Competitiveness of Thailand's Manufacturing Sector

Bhanupong

Lecture 13

Course Syllabus

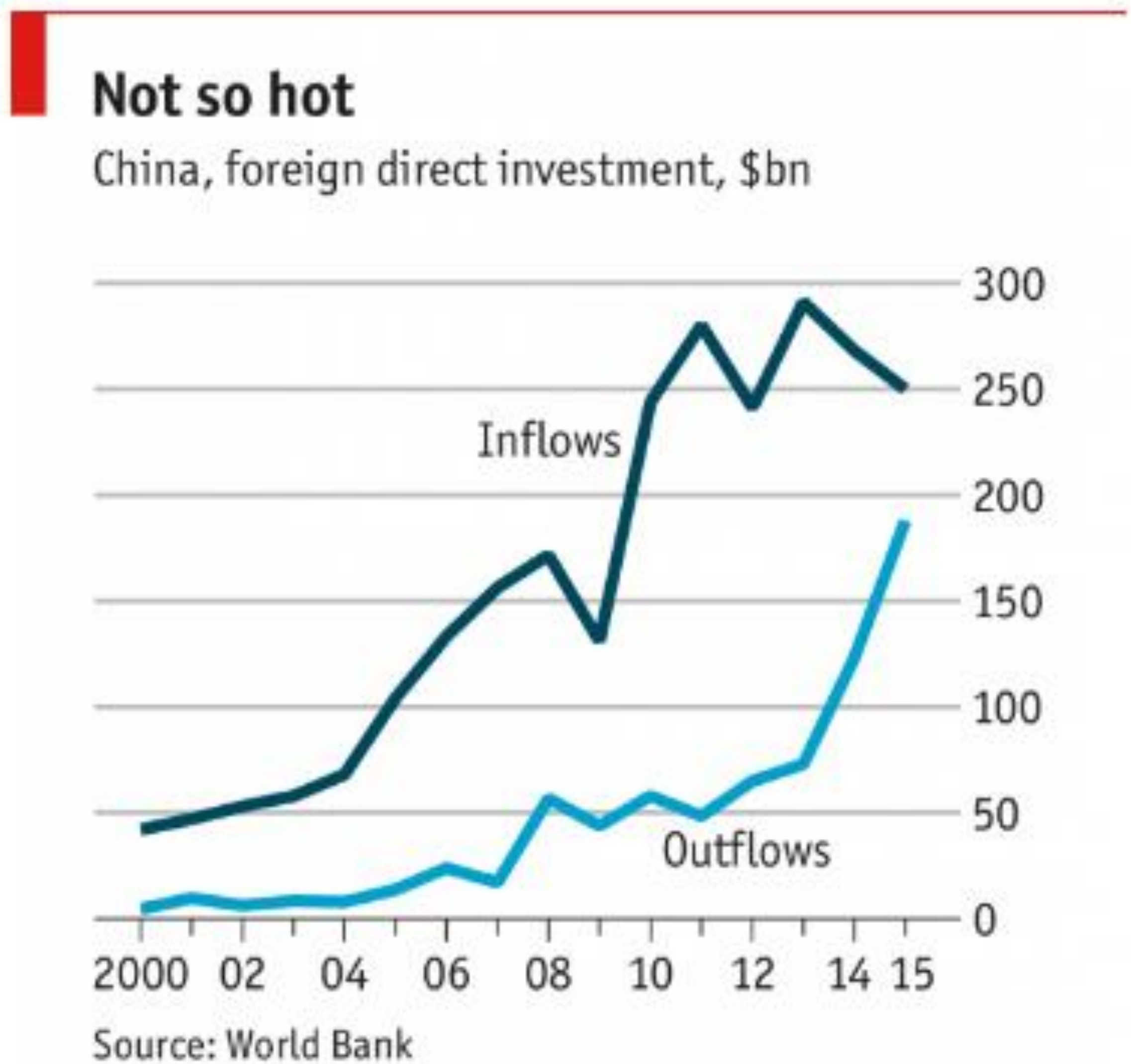
Lecture 13: **Industrial Competitiveness**

- This lecture provides an overview of Thailand's industry with references to the global competitiveness positioning of Thai manufacturing exports.
- We discuss Thailand's diversification of exports, competitive wage and exchange rates.

Key issues

- The importance of FDI for industrial development
- Overview of Thailand’s industry
- Global competitiveness
- Thailand’s manufacturing sector
- Diversification of exports

China’s inflows of foreign investment



China’s short list of forbidden investments

- For two decades, foreign direct investment flooded into China at an astonishing clip.
- But after reaching a peak of some $300 billion in 2013, foreign inflows have cooled just as Chinese direct investment overseas has skyrocketed.
- To win back jittery investors, China’s leaders have promised to liberalize investment laws.
- Leaders promise a shift from a regime reliant on politicized administrative approvals to a registration system involving just a short “negative list” of forbidden investments.

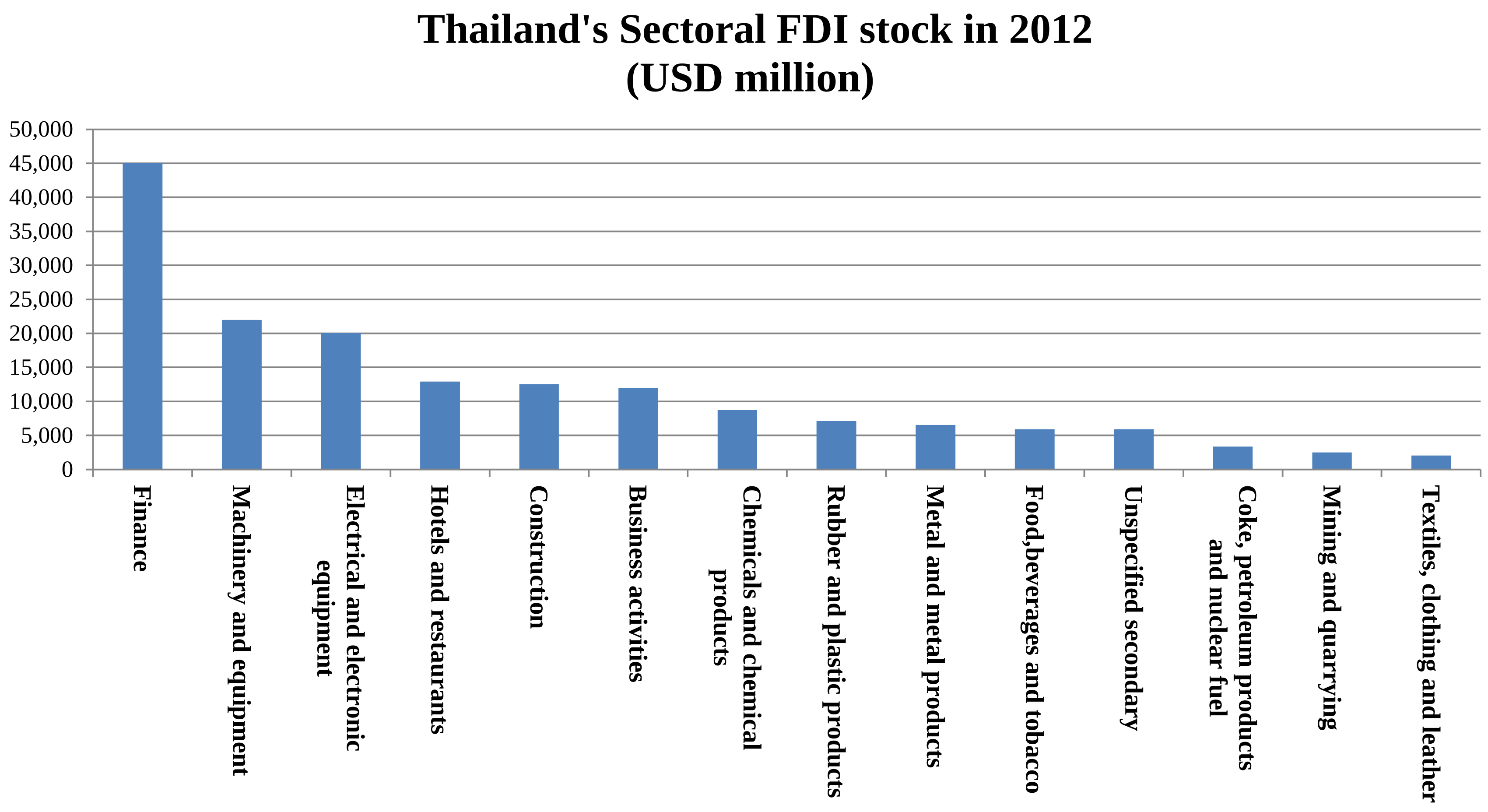
Damp squib: China’s foreign investment inflows

- Sadly there is less to the latest reforms than meets the eye.
- Nothing in them puts foreign firms on an equal legal footing with local ones.
- Also, there are already signs of bureaucratic resistance to the shift to a registration system.
- Chinese leaders must do more if they want to persuade foreign investors the welcome mat is out.

The important role of FDI: Lessons from China

- With strong value of the baht, rising wage rate, and political uncertainty, foreign direct investment has been directed to other countries in the region; thereby constraining capacity output growth and competitiveness of the industries.
- FDI is the dominant factor determining the success of Thailand’s manufactured exports

Sectoral capital stock deepening through FDI

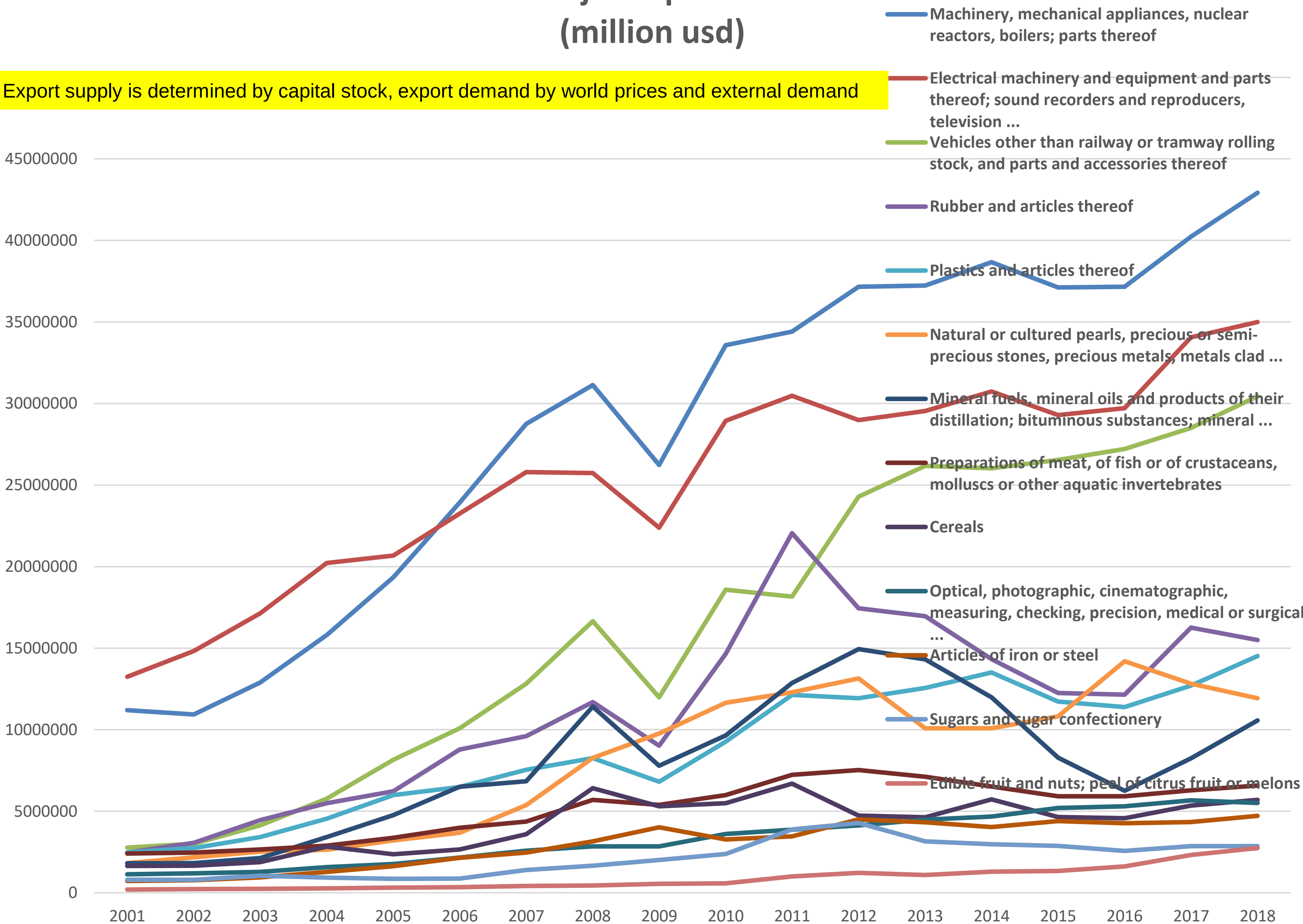


1. Overview of Thailand’s industries

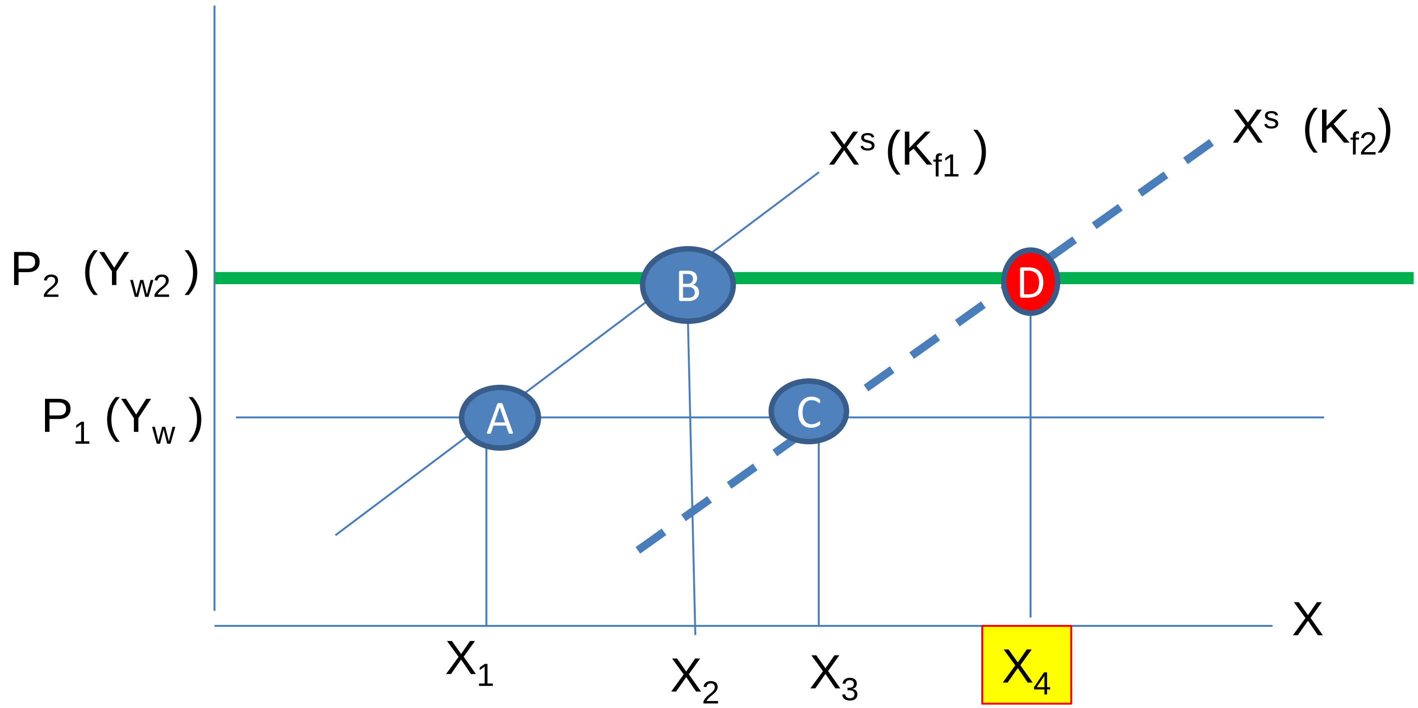
- The growth of Thailand’s industry is largely determined by external demand. The world business cycles are responsible for fluctuations in Thailand’s manufactured exports.
- Thailand is a price taker in the world markets.
- On the supply side, capital stock of the industry accumulated from substantial flows of foreign direct investment contributed to spectacular export performance in the past.

Thailand's major export commodities (million usd)

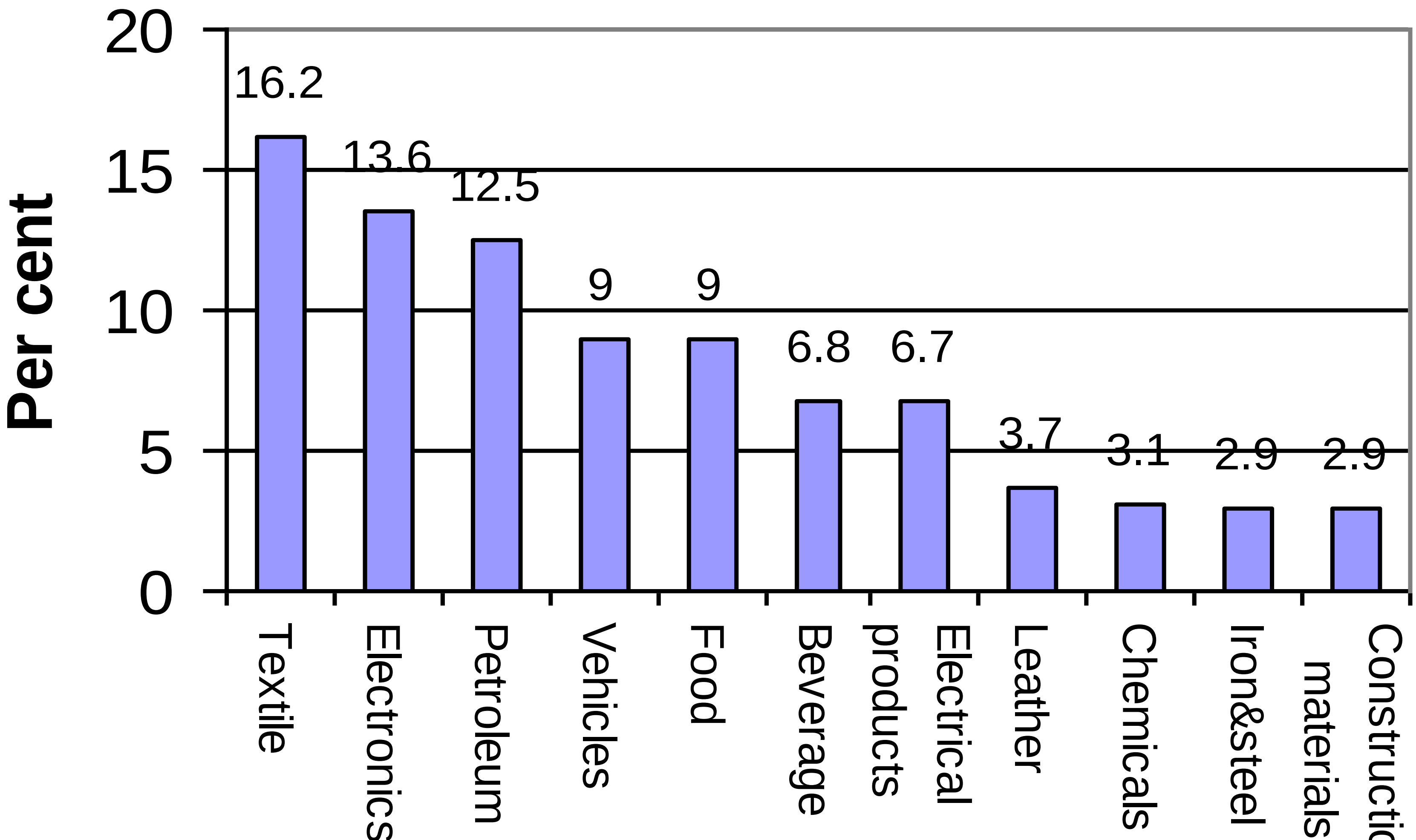
Export supply is determined by capital stock, export demand by world prices and external demand



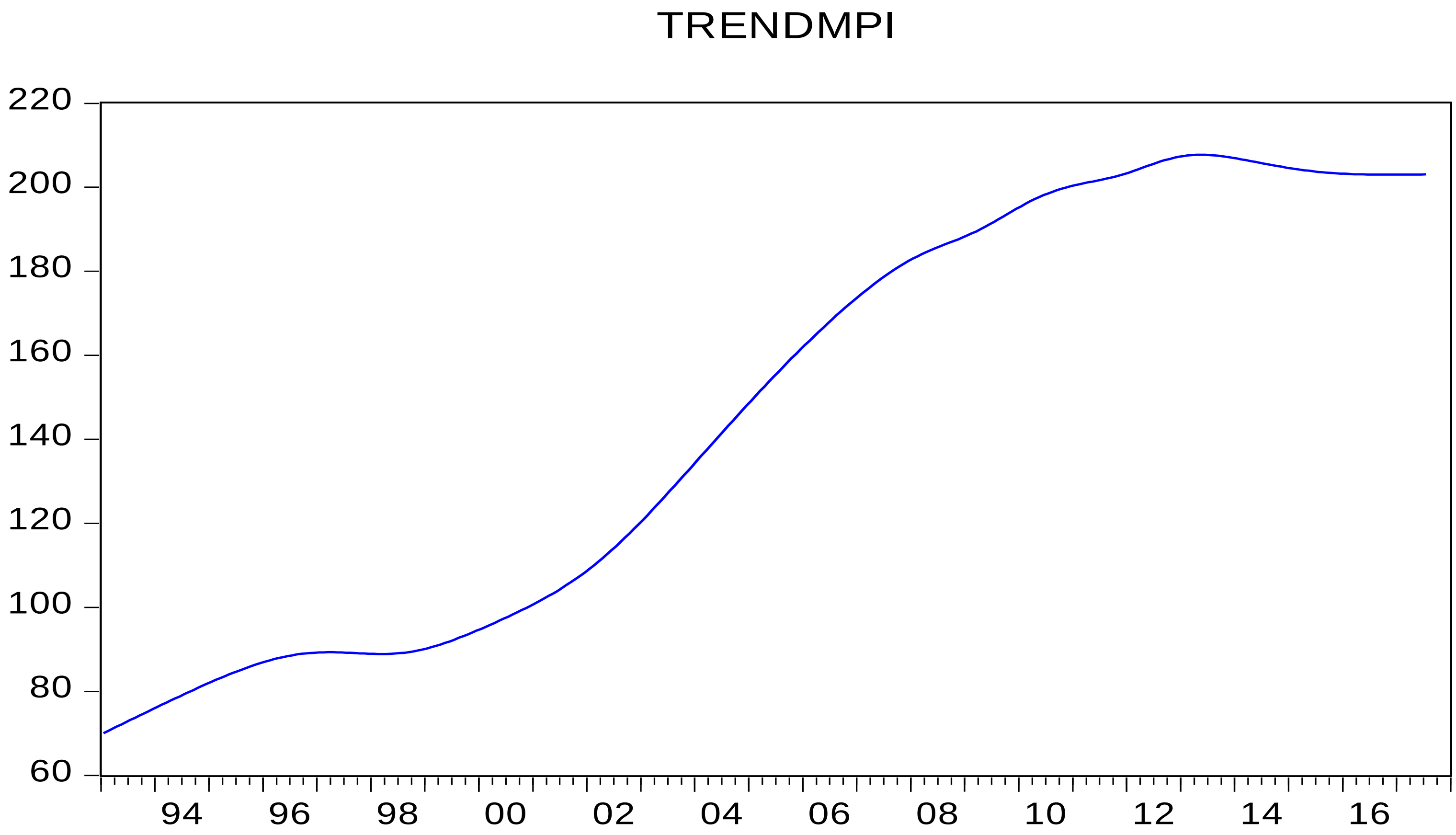
Increased FDI stock (K_2)and rising world output level (Y_{w2}) led to booming exports (X_4)



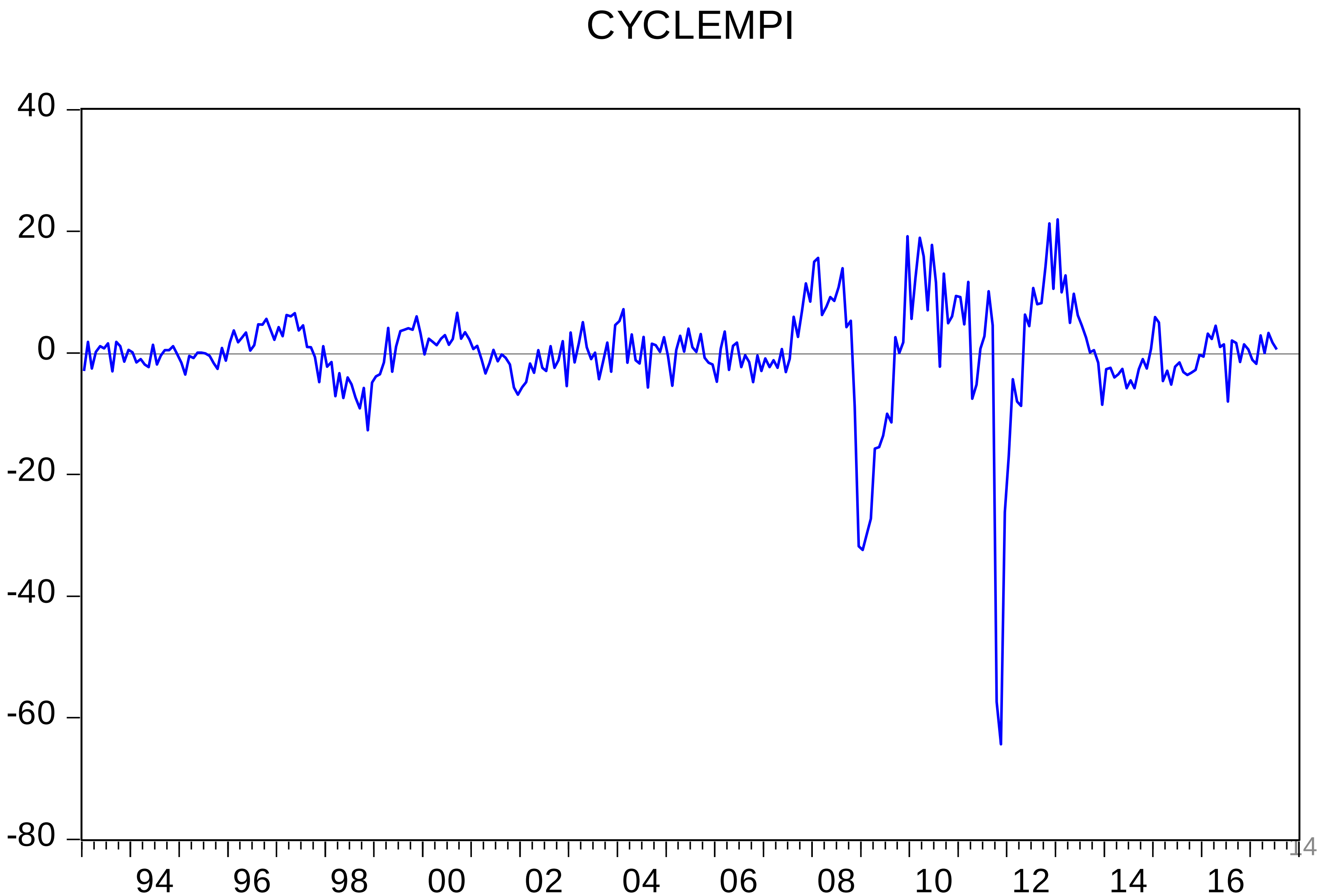
Weight in MPI



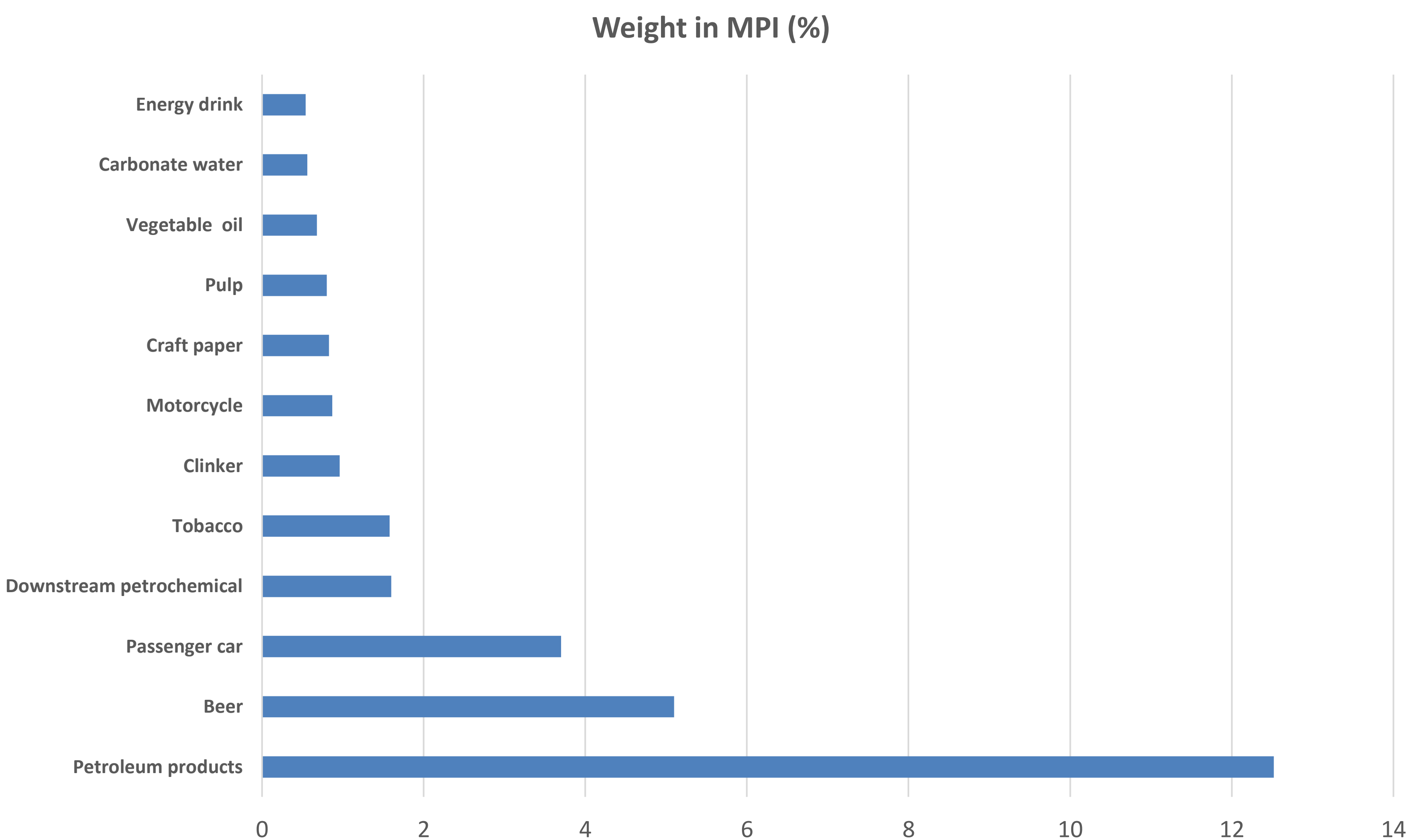
Manufacturing Production Index (MPI) Long term path: permanent output



Deviation from the trend: Cyclical component of the actual MPI



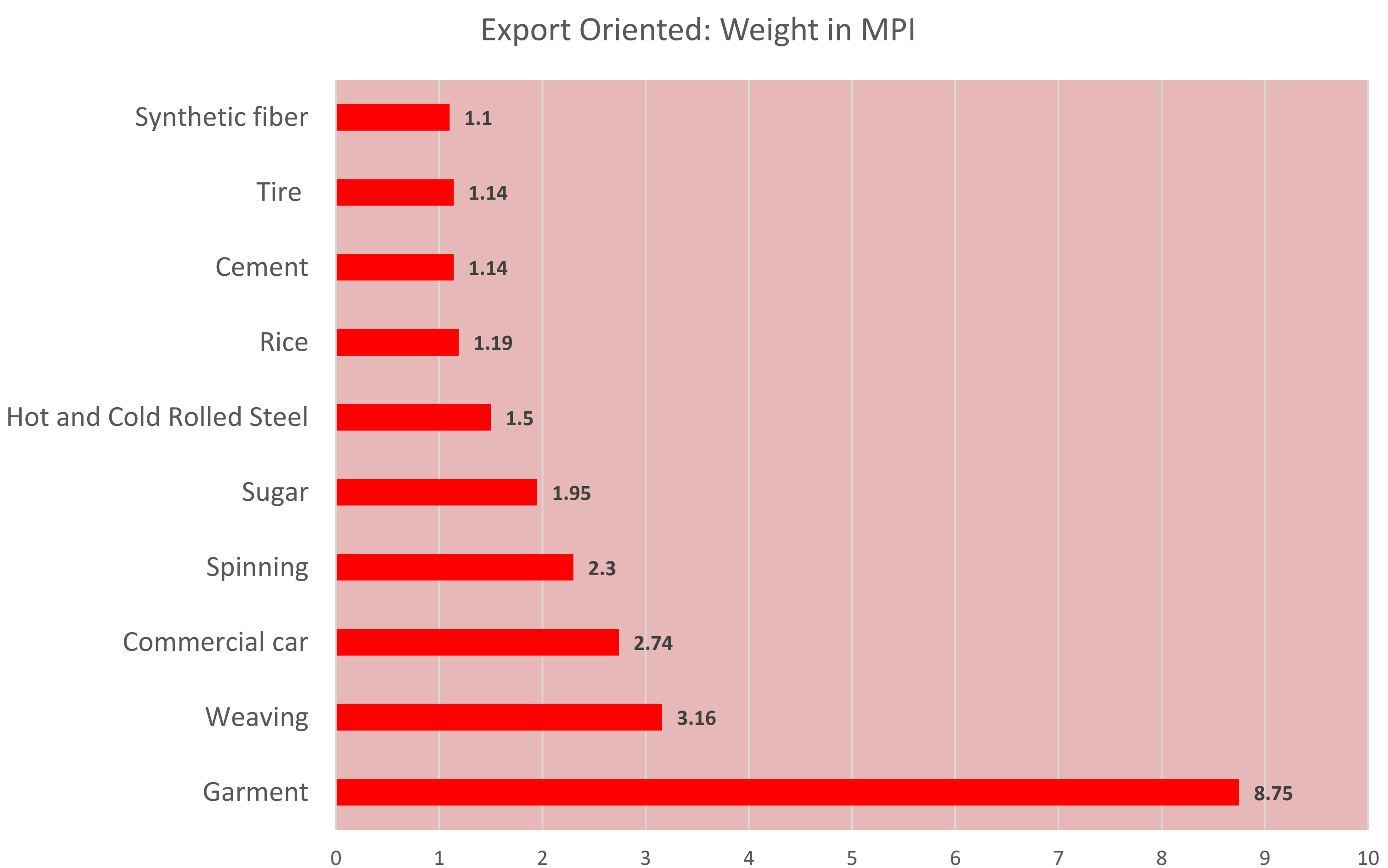
Domestic market-oriented Industry (Export-output ratio < 0.3)



Export market-oriented Industry:

0.3 <(X/Q)<0.6

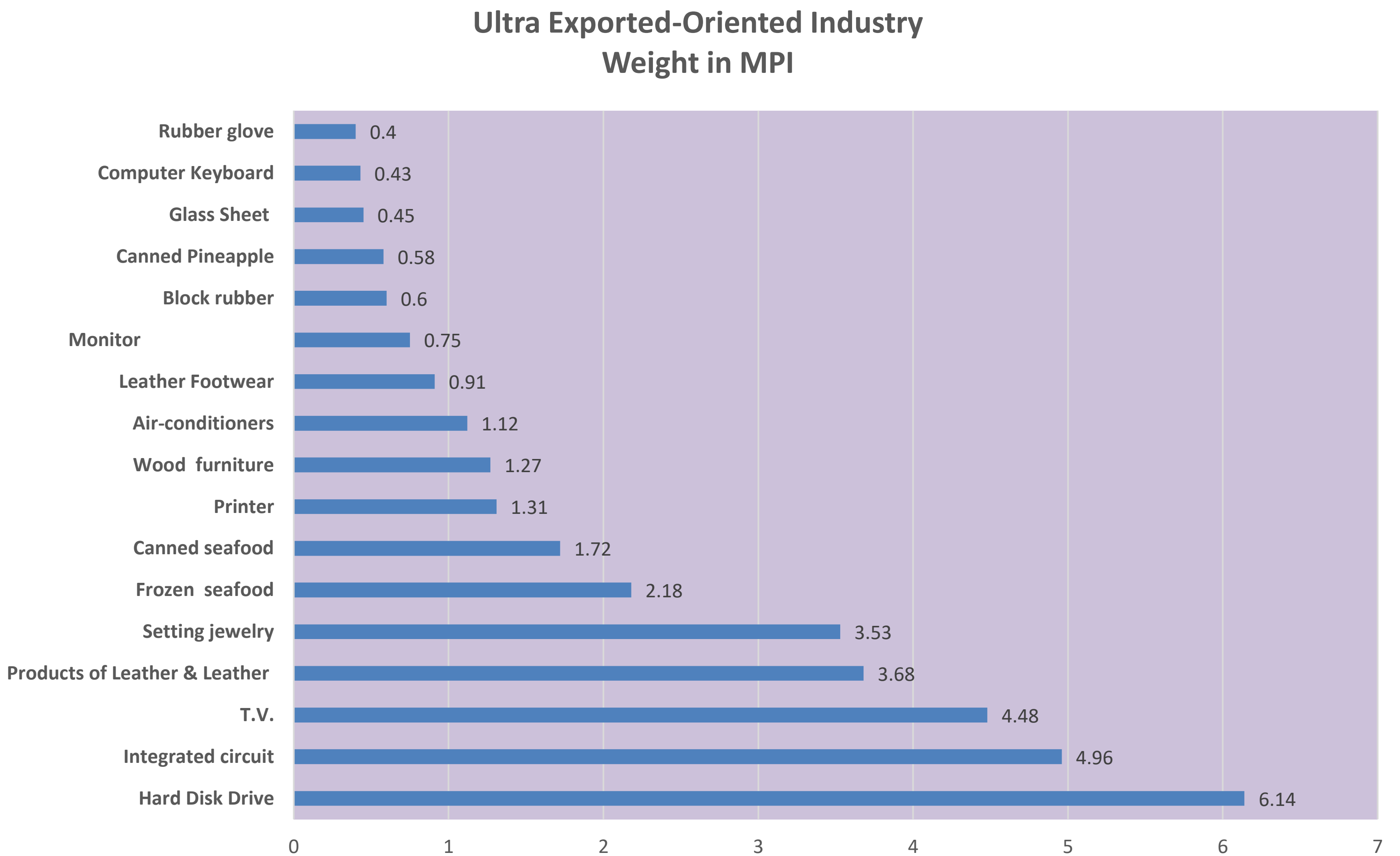
Weight in MPI (%)



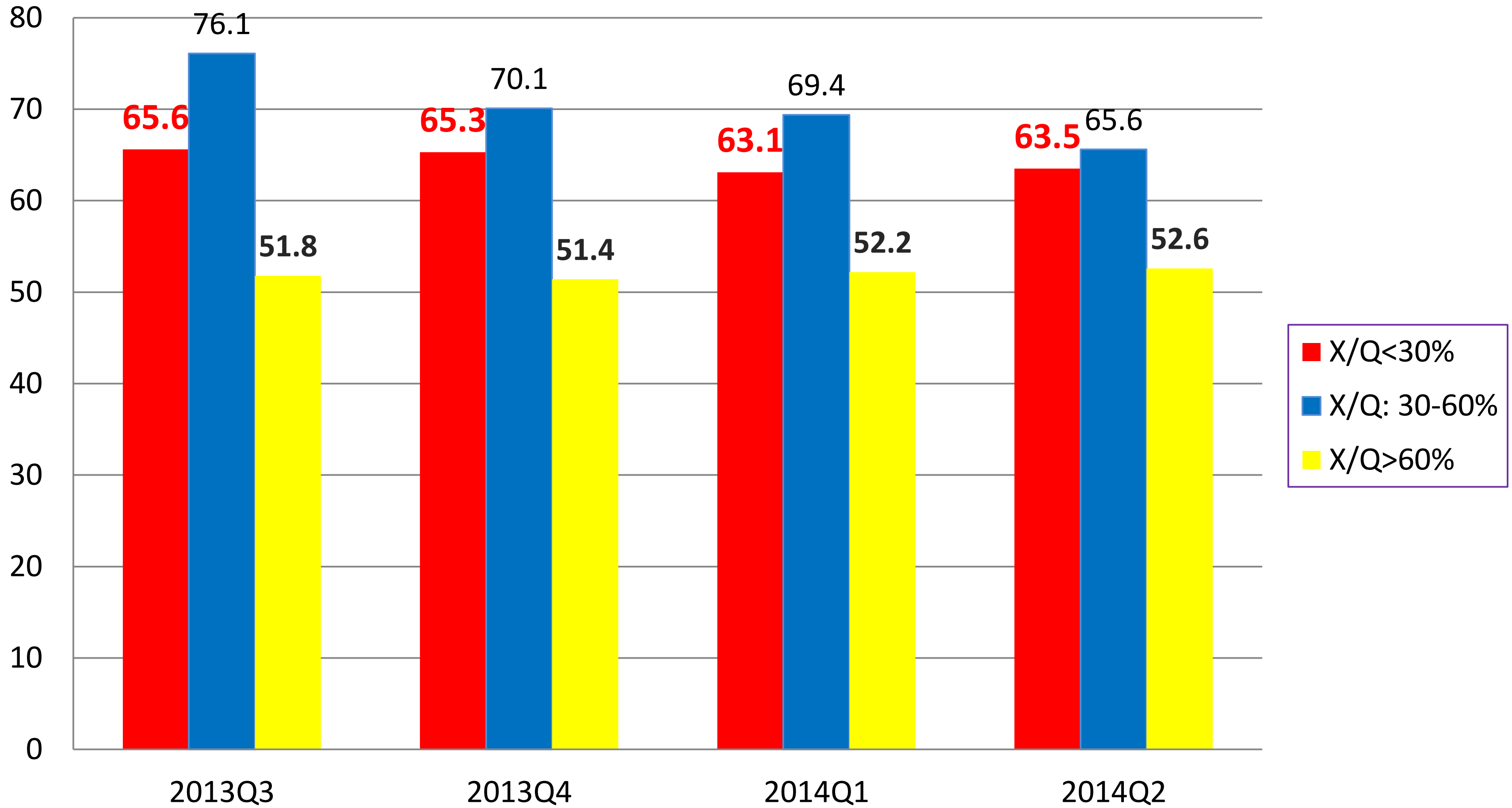
Ultra export market-oriented Industry:

(X/Q) > 0.6

Weight in MPI (%)



Capacity utilization by type of market orientation



Exported-oriented industries experienced lower capacity utilization than domestic-oriented industries

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.

Krugman, Paul. "Competitiveness: a dangerous obsession.“
Foreign affairs (1994): 28-44.

- 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.
- Recall Adam Smith’s gains from exchange and specialization
- “The concept of national competitiveness is elusive.”

Paul Krugman

different in principle from asking whether General Motors is competitive in the North American minivan market.

In fact, however, trying to define the competitiveness of a nation is much more problematic than defining that of a corporation. The bottom line for a corporation is literally its bottom line: if a corporation cannot afford to pay its workers, suppliers, and bondholders, it will go out of business. So when we say that a corporation is uncompetitive, we mean that its market position is unsustainable—that unless it improves its performance, it will cease to exist. Countries, on the other hand, do not go out of business. They may be happy or unhappy with their economic performance, but they have no well-defined bottom line. As a result, the concept of national competitiveness is elusive.

A trade surplus may be a sign of national weakness, a deficit a sign of strength.

Competitiveness and GDP growth relationship

Is “Competitiveness” a meaningless word?

Jeffrey Sachs found a fairly **strong *correlation*** between recent growth rates and the competitiveness index.

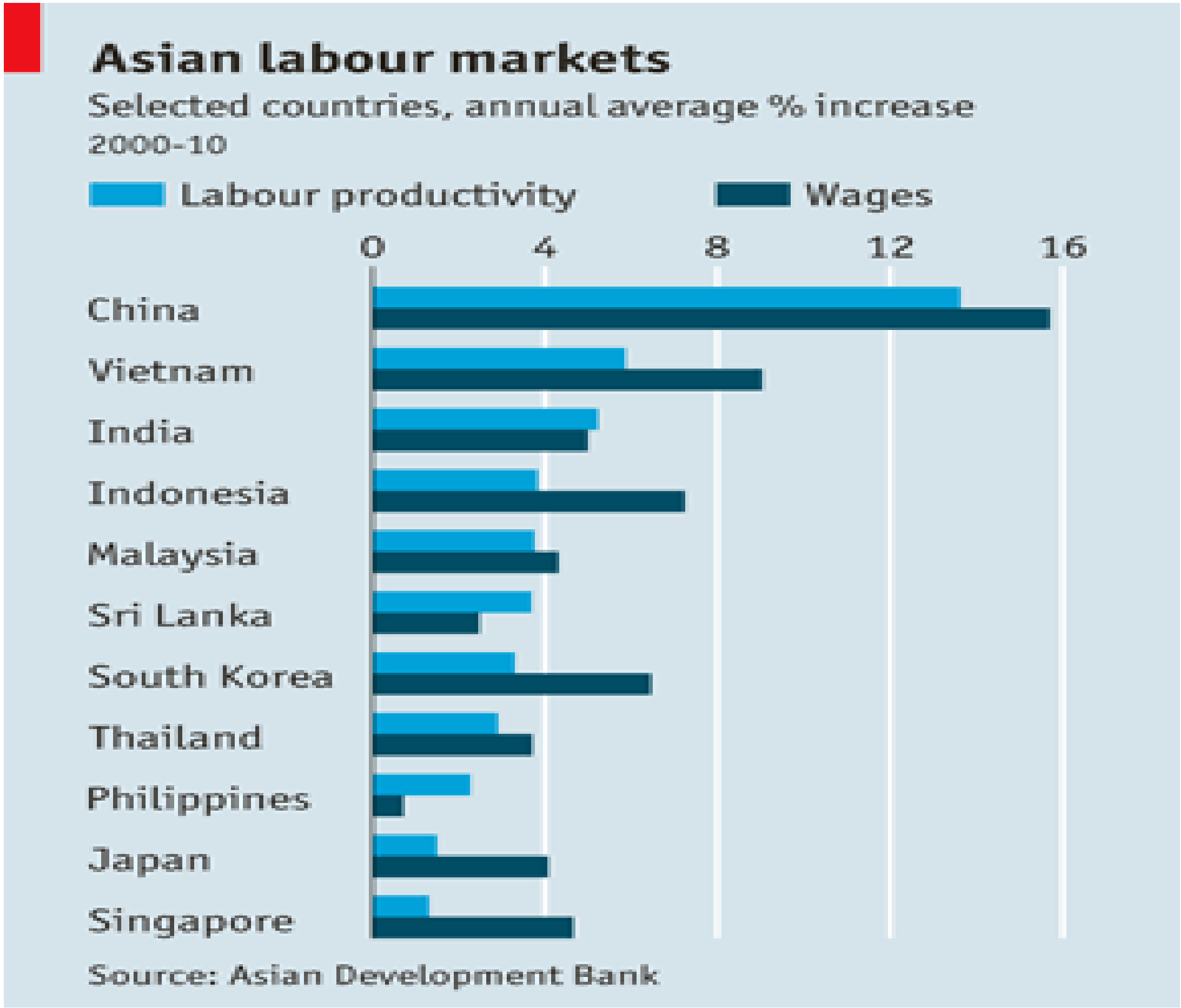
Sachs’ definition of competitiveness:

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

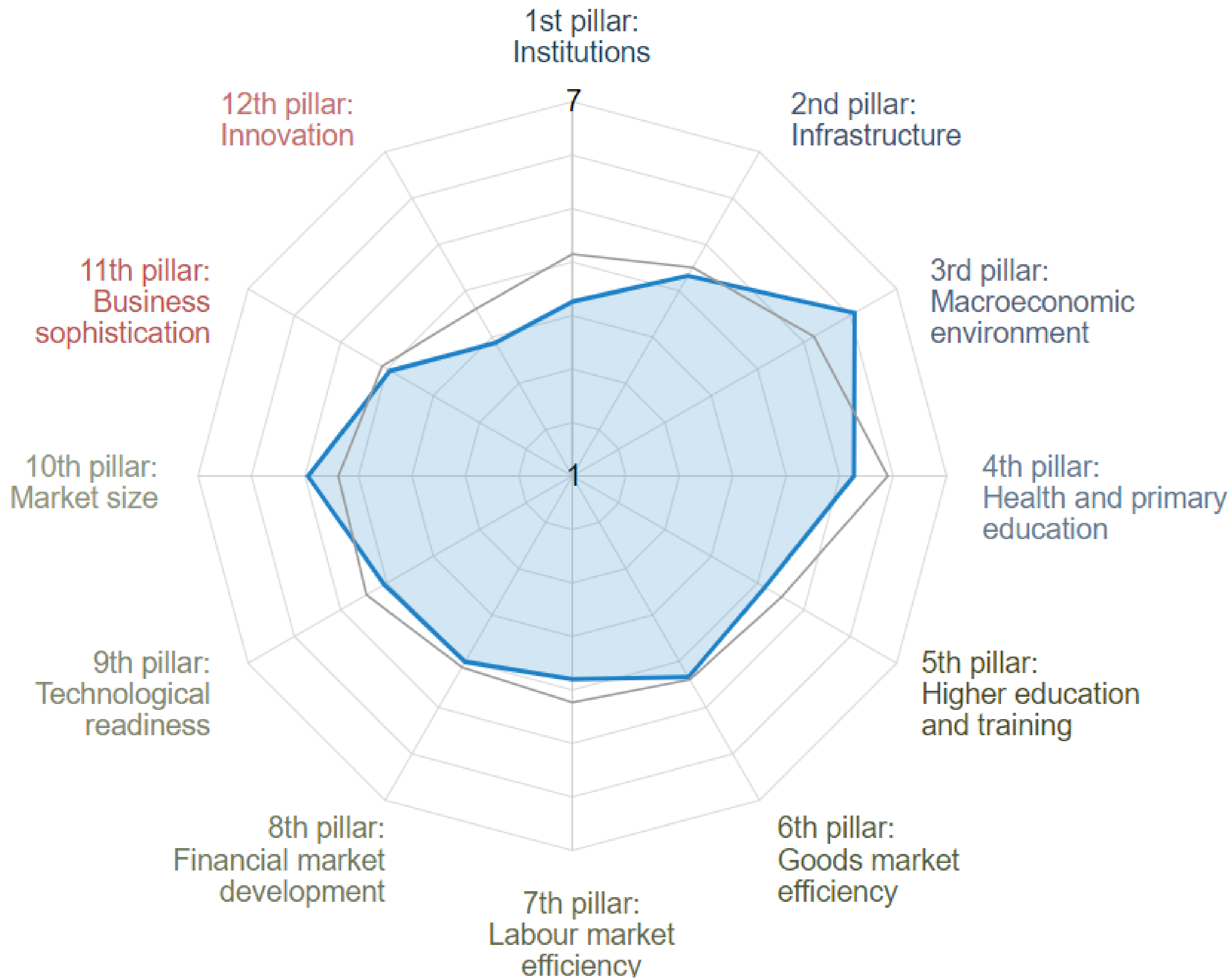
- Critique: Correlation between the two variables does not guarantee that the competitive index will be a good predictor of economies’ future growth prospects.
- ***IMD (Institute of Management Development)***

IMD said Thailand's challenges in 2018 include creating public awareness of the urgency and the magnitude of disruptive change; accelerating education reform and retraining/reskilling of the workforce to cope with future challenges; taking immediate action on applying technology and digital platforms for access to social services (such as education and healthcare); enhancing public services transformation to support the changing needs of businesses and citizens; and managing the political transformation and public conflict during the election process.

Labor productivity growth and wage hikes

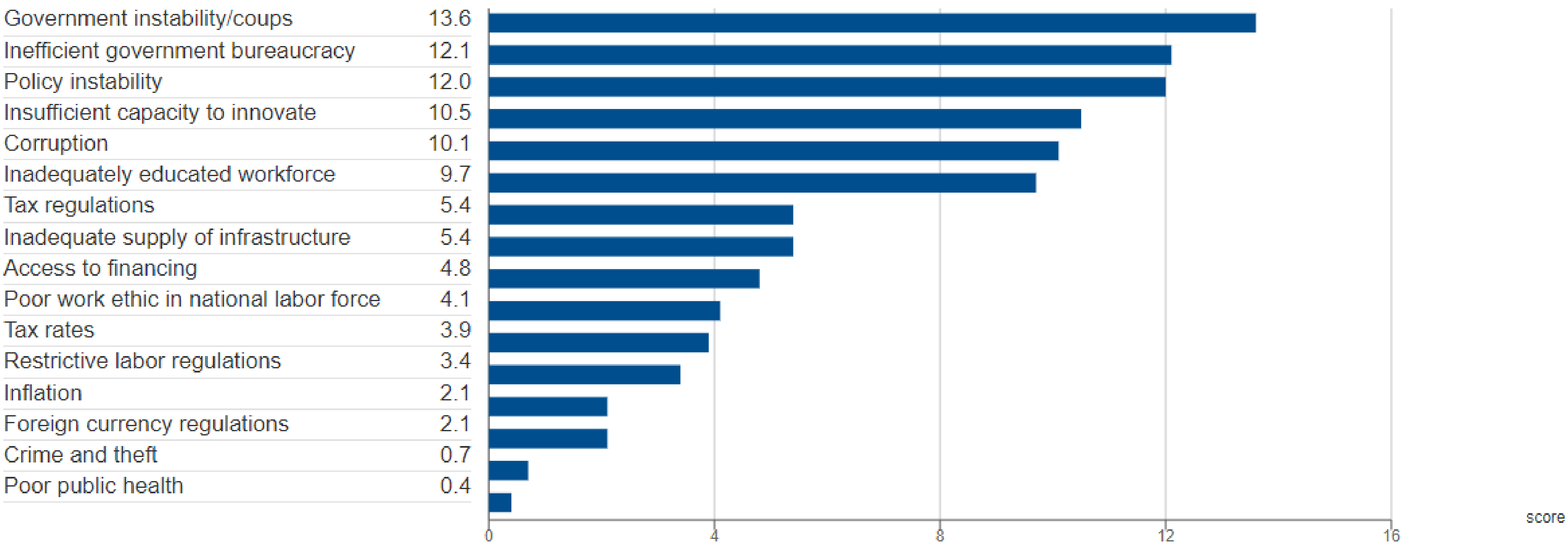


Thailand vs East Asia and Pacific's Global Competitiveness Index



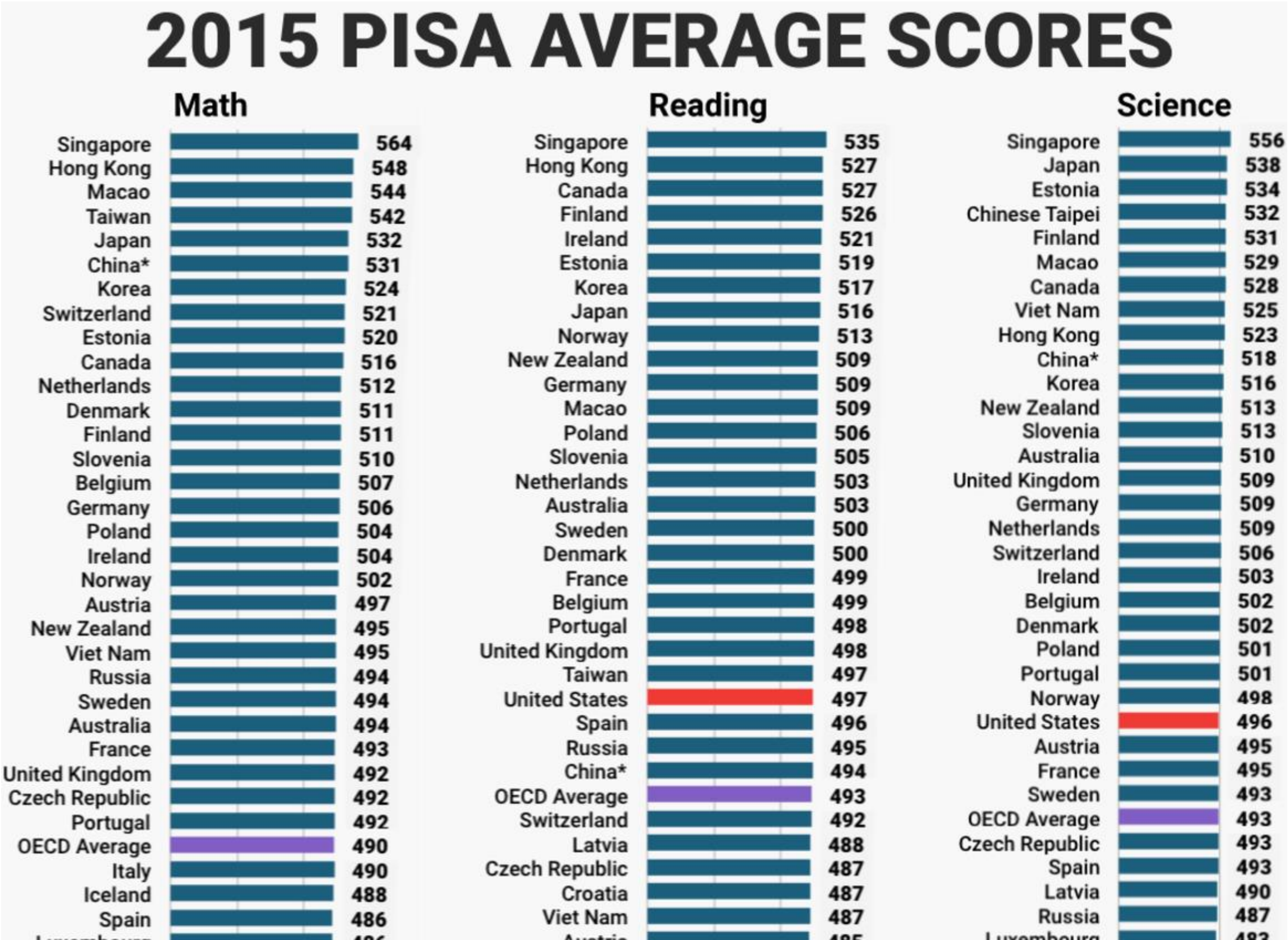
World Economic Forum

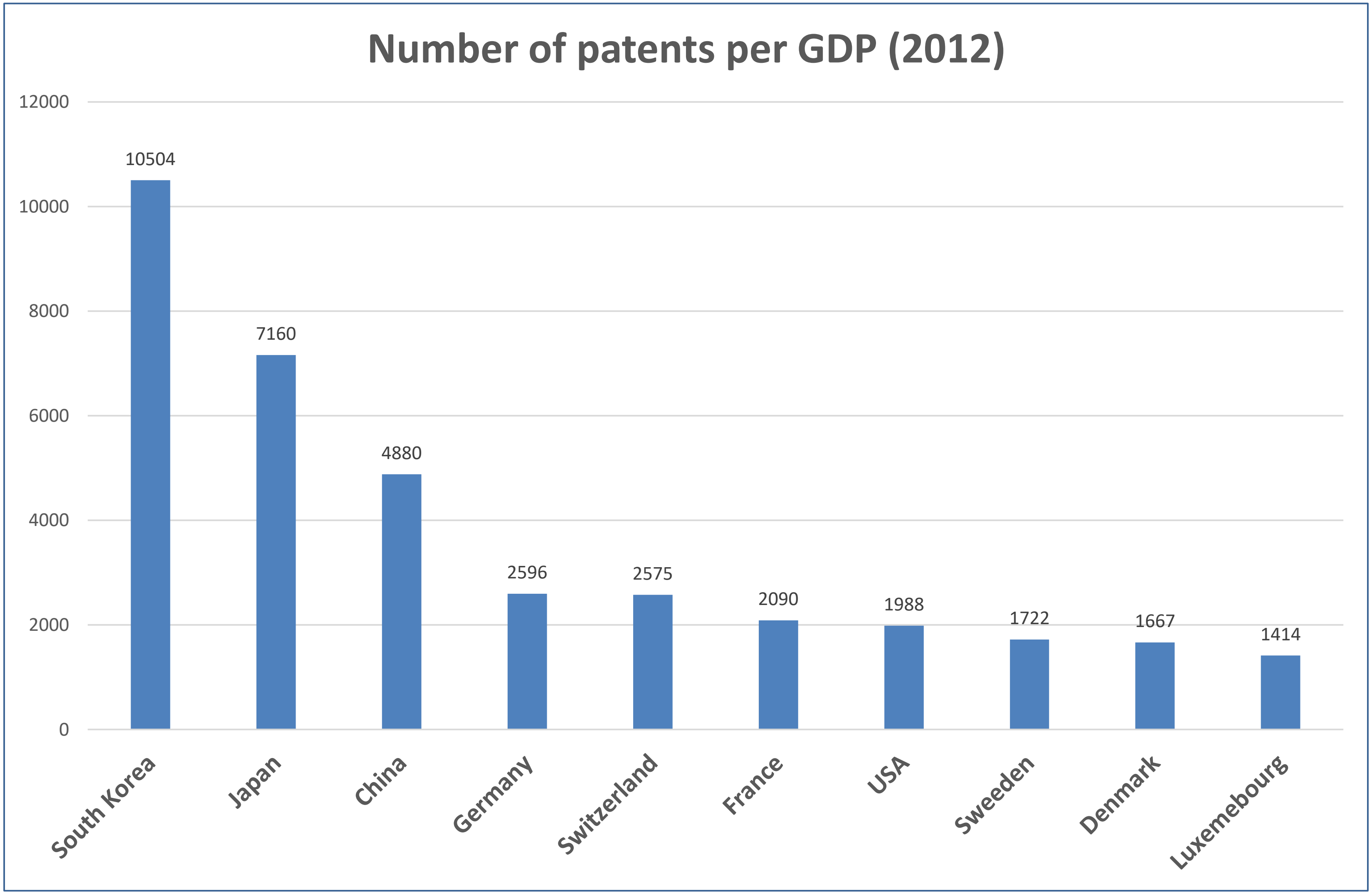
Most problematic factors for doing business



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

Index Component	Value	Rank/ 137	Trend	Dist. from best
Global Competitiveness Index 1-7 (best)	**4.7**	32		
Subindex A: Basic requirements 1-7 (best)	5.1	41		
1st pillar: Institutions 1-7 (best)	**3.8**	78		
2nd pillar: Infrastructure 1-7 (best)	**4.7**	43		
3rd pillar: Macroeconomic environment 1-7 (best)	**6.2**	9		
4th pillar: Health and primary education 1-7 (best)	**5.5**	90		
Subindex B: Efficiency enhancers 1-7 (best)	4.6	35		
5th pillar: Higher education and training 1-7 (best)	**4.6**	57		
6th pillar: Goods market efficiency 1-7 (best)	**4.7**	33		
7th pillar: Labour market efficiency 1-7 (best)	**4.3**	65		
8th pillar: Financial market development 1-7 (best)	**4.4**	40		
9th pillar: Technological readiness 1-7 (best)	**4.5**	61		
10th pillar: Market size 1-7 (best)	**5.2**	18		
Subindex C: Innovation and sophistication factors 1-7 (best)	3.9	47		
11th pillar: Business sophistication 1-7 (best)	**4.4**	42		
12th pillar: Innovation 1-7 (best)	**3.5**	50		


2015 PISA AVERAGE SCORES
Math
Singapore 564
Hong Kong 548
Macao 544
Taiwan 542
Japan 532
China* 531
Korea 524
Switzerland 521
Estonia 520
Canada 516
Netherlands 512
Denmark 511
Finland 511
Slovenia 510
Belgium 507
Germany 506
Poland 504
Ireland 504
Norway 502
Austria 497
New Zealand 495
Viet Nam 495
Russia 494
Sweden 494
Australia 494
France 493
United Kingdom 492
Czech Republic 492
Portugal 492
OECD Average 490
Italy 490
Iceland 488
Spain 486
Luxembourg 486
Reading
Singapore 535
Hong Kong 527
Canada 527
Finland 526
Ireland 521
Estonia 519
Korea 517
Japan 516
Norway 513
New Zealand 509
Germany 509
Macao 509
Poland 506
Slovenia 505
Netherlands 503
Australia 503
Sweden 500
Denmark 500
France 499
Belgium 499
Portugal 498
United Kingdom 498
Taiwan 497
United States 497
Spain 496
Russia 495
China* 494
OECD Average 493
Switzerland 492
Latvia 488
Czech Republic 487
Croatia 487
Viet Nam 487
Austria 485
Science
Singapore 556
Japan 538
Estonia 534
Chinese Taipei 532
Finland 531
Macao 529
Canada 528
Viet Nam 525
Hong Kong 523
China* 518
Korea 516
New Zealand 513
Slovenia 513
Australia 510
United Kingdom 509
Germany 509
Netherlands 509
Switzerland 506
Ireland 503
Belgium 502
Denmark 502
Poland 501
Portugal 501
Norway 498
United States 496
Austria 495
France 495
Sweden 493
OECD Average 493
Czech Republic 493
Spain 493
Latvia 490
Russia 487
Luxembourg 483


Number of patents per GDP (2012)
12000
10000
8000
6000
4000
2000
0
10504
7160
4880
2596
2575
2090
1988
1722
1667
1414
South Korea
Japan
China
Germany
Switzerland
France
USA
Sweeden
Denmark
Luxemebourg

3. Competitiveness of Thai Manufacturing sector via BCG model

- Boston Consulting Group (BCG) model
- Export the commodities which are growing faster than world trade volume (high income elasticity of demand)
- Manufacture commodities which gain the world market share (revealing competitiveness)

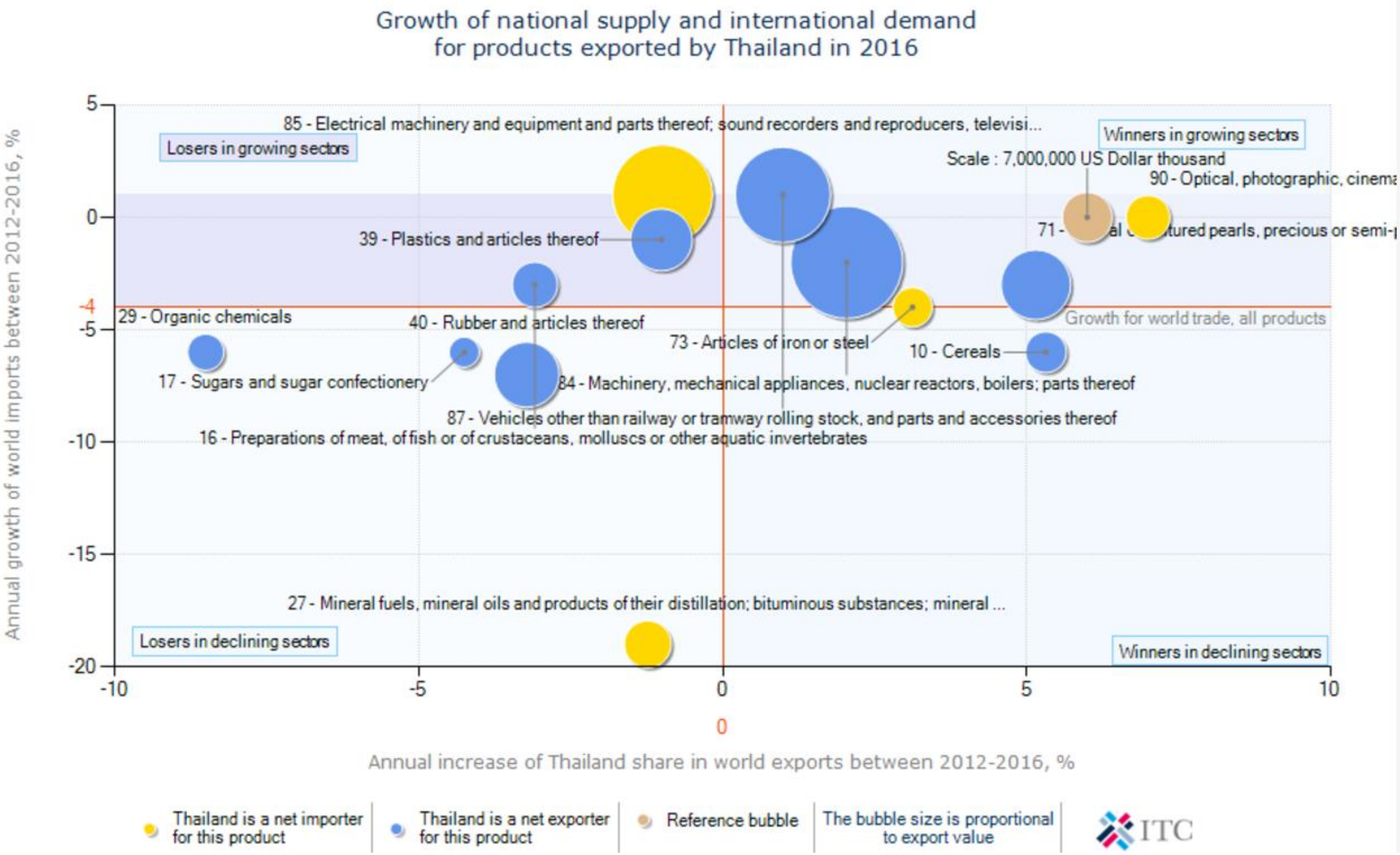
Competitive Positioning

Revealed competitiveness ($\dot{Z}>0$) and income elasticity of **demand** (η)

Export the right commodity

Export the commodity right

	Declining share of that product in world trade ($\eta<1$) Declining sectors	Rising share of that product in world trade ($\eta>1$) Growing (dynamic sectors)
Gaining world market share ($\dot{Z}>0$) **Winners**	**Falling stars** (Cash Cows)	**Rising stars** (Stars)
Losing world market share($\dot{Z}<0$) **Losers**	**Retreat** (Dog) (A good idea to move to other growing industry)	**Lost Opportunity** (Problem Child, requiring helping hand, despite growing rapidly)



Growth of national supply and international demand
for products exported by Thailand in 2016
85 - Electrical machinery and equipment and parts thereof; sound recorders and reproducers, televisi...
Losers in growing sectors
Winners in growing sectors
Scale : 7,000,000 US Dollar thousand
90 - Optical, photographic, cinema
39 - Plastics and articles thereof
29 - Organic chemicals
40 - Rubber and articles thereof
73 - Articles of iron or steel
10 - Cereals
Growth for world trade, all products
17 - Sugars and sugar confectionery
84 - Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof
87 - Vehicles other than railway or tramway rolling stock, and parts and accessories thereof
16 - Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates
27 - Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral ...
Losers in declining sectors
Winners in declining sectors
Annual growth of world imports between 2012-2016, %
Annual increase of Thailand share in world exports between 2012-2016, %
Thailand is a net importer for this product
Thailand is a net exporter for this product
Reference bubble
The bubble size is proportional to export value
ITC

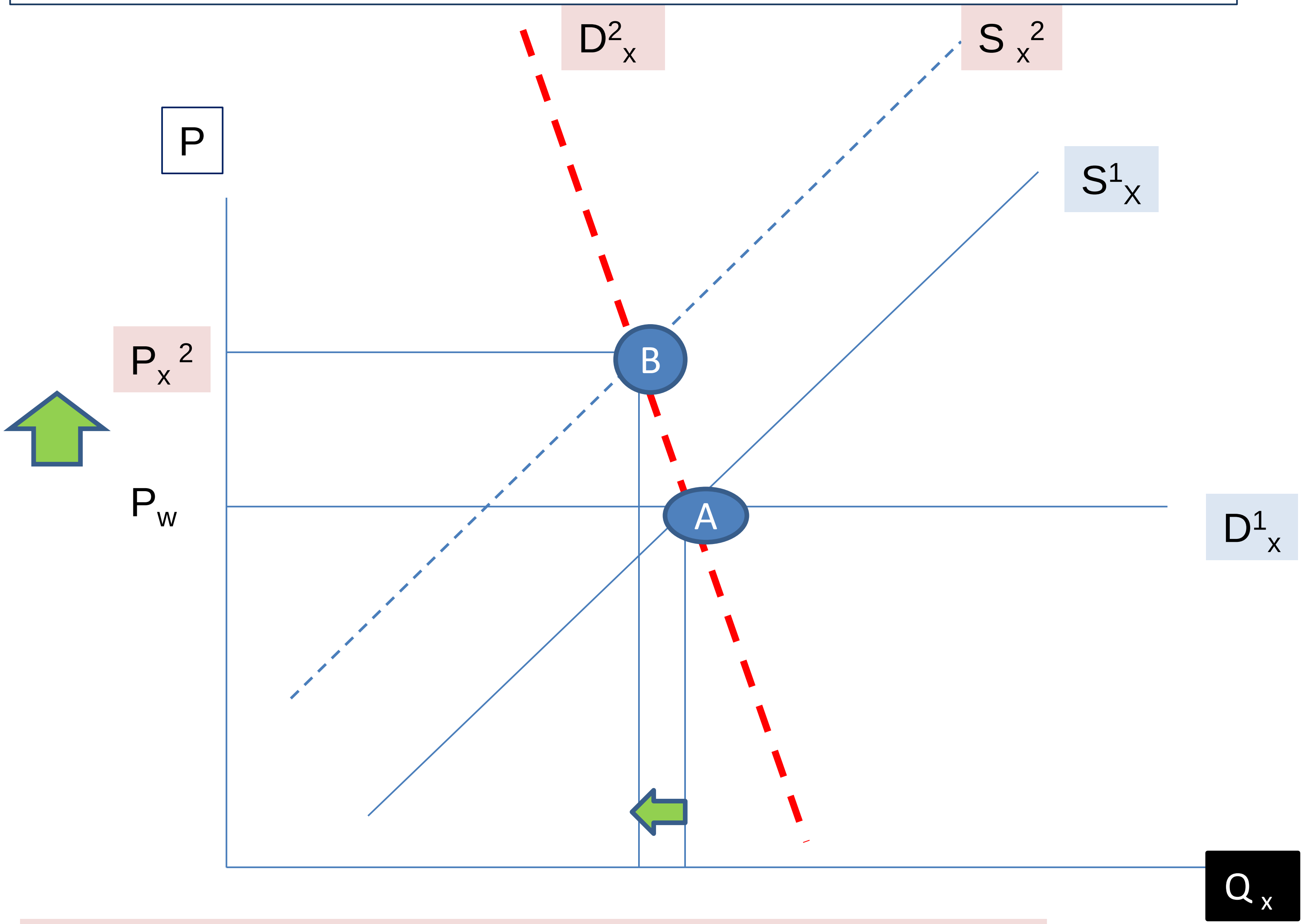
Michael Porter (1990) *The Competitive Advantages of Nations*

- There are two basic types of competitive advantages: lower cost and product differentiation.
- Pure cost advantages are less sustainable than product differentiation: Any new comer with 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: differentiation in services provided by banks, supermarkets, and gasoline stations.

More advices 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 product differentiation *can eliminate* cost advantage.**
- **The government can raise the probability of gaining competitive advantage but lacks the power to create advantage by itself.**

Innovation raises unit cost of the product, but it can fetch higher product prices, as the demand become less inelastic

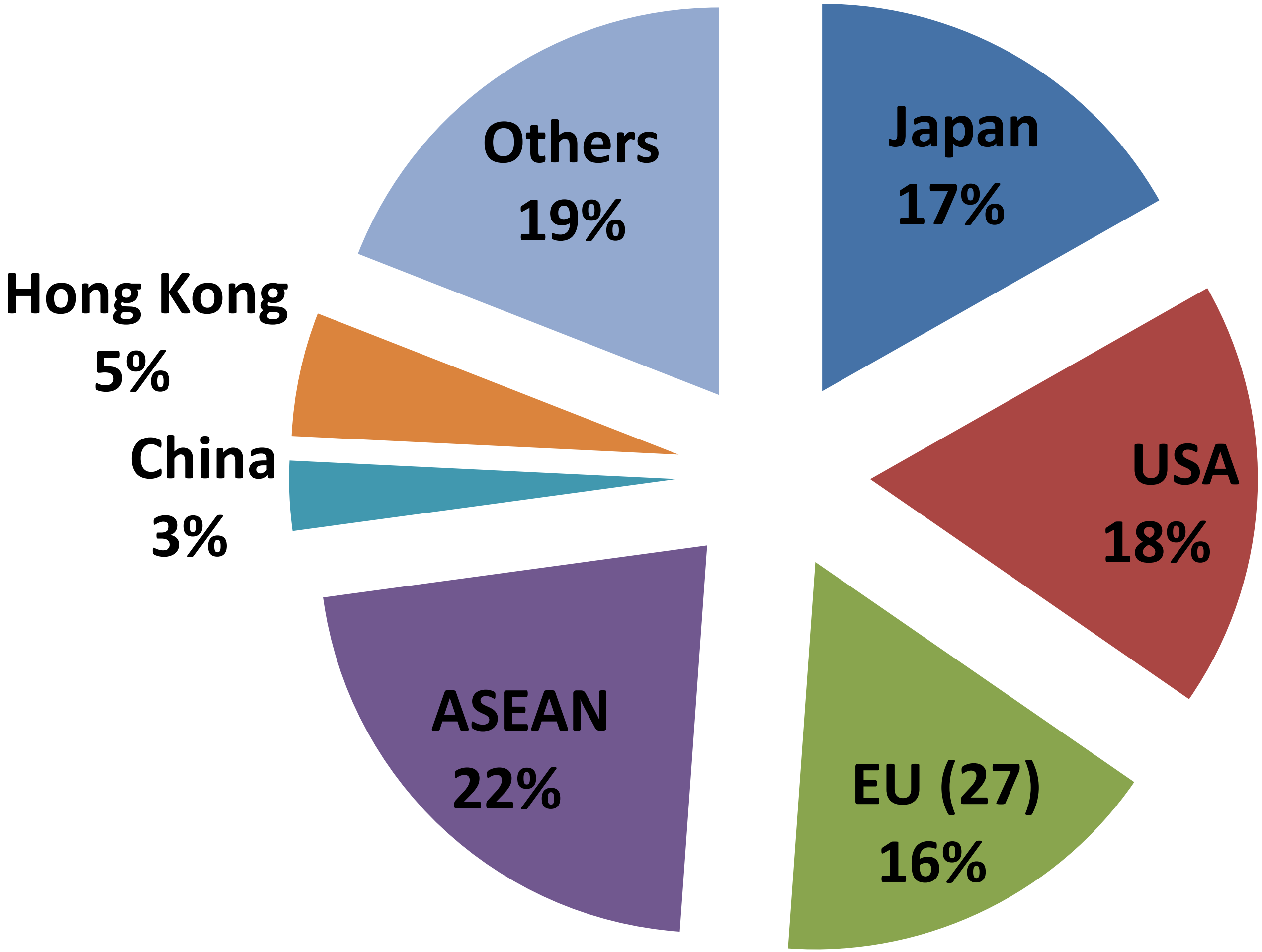


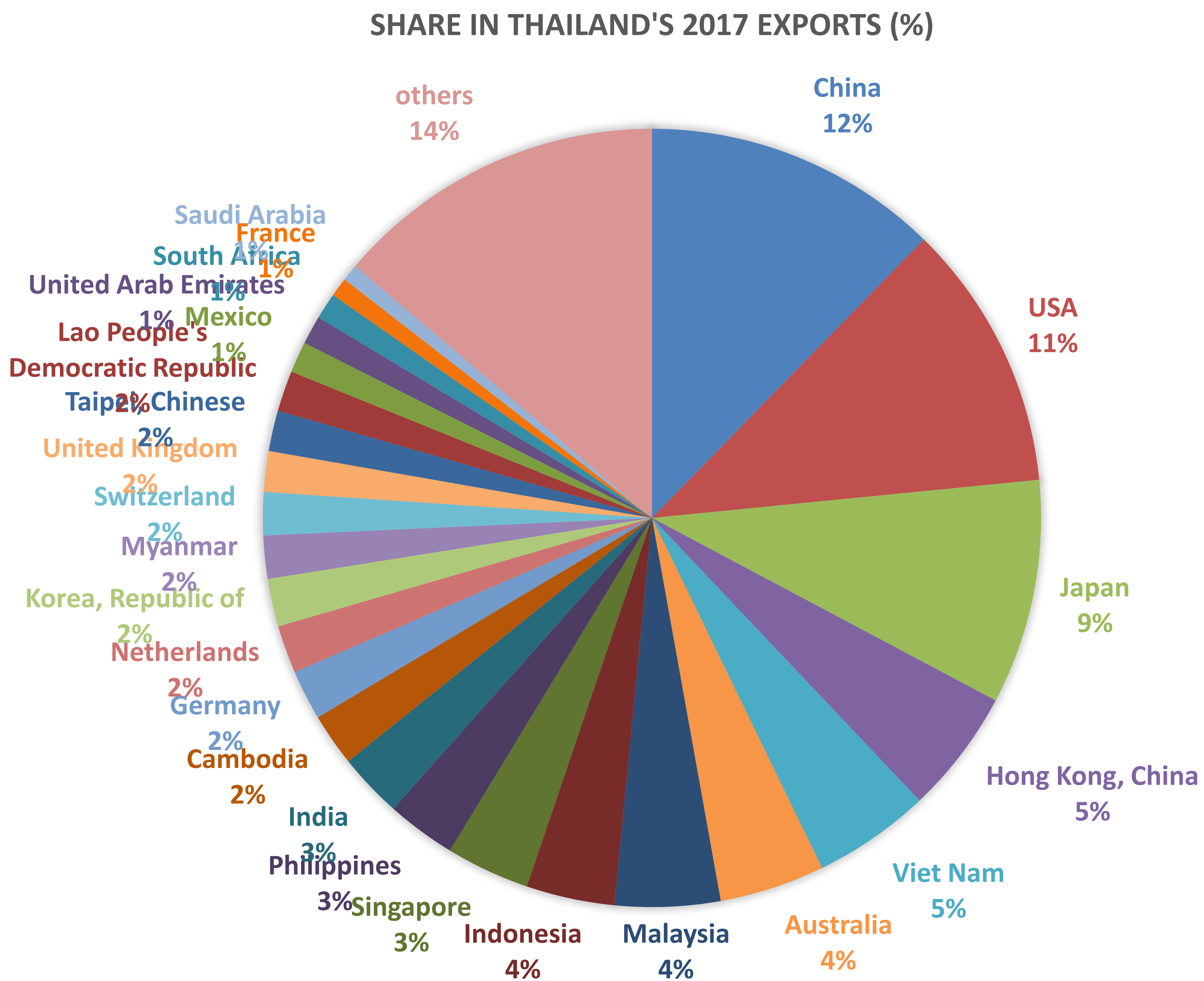
Higher export values, despite lower quantity of exports
Due to product differentiation through innovation

4. Diversification of Thai exports Product and market diversification

- 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




SHARE IN THAILAND'S 2017 EXPORTS (%)
China
12%
USA
11%
Japan
9%
Hong Kong, China
5%
Viet Nam
5%
Australia
4%
Malaysia
4%
Indonesia
4%
Singapore
3%
Philippines
3%
India
3%
Cambodia
2%
Germany
2%
Netherlands
2%
Korea, Republic of
2%
Myanmar
2%
Switzerland
2%
United Kingdom
2%
Taipei, Chinese
2%
Lao People's Democratic Republic
2%
Mexico
1%
United Arab Emirates
1%
South Africa
1%
France
1%
Saudi Arabia
1%
others
14%

Review Questions

- ***What was the geographical diversification of Thai exports in 2018?***
- ***How was the manufacturing sector affected by the 2009 global recession and global growth slowdown in 2017?***
- ***What went wrong with Thailand's exports in between 2014 and 2016?***
- ***Would Thai exports resume its strong growth path in 2019?***