

Commodity price cycles, the agricultural  
trap, and Thailand's incessant subsidies  
Lecture 12 (B)

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# Commodity price cycles, the agricultural trap, and Thailand's incessant subsidies

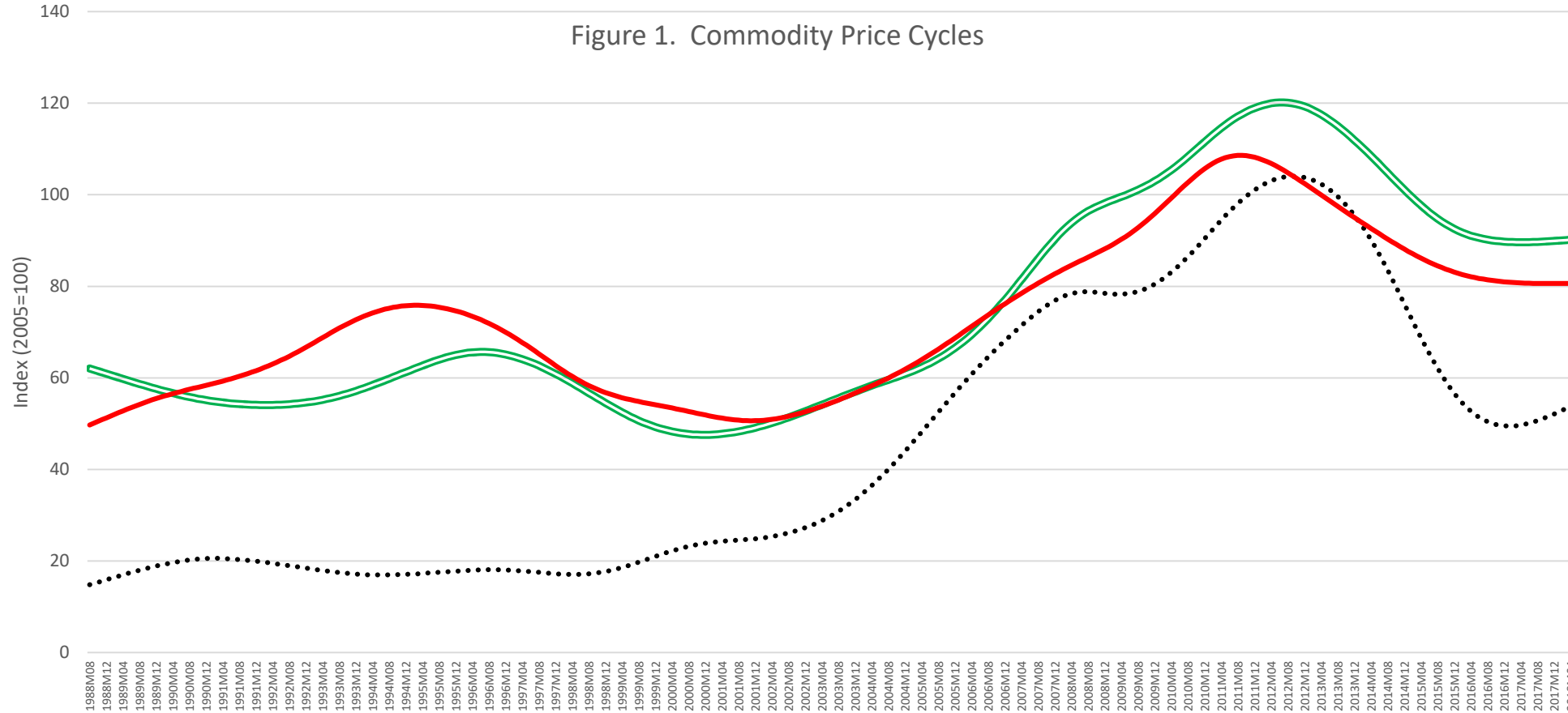
*Asian Economic Papers 18(2) 2019*

## **Abstract**

During Thailand's economic development, the shares of output and employment in agriculture have been consistently higher than in other countries at the same level of income. There are push and pull factors for labor transformation. This paper demonstrates that the slow transformation from rural to urban economy is the result of the agricultural trap, which keeps agrarian labor inside the farm sector. In addition to the lack of public investment in human capital, extremely wasteful farm subsidies have weakened the natural process of structural transformation. Farm subsidies encourage land expansion, which usually lags behind commodity booms, resulting in the excess supply of farm products. In turn, when commodity prices collapse, excess supply perpetuates further subsidies and emboldens the pork barrel activities of incumbent governments.

# Booms and busts: 1998-2018

Figure 1. Commodity Price Cycles



Source: Mundi Index

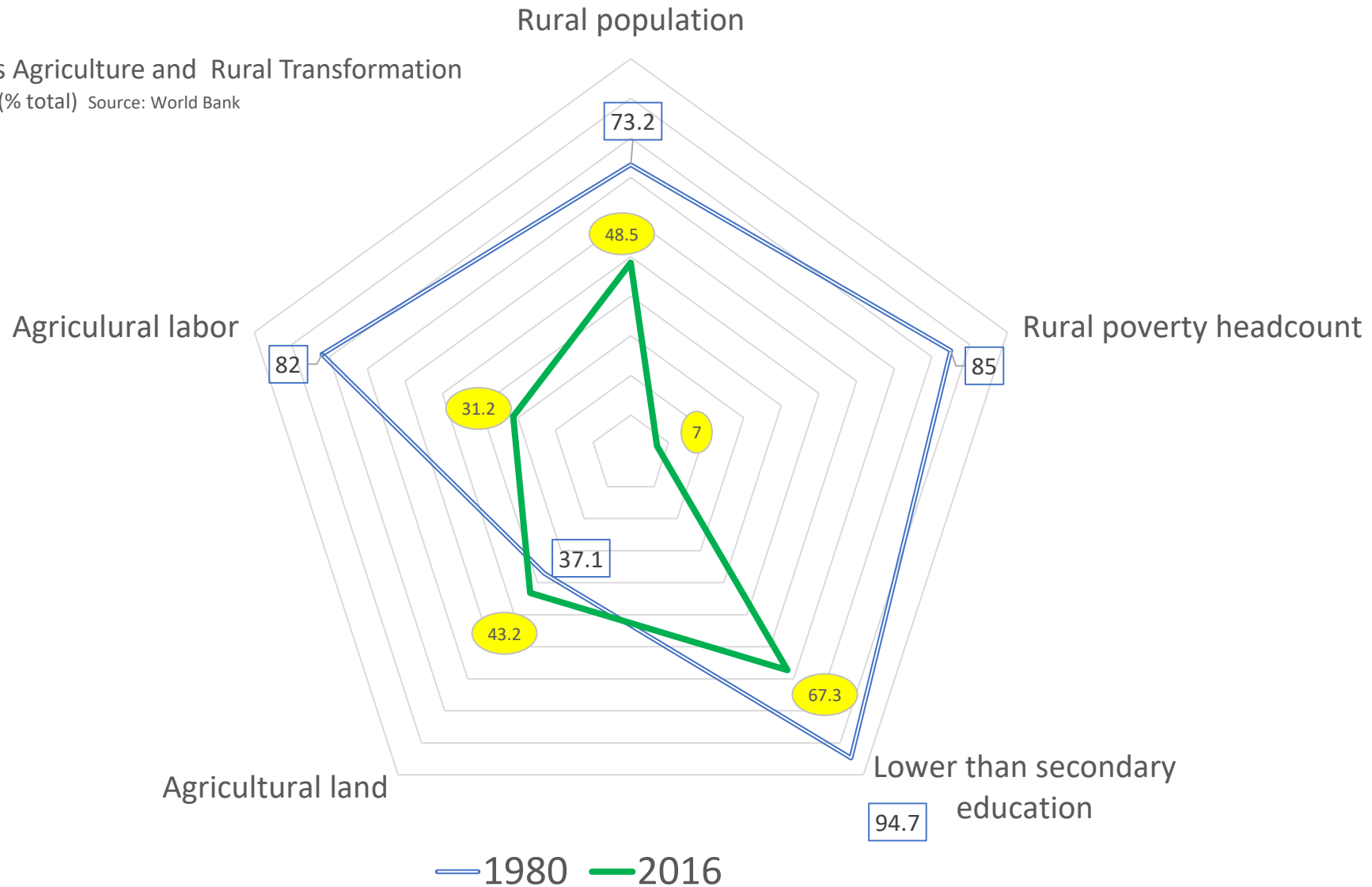
..... Crude oil

—— Food

—— Agricultural Raw

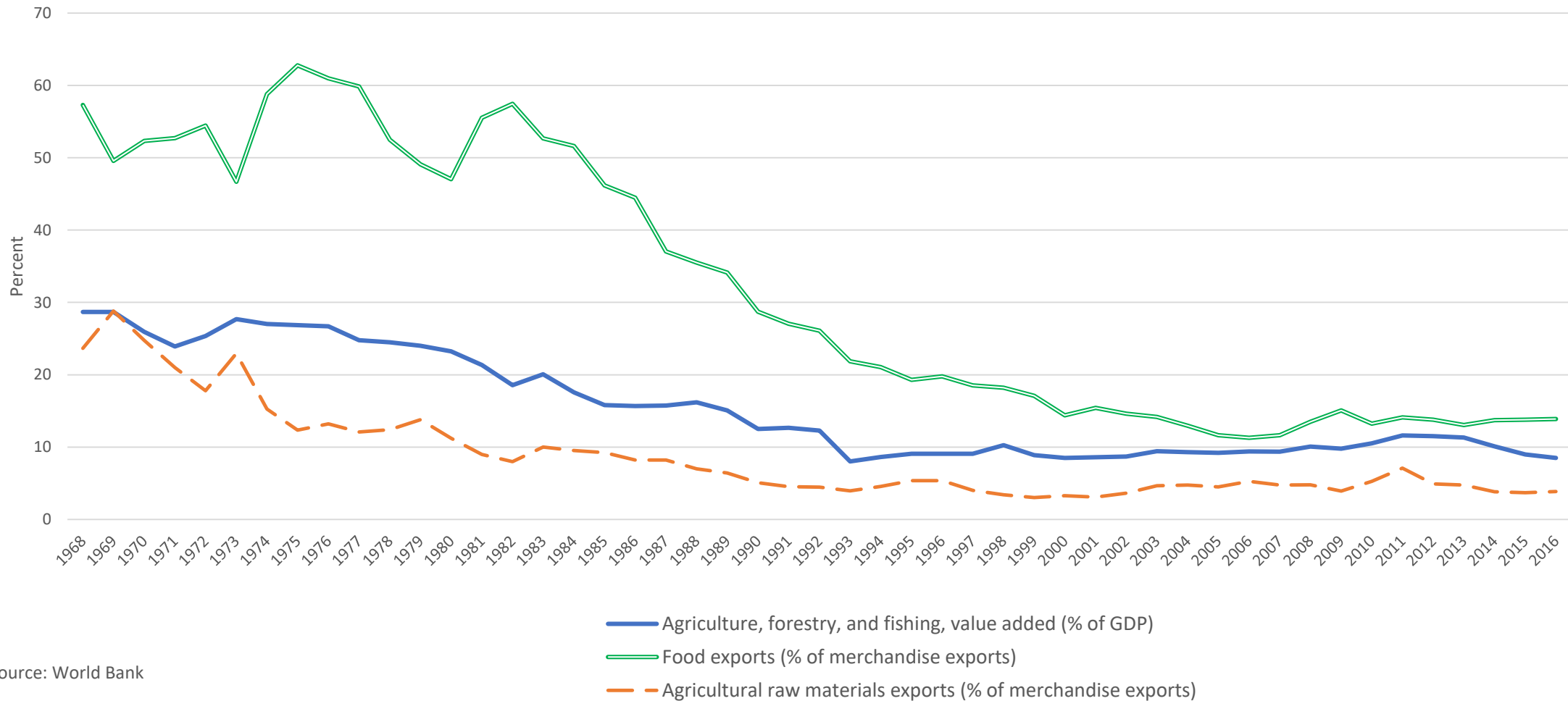
# Idiosyncratic transformation

Figure 2. Thailand's Agriculture and Rural Transformation  
(% total) Source: World Bank



# The rustic trap

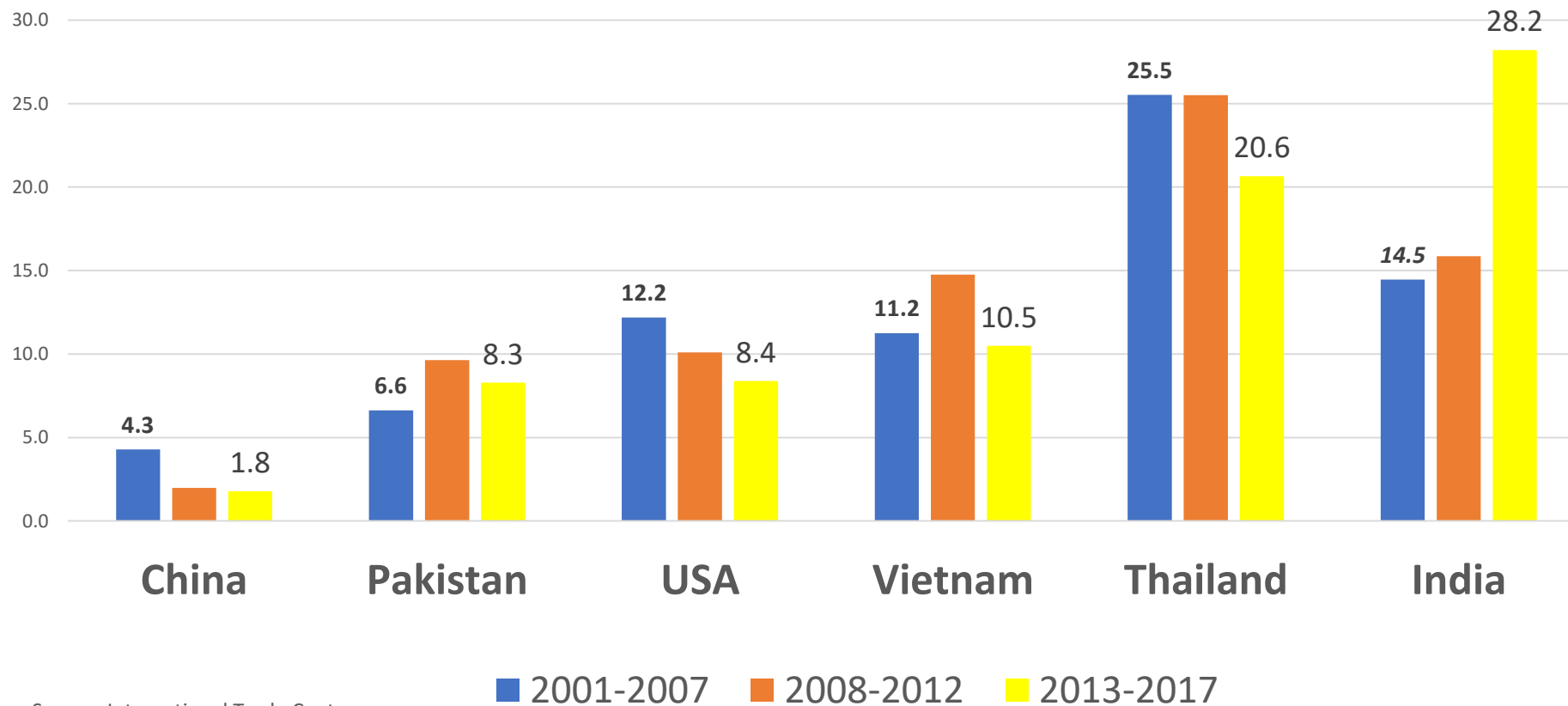
Figure 3. Thailand's Dwindling Agriculture



Source: World Bank

# How long can Thailand sustain the large market share of rice?

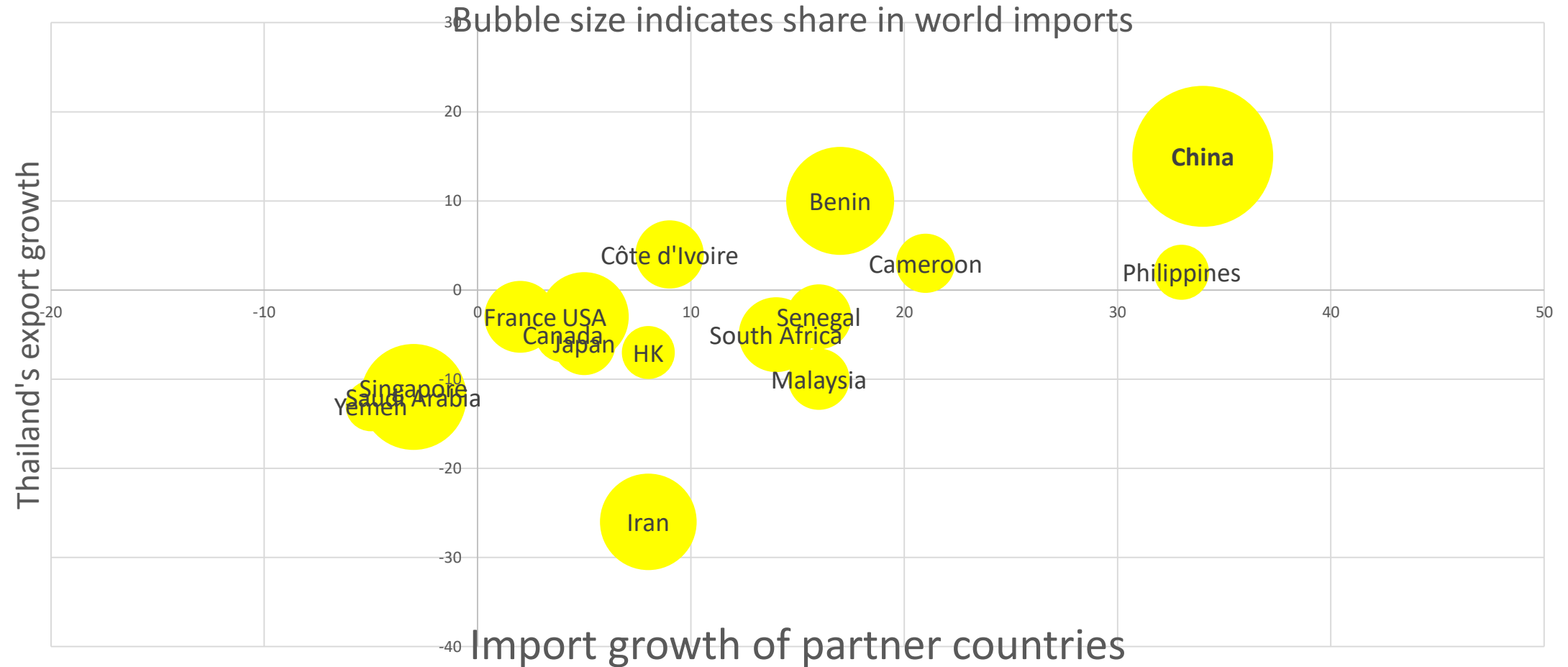
Figure 4. World Market Shares of Rice Exports



Source: International Trade Center

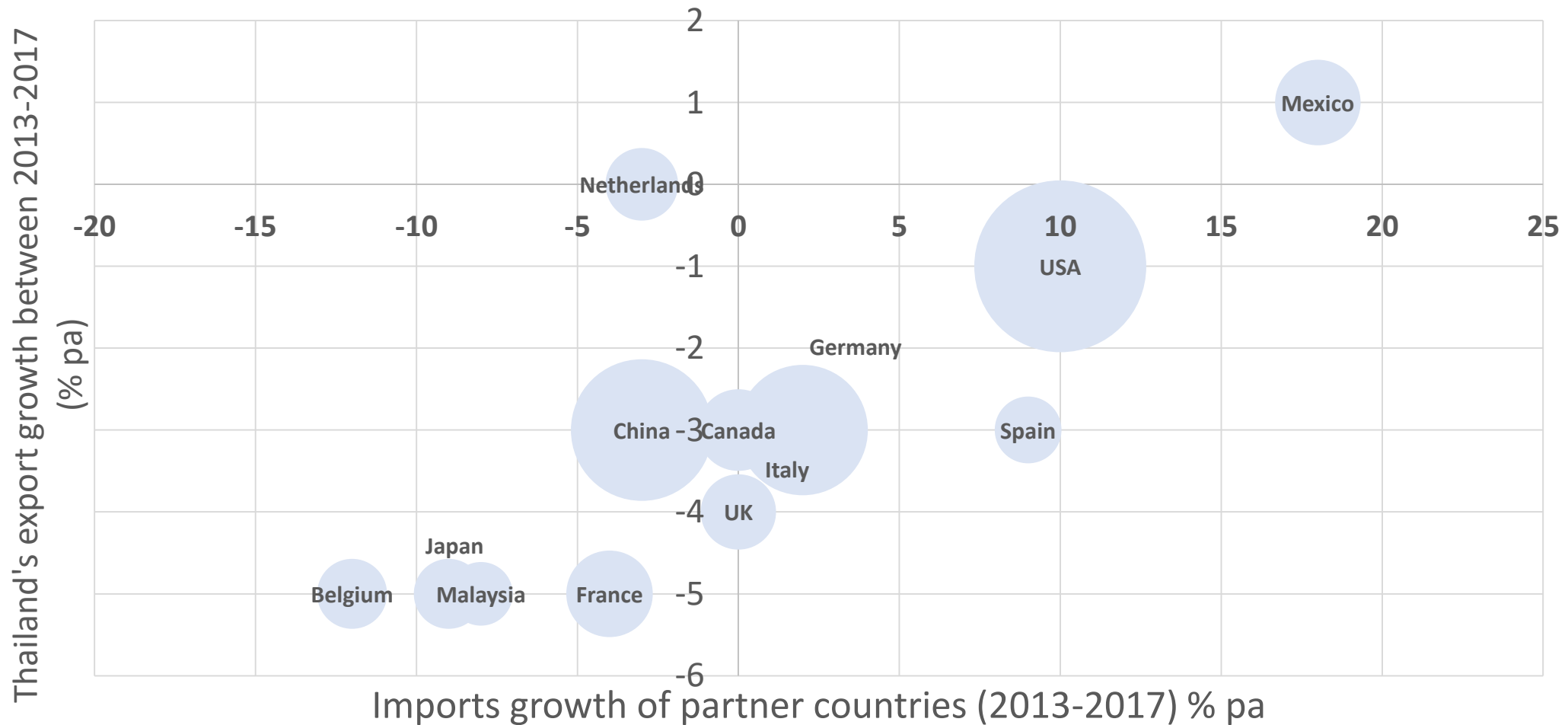
# A bright future?

Figure 5 Prospect of Thai rice exports  
percentage change 2013-2017



# Rubber: Retreating and missed opportunities

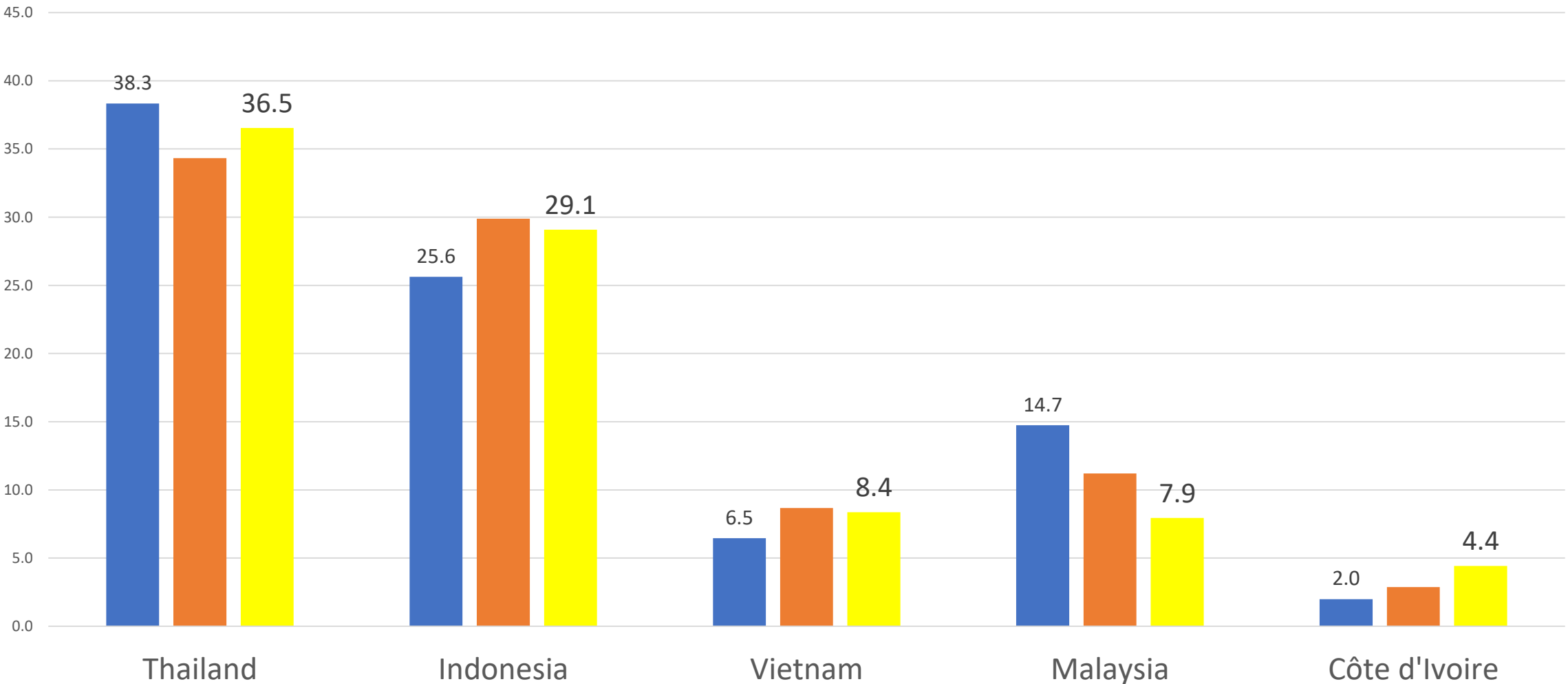
Figure 6. Losing market shares: Rubber  
(Bubble sizes indicate share in world import markets)  
Source: International Trade Center



# No ground for complacency: Rubber

Figure 7. World Export Market Shares of Natural Rubber

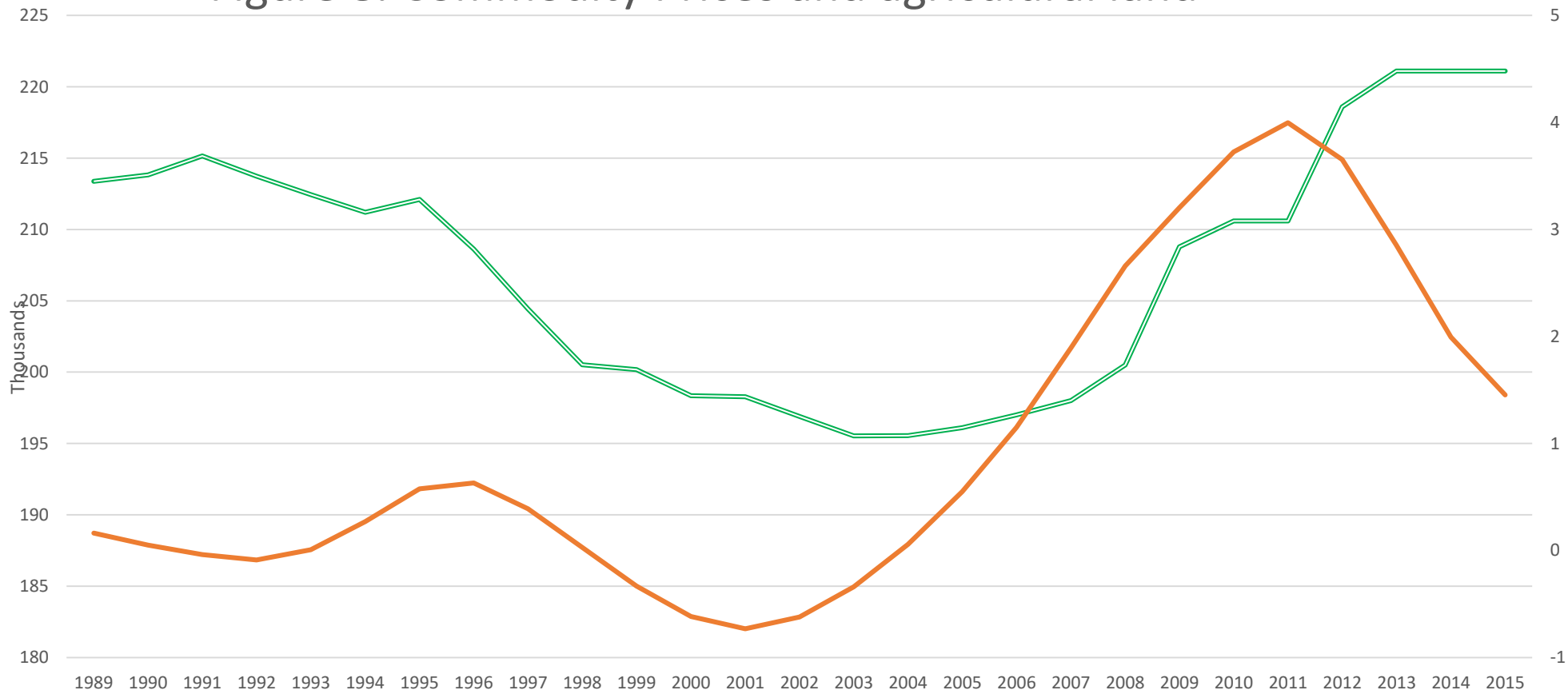
■ 2001-2007 ■ 2008-2012 ■ 2013-2017



Source: International trade Center

# Agricultural lag response

Figure 8. Commodity Prices and agricultural land

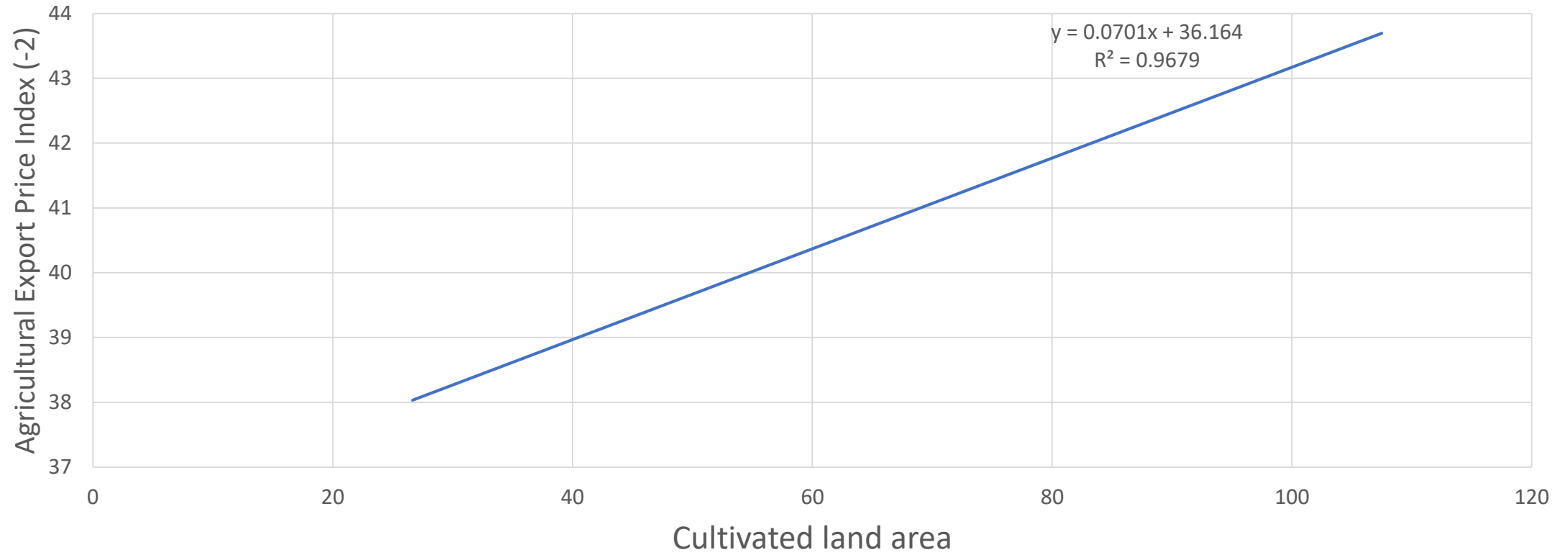


Source: World Bank and Mundi Index

— land(Sqkm: RS) — PC (rice and rubber: LS)

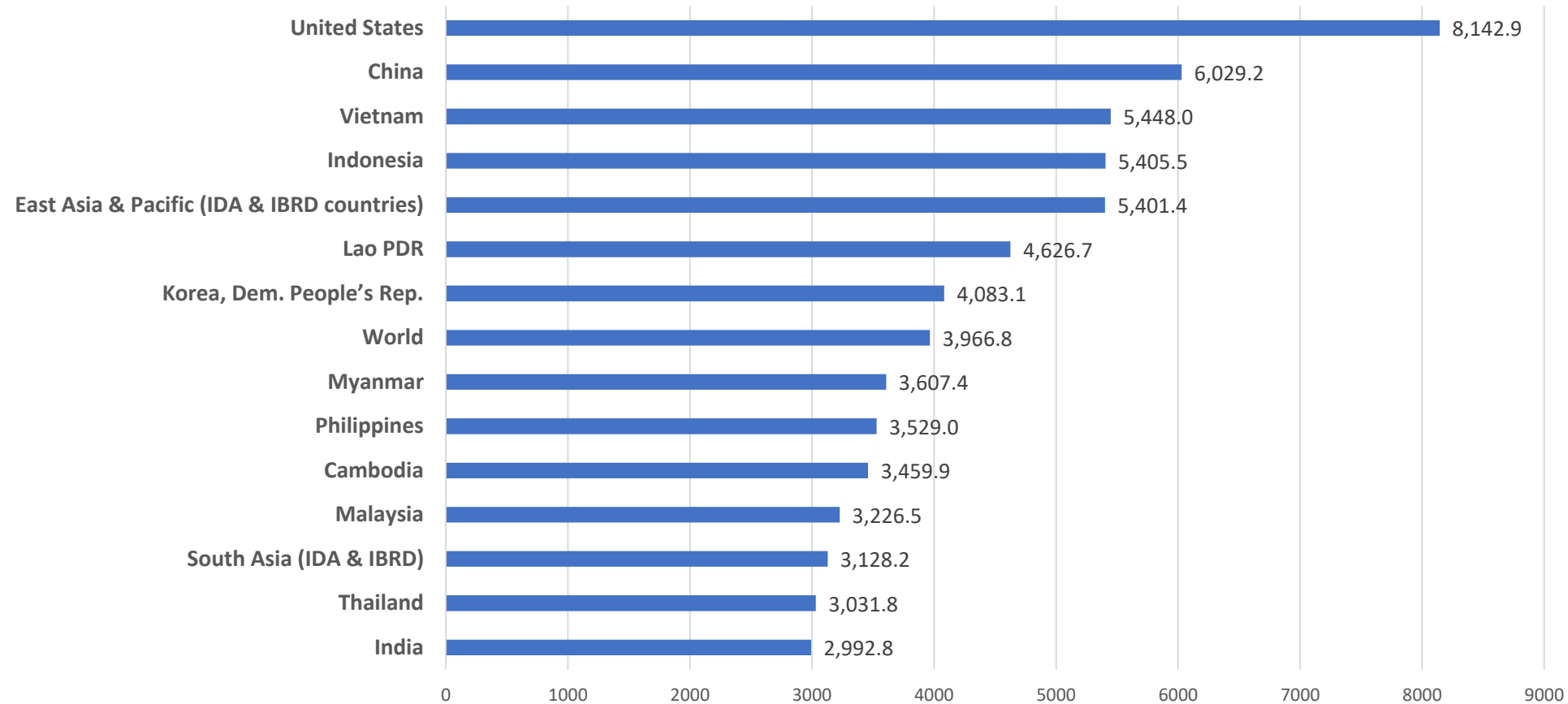
# Late is worse than never

Figure 9. Area lag responses to price changes  
(2002-2015)  
Source: World Bank



# Dismal performance (crop yields)

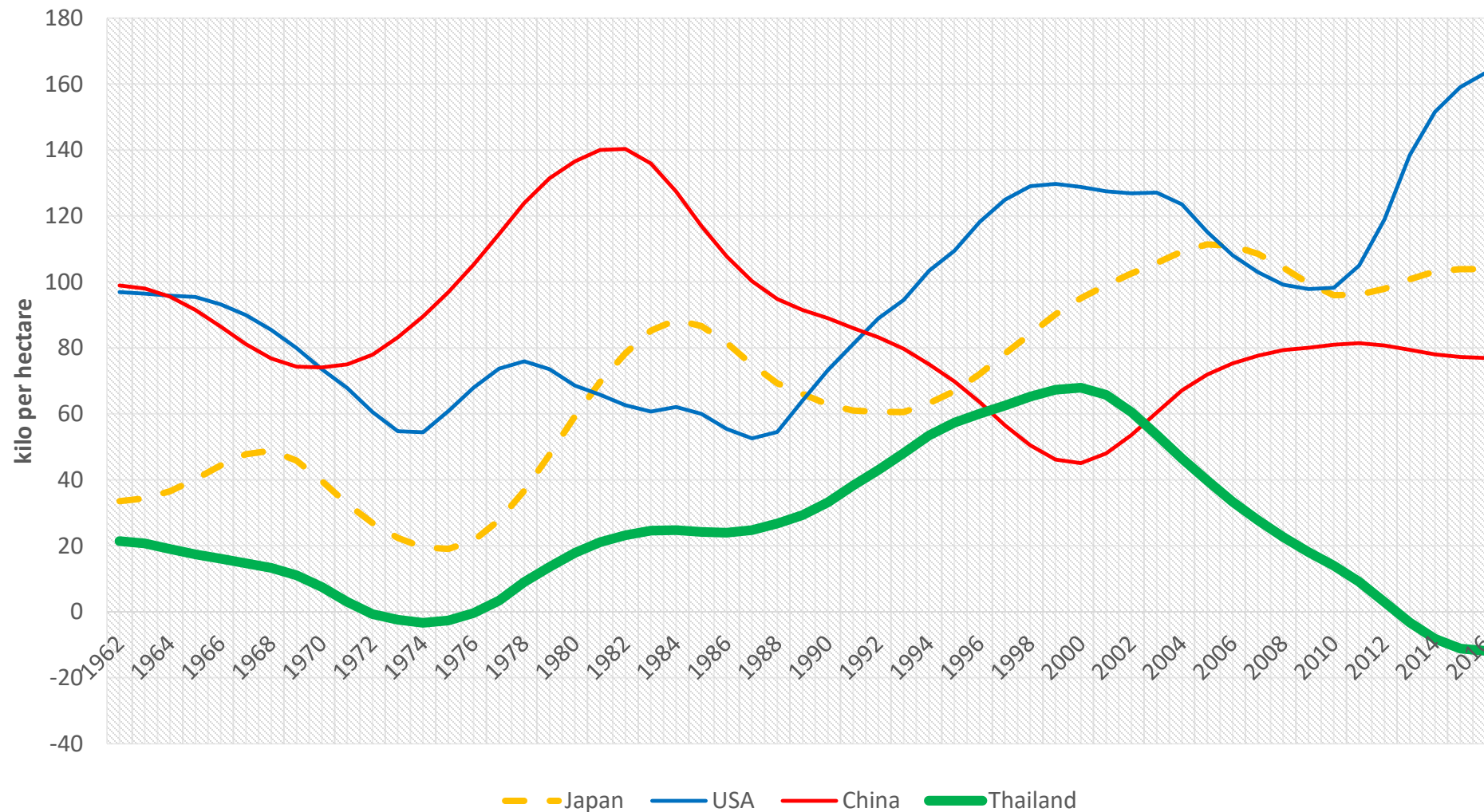
Figure 10. Crop yields in 2016  
(Kg per hectare)



Source: World Bank

# Dynamism of the agriculture sector

Figure 11. Changes in long-term land productivity

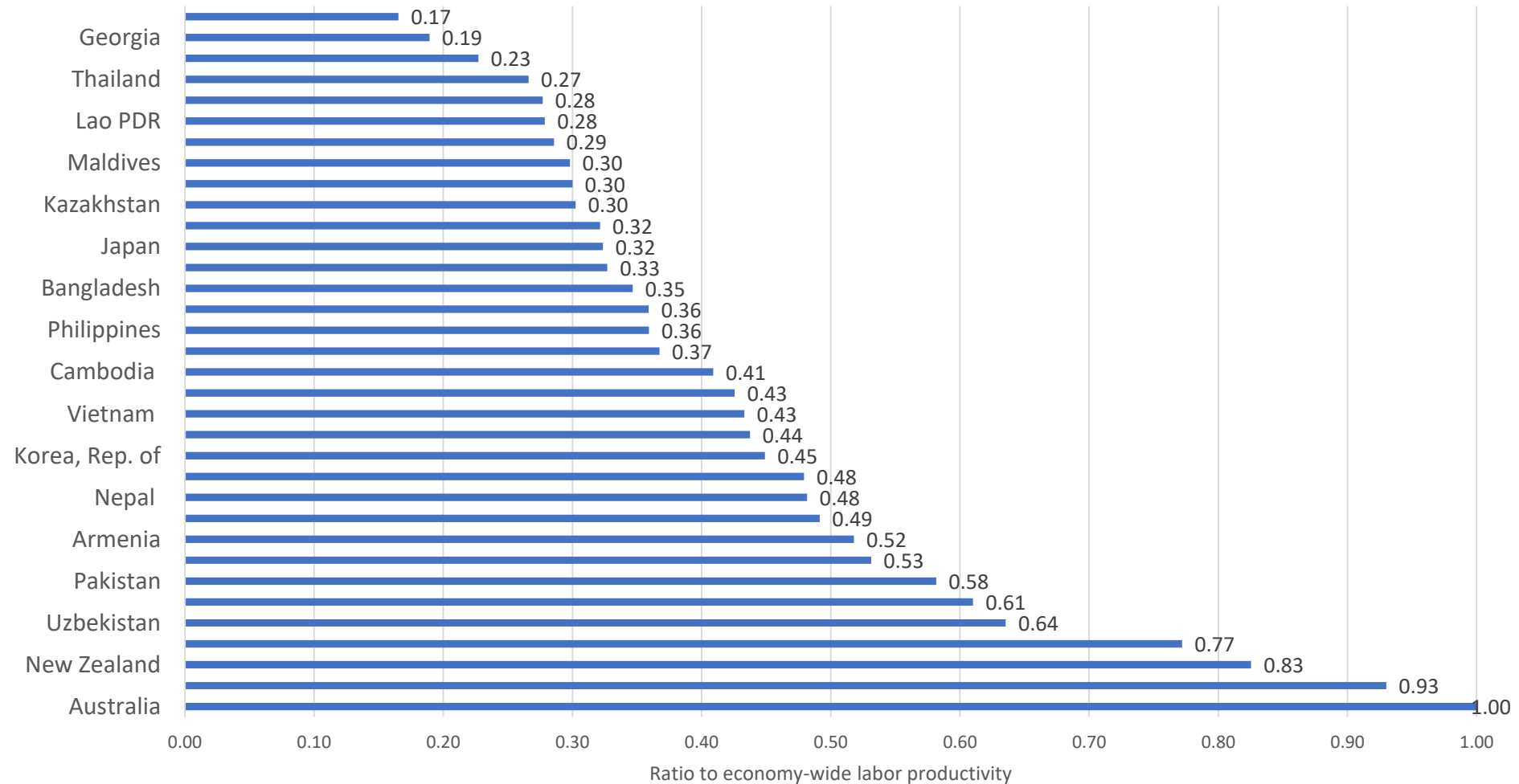


Source: Calculation based on World Bank data

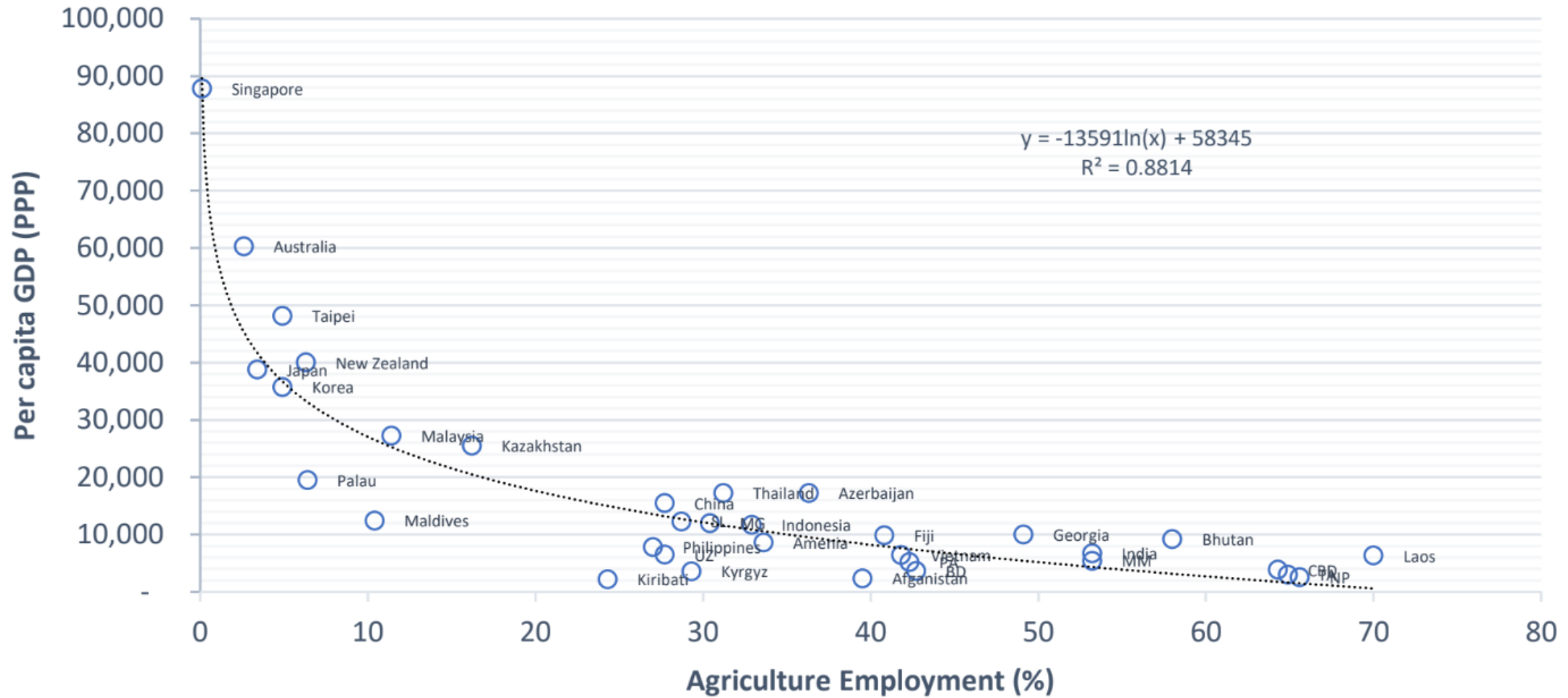
# The Cost Disease and farm productivity

Figure 12. Agricultural Labor Productivity Gap Index  
(2016)

Source: Calculation based on World Bank Data  
 $(Y_a/Y)/(L_a/L)=(Y_a/L_a)/(Y/L)$

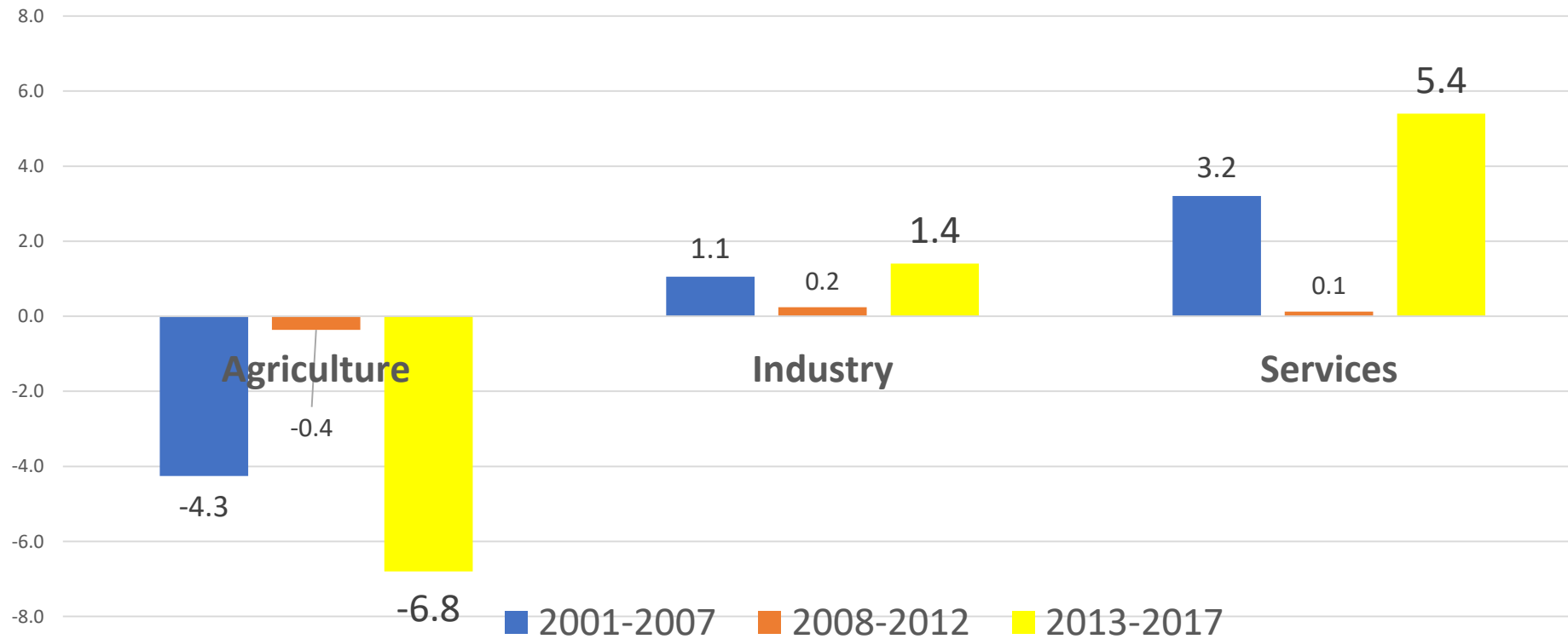


# A non-linear relationship



# Where did agrarian labors go?

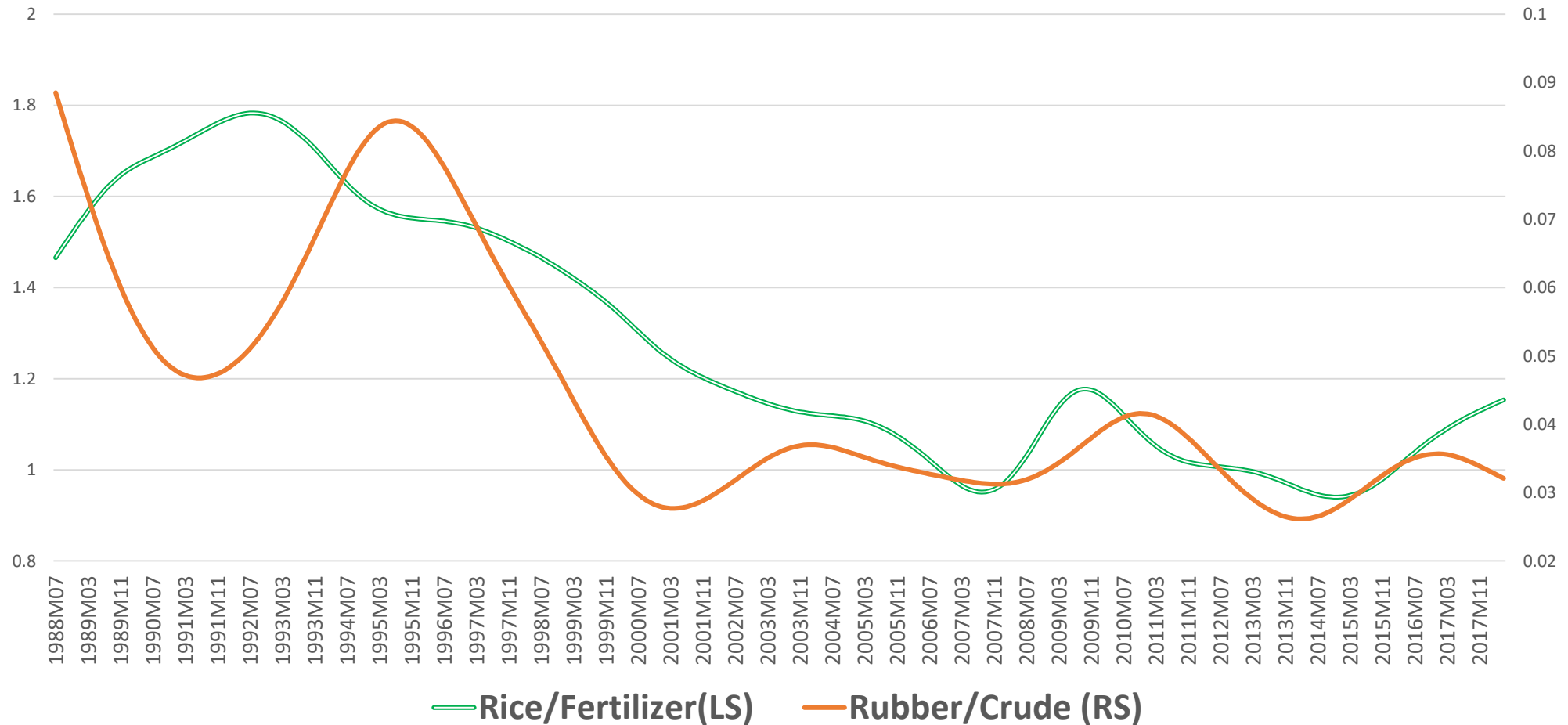
Figure 14 Changes in employment shares  
(from beginning to end period)



Source: NESDB

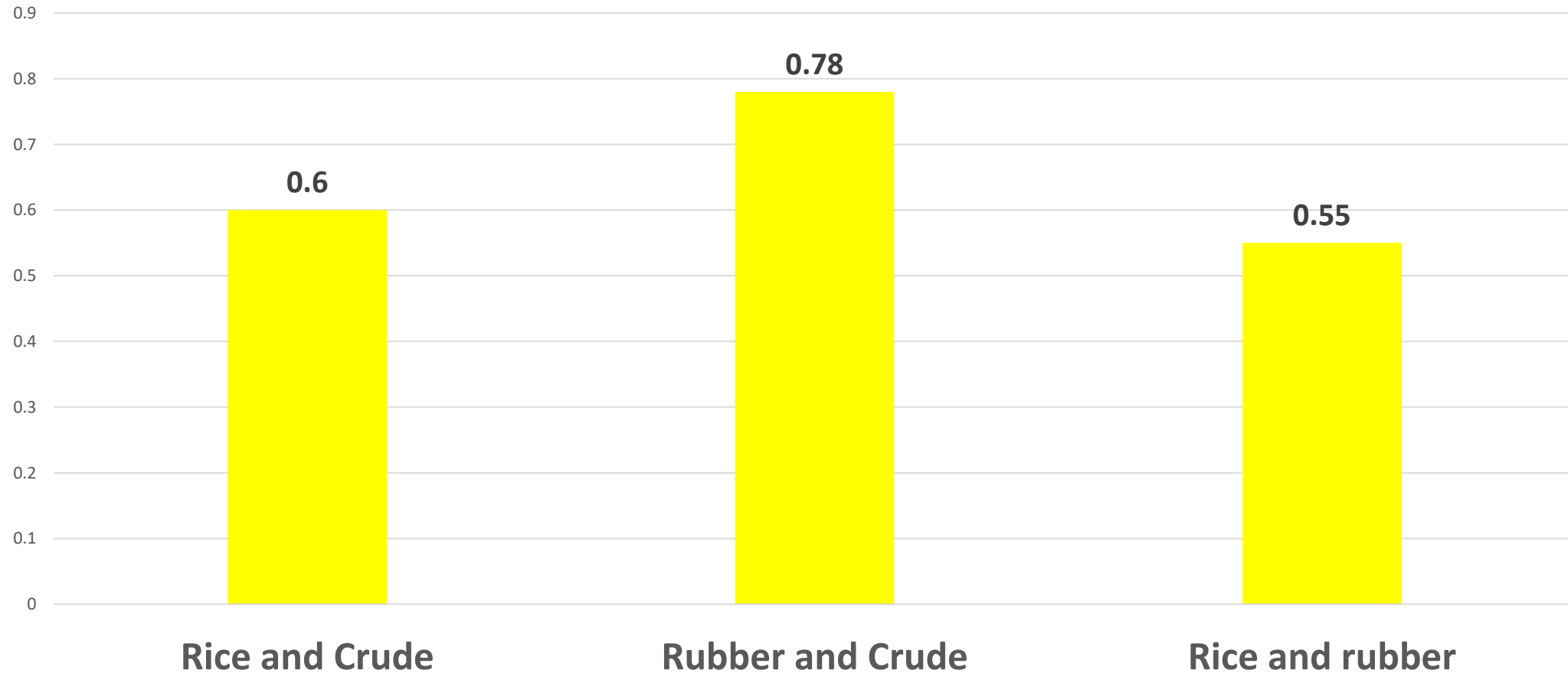
# Prebisch-Singer may be right

Figure 15. Deteriorating Trends of the Terms of Trade



# Correlations do suggest causations (in this case)

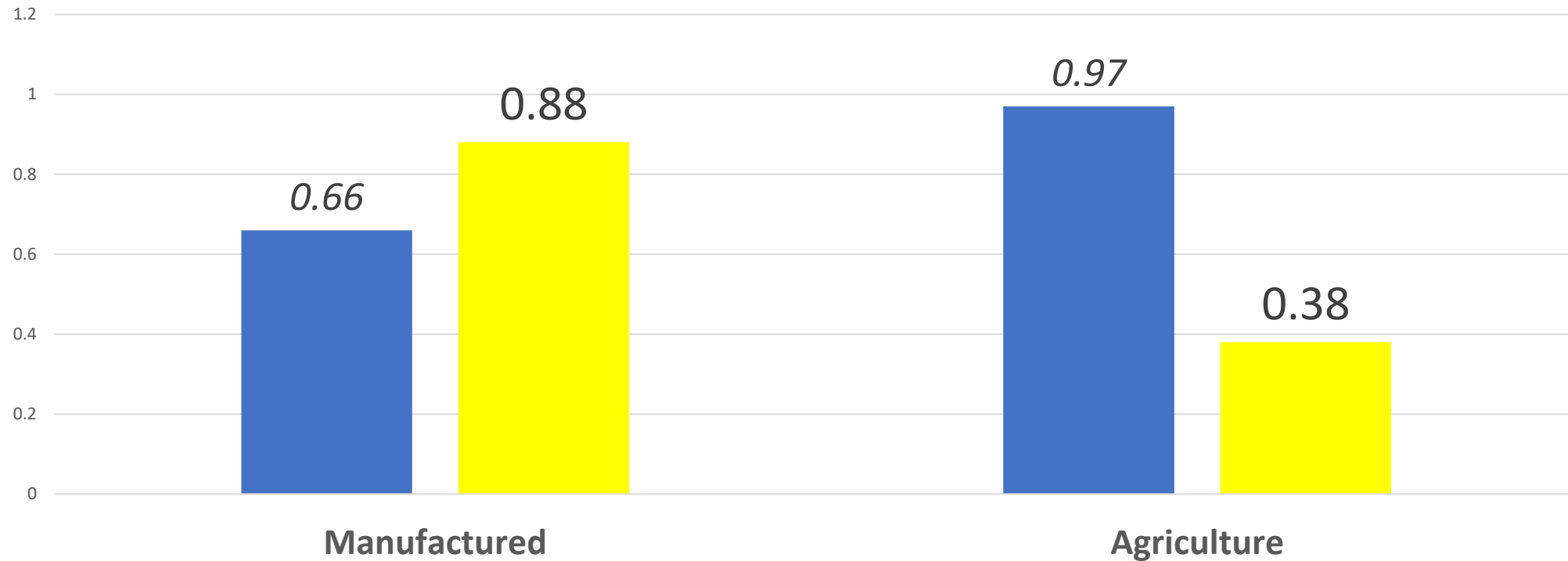
Figure 16. Correlates of commodity monthly prices  
(1988 - 2018)



Source: Calculation based on data from Mundi Index

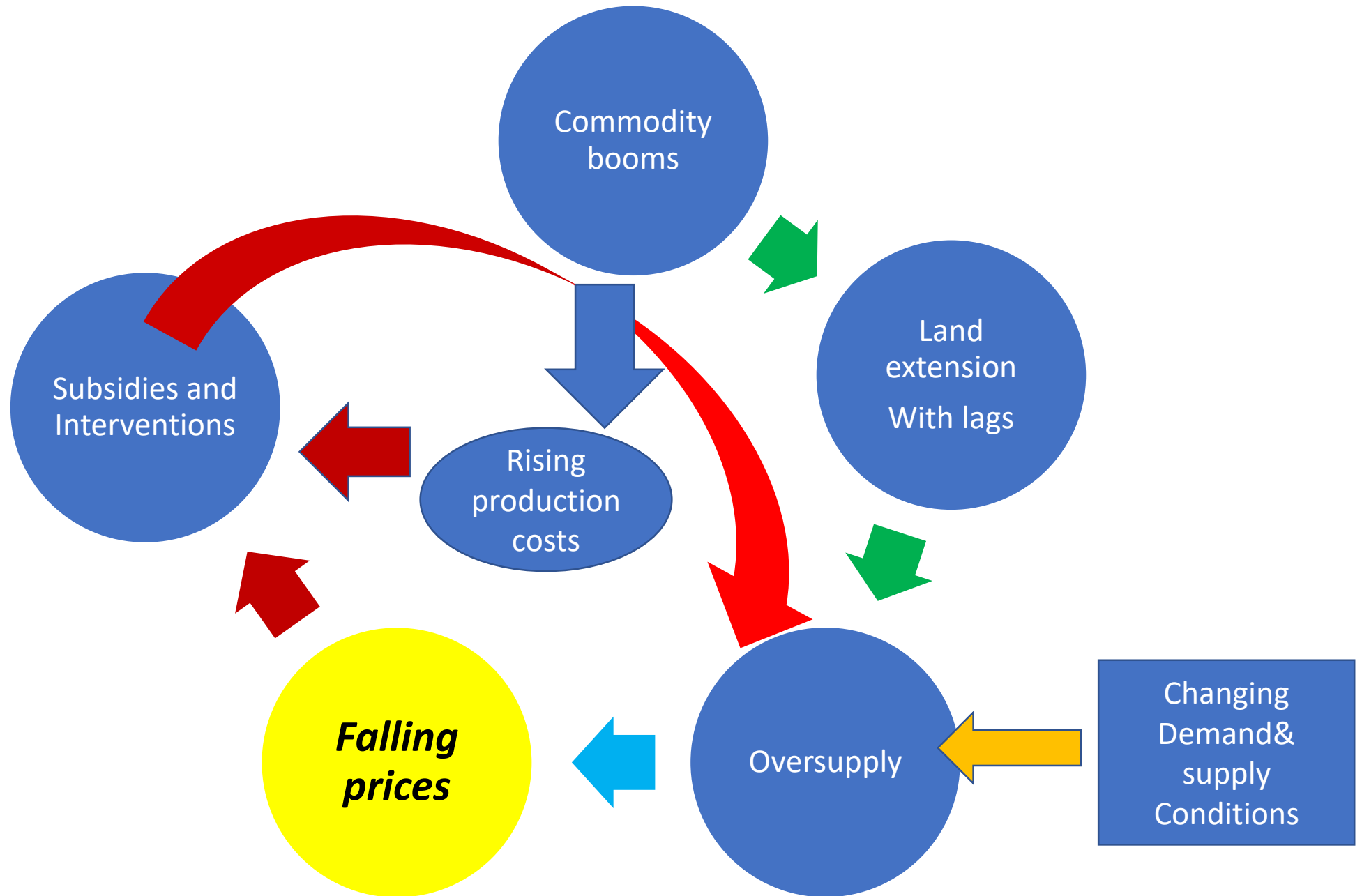
# Prices matter more in agricultural exports Volumes matter more in manufactured exports

Figure 17. Correlates of export values  
(Jan 2000-May 2018)



Source: Calculation based on data from Bank of Thailand

■ Price ■ Volume



# Agricultural subsidies: A global norm

## From Iowa to Indochina

- USA: \$20 billion a year

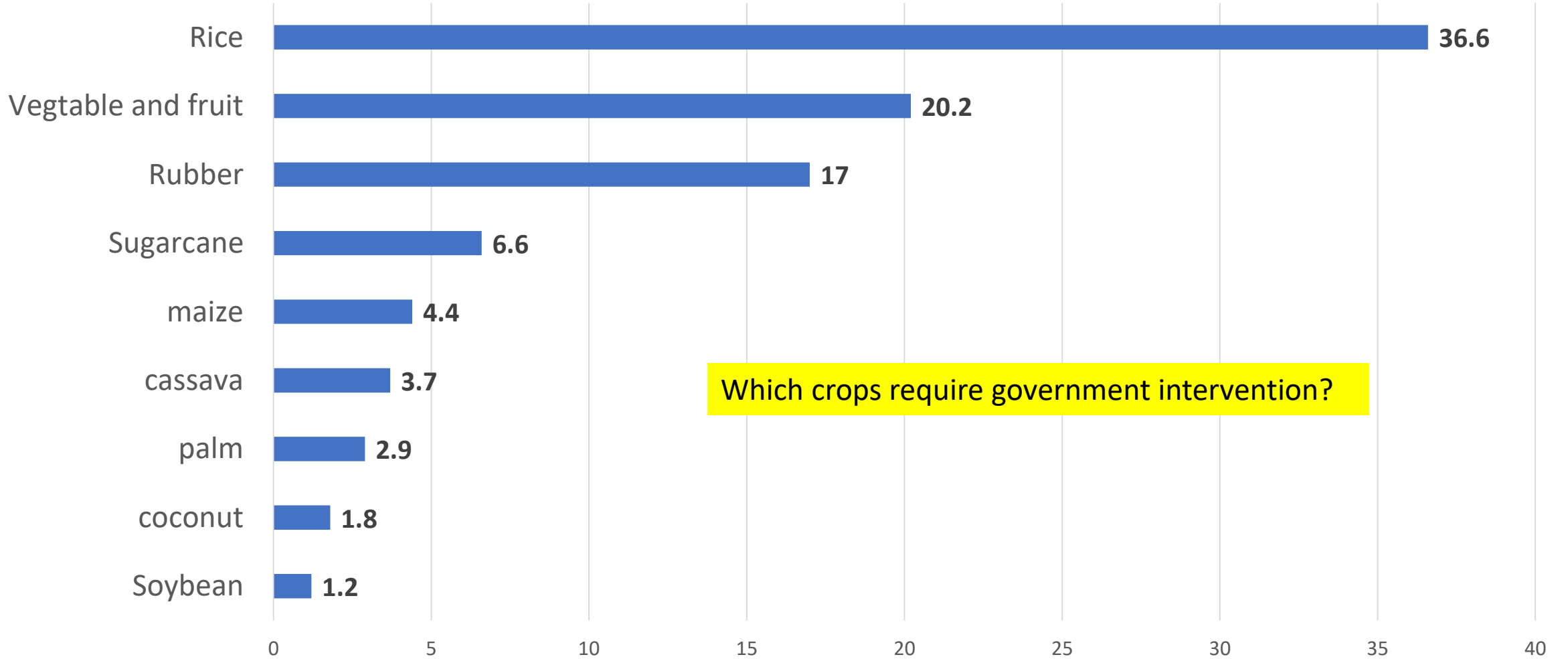
Corn and soybeans in Iowa: Direct payments based on farm ownership (before 2014)

- UK Direct payments by the EU (Common Agricultural Policy)
- Japan “gentan” program under which the government has paid farmers to reduce rice crops since 1971
- China “land bank” to enlarge farm sizes

# Relative importance of major crops

Weight shares in agricultural production index

Source: Bank of Thailand



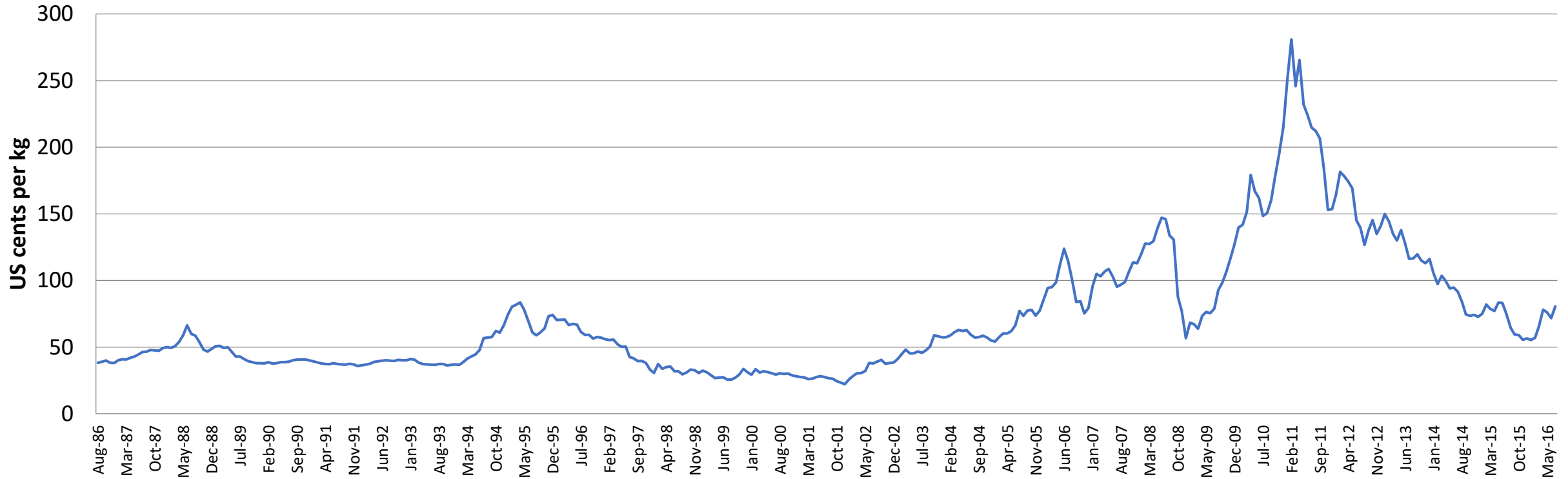
# Rice prices in the last decade



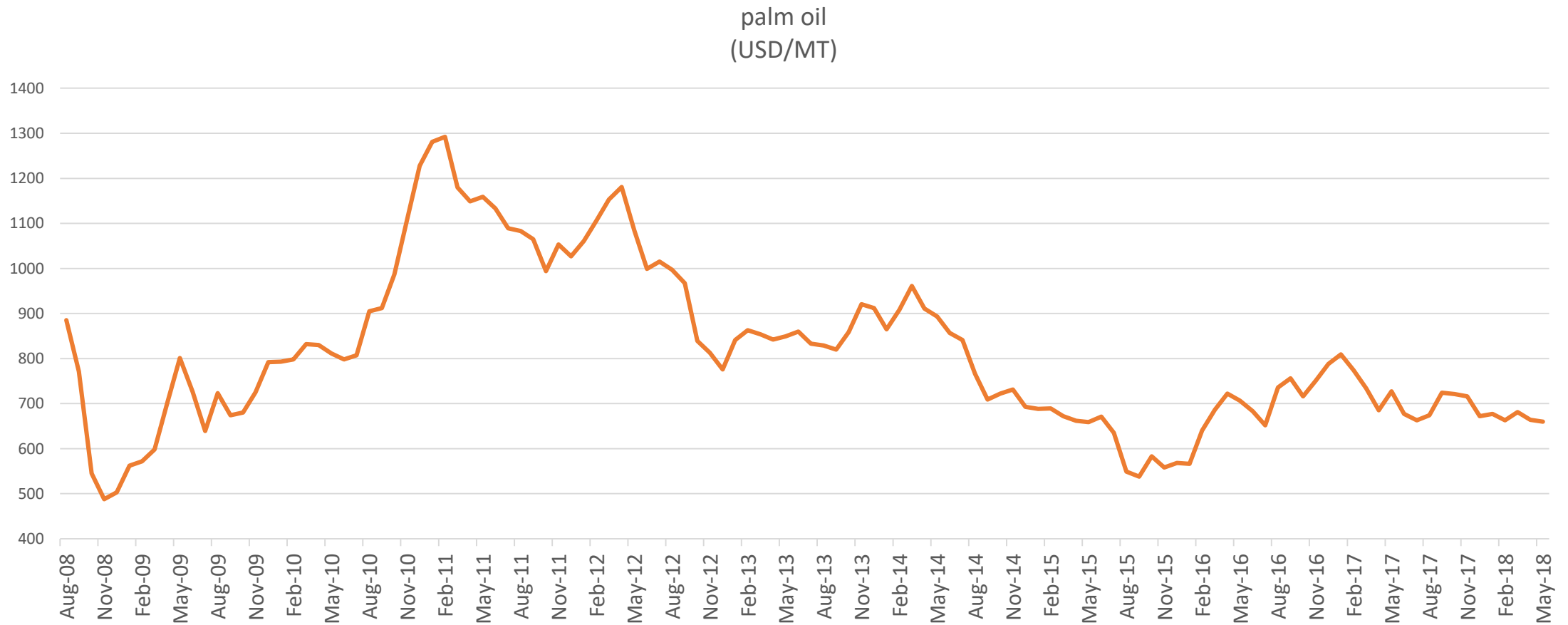
# Rubber Prices: booms and busts

## Government's solution: Reduce supply and increase domestic demand

**Rubber Price**  
**Rubber, No. 3 Smoked Sheet (RSS3), Singapore Commodity Exchange**



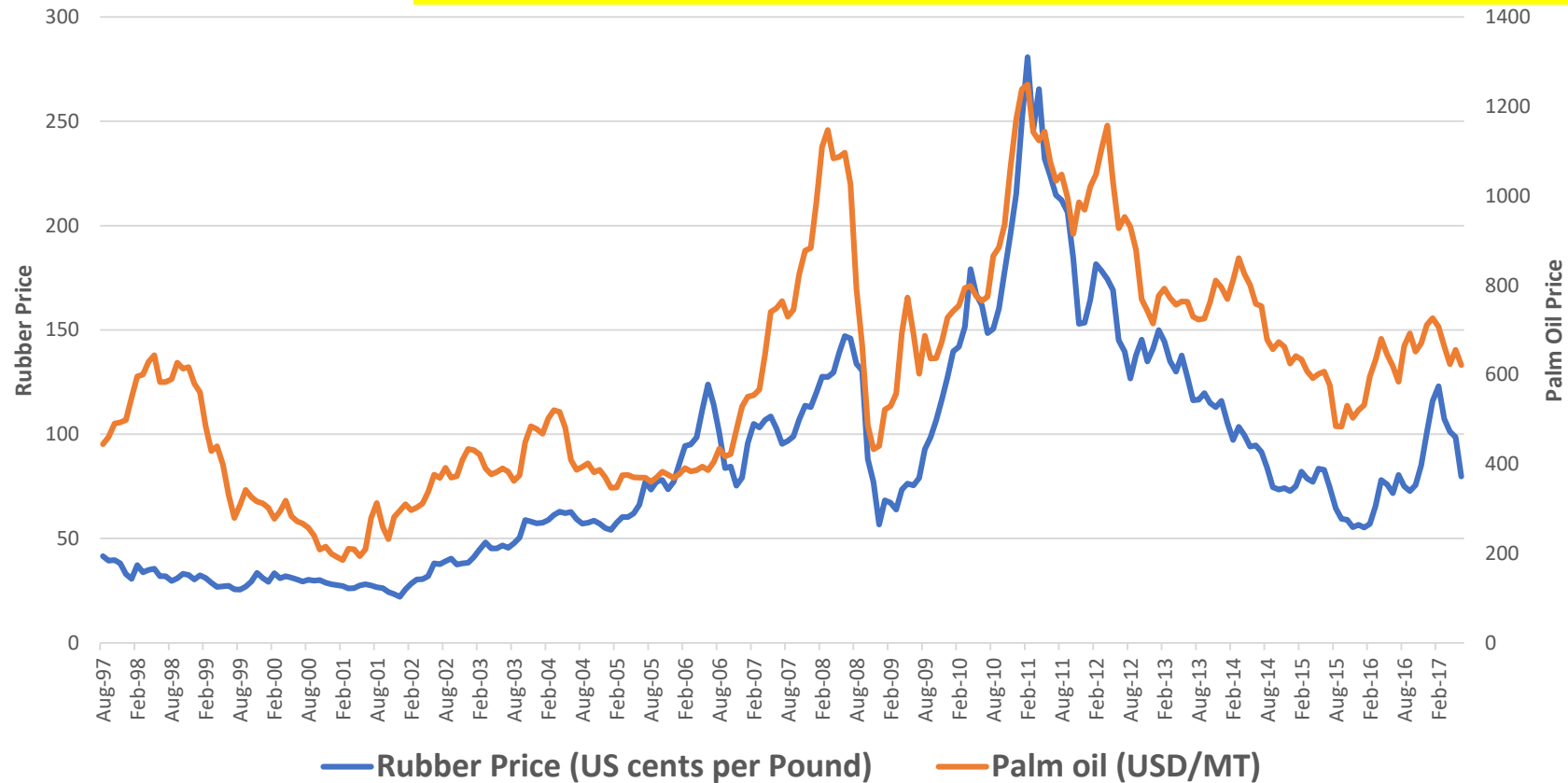
# Palm oil price in the last decade



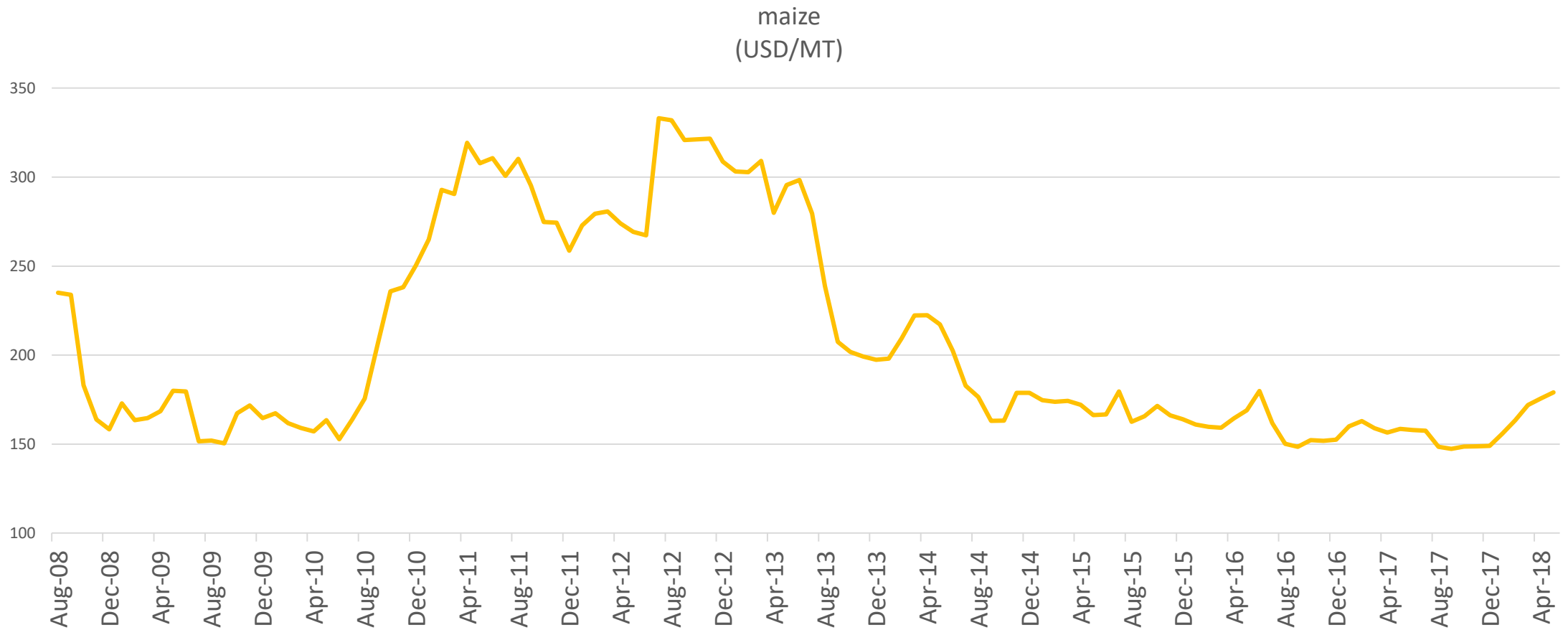
Due to the oversupply of natural rubber and the rising demand for *synthetic petroleum-based rubbers*, many rubber farmers expand into the more profitable *palm tree* business to produce palm oil.

The biodiversity decreases as palm oil trees cover more and more surface area in Southern Thailand.

## High Correlation between Palm Oil and Rubber Prices

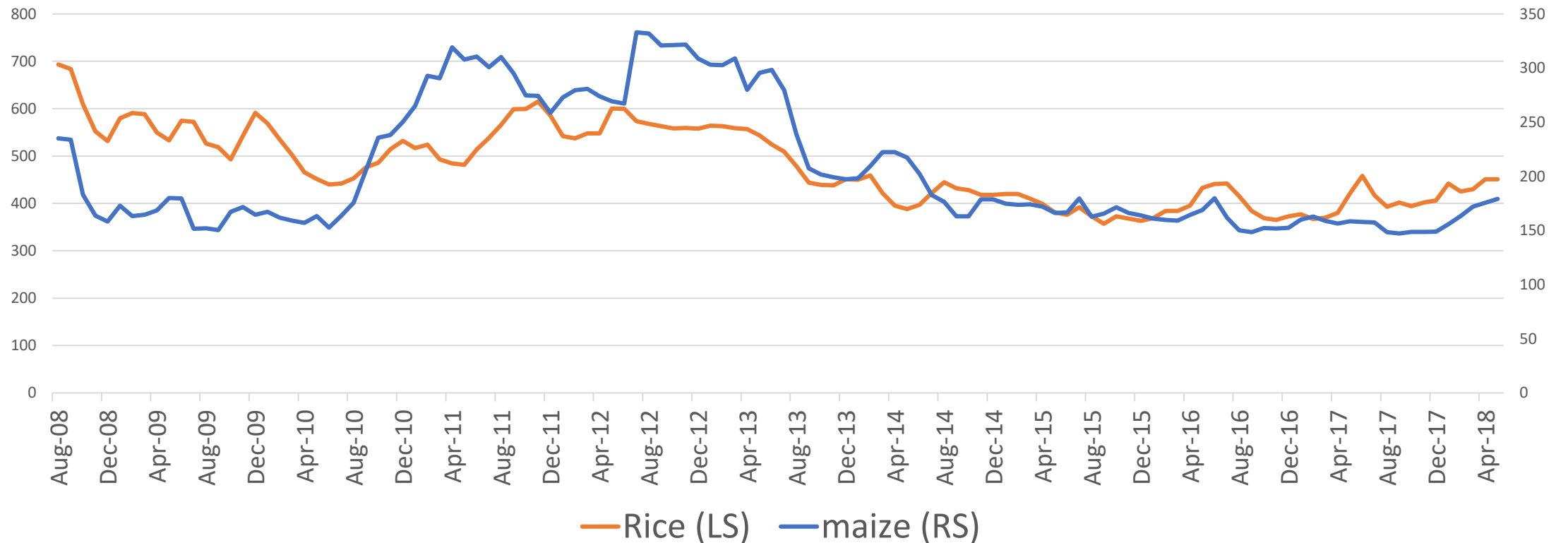


# Maize prices in the last decade

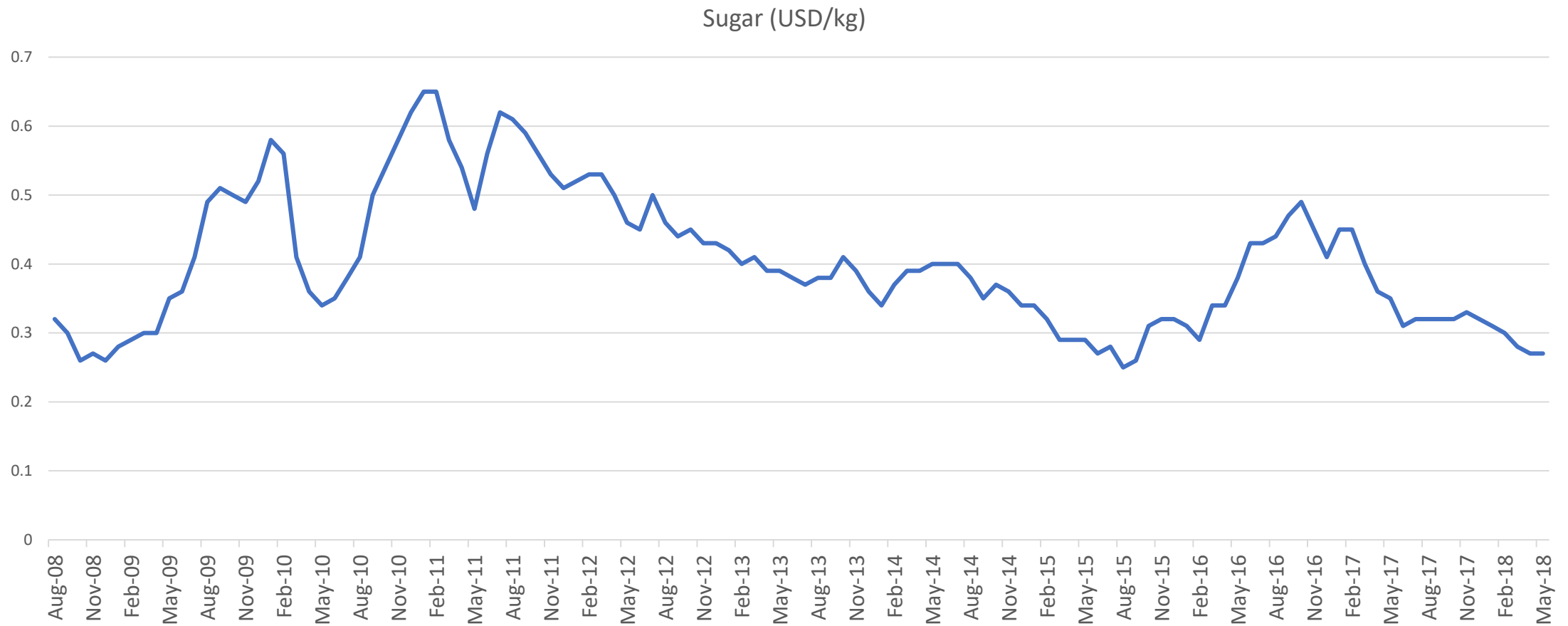


The government paid paddy farmers to abstain from growing the second crop and switch to maize (Reduce supply of rice and increase supply of maize)

Rice and Maize Prices



# Sugar prices



# To increase farm prices: Reduce supply and increase the domestic demand

- Import ban to reduce market supply: Coconut
- Create artificial demand: imposed the stock/export ratio of cassava exports (1.5)
- In January 2015, the cabinet approved 2,760 million baht to subsidize 3 % interest rate loan for each farmers who **postpones harvesting** in order to push up the price at the beginning harvest season.
- The interest subsidy at 3% also goes to processing factories, exporters, and ethanol producers **to purchase tapioca at the high supply seasons** to shore up the price

## Cash handouts to rice farmers who delayed selling their crops for six months: A delay tactic

- In September 2016, the National Rice Policy Committee, chaired by the PM, approved measures to encourage farmers to *delay rice sales*.
- The measures include 1,000 baht per rai in cash handouts to rice farmers, plus a 4% interest rate subsidy worth of combined 1.24 billion baht to millers and agricultural cooperatives that agree to *hold rice in their warehouses for six months*.

# Cassava price guarantee is higher than the market price

- The first nine months of 2019, Thailand exported 5.27 million tons of tapioca products, down 17%, with value of \$2.03 billion, down 12%.
- As of Nov 27, 2019 the price of fresh cassava root with 25% starch was quoted at 2.20-2.40 baht per kg.
- The cabinet on Nov 12 approved 9.6 billion baht for the tapioca price guarantee scheme for the 2019-20 harvest season.
- The price guarantee is set at 2.50 baht per kg, limited to 100 tones per family.
- The program runs from Oct 1, 2019, to Dec 31, 2020 and is expected to cover 540,000 farmers.

# Conclusions

- Changing weather pattern disrupts the regular supply of grains.
- Cyclical movements in world business cycles affect demand for agricultural raw materials.
- Imbalances in supply and demand of agricultural commodities lead to booms and busts of primary products.

# Conclusions

- Because of the lag responses of agricultural production, the resulted excess supply and demand necessitate governments to regularly intervene to stabilize farm incomes through various commercial policies and farming subsidies.
- Rural poverty and rising farm debts provide incumbent governments an excuse to intervene, enhancing the opportunity to please voters and pacify the less well-off.
- Enormous budgets are allocated for subsidies, at the expense of other long-term agricultural investment, which turns out to be inefficient and ineffective.