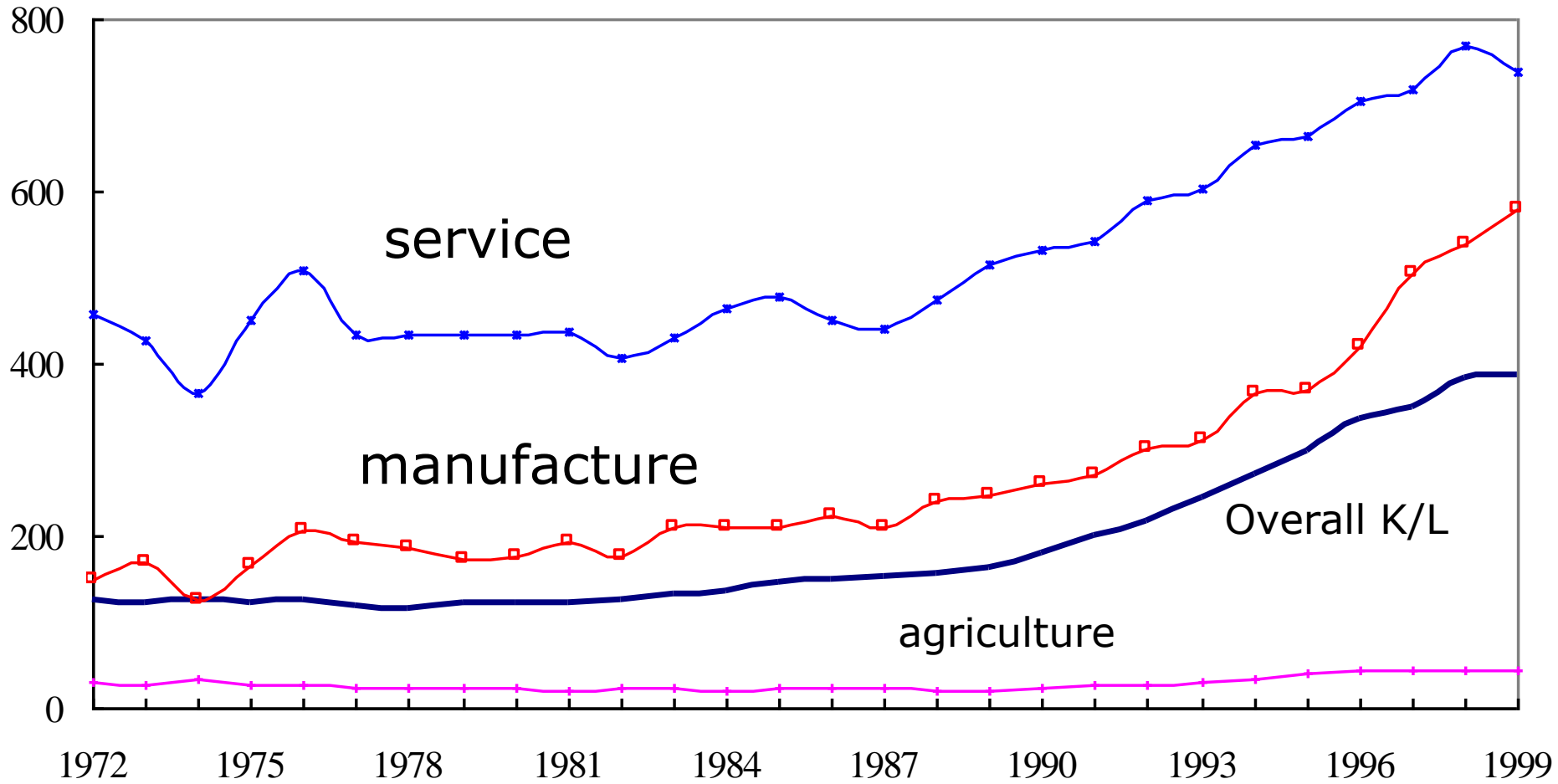
- During the past three decades prior to the 1997 crisis, real per capita income had increased continuously.
- There was ***a significant decline*** in inequality between 1988 and 1998, the Gini coefficient dropped from 0.48 in 1988 to 0.41 in 1998.
- The increase in inequality in 1999 was the result of increasing level of poverty due to increased unemployment after the crisis.
- Poverty and income distribution are related.

Factors contributing to widening income inequality

- Higher incidence of poverty
- Slowdown in economic growth
- Rising unemployment rate
- Declining terms of trade between agriculture and non-agriculture
- Widening productivity gaps
- Financial exclusion

Severe inequality can cause a vicious circle of slower economic growth

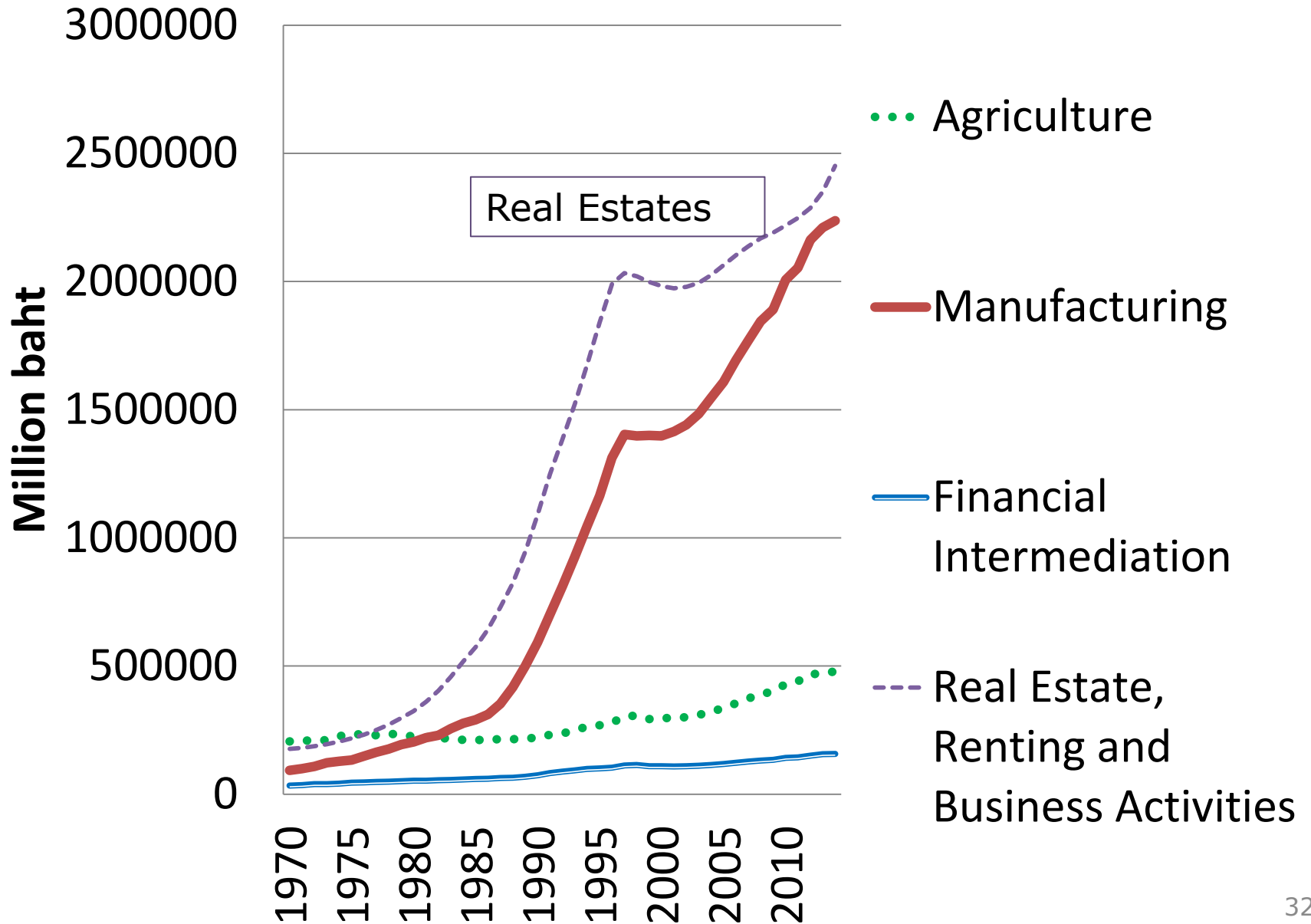
Capital-labor ratio



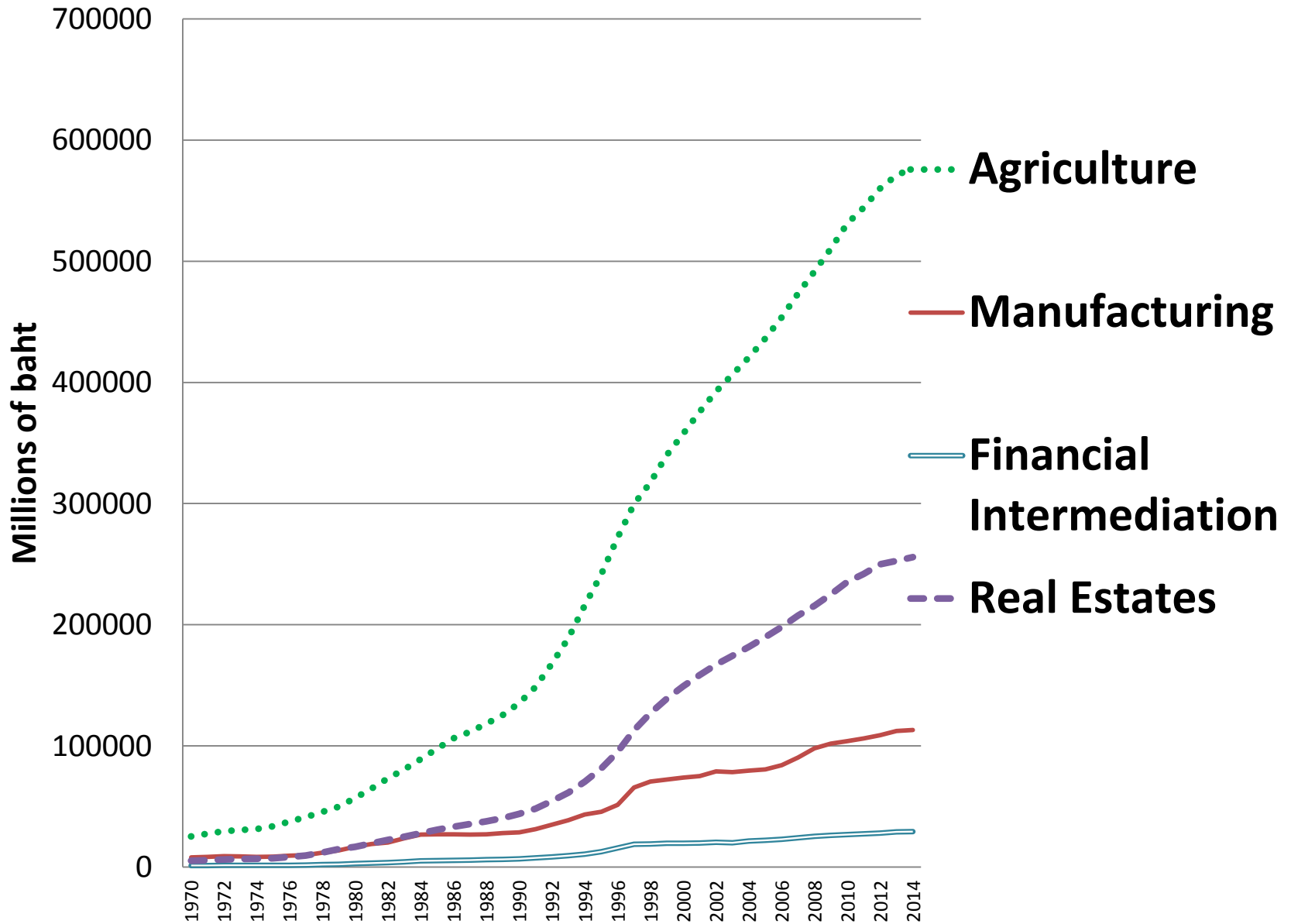
Impact of capital account liberalization

- **Capital liberalization led to capital concentration in the modern sector; thereby raising the capital-labor ratio in the manufacturing and non-traded sectors, including the FIRE (Finance, Insurance, Real Estates) sector.**
- **The agricultural sector is credit constrained with low level of capital accumulation.**
- **Productivity differentials grow together with wage differentials and income inequality.**

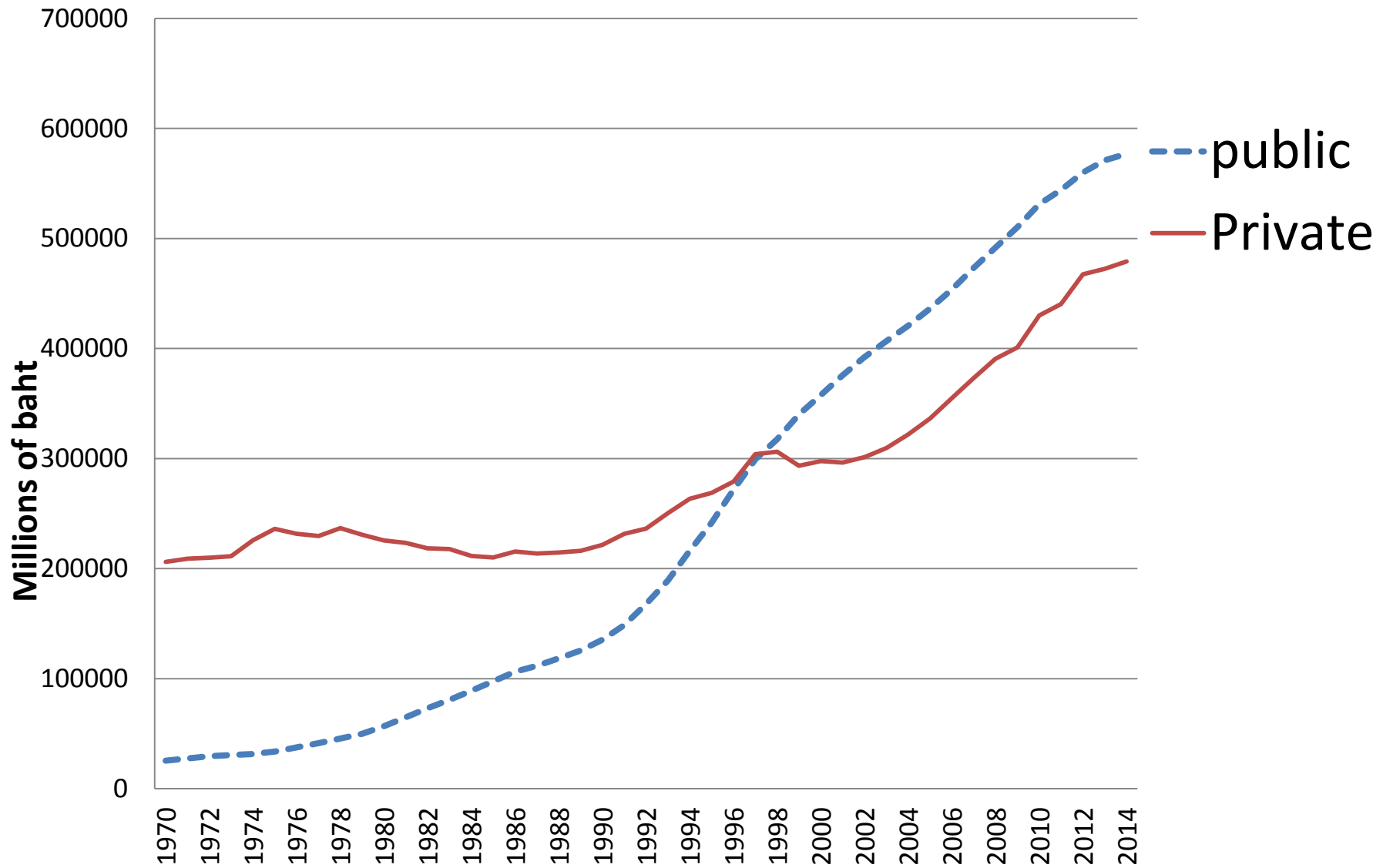
Net Private Capital Stock (K_p)



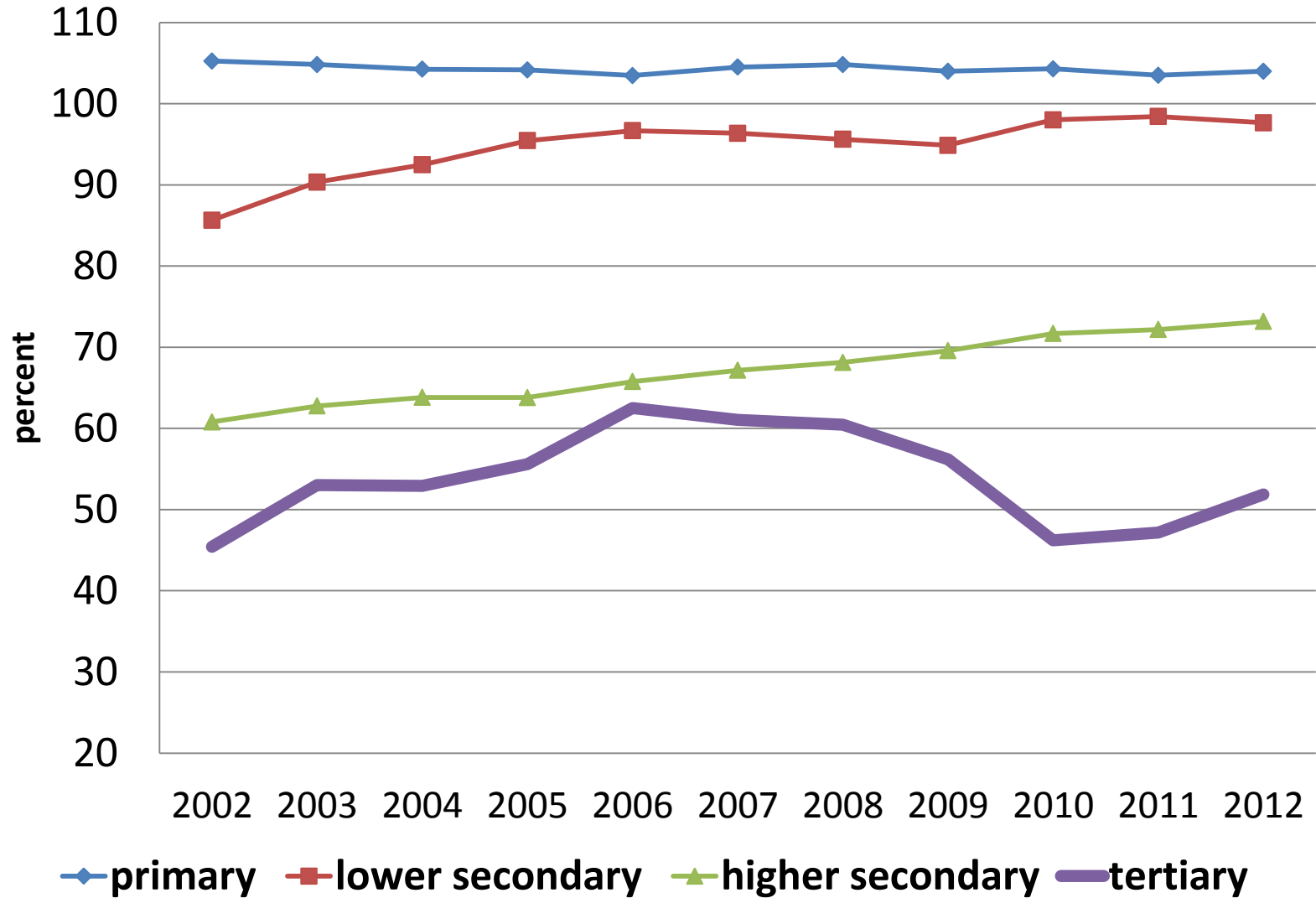
Public Net Capital Stock (K_G)



Public vs. Private Net Capital Stock in Agriculture



Education Enrolment (% coresponding age group)



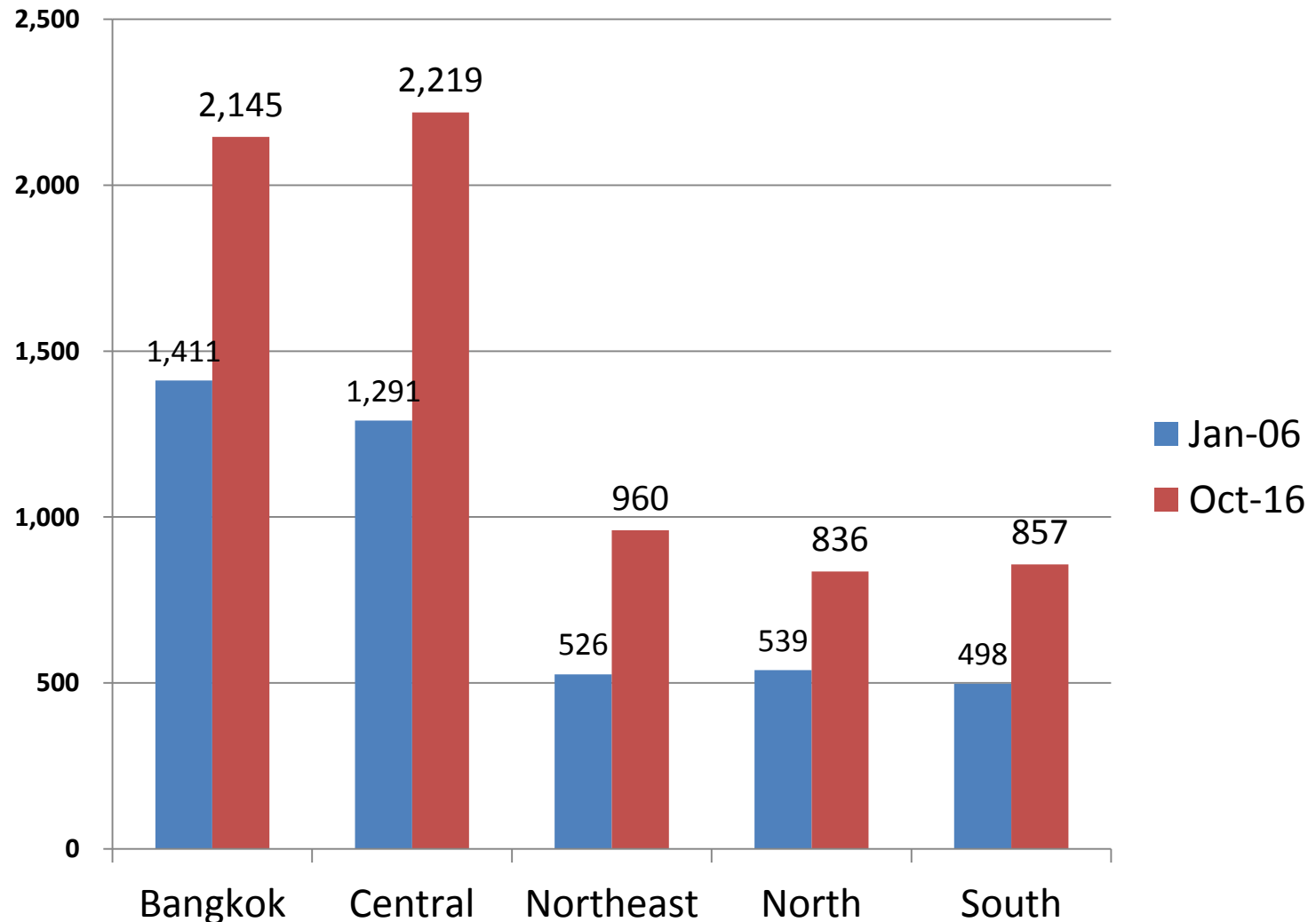
Why migration reduces income inequality

- Bangkok and surrounding areas have been the places where the **poverty reduction** was the greatest.
- High degree of labor mobility contributes to a reduction in regional income disparity.
- Growth of urban wage rates is mitigated by migration of workers from rural areas, which in turn raises the agricultural wage rate; thereby, reducing wage differentials between the two sectors.

Financial inclusion: three important effects

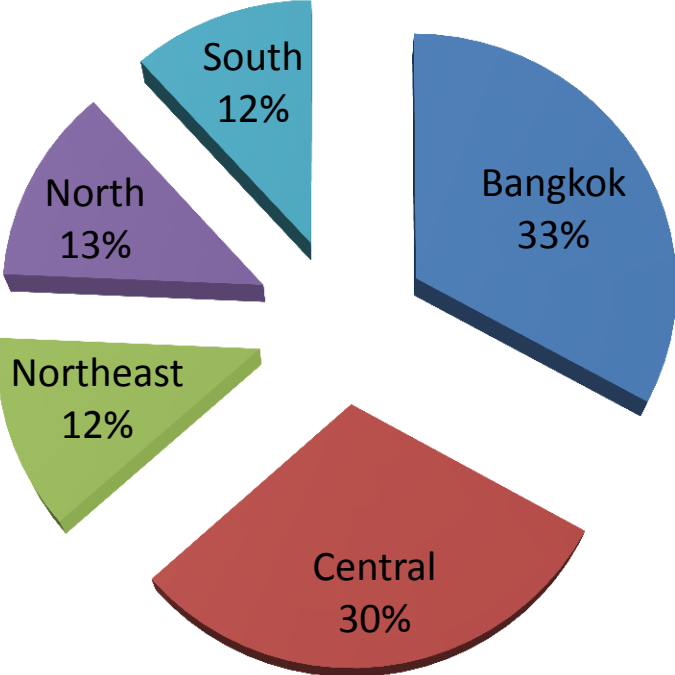
- There is now a wealth of evidence from worldwide research that suggests financial inclusion plays a critically important role in ***poverty reduction, reducing income disparities and increasing economic growth.***
- The cumulative effect of a large group of population being effectively excluded from access to formal financial services carries both private and social costs, and ultimately undermines economic growth and development.
- The most important reason for being excluded appears to be either having incomplete documentation or lacking any collateral.

Number of bank branches in different regions in the last decades

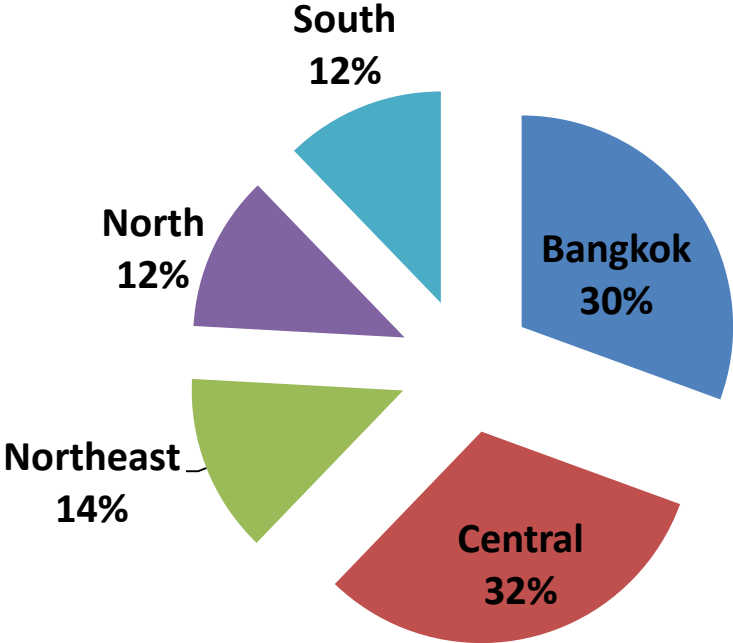


Financial Inclusion: share of bank branches

Jan 2006



Oct-2016



Summary

- Output growth of the service sector has more impact on poverty reduction than manufacturing and agricultural sectors.
- Capital liberalization led to rapid capital inflows, enhancing capital-labor ratio, and enlarging productivity differentials.
- When the terms of trade turns against farm prices and agricultural productivity lags behind other sectors, income inequality deteriorates.
- There are some flaws in using the Gini coefficient to measure inequality.

Questions

- Explain how trade reform and capital control liberalization might affect income distribution.
- “Economic development in Thailand is a failure because income distribution has worsened” Discuss.
- What are major factors determining income distribution in Thailand?
- “A move toward free trade improves income distribution in Thailand” Discuss.
- Analyze the impact of oil price shocks and food price shocks on Thailand’s poverty and income distribution.
- What can Government Savings Bank and the Bank of Agriculture and Agricultural Cooperatives contribute to reduce income inequality?

Previous final exam questions

1. "Quantitative easing policy conducted in the US would exert a negative impact on Thai exports in 2011" State whether you agree or disagree with the statement. Provide brief reasons to support your answer.
2. "The Bank of Thailand raised its key policy rate to 2% last week. Other things equal, the normalization of monetary policy that would continue into next year can subdue inflation in 2011". State whether you agree or disagree with the statement. Provide brief reasons to support your answer.

Open-book exam
Each question carries 10 points

3. With substantial extension of mass-transit routes of trains to provinces surrounding Bangkok, How would the rent gradient of Bangkok look like in 2020?
4. Discuss whether a ban on rice exports by China would have any impact on poverty and income distribution in Thailand.

Answer all questions

5. If Myanmar and Laos are accepted as members of the WTO in 2025, how would Thailand's pattern of trade be affected?
6. If the government does not cut public consumption in the next fiscal year, the budget deficit will be worsen and raise the debt-to-GDP ratio further.

Make sure that your answers are as clear and concise as possible

7. Thai economy recovered within a few years after the bailout by the IMF during the financial crisis in 1998. Do you envisage any similar pattern of recovery of the Greek economy in the near future?
8. Examine how Thai industries, poverty, and income distribution can be affected by:
 - (a) baht/dollar appreciates to 27 baht by the end of the year
 - (b) baht/dollar depreciate to 40 baht by the end of the year
 - (c) The daily minimum wage is raised to 356 baht.