

INCOME INEQUALITY IN THAILAND

Bhanupong

Lecture 28

Chapter 12

“Extreme inequality is troubling for various reasons. It fosters gross and wasteful consumption.

More importantly, it undermines the principle of political equality.

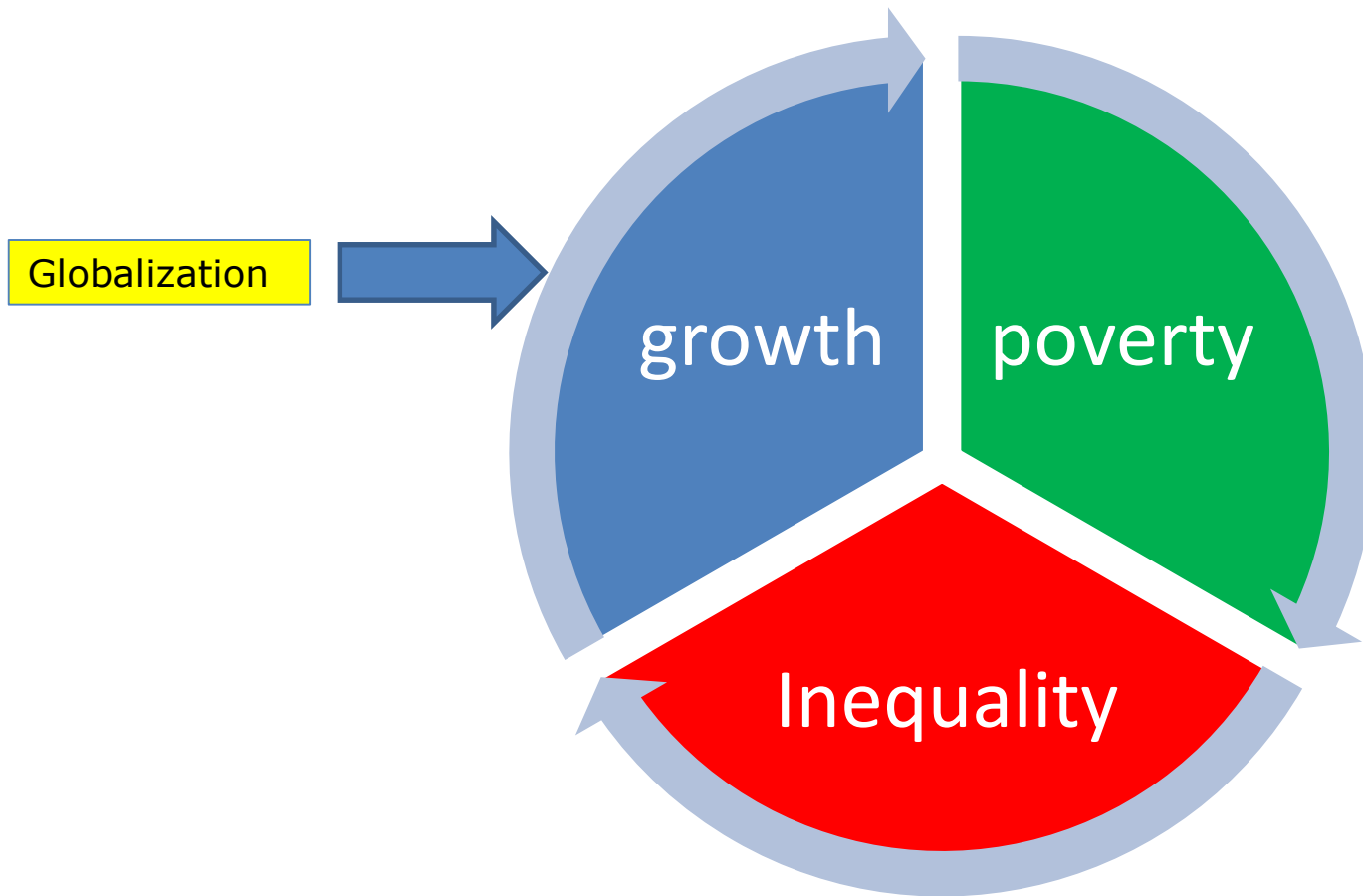
Nearly unencumbered transfers of wealth permitted under current law perpetuate those imbalances, creating dynasties of the rich and hampering economic and social mobility.”

Henry J. Aaron

Outline

1. The nexus among income inequality, poverty, and economic growth
2. Kuznets hypothesis: A trickle down effect of growth
3. Causes of widening wealth gap
4. Financial inclusion: A silver bullet?

1. Poverty-growth-inequality complex Relationships

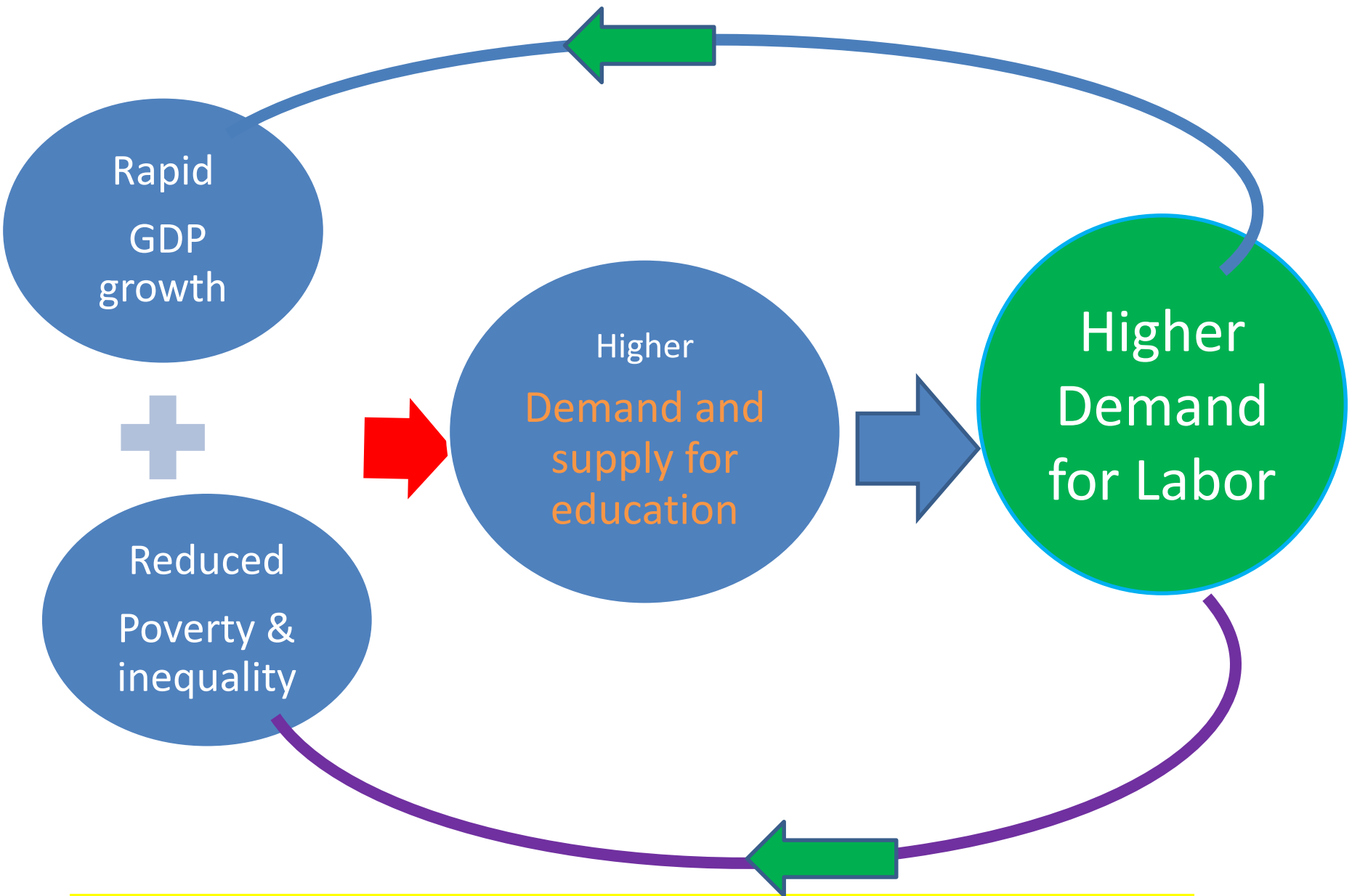


Impacts of globalization

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

Experiences of East Asian Economies

- East Asian economies have experienced rapid growth over three decades, with relatively low levels of income inequality, and appear to have also achieved reductions in income inequality.
- Reduced poverty and income inequality, such as emphasizing **high-quality basic education** and ***augmenting labor demand*** also stimulated growth.



The Virtuous Circle

Growth can be shared via education policy

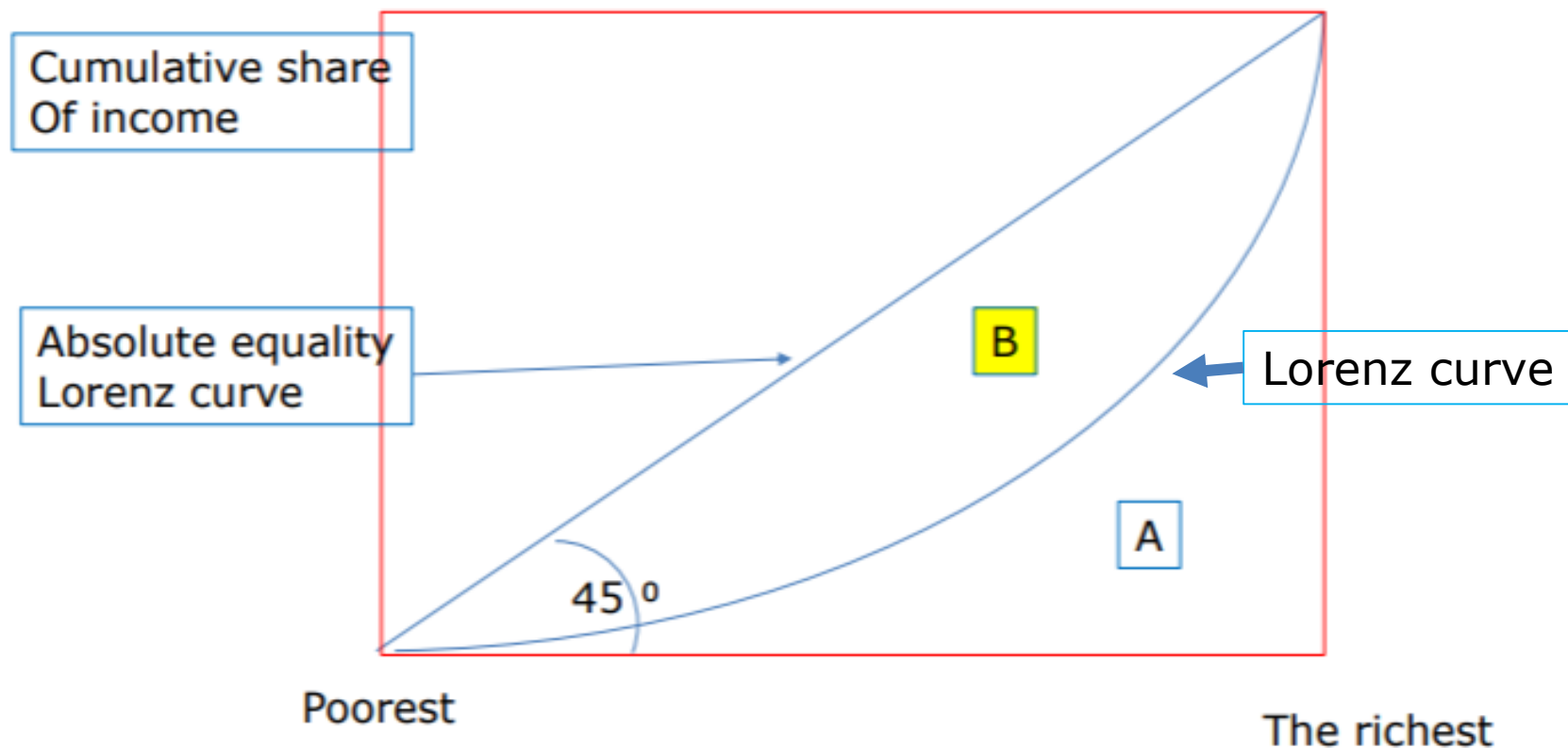
- Closing two virtuous circles, rapid growth and reduced inequality led to higher demand for, and supply of, education,
- Moreover, *more income equality may have directly stimulated growth.*
- Empirical evidence: A positive causal effect of low inequality on economic growth in Japan, South Korea, and Taiwan.
- *Investment in education* is a key to sustained growth, both because it contributes directly through labor productivity effects and because it reduces income inequality.
- How to measure income inequality?

The Gini Coefficient: A measurement of income 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.

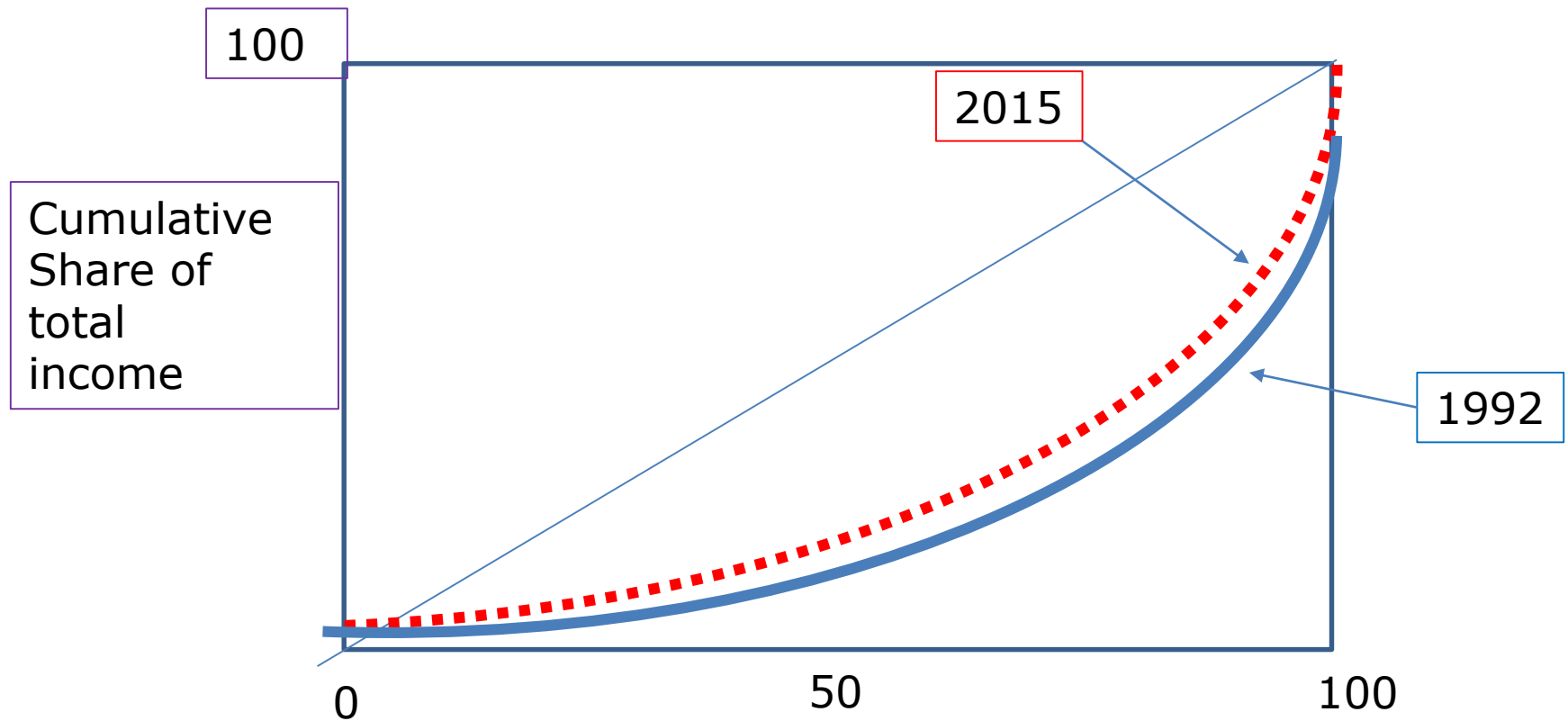
Perfect equality: Area B = 0

$$\text{Gini} = B / (B + A)$$

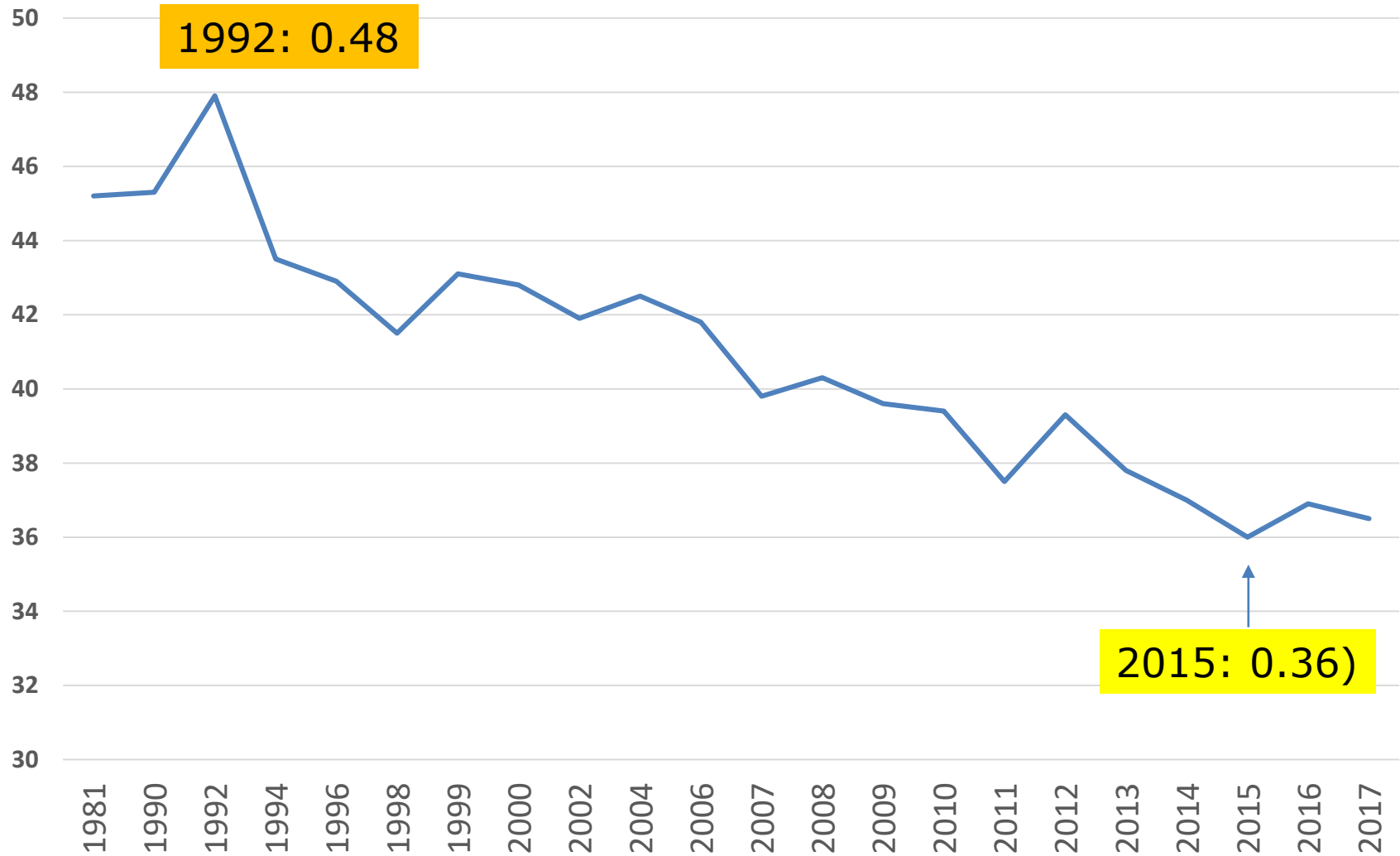


The Lorenz curves

Thailand's Gini coefficient declined from 0.48 in 1992 to 0.36 in 2015



Thailand's Gini coefficient World Bank Estimates



The rise of the middle class

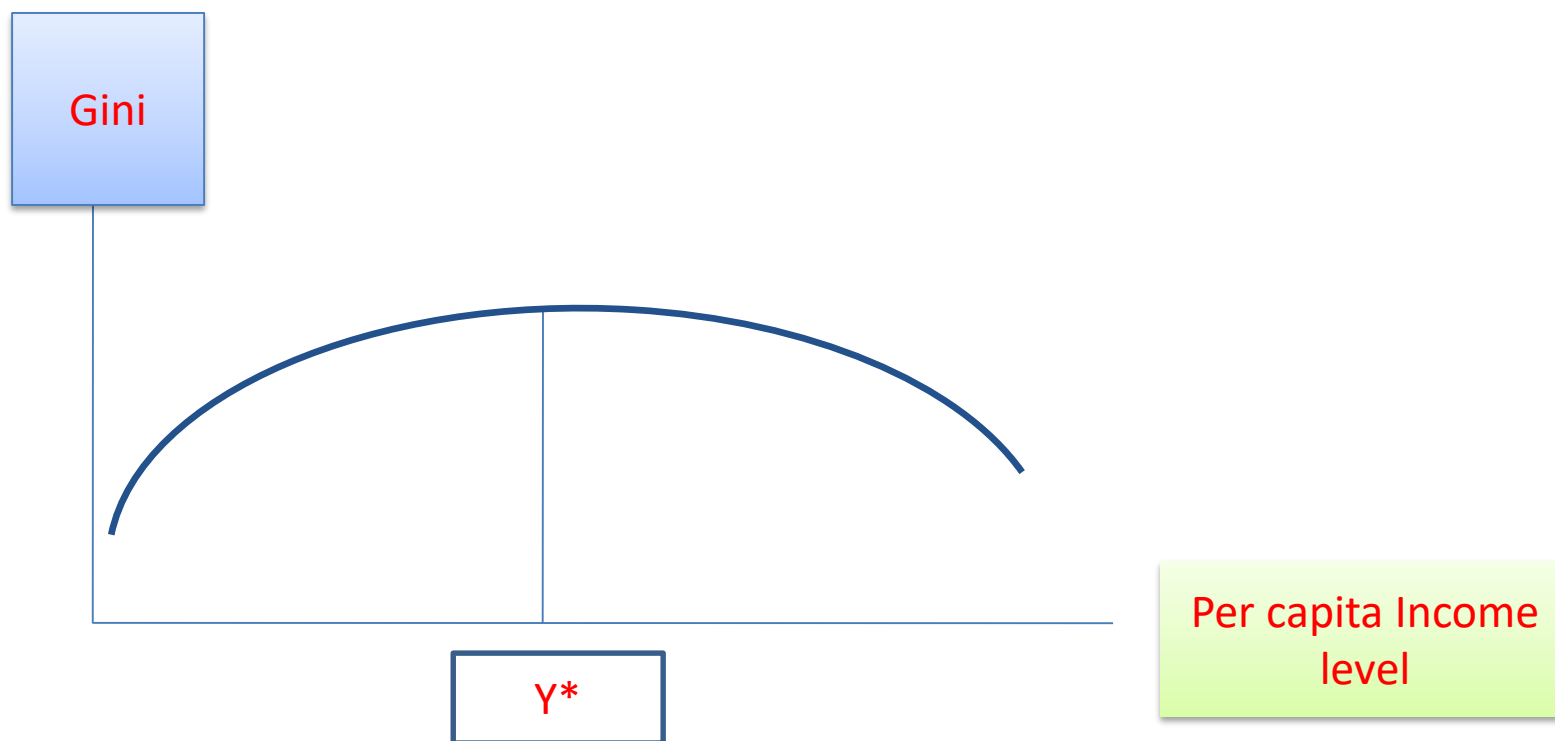
- The Gini index is *sensitive* to the *changes in the middle of the earnings distribution* rather than the tails.
- *If the income share of the middle class is enlarged, the Gini coefficient will decline*
- *This is what's happening now in China, where the Gini has declined with the emerging middle class.*

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)
- *It seems that China's income distribution has improved steadily after the rise of the middle class.*

2. Kuznets hypothesis

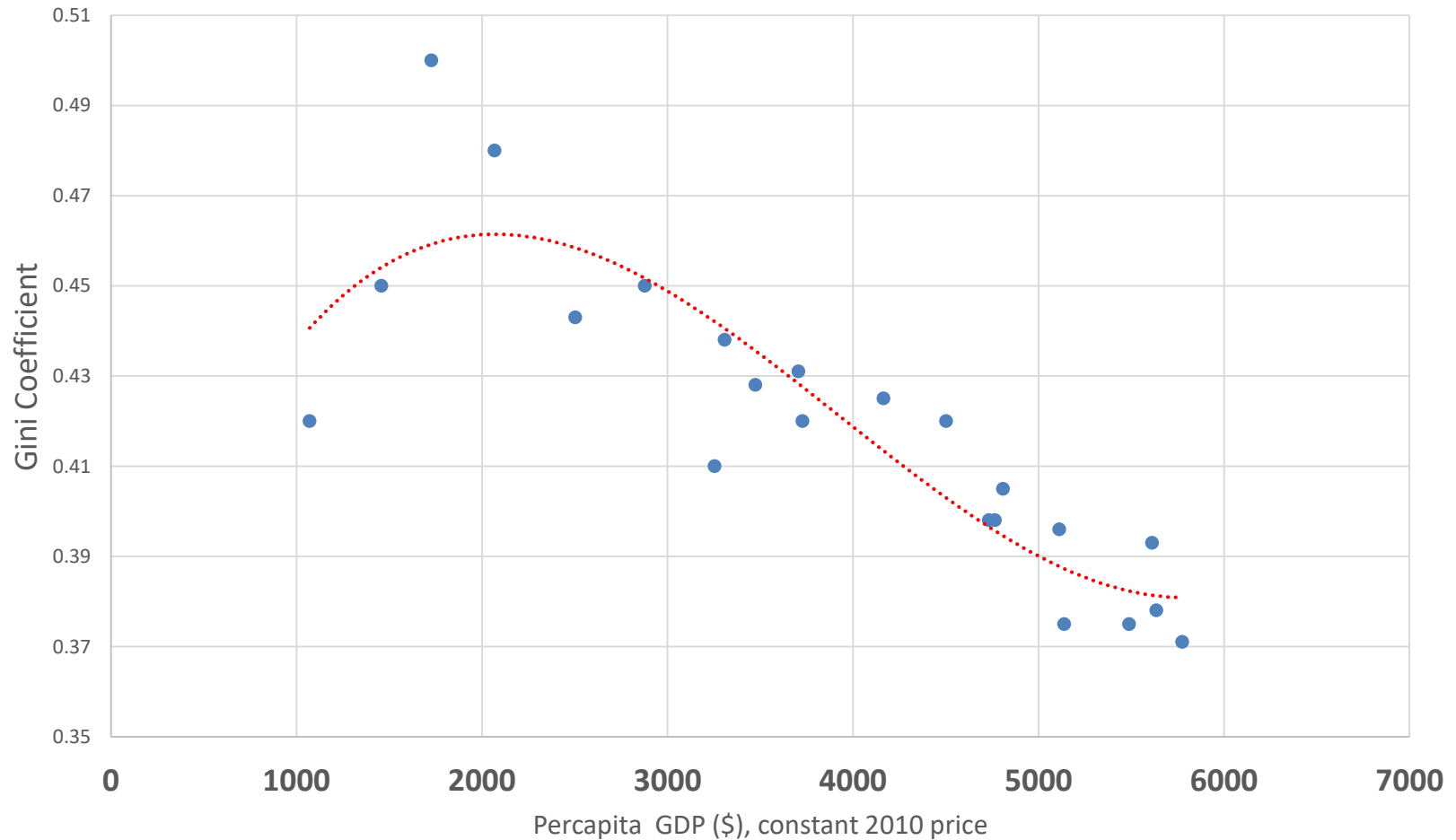
The empirical evidence on the Kuznets hypothesis is far from conclusive. The inverted U-shaped curve cannot properly capture the intricate relationship between income and inequality.



A simple non-linear relationship

- *“Income distribution must get worse before it gets better.”*
- 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*.

Figure 12.7 Thailand's Kuznets Curve: 1975-2015

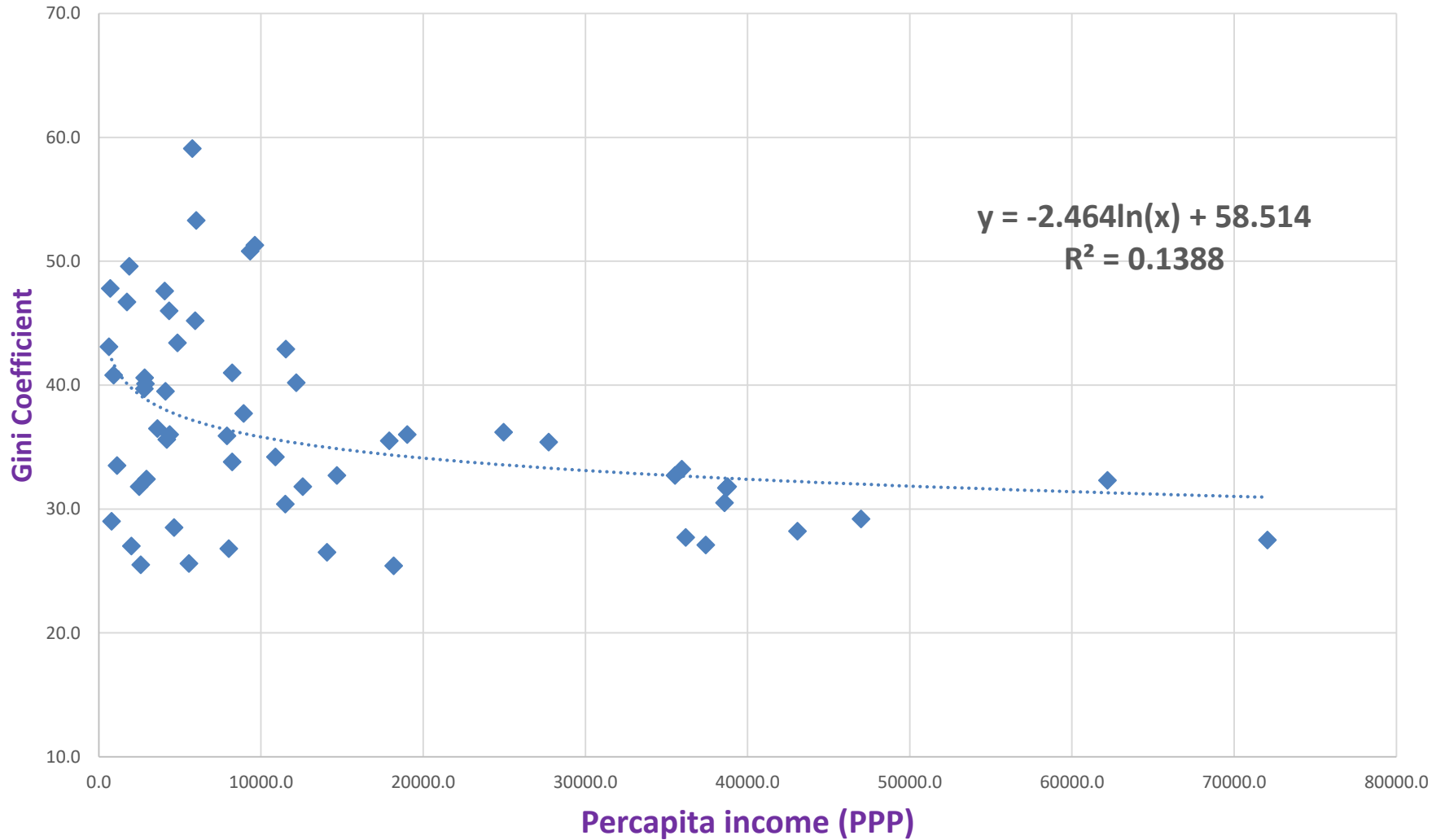


What the *Gini* does not tell

- Income measures may inadequately capture *informal sector income*, value of food *grown and consumed* by the family, and other economic activity that goes unreported or un-estimated (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.
- How about measuring inequality by *expenditures* rather than income?

International Kuznets Curve: 2015

High and low-income countries



Always be careful when comparing the Gini coefficients

- Two different Lorenz curves with different shapes can yield the same Gini coefficient.
- Household income definitions are different from one country to another. For example when *gross income*, rather than *net* income, is used (excluding taxation and transfer money payments).
- Different population coverage in the household survey.
- Underlying *household surveys* differ in method and in the type of data collected, the distribution data are ***not strictly comparable*** across countries.
- Furthermore, we must take into account of any *major event* affecting ***transitory income*** that might create distortions to the computation of income.

Gini coefficients of **high income countries** Compared with Thailand in 2015

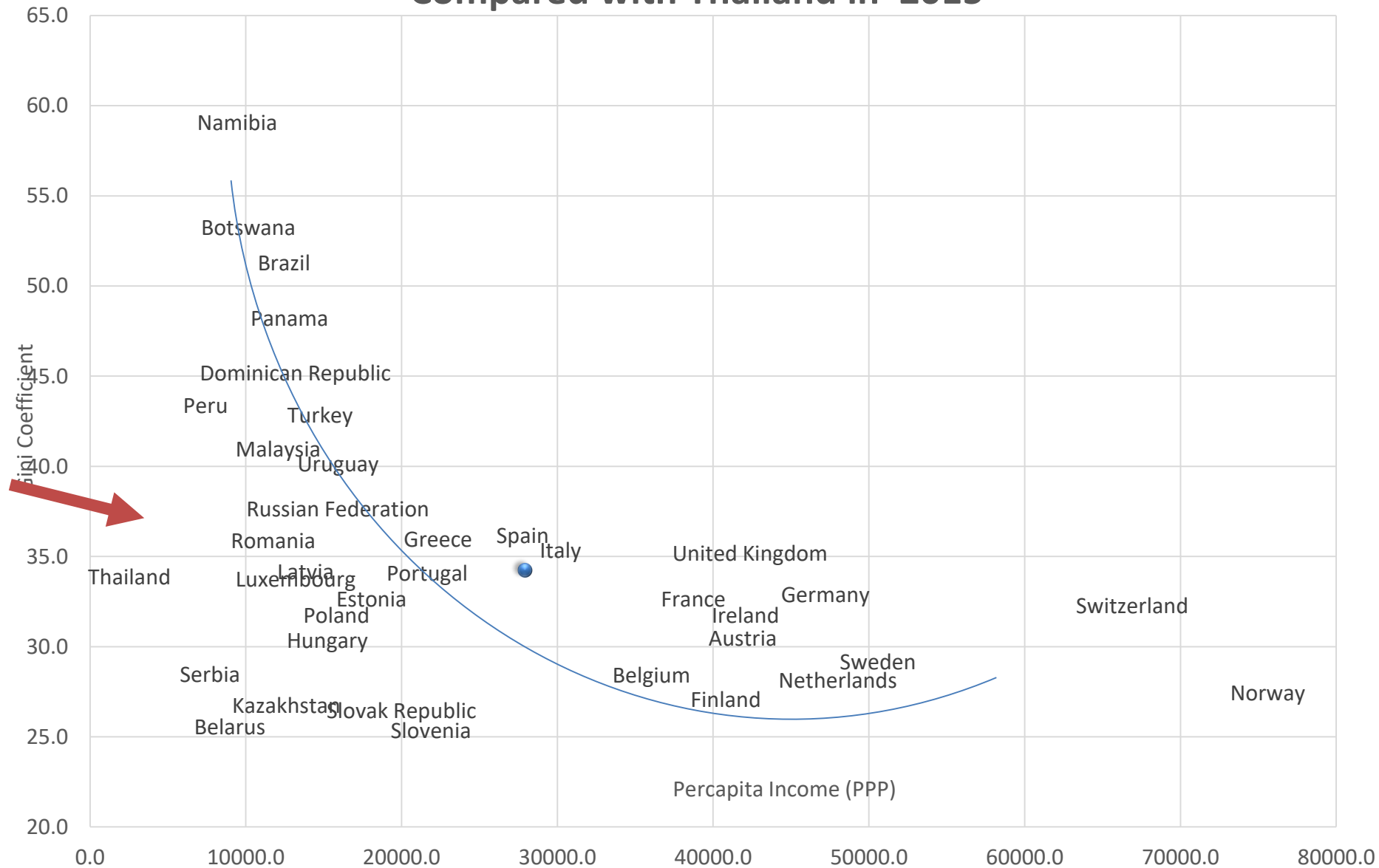
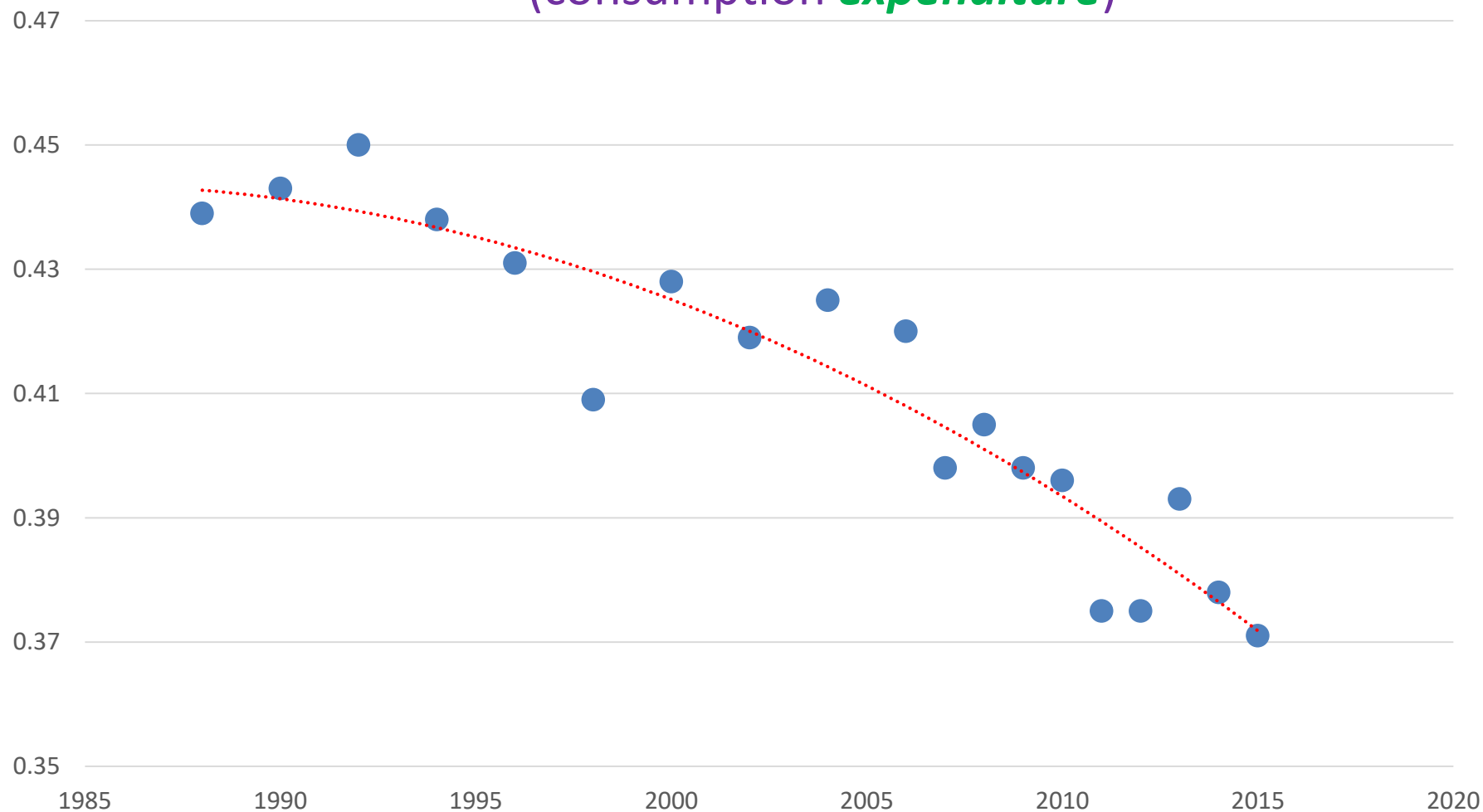


Figure 12.8 Declining inequality

Gini Coefficient
(consumption *expenditure*)



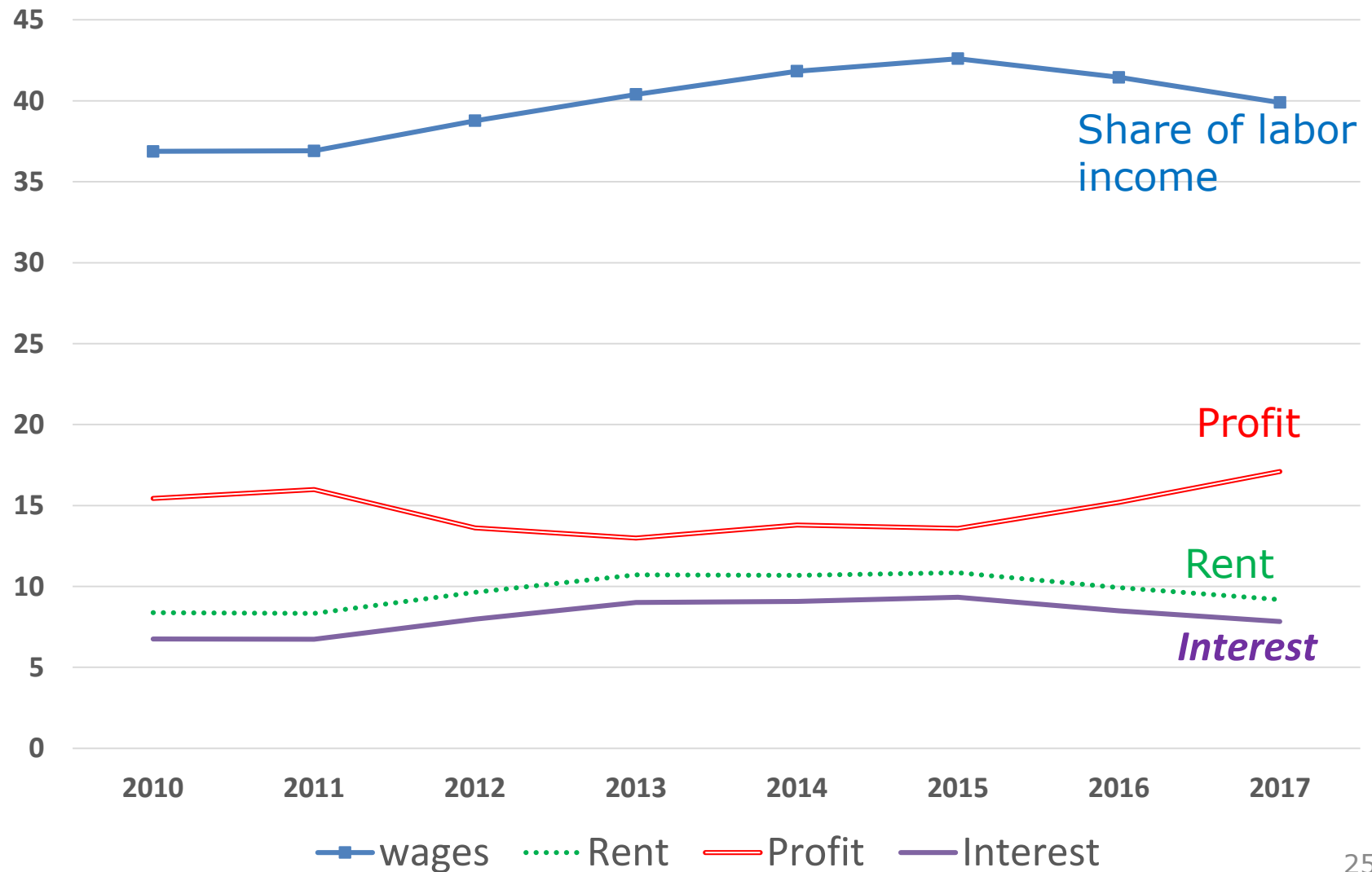
Should we tax the rich heavily?

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

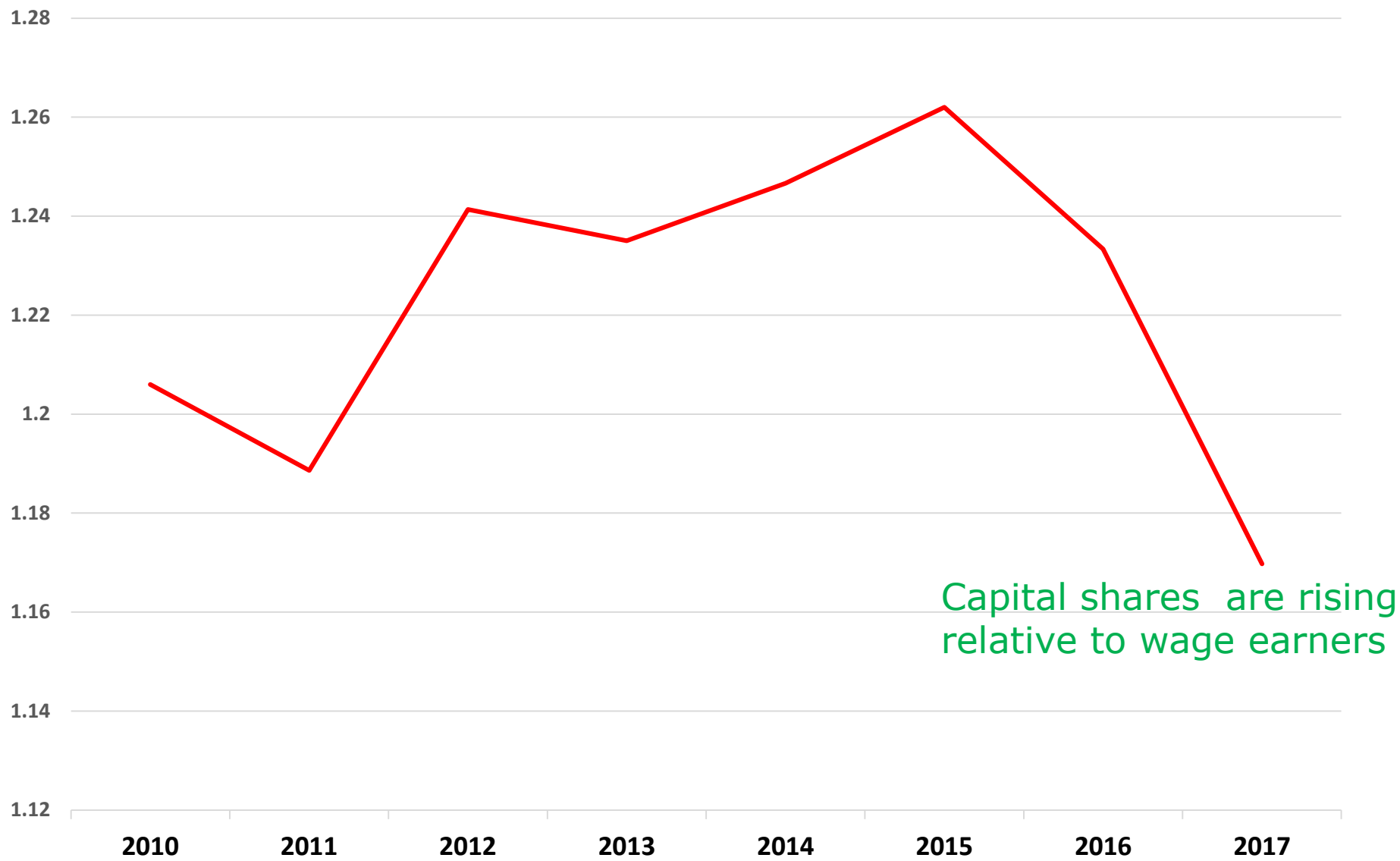


Capital is Marx's masterpiece, a work he had been working for over thirty years but never finished. The first volume, which first appeared in German in 1867 with the title *Das Kapital*, analyzes the process of the capitalist production. It was the only part published during his life.

Factor income shares in Net National Income (percentage)



Wages/Capital income (Profits, rent, interests)



Thomas Piketty

Capital in the Twenty-First Century

(*When $R > g$, inequality rises*)

- Capital in the Twenty-First Century is a 2013 book by French economist Thomas Piketty.
- It focuses on wealth and income inequality in Europe and the United States since the 18th century.
- The book's central thesis is that when the rate of **return on capital (R)** which includes profits, rent, dividends, and interest is greater than the rate of economic growth (g) over the long term, the result is concentration of wealth, and this unequal distribution of wealth causes social and economic instability.

Thomas Piketty

*When $R > g$, capitalist's share in GDP rising,
implying rising inequality*

- Piketty proposes *a global system of progressive wealth taxes up to 2 %, progressive income tax up to 80%*. to reduce inequality and avoid the vast majority of wealth coming under the control of a tiny minority.
- He has got plenty of criticism from theoretical and empirical points: “An essential thinker of the left”

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

It is premature to say that Thailand's market friendly development policy has increased income inequality, as argued by critiques of globalization.

To reduce vertical and horizontal inequality, the government must intervene

"From each according to his ability, to each according to his needs"
Karl Marx

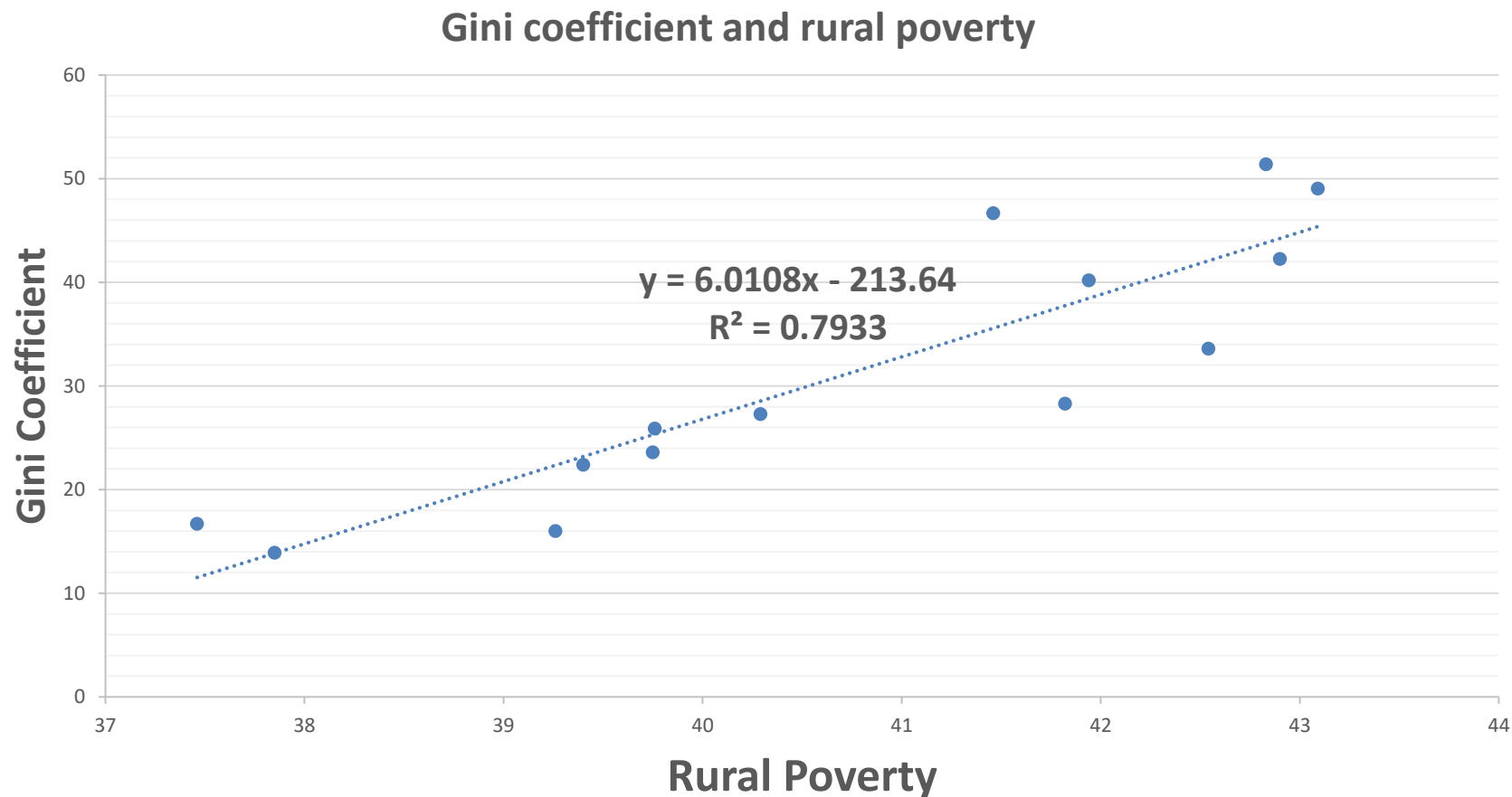
Addressing **vertical** inequality

- (1) Tax the rich (progressive income tax, wealth tax, inheritance tax). Make sure that the tax rate is not so high that it deprives incentives to work, save, and invest.
- (2) Help people afford basic needs: school lunch, milk for school children
- (3) Rewrite the rules: Anti monopoly laws, strengthen labor and worker health and safety laws, environmental laws, and continuous improvement in financial and market regulations.

Addressing horizontal inequality

- All kinds of income, regardless of sources, (wages, rents, interests, dividends, and capital gains) at the level must be subject to the same of tax rates.
- No LTF, RMF tax exemption or tax privileges .

Figure 12.9 Inequality can be attributed to rural poverty

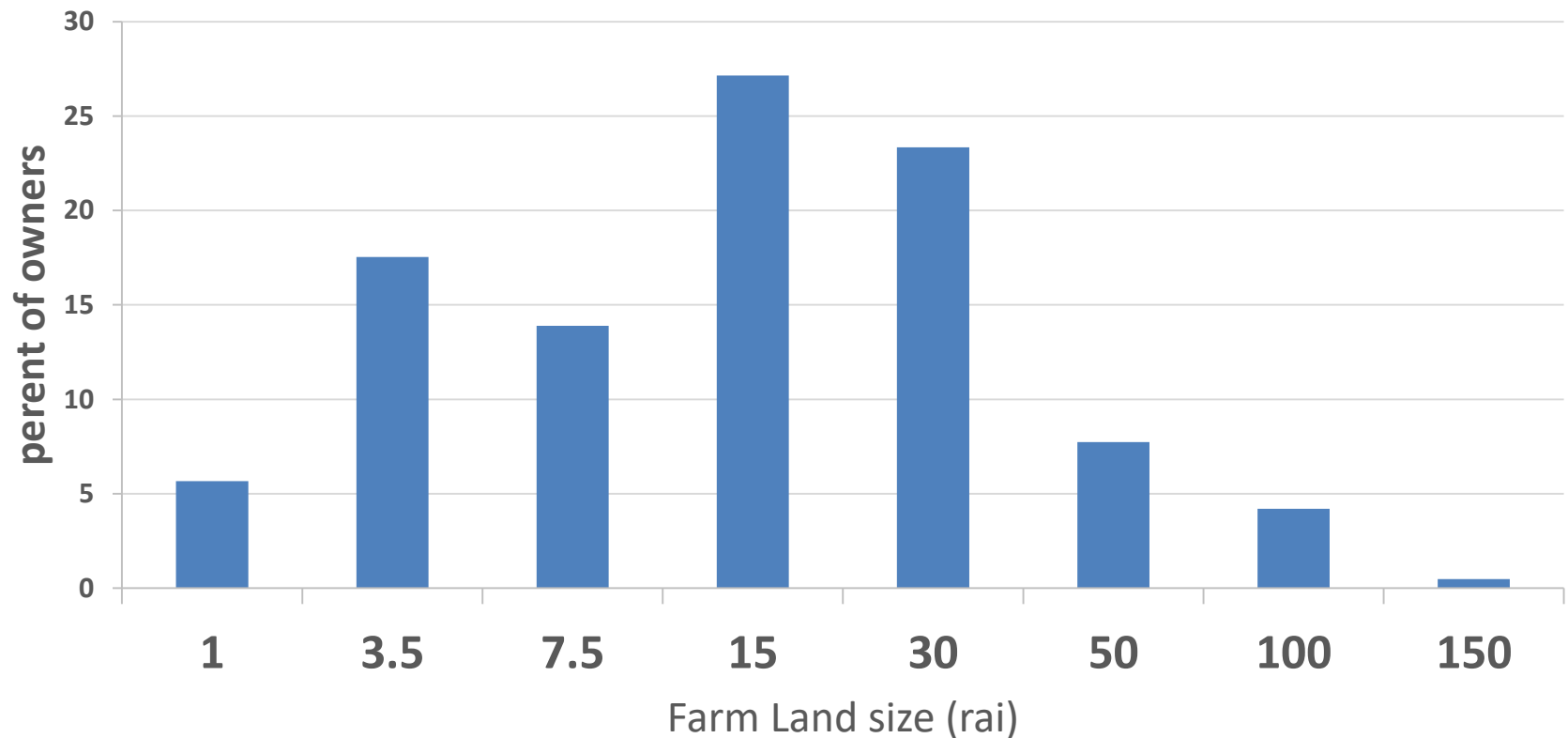


Other kinds of social inequality

- Note that 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.**

Income inequality is related to **asset inequality**

Land holding inequality



According to the bill, land used for agricultural purposes with appraisal prices of up to 75 million baht will be taxed at a rate of 0.01%, those between 75-100 million baht will be taxed at 0.03%, between 100-500 million at 0.05%, between 500-1 billion baht at 0.07% and land with appraisal prices of more than one billion baht will be taxed at a rate of 0.1%.

Progressive tax rates
On larger piece of land

BREAKING IT DOWN

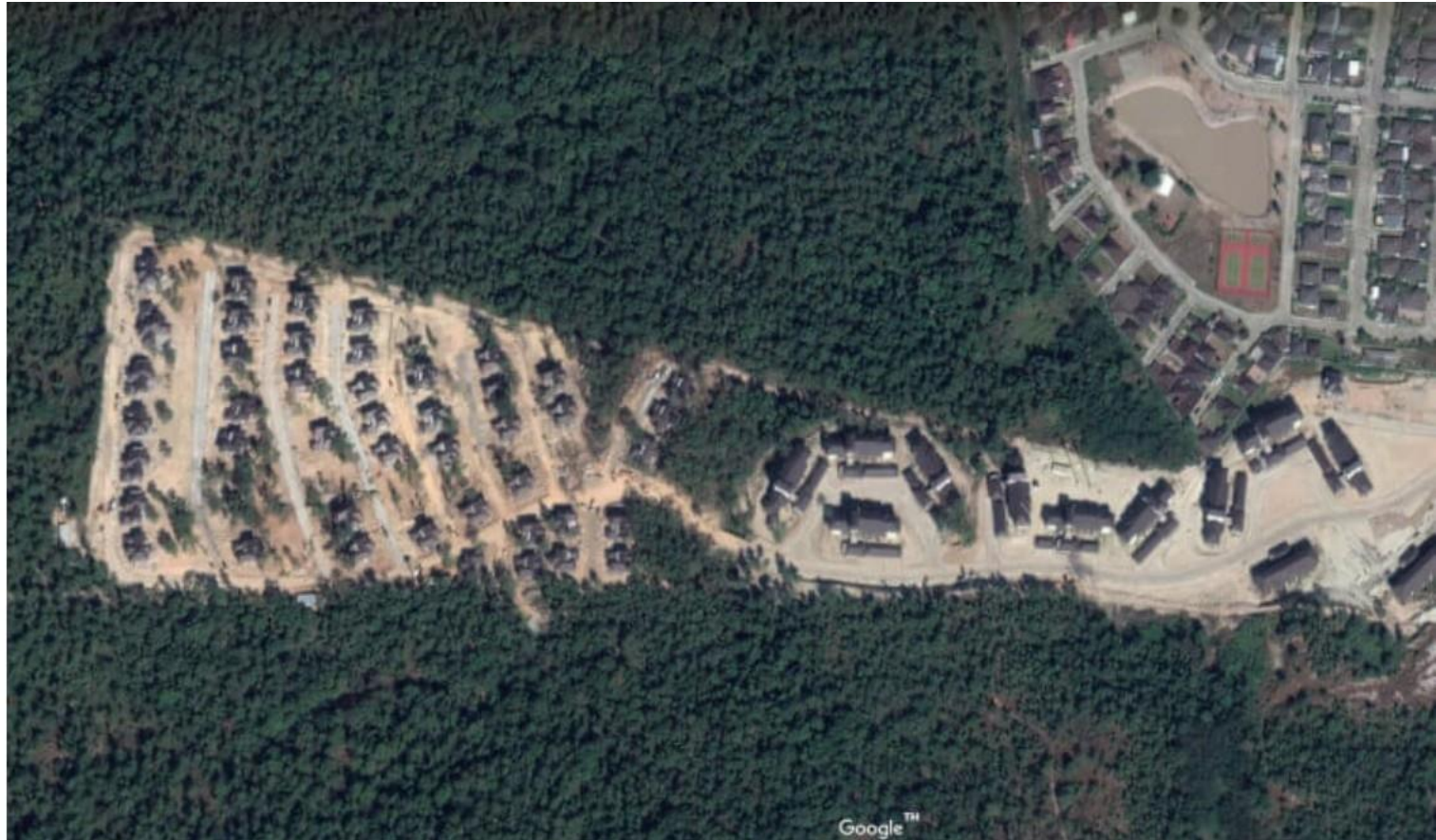
Land and buildings tax proposed by the National Legislative Assembly (NLA) standing committee

Category of land	Legal ceiling rate	Appraisal value	Applicable rate
Residences 	0.3%	0-50	0.02%
		>50-75	0.03%
		>75-100	0.05%
		>100	0.1%
Note: For first homes, a tax exemption of up to B50m for owners of both the land and home, and if their names are on household registration documents, and up to B10m for those who have ownership of homes only and if their names are on household registration documents			
Agricultural use 	0.15%	0-75	0.01%
		>75-100	0.03%
		>100-500	0.05%
		>500-1,000	0.07%
		>1,000	0.1%
Note: Tax exemption for agricultural land worth up to B50m belonging to individuals			
Other uses 	1.2%	0-50	0.3%
		>50-200	0.4%
		>200-1,000	0.5%
		>1,000-5,000	0.6%
		>5,000	0.7%
Undeveloped land 	1.2%	0-50	0.3%
		>50-200	0.4%
		>200-1,000	0.5%
		>1,000-5,000	0.6%
		>5,000	0.7%

Rate will be raised by 0.3 percentage points every three years but will not exceed 3%

The Judge Housing Project

Doi Suthep, Chiang Mai



98 Wireless Road

A 300 million-baht apartment

The price has gone up above a million baht per square meter



3. Factors contributing to income inequality

- Inequality in **access to education**
- Increased poverty (The poor at the bottom 20%)
- Slowdown in economic growth (lower employment growth)
- Rising unemployment and ***underemployment***
- Deteriorating terms of trade of agricultural prices
- Financial exclusion

Severe inequality causes a vicious circle of slower economic growth (two-way causations)

When access to education is denied to the poor,

Mincer earnings function

Jacob Mincer (JPE 1958)

- The Mincer earnings function is a single-equation model that explains wage income as a function of schooling and experience

$$\ln W = \ln W_0 + \rho S + \beta_1 X + \beta_2 X^2$$

W_0 = wage with no education and working experience

S = number of years of schooling

X = years of experience

ρ and β_1, β_2 are the returns to schooling and experience

Note the quadratic function

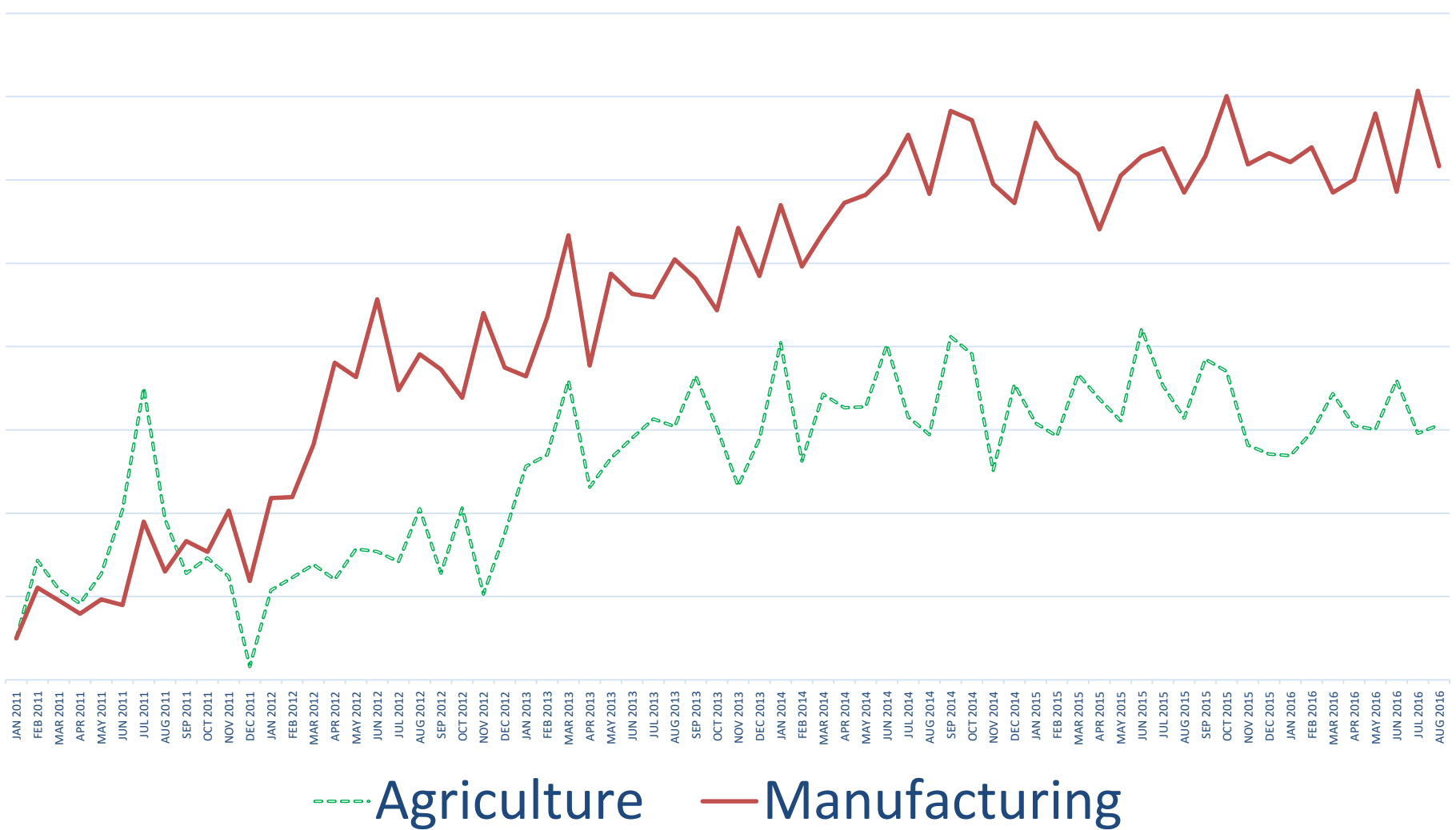
Neoclassical theory of wage

- The wage rate (W) 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 (MP_L).
- The higher the marginal productivity of labor, the higher the real wage rate.

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

- 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 (P_M/P_A).

Figure 12. 12 Widening sectoral wage differentials



The gap between non-agriculture and agriculture can rise or fall

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

Marginal productivity of labor depends on capital labor ratio

Level of education attainment is related to labor productivity

The **wage share** of industrial labor rises relative to agricultural sector when

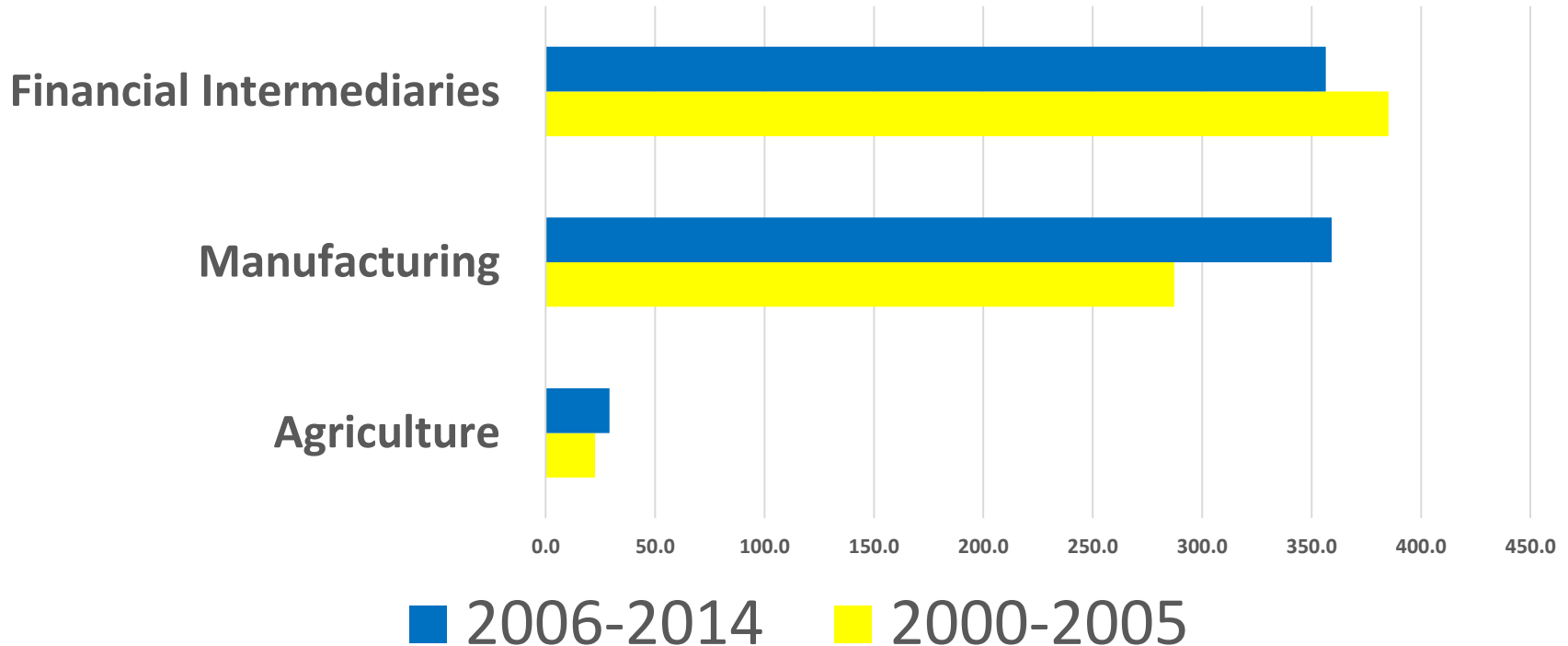
- (1) The agricultural share of employment is declining relative to other sectors. (L_M / L_A) rises
- (2) if the marginal product of other sectors rises faster than that of agricultural labors. Thus (MP_L^M / MP_L^A) rises
- (3) If ***the terms of trade*** of agricultural goods to manufactured goods declines, i.e., (P_M / P_A) rises, income inequality will increase.

Capital control liberalization and income inequality

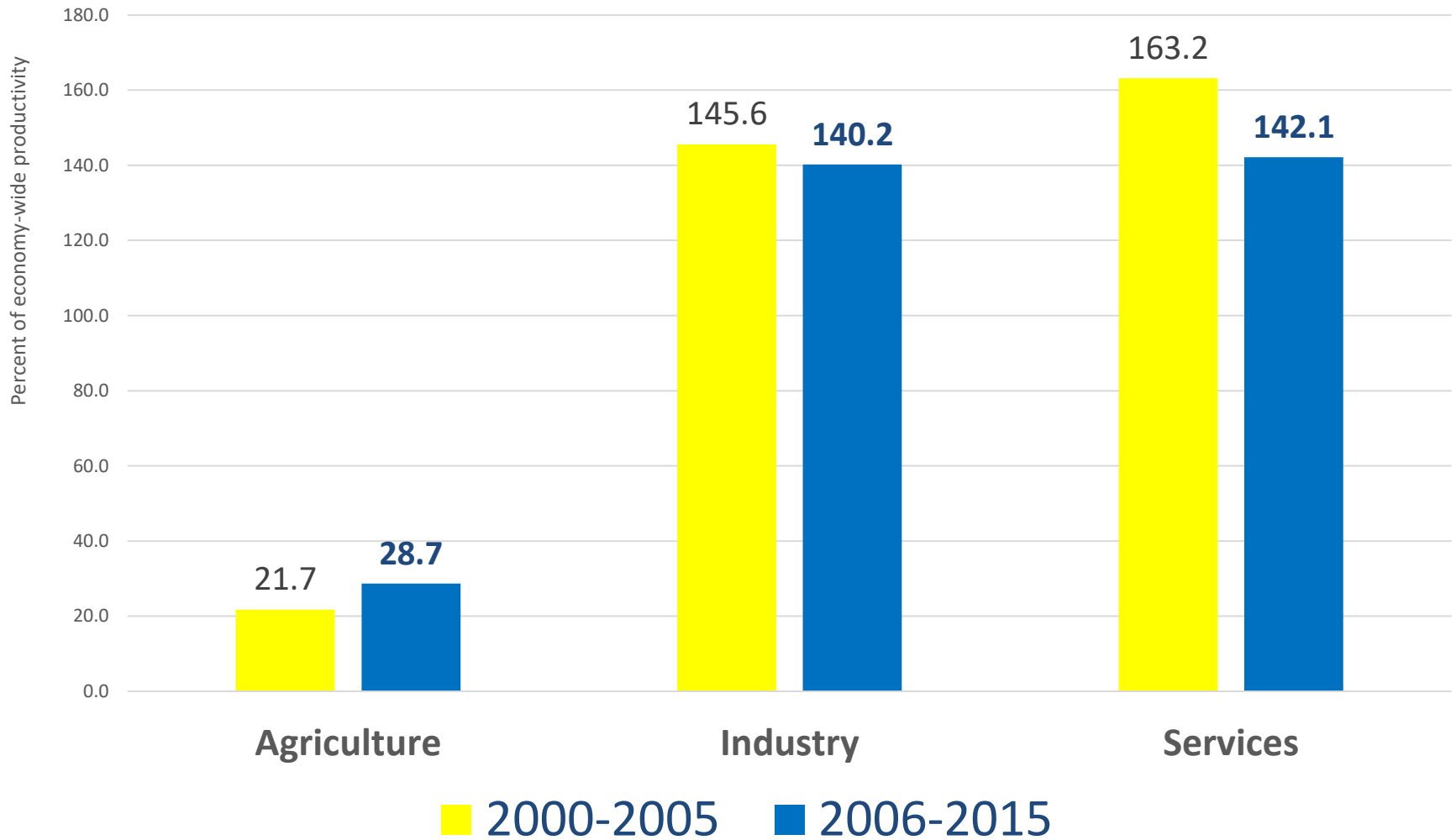
- **Capital liberalization led to capital concentration in the modern sector; thereby raising the capital-labor ratio in the manufacturing and non-traded sectors, including the FIRE (Finance, Insurance, Real Estates) sector.**
- **The agricultural sector is credit constrained with low level of capital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

K/L in Agriculture is the lowest and has not changed much over the years

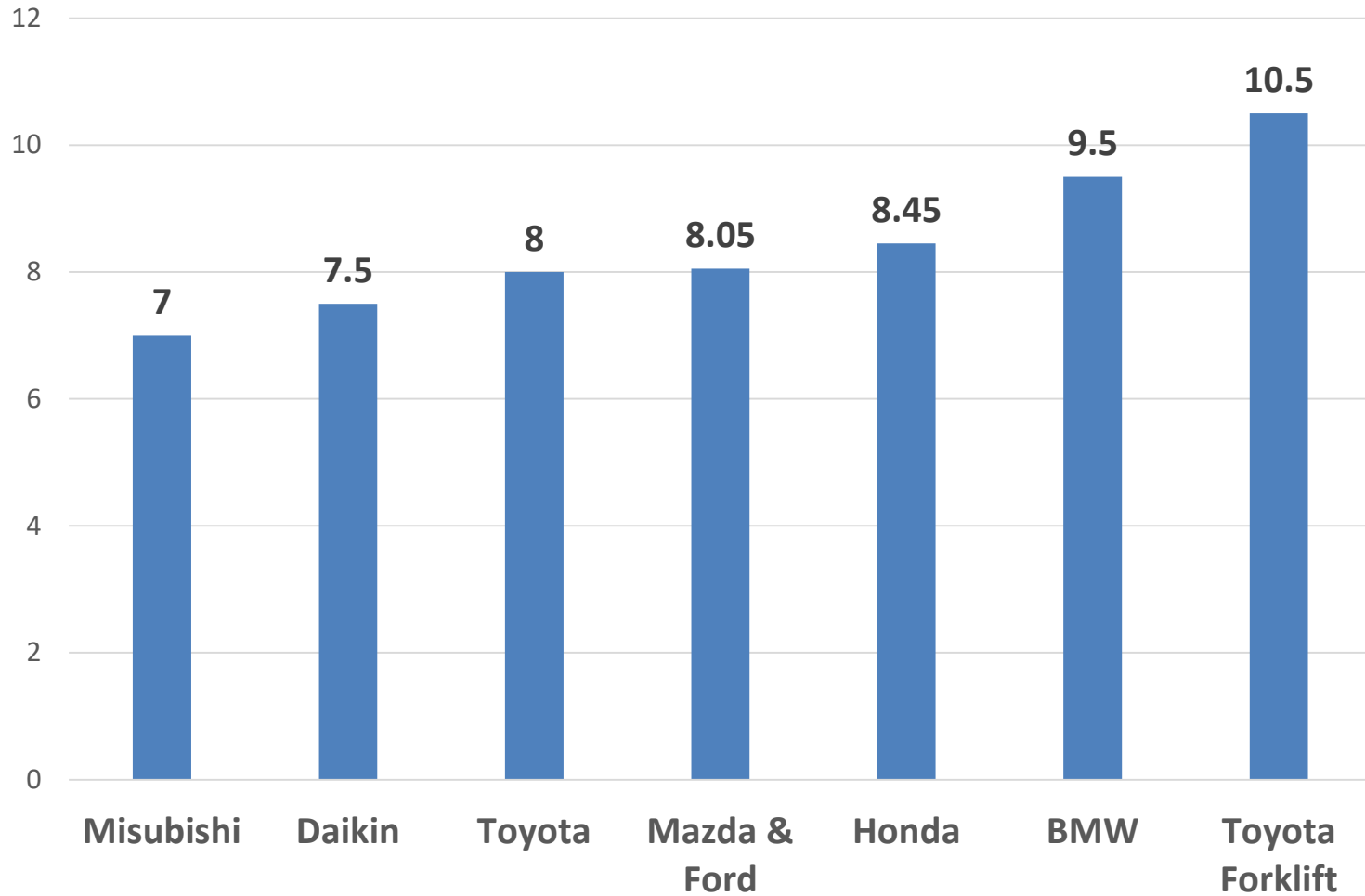
**Figure 12.12 Capita-Labor Ratio
(Thousands of baht per worker)**



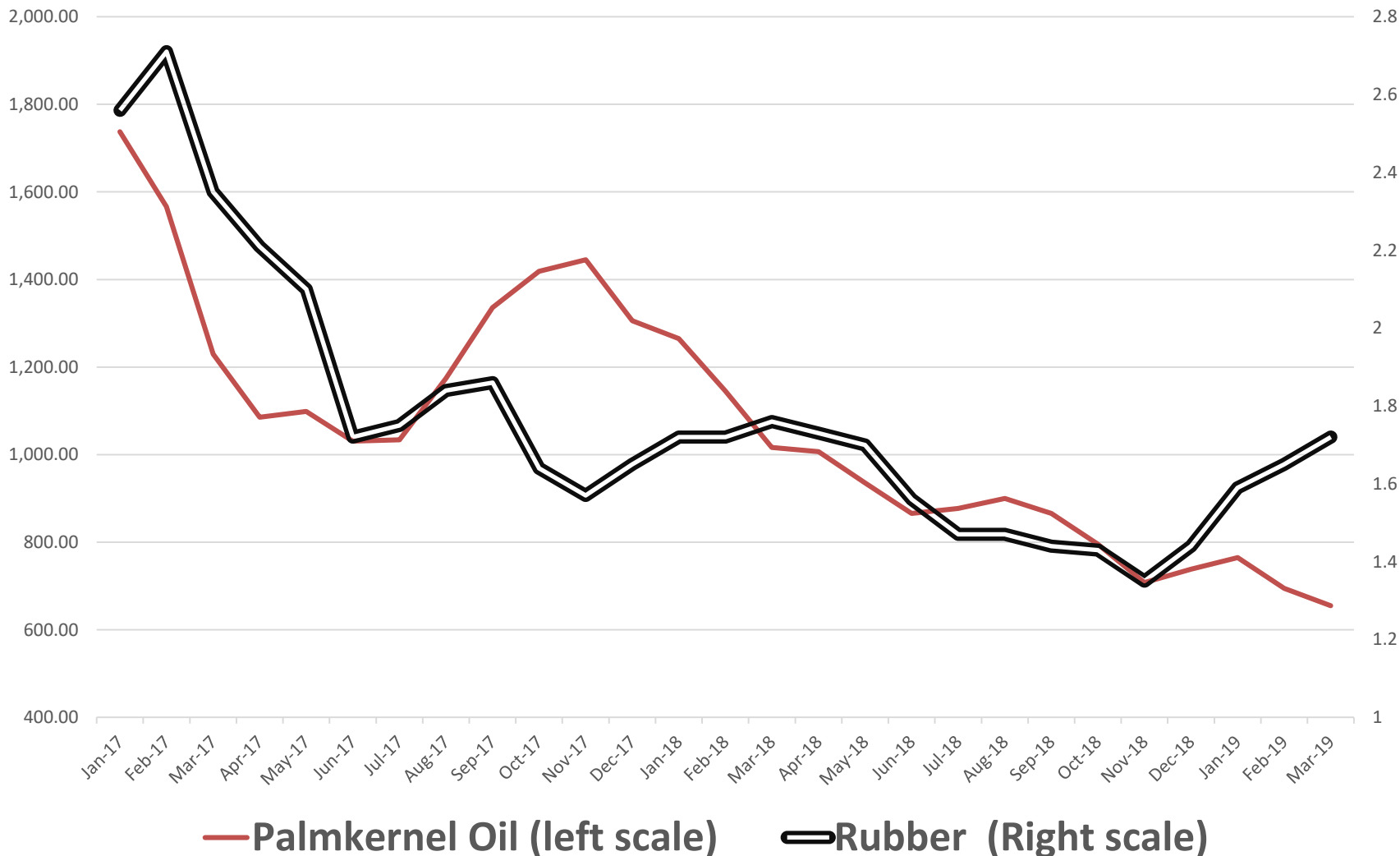
**Figure 12.13 Relative Labor Productivity Index
(Sectoral output share/employment share)**



Bonus in 2019 (months)



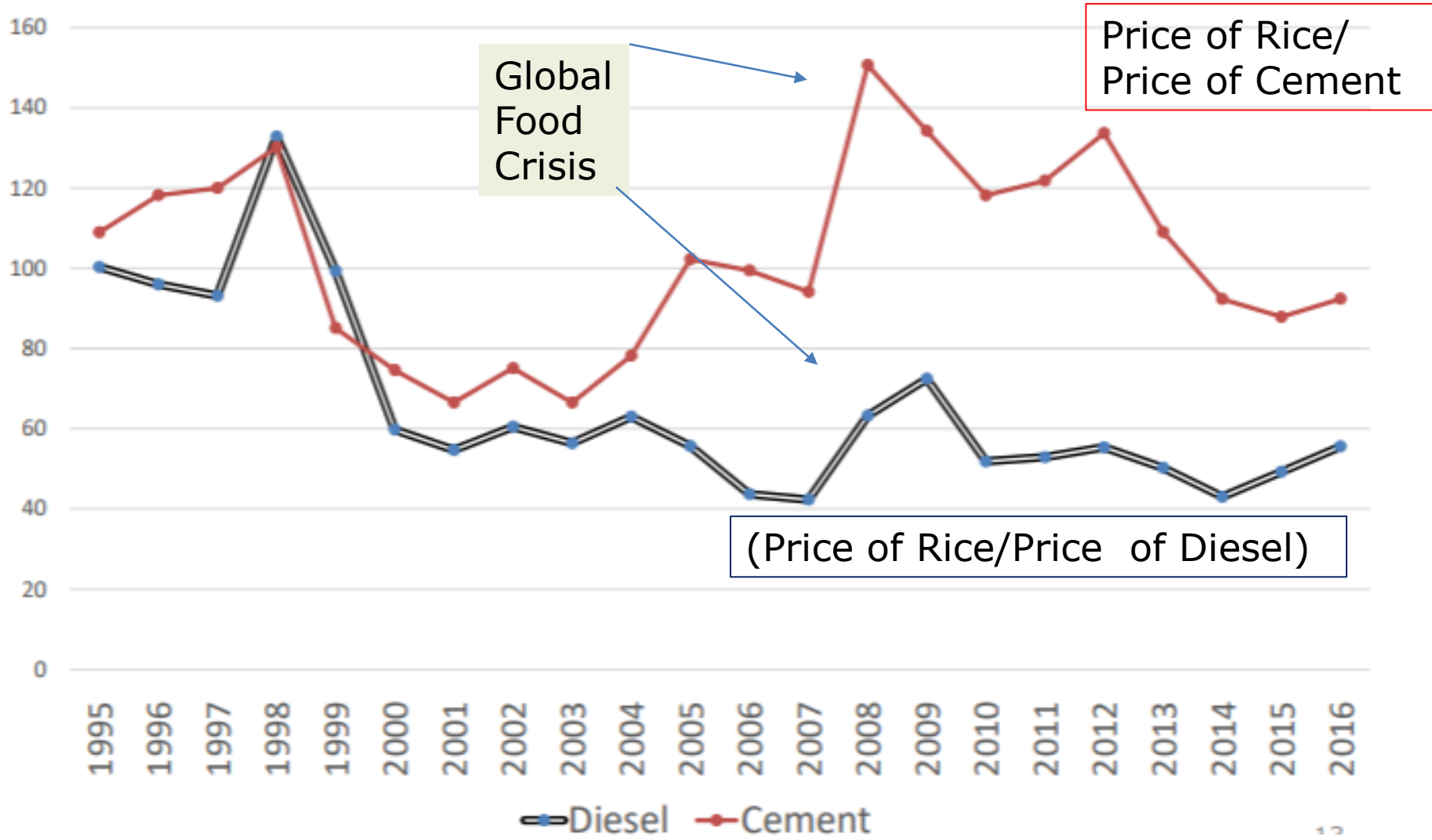
Declining commodity prices \$ per MT (palm kernel) and kg (rubber)



(3) (P_A/P_M) falls

Terms of Trade

Rice vs. Manufactured Products



Nutrition is a key factor in development of children intelligence



Brain food: Nutrition is a key factor in the development of children's intelligence. PHOTO: Jetjaras na Ranong

Malnutrition causes stunting

- Stunting: When a child cannot grow to an age appropriate height
- **Chronic malnutrition**: Some children from poor families never got a chance to reach their potential
- *Stunting impedes brain development*, especially in children up to the age of 5, preventing them from reaching their full potential.
- The world bank estimates that **every dollar invest** in *material and child nutrition* can deliver *returns up to 16 dollars* on average.
- There is no single magic bullet but a number of different interventions needed, focused primarily on *young pregnant women and young children*.

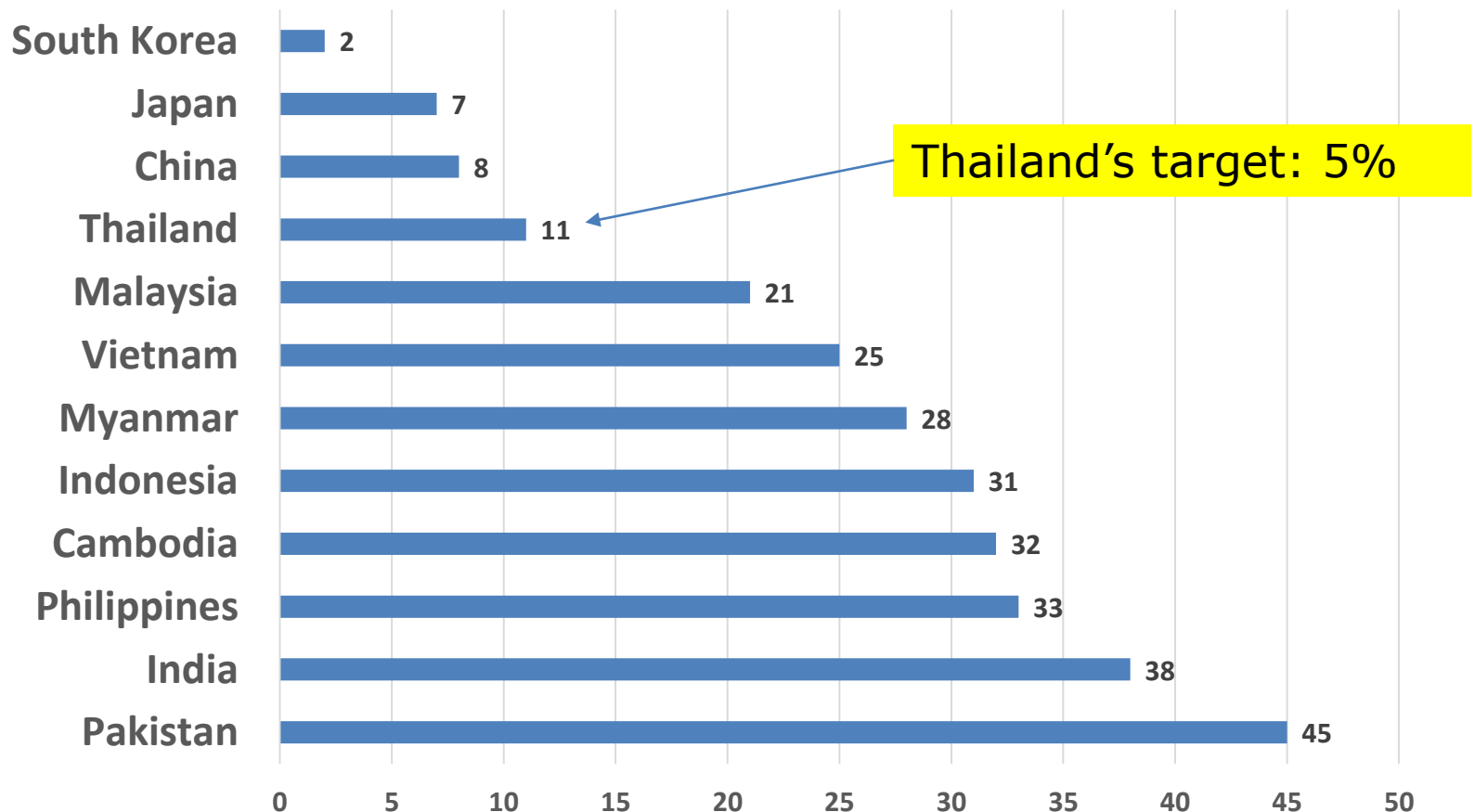
Winston Churchill on political statistics

“There is no finer investment for community than putting milk into babies”

“I gather, young man, that you wish to be a Member of Parliament. The first lesson that you must learn is, when I call for statistics about the rate of *infant mortality*, what I want is proof that *fewer babies died* when I was Prime Minister than when anyone else was Prime Minister. That is a political statistic.”

Prevalence of stunting, height for age (% of children under 5)

Children under 5 suffering from stunted growth (%)



Swindled school lunch budgets:

April 2018

noodle with fish sauce, nothing else



After the corruption purge: June 2018



Cognitive ability: IQ of Grade 1 students (2016)



IQ of Grade 1 students
In 2016

Pink (45%) less than 100
In 35 provinces

Yellow (39%) about 100
In 30 provinces

Green (16%) above 100
In 12 provinces

But efforts outperform IQ by a factor of two in predicting success in life

4. 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
 - (1) *poverty reduction,*
 - (2) *reducing income disparities and*
 - (3) *increasing economic growth.*
- Recall the non-neutrality of monetary policy in the market segmentation model.

Impacts of financial exclusion

- 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*.

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.
- An attempt to make Pico and Nano finance available to the poor can backfire if the volume of lending in informal money markets does not decline.

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? *Are they different from other emerging economies?*
- “A move toward free trade improves income distribution in Thailand” Discuss.
- Analyze the impact of oil price shocks and food price shocks on income distribution and poverty.
- What can Government Savings Bank and the Bank of Agriculture and Agricultural Cooperatives (BAAC) 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, What would the rent gradient of Bangkok look like in 2025?
4. Discuss whether a ban on rice exports by China (or **India**) 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? *You may compare with the impact of China's entry to the WTO in 2001.*
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. Thailand was able to recover 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) the baht appreciates to 27 baht to the dollar by the end of the year
 - (b) the depreciation of the baht to 40 baht by the end of the year
 - (c) The daily minimum wage is raised to 356 baht.