

# Competitiveness of the Thai Manufacturing Sector

**Bhanupong**

**Lecture 13**

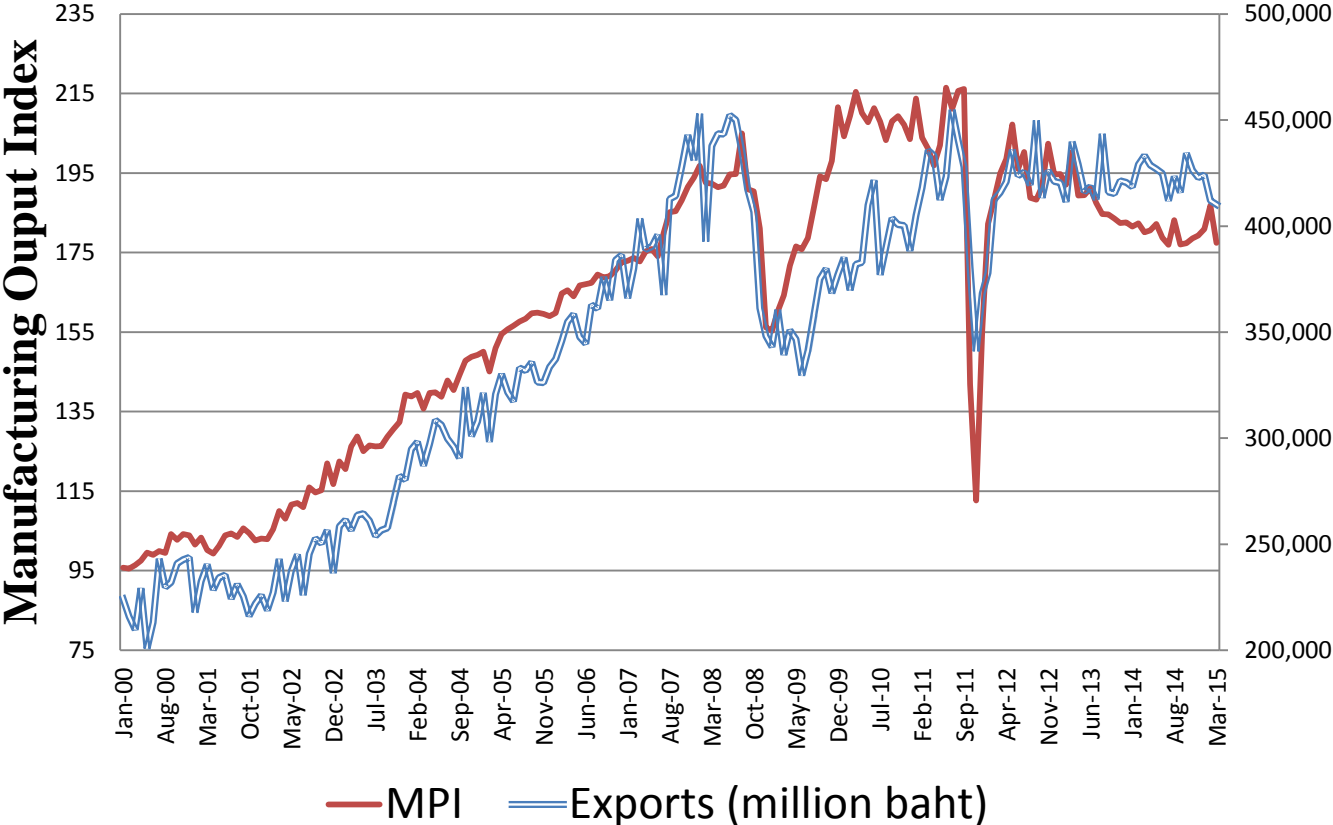
# Outline

- Overview of the industry
- Global competitiveness
- Competitiveness and positioning of Thai manufacturing
- Diversification of exports

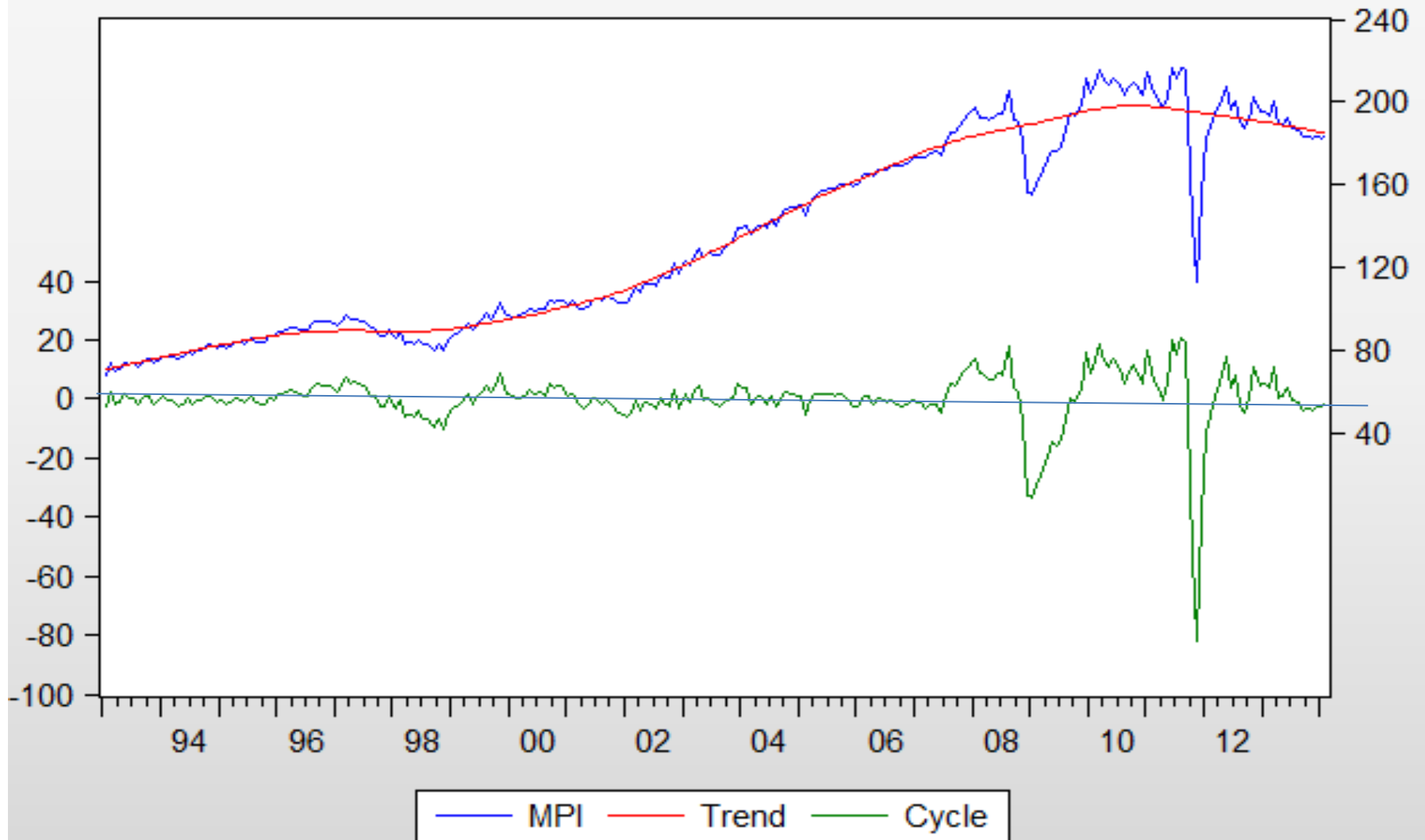
# 1. Overview

- Trend growth of industrial production
- Identify major industrial goods
- Analyze the cyclical pattern
- Characterize products by market orientation

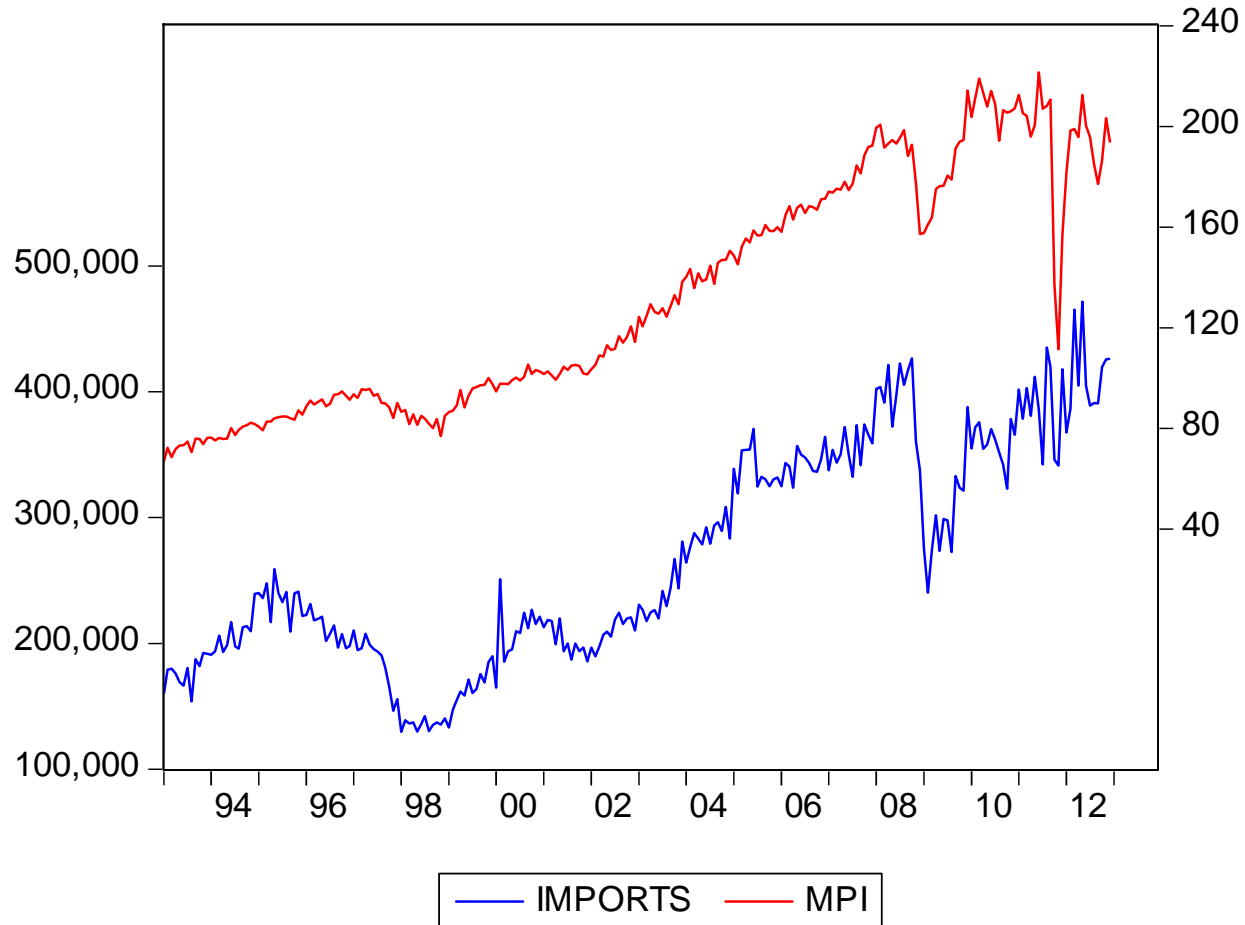
# Exports and Manufacturing Output



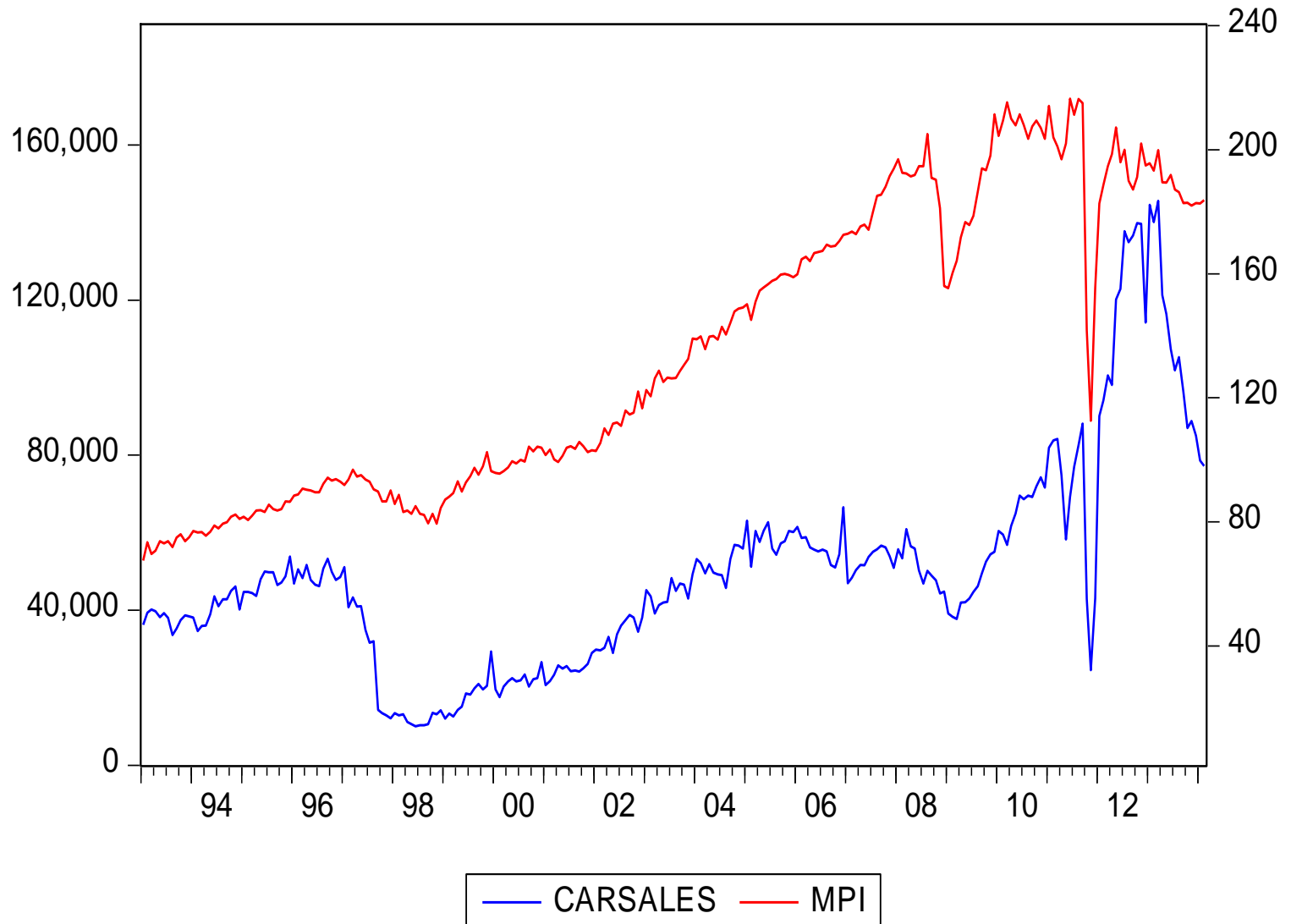
### Hodrick-Prescott Filter (lambda=14400)



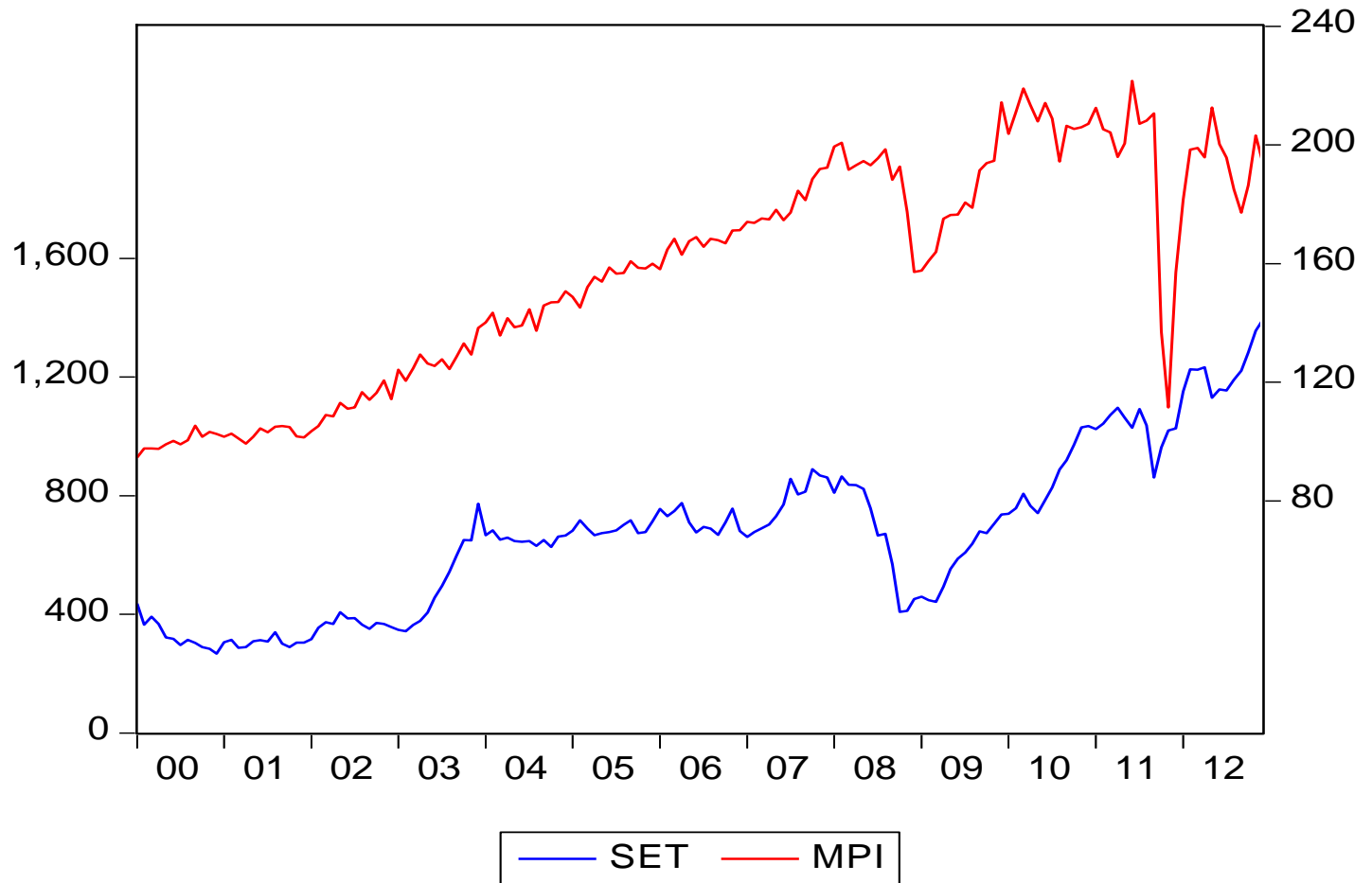
# Manufactured products and imports



# Demand for automobile and manufacturing production



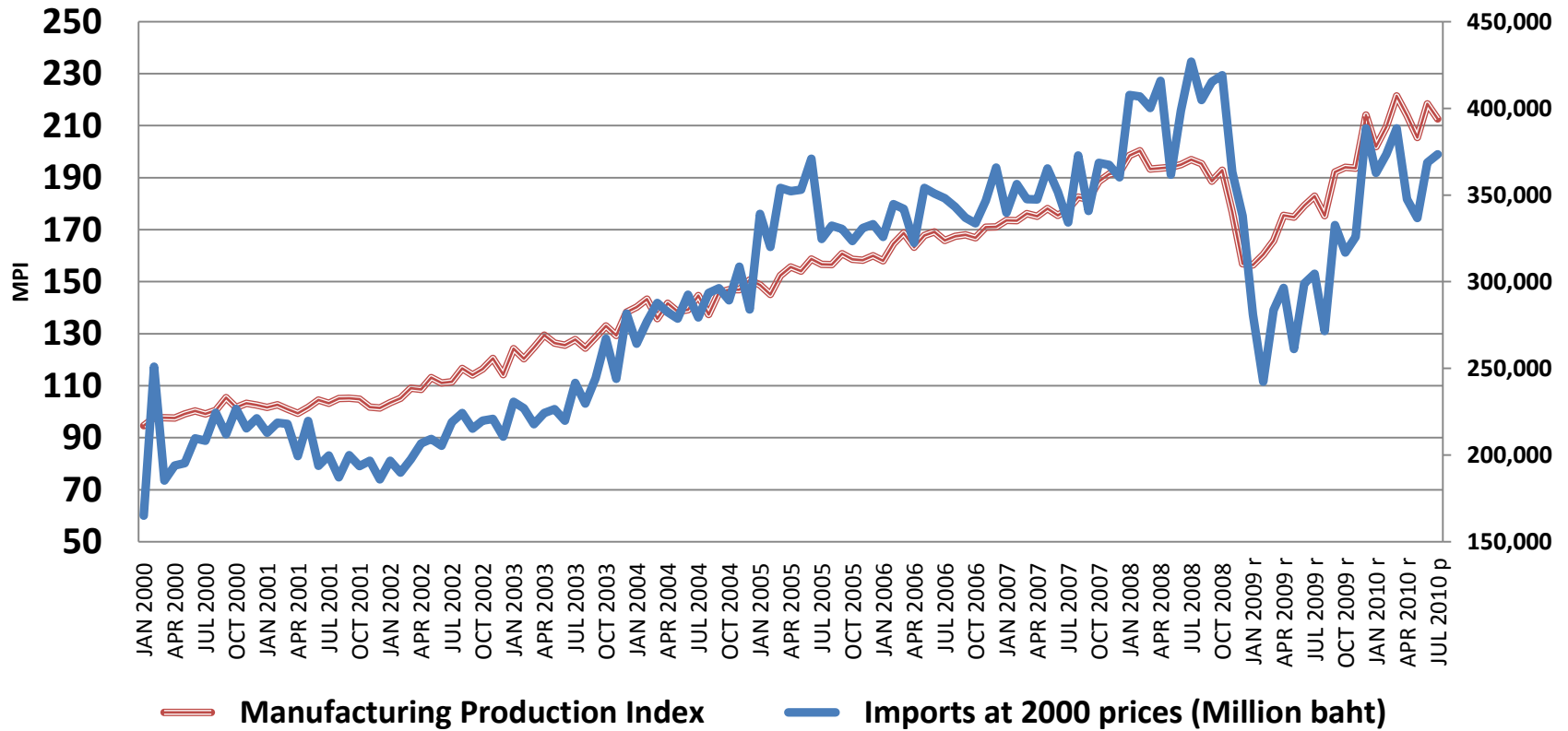
# Economic activity and stock prices



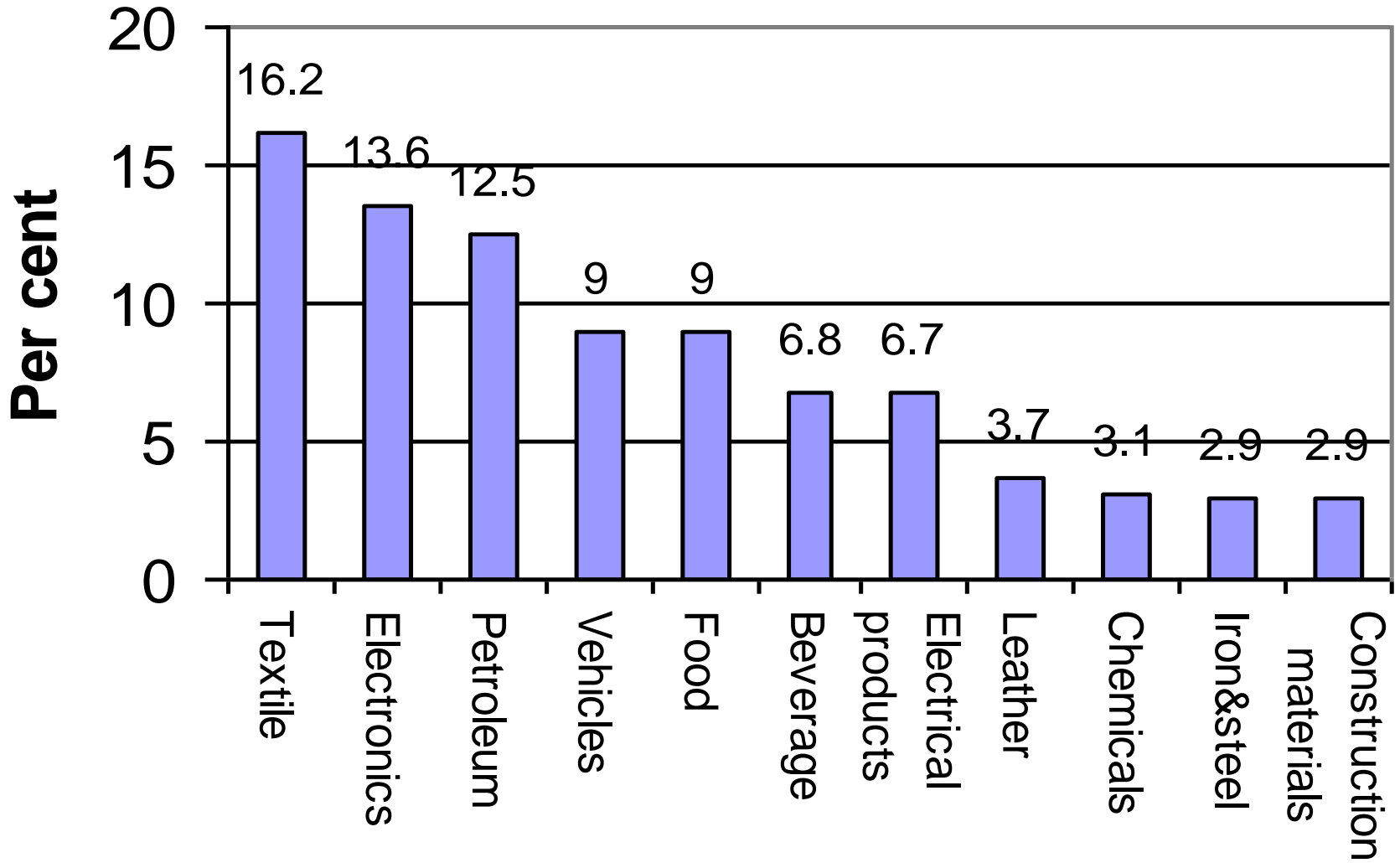


# Recession and recovery

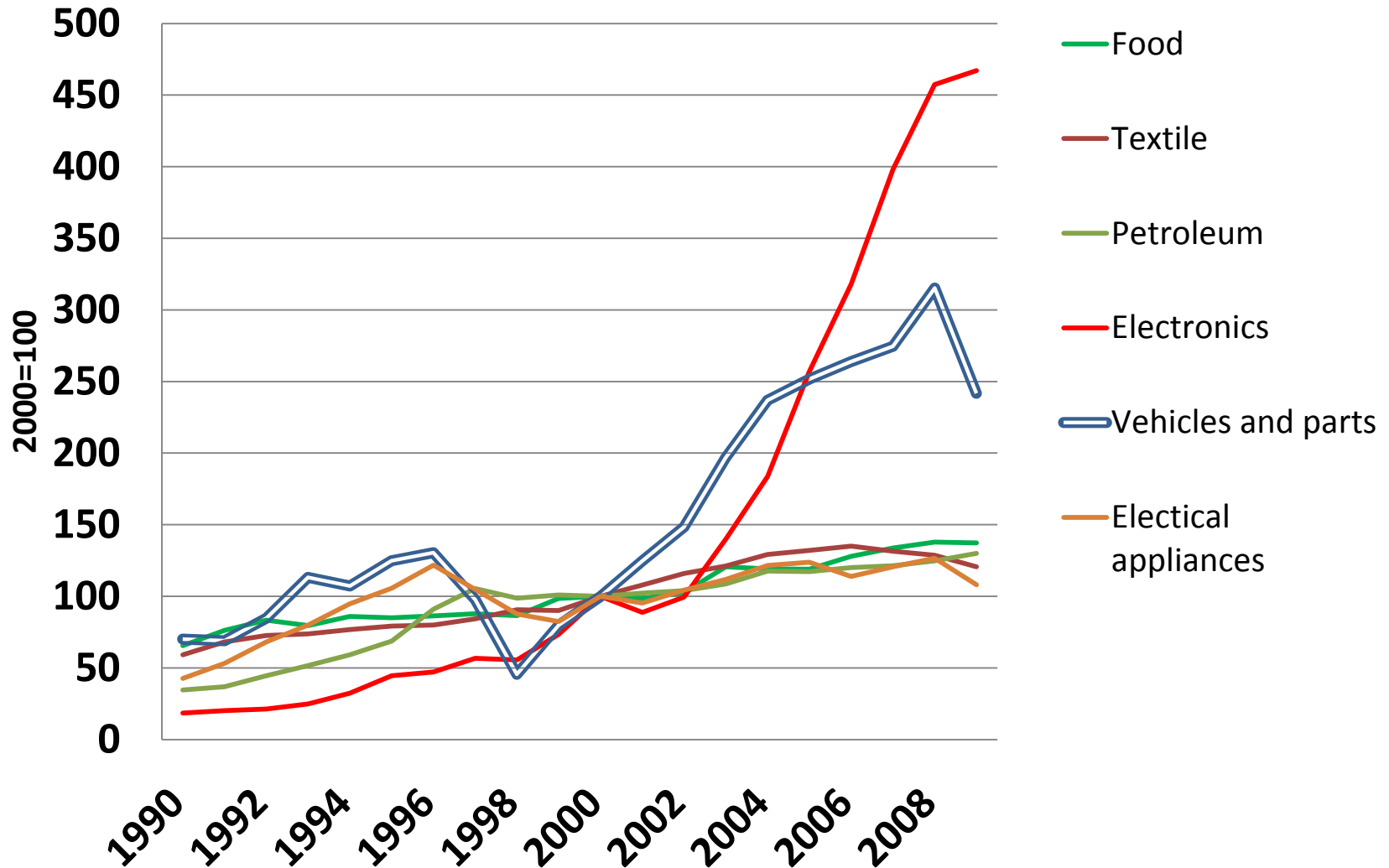
## Manufacturing production and imports



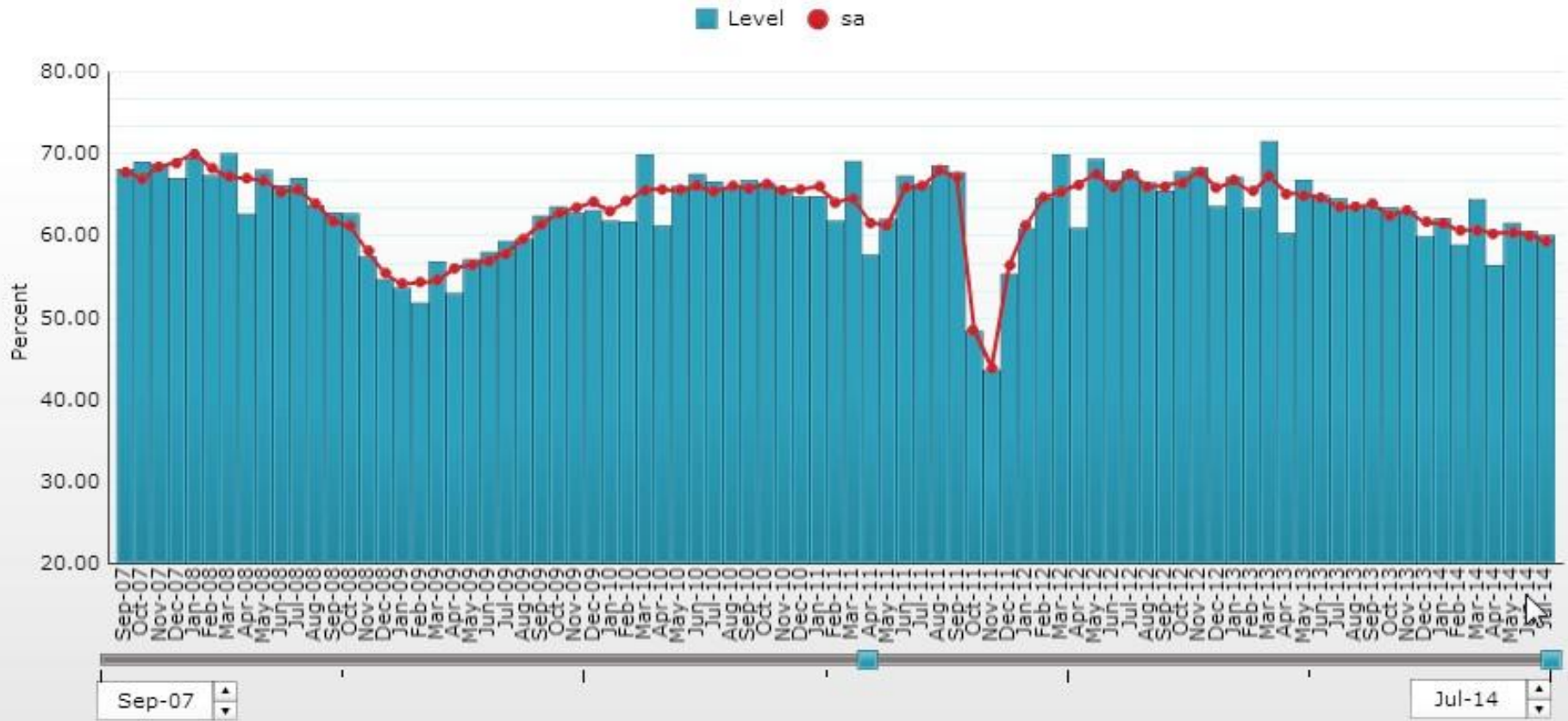
# Weight in MPI



# Manufacturing production index



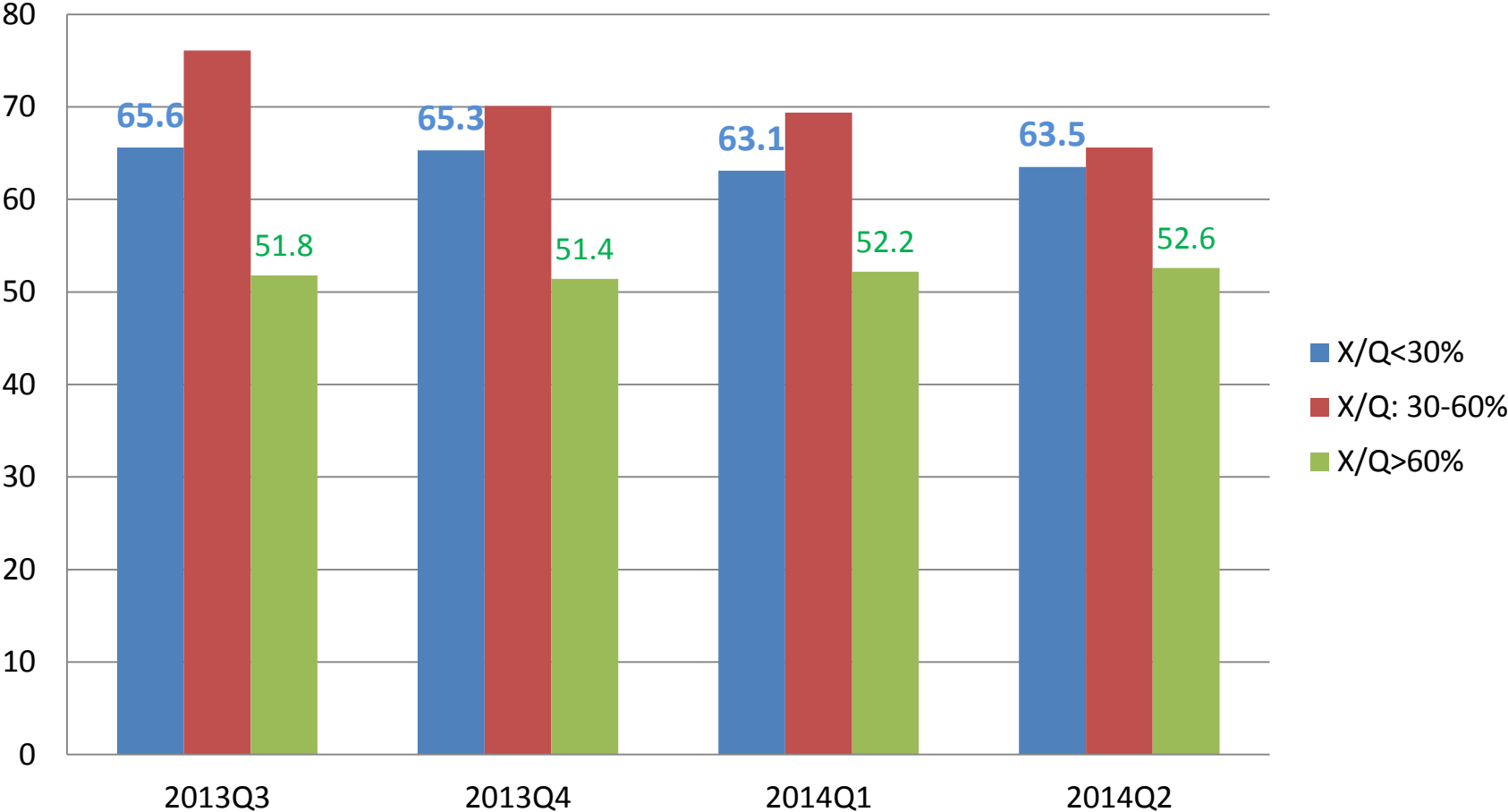
# Capacity Utilization: 2007-2014



Source: The Office of Industrial Economics

General Economic Survey and Processing Team Tel. 0-2283-5145

# Capacity utilization by type of market orientation



# Domestic Market oriented Products

(exported less than 30% of total production)

	Weight in MPI
<b>Total weight</b>	<b>34.01</b>
• Petroleum products	12.52
• Beer	5.08
• <b>Passenger car</b>	<b>3.74</b>
• Downstream Petrochemical	1.62
• Tobacco	1.58
• Clinker	0.96
• <b>Motorcycle</b>	0.87
• Craft paper	0.83
• Pulp	0.80
• Vegetable oil	0.68
• Carbonate water	0.56
• Energy drink	0.54

# Export Oriented Products

(X/Q between 30% to 60%)

<b>Total</b>	<b>30.87 %</b>	<b>weight in MPI</b>
• <b>Garment</b>		<b>8.57</b>
• Weaving		3.16
• <b>Commercial car</b>		<b>2.74</b>
• Spinning		2.24
• <b>Sugar</b>		<b>1.95</b>
• <b>Hot &amp; cold-rolled sheet</b>		<b>1.50</b>
• <b>Rice</b>		<b>1.19</b>
• Cement		1.14
• Tire		1.14
• Synthetic fiber		1.10

# Ultra Export oriented products: (X/Q > 60%)

<b>Total</b>	<b>Weight in MPI</b>	<b>35.11%</b>
• <b>Hard Disk Drive</b>	<b>6.14</b>	
• <b>Integrated circuit</b>	<b>4.96</b>	
• <b>T.V.</b>	<b>4.48</b>	
• Products of Leather & Leather	3.68	
• Setting jewelry	3.53	
• <b>Frozen seafood</b>	<b>2.18</b>	
• <b>Canned seafood</b>	<b>1.72</b>	
• Printer	1.31	
• Wood furniture	1.27	
• <b>Air-conditioners</b>	<b>1.12</b>	
• Leather Footwear	0.91	
• Monitor	0.75	
• <b>Block rubber</b>	<b>0.60</b>	
• <b>Canned Pineapple</b>	<b>0.58</b>	
• Glass Sheet	0.45	
• Computer Keyboard	0.43	
• Rubber glove	0.40	



## 2. Global Competitiveness

- A country's future prosperity depends on its **growth in productivity**, which government policies can influence.
- Nations compete to choose policies to promote higher living standards.
- International Institute for Management Development (IMD) and **World Economic Forum (WEF)** have their own ways of measuring competitiveness.

# Paul Krugman

- International trade is **not** a zero-sum game.
- Countries do not compete in the same way as companies.
- When two countries compete through trade, they both win.
- Is “Competitiveness” a meaningless word?
- Not quite, said Jeffrey Sachs.

# Trade and growth relationship

- Jeffrey Sachs (Columbia) found a fairly **strong correlation** between recent growth rates and the competitiveness index.
- Critique: Correlation between the two variables does not guarantee that the competitive index will be a good predictor of economies' future growth prospects.
- Sachs' definition of competitiveness:

***The ability of a country to achieve sustained high rates of growth in GDP per capita.***

## World Economic Forum (WEF) Global Competitiveness Index

- The rankings are calculated from both publicly available data and the **Executive Opinion Survey**, a comprehensive annual survey conducted by the World Economic Forum together with its network of Partner Institutes (leading research institutes and business organizations) in the countries covered by the Report.
- Over **11,000** business leaders were polled in a record **131 countries**.

# Components of weighted index of competitiveness

- Openness of an economy to trade and investment,
- Role of government (public spending, low marginal tax rates),
- Efficiency of the financial sector,
- Levels of education and skills (**two-thirds** of the total index)
- Quality of management, infrastructure and technology, the effectiveness of legal and political institutions (the rule of law).
- Thailand's judicial system ranks 9th from the total of 12 countries in Southeast Asia.

# WEF Report

- "In addition to urgently improving its institutional framework, the country needs to step up its effort to improve its health and educational systems and encourage wider adoption of new technologies for productivity enhancements.
- Such efforts will then buttress the country's innovation potential, which will become increasingly important as it moves towards the most advanced stage of economic development,"

# Asian Competitiveness

Leaders in Asia are:

**Singapore**

**Japan**

**Republic of Korea**

**Hong Kong**

What do these countries have in common?

# Competitive characters

high-quality infrastructure,  
flexible and efficient markets,  
healthy and well-educated workforces,  
high levels of technological readiness,  
innovative capacity



# Countries are classified into five stages

1. *Factor driven*

2. Transition to

3. *Efficiency driven (Thailand)*

4. Transition to

5. *Innovation driven*



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# The Global Competitiveness Report 2014–2015

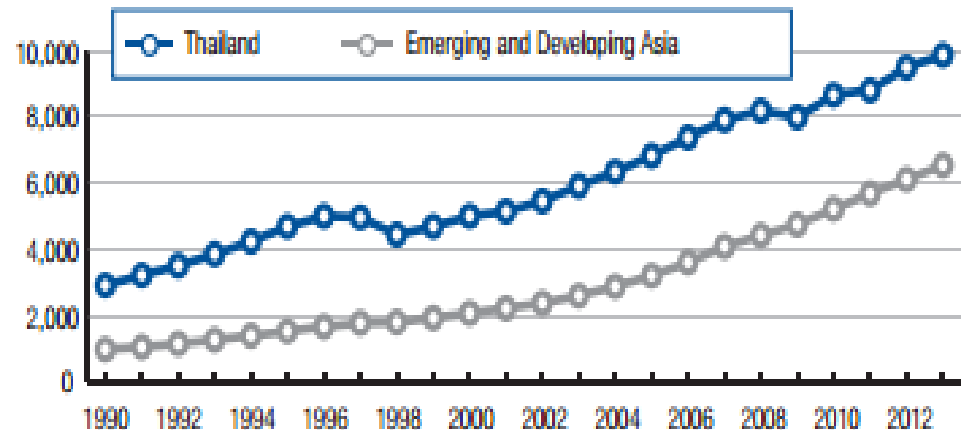
Klaus Schwab, World Economic Forum

# Thailand's key indicators

## Key indicators, 2013

Population (millions).....	68.2
GDP (US\$ billions).....	387.2
GDP per capita (US\$).....	5,674
GDP (PPP) as share (%) of world total.....	0.77

GDP (PPP) per capita (int'l \$), 1990–2013



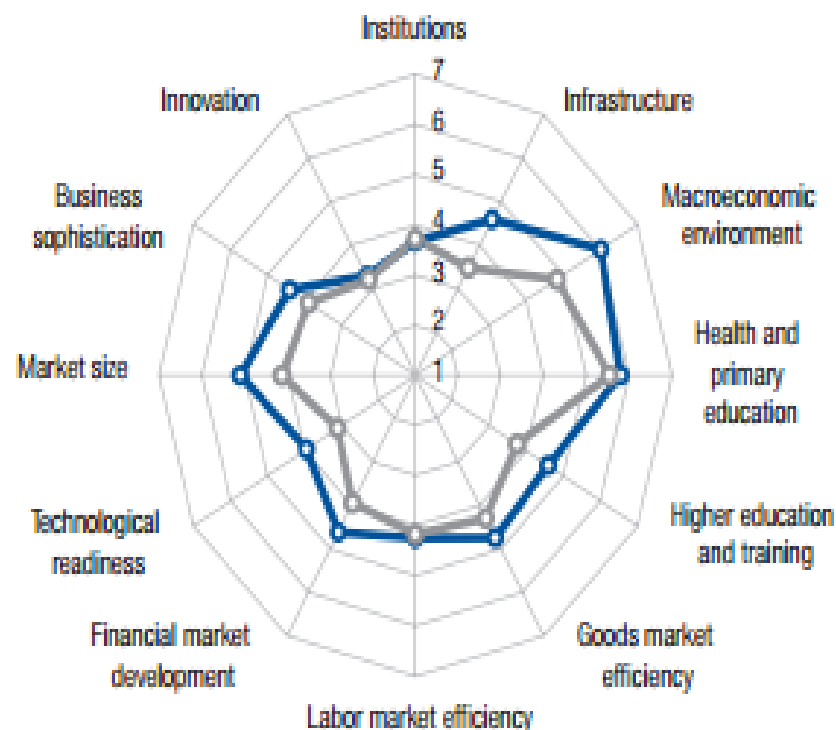
# The Global Competitive Index is based on 12 Pillars

- Institutions (the strength of public and private institutions in creating sound and fair environment to generate income and wealth in the economy),
- Infrastructure,
- Macroeconomic environment,
- Health and primary education,
- Higher education and training,
- Goods market efficiency,

# Global Competitiveness Index

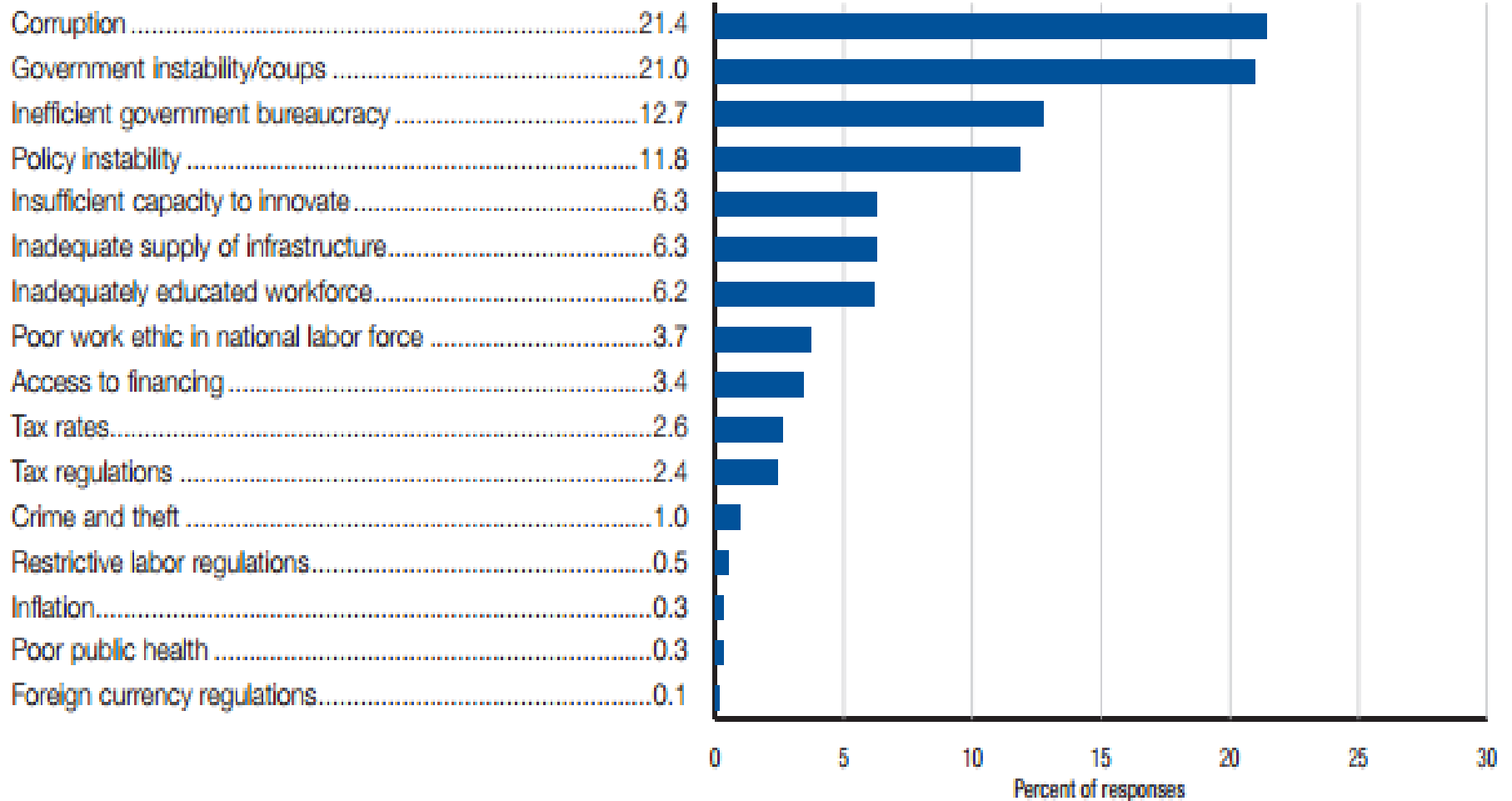
	Rank (out of 144)	Score (1-7)
<b>GCI 2014-2015</b> .....	<b>31</b>	<b>4.7</b>
GCI 2013-2014 (out of 148).....	37	4.5
GCI 2012-2013 (out of 144).....	38	4.5
GCI 2011-2012 (out of 142).....	39	4.5
<b>Basic requirements (40.0%)</b> .....	<b>40</b>	<b>5.0</b>
Institutions.....	84	3.7
Infrastructure.....	48	4.6
Macroeconomic environment.....	19	6.0
Health and primary education.....	66	5.8
<b>Efficiency enhancers (50.0%)</b> .....	<b>39</b>	<b>4.5</b>
Higher education and training.....	59	4.6
Goods market efficiency.....	30	4.7
Labor market efficiency.....	66	4.2
Financial market development.....	34	4.6
Technological readiness.....	65	3.9
Market size.....	22	5.1
<b>Innovation and sophistication factors (10.0%)</b> .....	<b>54</b>	<b>3.8</b>
Business sophistication.....	41	4.4
Innovation.....	67	3.3

## Stage of development



—○— Thailand      —○— Emerging and Developing Asia

## The most problematic factors for doing business



# The Global Competitive Index is based on 12 Pillars

- Labor market efficiency,
- Financial market development,
- Technological readiness,
- Market size,
- Business sophistication,
- innovation.

	GCI 2012-2013		GCI 2011-2012
Country/Economy	Rank	Score	Rank
Switzerland	1	5.72	1
Singapore	2	5.67	2
Finland	3	5.55	4
Sweden	4	5.53	3
Netherlands	5	5.50	7
Germany	6	5.48	6
United States	7	5.47	5
United Kingdom	8	5.45	10
Hong Kong SAR	9	5.41	11
Japan	10	5.40	9



	GCI 2012-2013		GCI 2011-2012
Country	Rank	Score	Rank
Denmark	12	5.29	8
Korea, Rep.	19	5.12	24
Australia	20	5.12	20
Malaysia	25	5.06	21
China	29	4.83	26
Spain	36	4.60	36
Kuwait	37	4.56	34
<b>Thailand</b>	<b>38</b>	<b>4.52</b>	<b>39</b>
Czech Republic	39	4.51	38
Panama	40	4.49	49
Poland	41	4.46	41
Italy	42	4.46	43

### 3. Competitiveness of Thai Manufacturing sector

- Characteristics of manufactured products
- Export growth in each product group
- Boston Consultant Group (BCG) model

# Competitive Positioning

Revealed competitiveness and **income elasticity** of demand ( $\eta$ )

*Export the right commodity*

	Rising share of that commodity in total world trade value ( $\eta > 1$ )	Declining share of that commodity in total world trade value ( $\eta < 1$ )
Gaining world market share	<b>Rising stars</b> (Stars)	<b>Falling stars</b> (Cash Cows)
Losing world market share	<b>Lost Opportunity</b> (Problem Child)	<b>Retreat</b> (Dog)

*Export the commodity right*

# The 2004 OIE Study

**Office of Industrial Economics (OIE) employed the Boston Consulting Group (BCG) Model**

**RISING STARS:** air conditioners

**FALLING STARS:** garments

**LOST OPPORTUNITY:**

plastic, cargo transportation vehicles, pulp and paper, primary petrochemicals

**RETREAT:** medicine, artificial fiber, chicken

What were rising/falling stars products in 2015?

## Two opposing views: Quo Vadis?

*“Thailand does not necessarily have to compete in the manufacturing, since it can specialize in the production of agricultural commodities and in tourism, where it has a definite comparative advantage.”*

**“Thailand has to continue its industrialization drive to generate additional industrial employment and incomes, and to raise general living standards through linkages with other sectors, particularly agriculture and service.”**

*Which view would you endorse?*

# Michael Porter (1990)

## *The Competitive Advantages of Nations*

- There are two basic types of competitive advantages: **lower cost** and **product differentiation**.
- **Pure cost advantages** are *less sustainable* than **differentiation**: Any new source of lower costs can nullify a firm's cost advantage.
- Differentiation is the ability to provide unique and superior value to buyers in terms of product quality, special features, or after-sale service.
- Examples are services differentiation provided by banks, supermarkets, and gasoline stations.

## More advice from Michael Porter

- **Differentiation** allows a firm to command a **premium price**, which leads to superior profitability provided costs are comparable to those of competitors.
- Pure cost advantages are more vulnerable because new product designs or other forms of **differentiation *can eliminate*** cost advantage.
- The government can raise the odds of gaining competitive advantage but lacks the power to create advantage itself.

# Net user of foreign exchanges

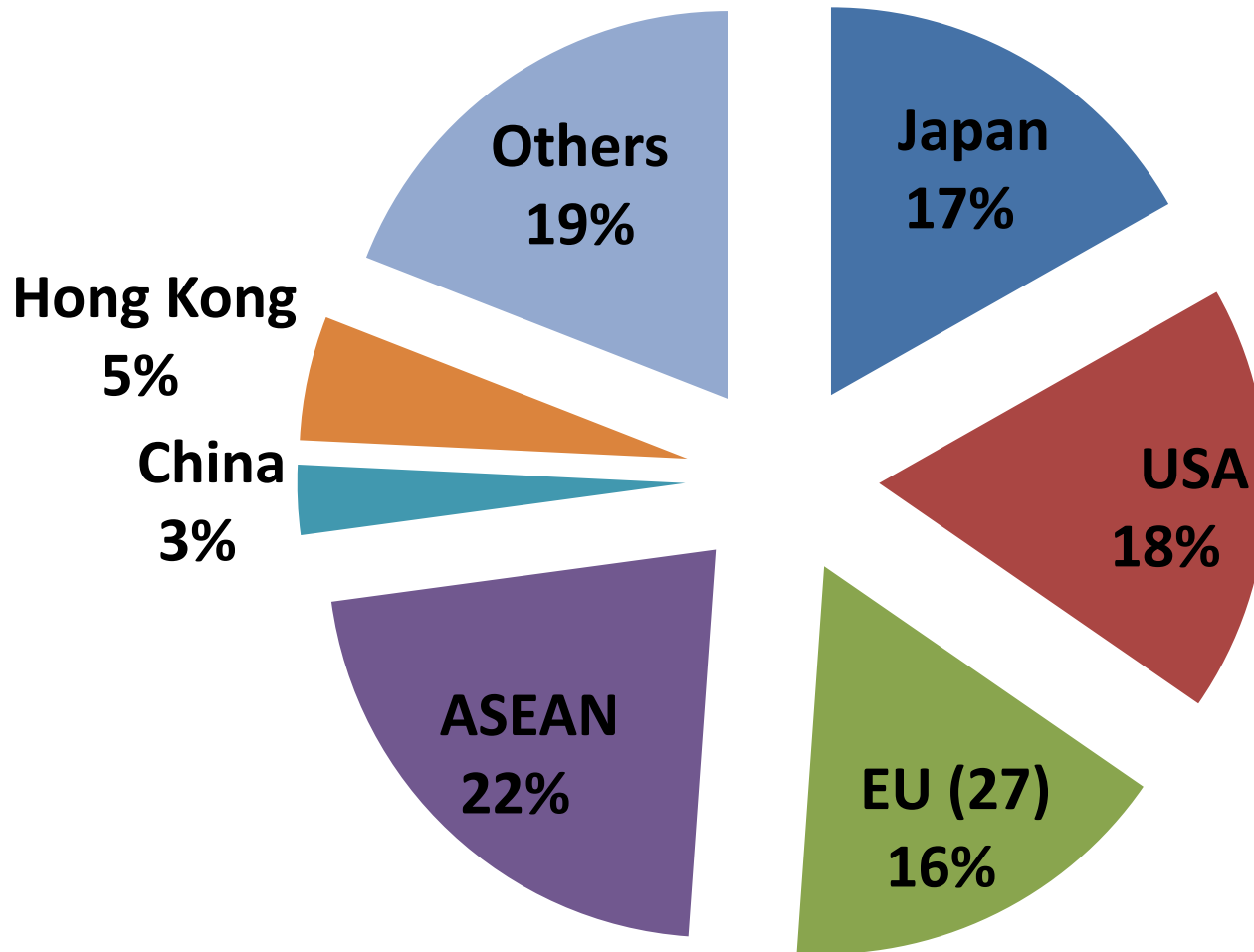
- The manufacturing sector exported nearly 40% of its product in 1997, but because of the heavy reliance on imported intermediate inputs, the **net** export was just 16% (10% if resource-based food and rubber products are excluded).
- If imports of capital equipment are included, the manufacturing sector as whole was a net users of foreign exchanges.
- *What are implications of currency depreciation and appreciation?*



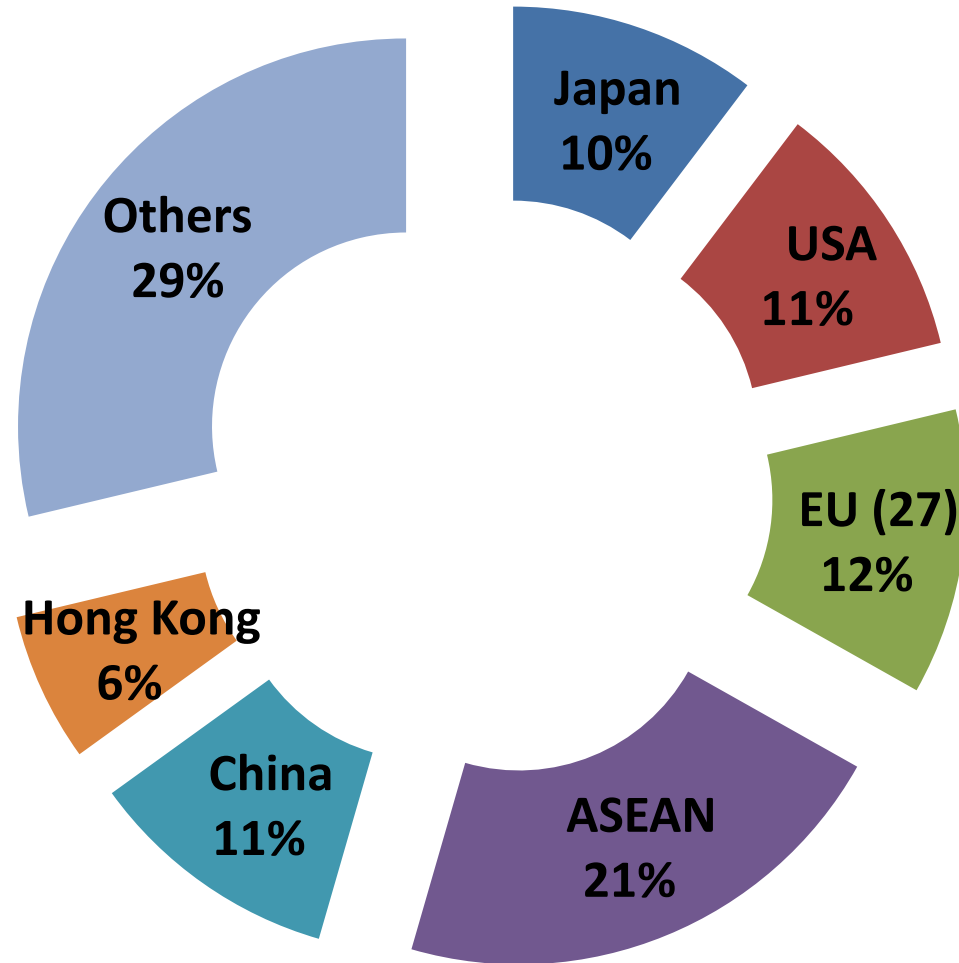
# 4. Diversification of Thai exports

- A country is considered competitive in products in which it is increasing its world market share.
- An export product is considered dynamic in world trade if it is *growing faster* than the average for all products (either rising or falling stars).
- Thailand's exports were in the rising stars category for 54% in 1996, but they *fell* to 15% by 2000.
- Ten years after this study, the figures were totally different in 2006.
- Thailand did not do as well as its major competitors during the 1996-2000 boom in electronic exports.
- Thus the share of loss opportunity category *increased* from 3% to 43% of total exports.

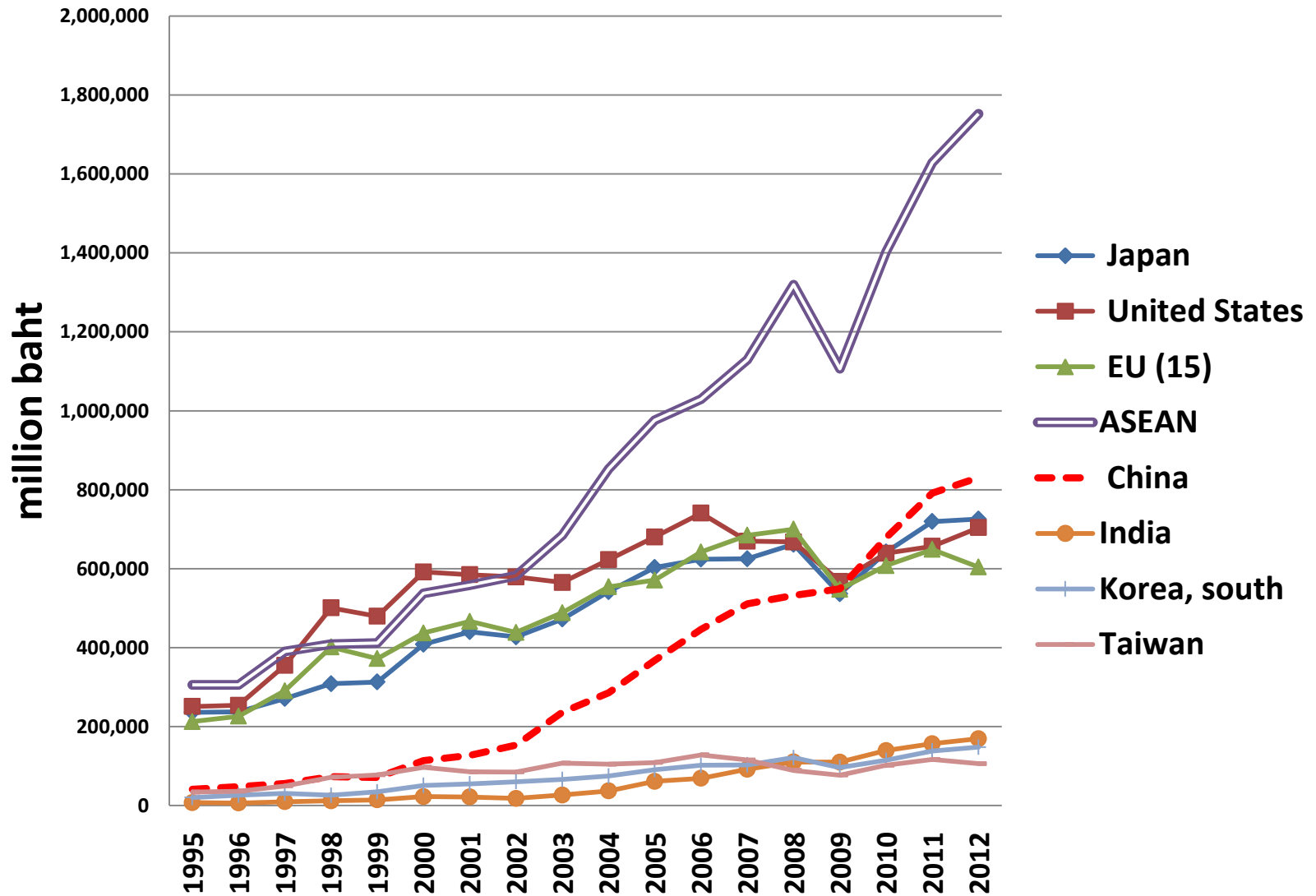
# Exports market diversification: 1995



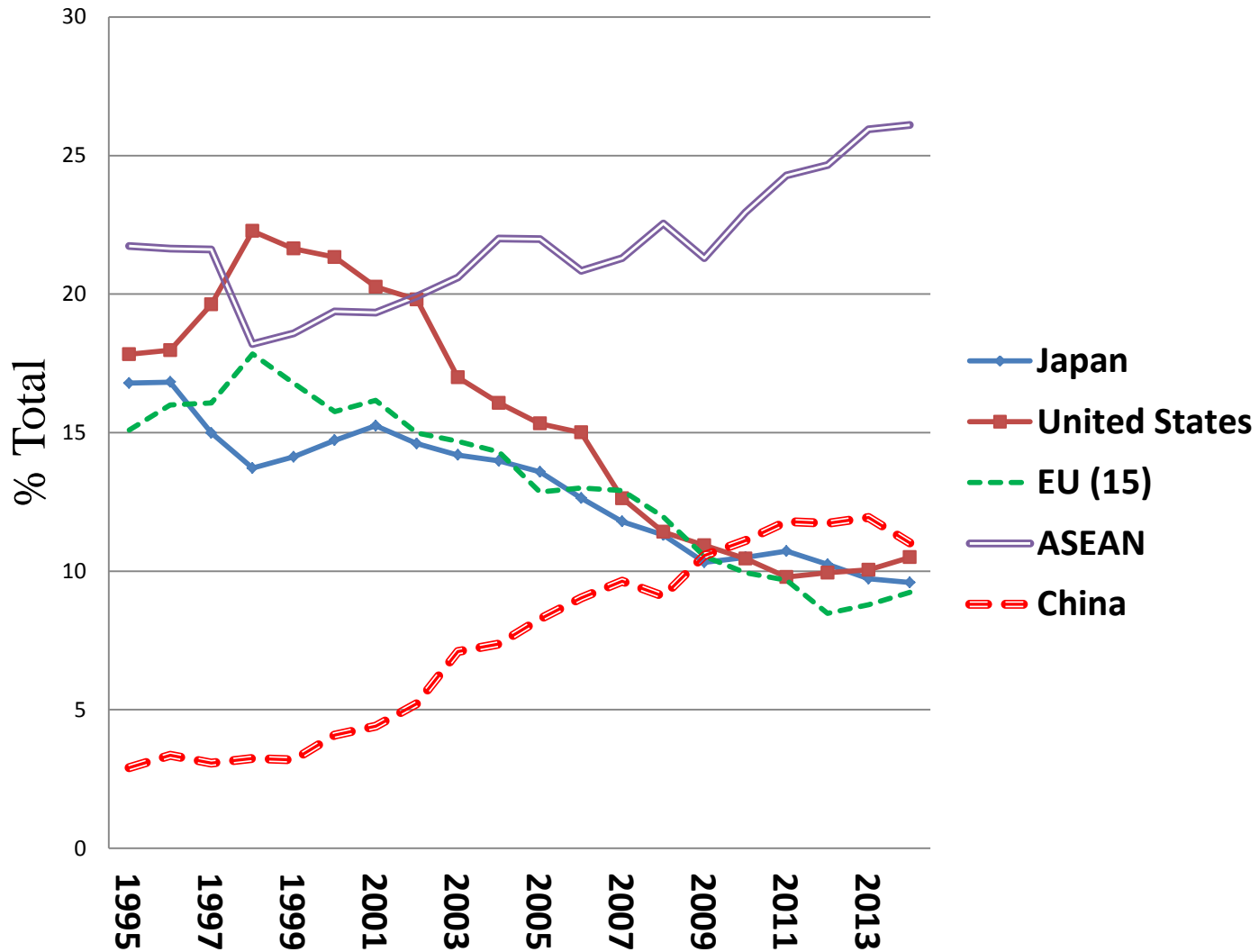
# Export market diversification in 2009



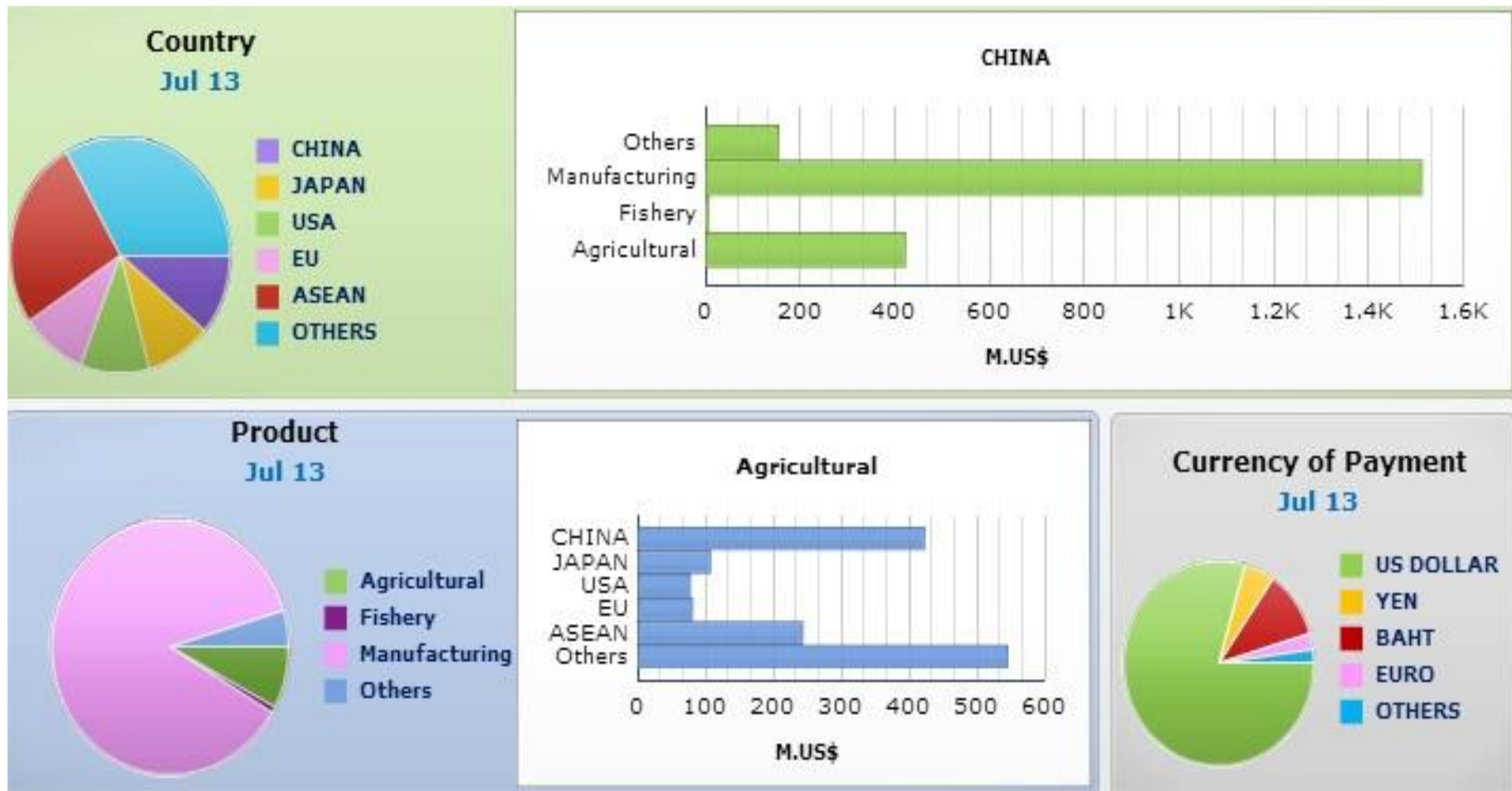
# Thailand's Changing Export Destinations 1995-2012



*After the great fall of China*  
Thailand's Exports by destinations



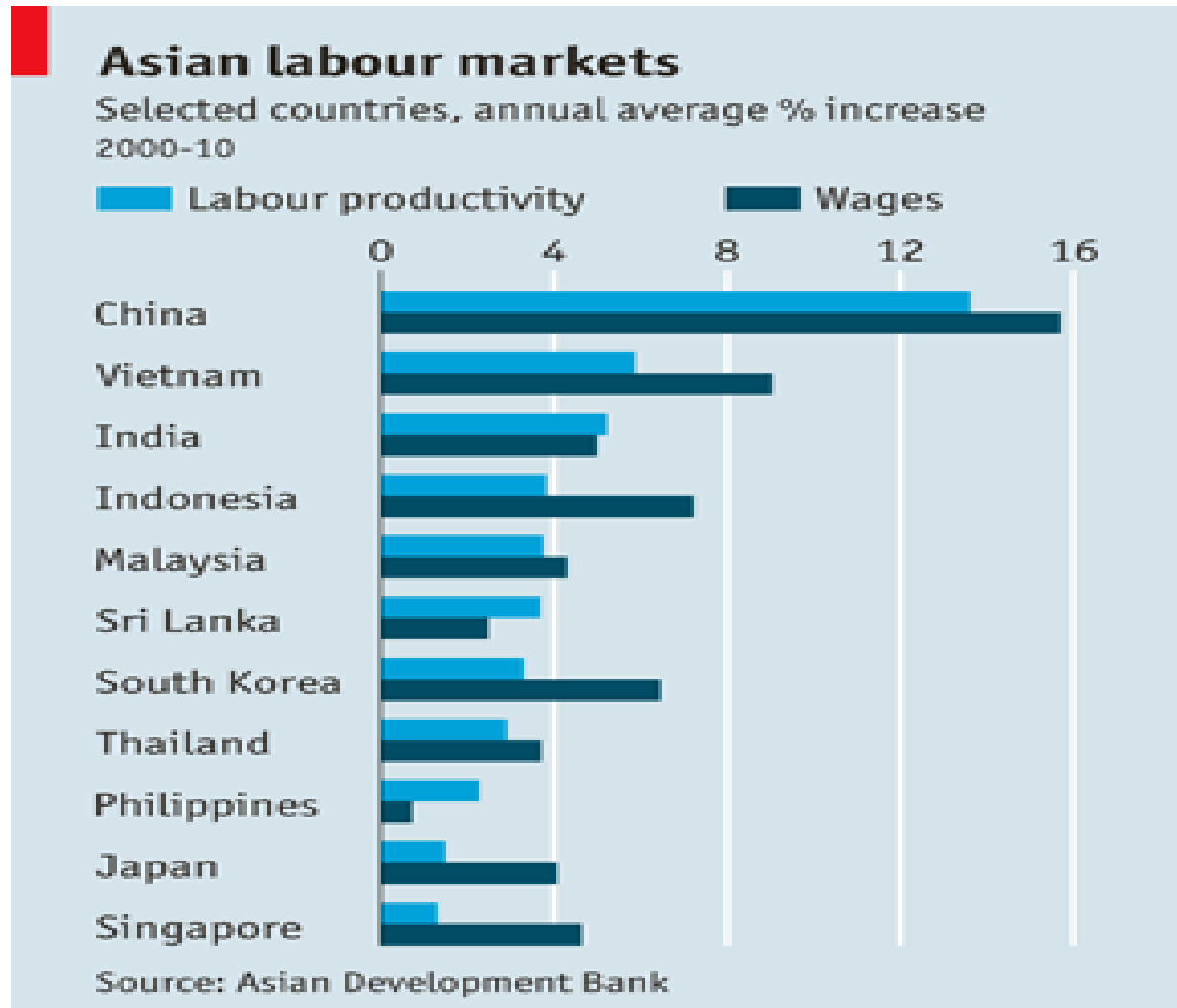
# Geographical and export product diversification in 2013



Source: Customs Department and Bank of Thailand

Balance of Payments Statistics Team Tel. 0-2356-7812

# Productivity growth and competitiveness



# Questions

- *What was the geographical diversification of Thai exports in 2015?*
- *How was the manufacturing sector affected by the 2009 global recession and China's slowdown in 2015?*
- *Did free trade agreements prevent Asian countries from the global recession in 2009?*
- *What went wrong with Thailand's exports in 2014 and 2015?*