

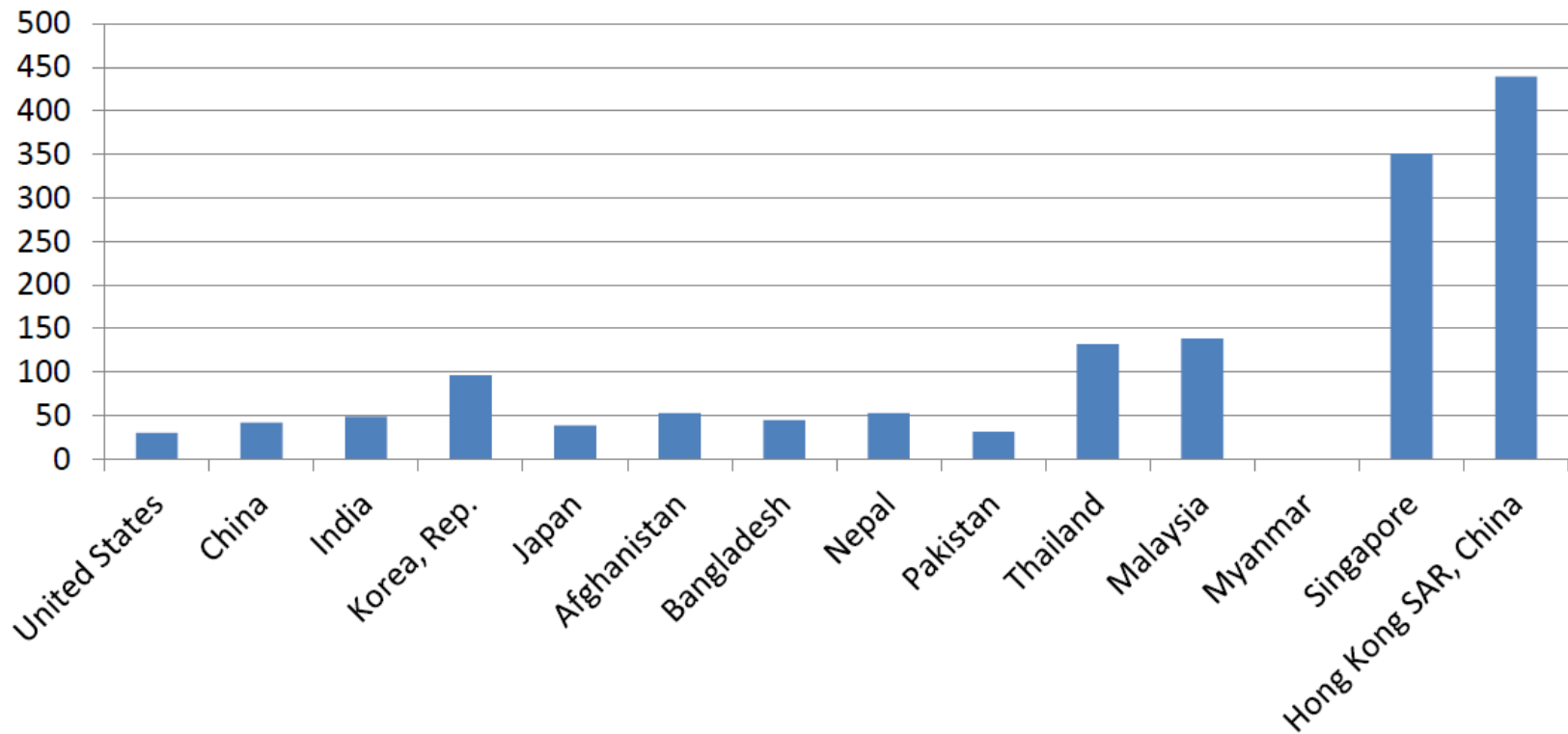


Thailand's Trade Policy and Economic Development

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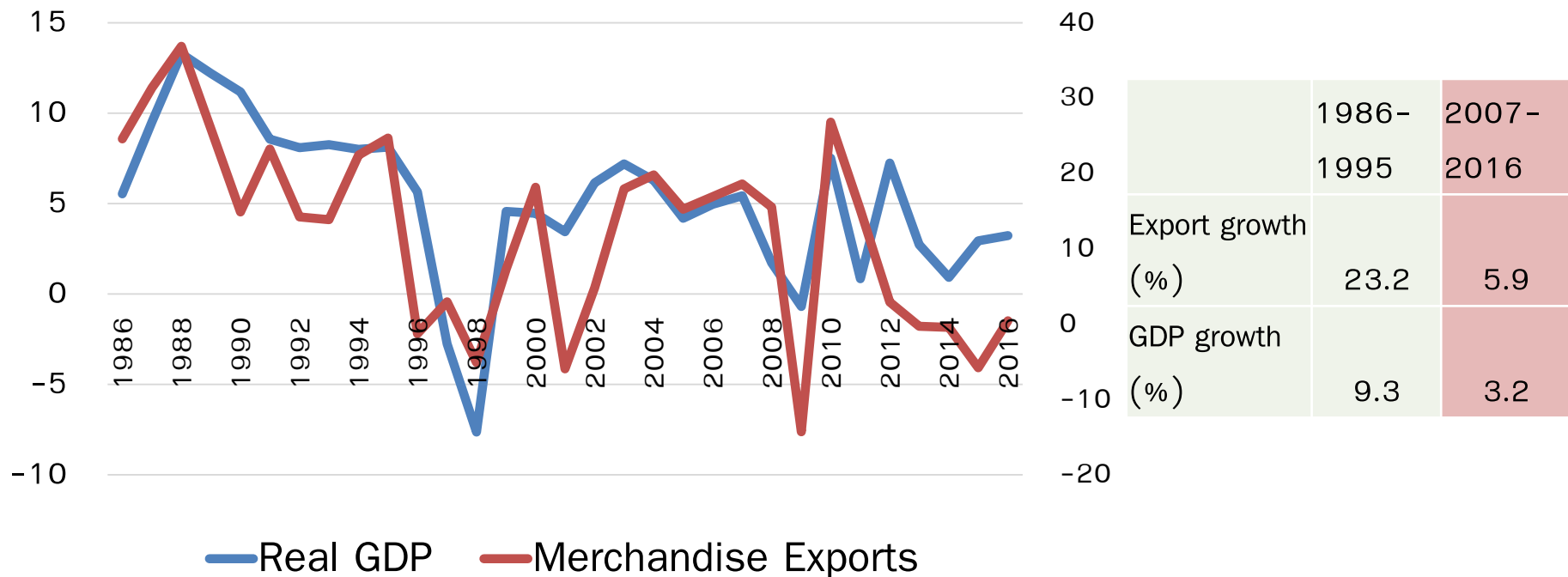
How much Thailand depend on international trade?





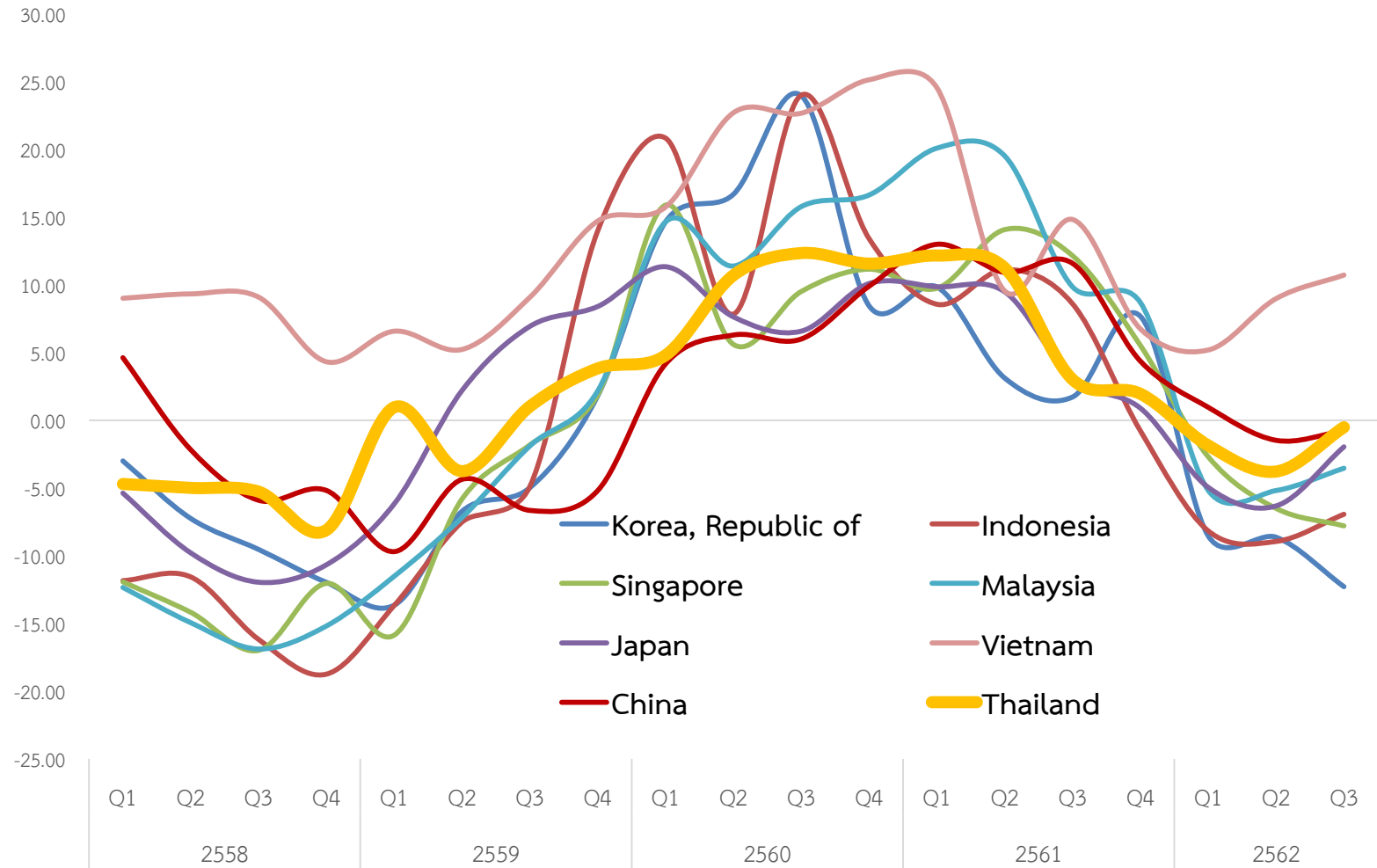
In the long run, Thailand's GDP growth is determined by export growth.

Thailand's Merchandise Export and Real GDP Growth
(%, 1985-2016)



Source: World Development Indicators (2017)

Thailand's export growth rates compared to its peer countries

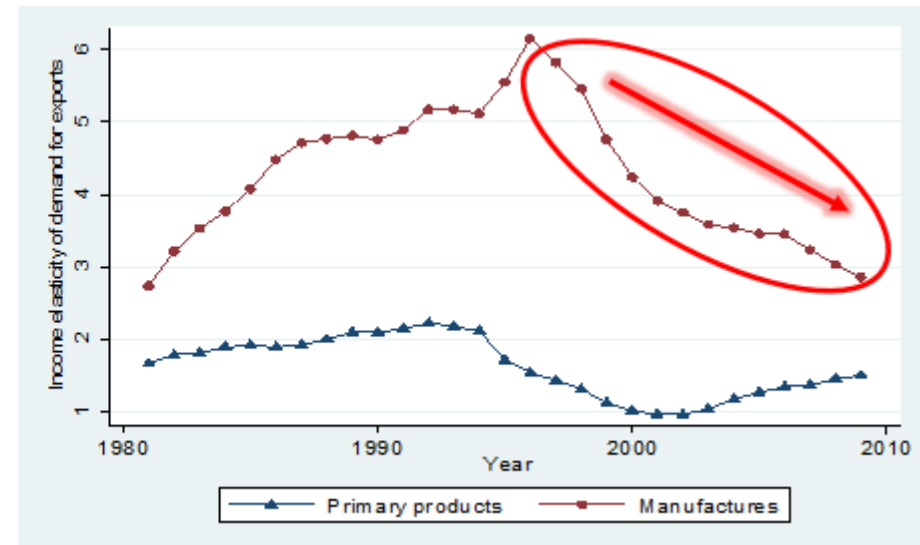
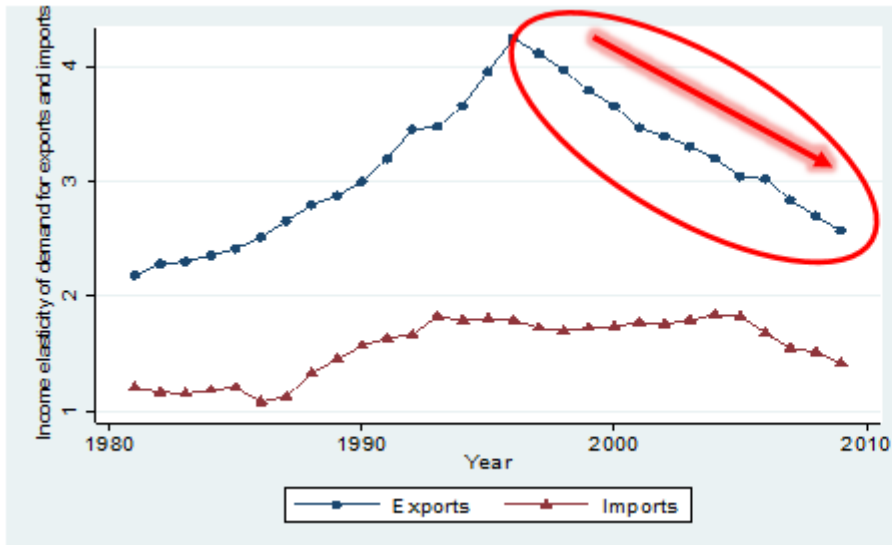


Source: Trade Policy and Strategy Office, Ministry of Commerce



Thailand's long-term export competitiveness is at risk

- Income elasticity of demand for Thailand's merchandise, particularly manufactures, exports has dropped at an alarming rate.
- That is, a 1% increase in world GDP results in **smaller and smaller demand for exports from Thailand.**
- This explains the relative decline of Thailand's export growth in the post-1997 period. **What has happened to Thailand's long-term export competitiveness?**



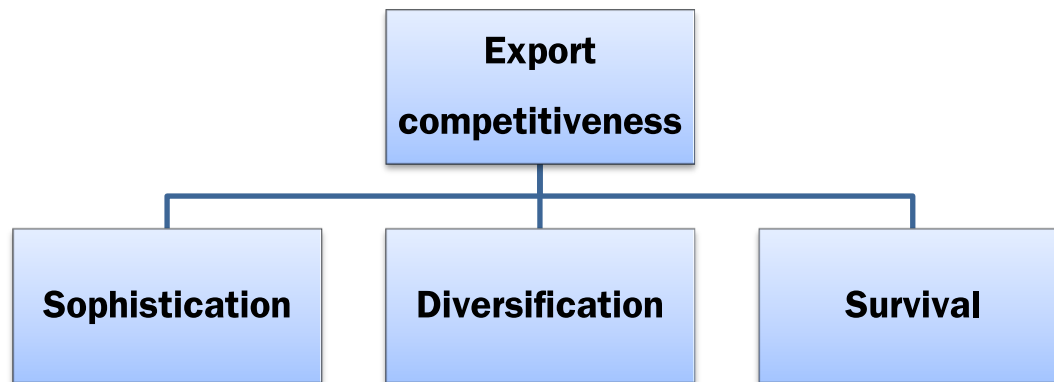
Rolling regression estimates of export and import demand functions for Thailand

$$\ln \text{Export} = c + \epsilon \ln \text{WorldGDP} + \pi \ln \text{Relativeprice}$$

Source: Tharnpanich and McCombie (2013)



Export growth decomposition



Export growth is decomposed to investigate the root cause(s) of the problem. In particular, we will look at

1. Export sophistication
2. Export diversification
3. Export survival

Comparison will also be made between Thailand and China, Malaysia, Indonesia, the Philippines, and Vietnam



Sophistication: Share in total exports by technology intensity

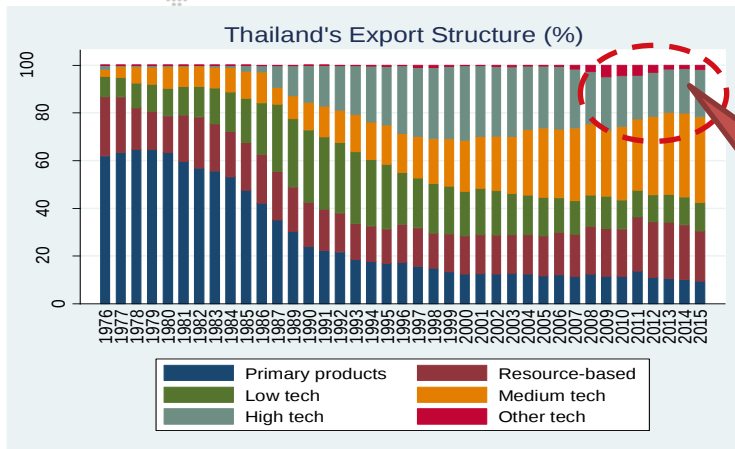
Lall (2000) classifies products into Primary, Resource-based, Low-tech, Medium-tech, High-tech products in SITC Rev.3.

Classification	Examples
Primary products	Fresh fruit, meat, rice, cocoa, tea, coffee, wood, coal, crude petroleum, gas
Manufactured products	
<u>Resource based manufactures</u>	
Agro/forest based products	Prepared meats/fruits, beverages, wood products, vegetable oils
Other resource based products	Ore concentrates, petroleum/rubber products, cement, cut gems, glass
<u>Low technology manufactures</u>	
Textile/fashion cluster	Textile fabrics, clothing, headgear, footwear, leather manufactures, travel goods
Other low technology	Pottery, simple metal parts/structures, furniture, jewellery, toys, plastic products
<u>Medium technology manufactures</u>	
Automotive products	Passenger vehicles and parts, commercial vehicles, motorcycles and parts
Medium technology process industries	Synthetic fibres, chemicals and paints, fertilisers, plastics, iron, pipes/tubes
Medium technology engineering industries	Engines, motors, industrial machinery, pumps, switchgear, ships, watches
<u>High technology manufactures</u>	
Electronics and electrical products	Office/data processing/telecommunications equip, TVs, transistors, turbines, power generating equipment
Other high technology	Pharmaceuticals, aerospace, optical/measuring instruments, cameras
Other transactions	Electricity, cinema film, printed matter, 'special' transactions, gold, art, coins, pets



Sophistication: Share in total exports by technology intensity

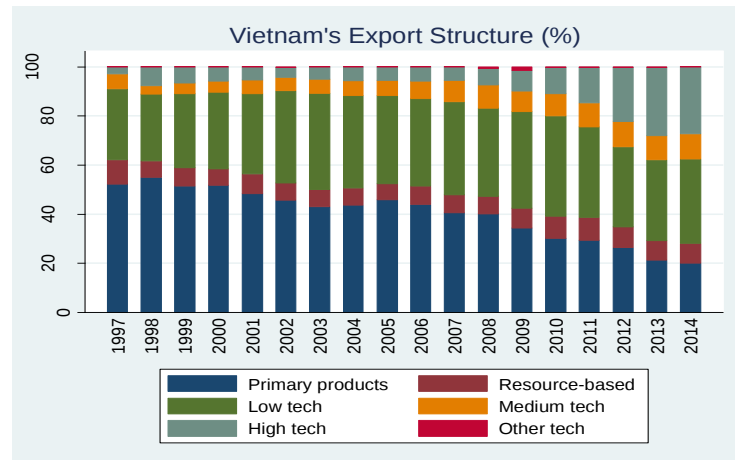
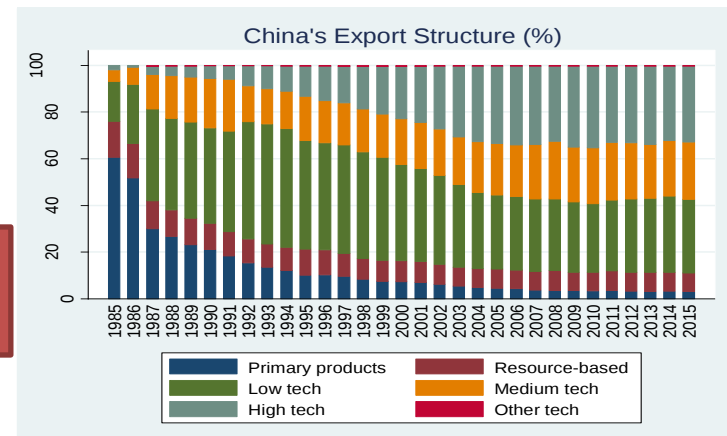
Lall (2000) classification of products by technological intensity shows that **share of high-technology exports has fallen over time** for Thailand.



Thailand

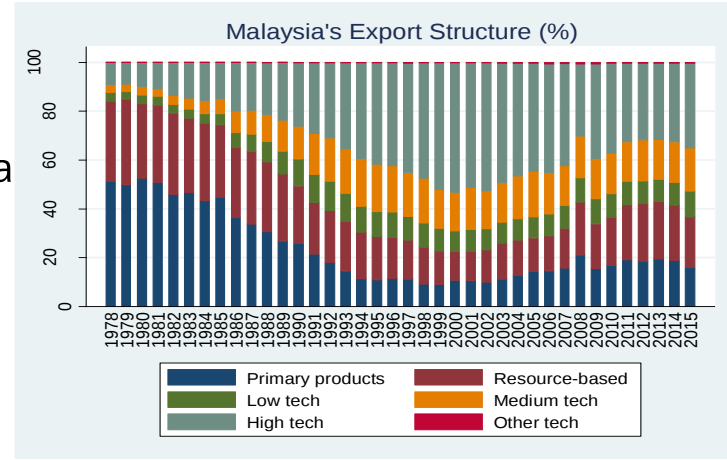
China

Share of high-technology exports of Thailand has recently dwindled



Vietnam

Malaysia



The technology intensity classification follows that in Lall (2000)

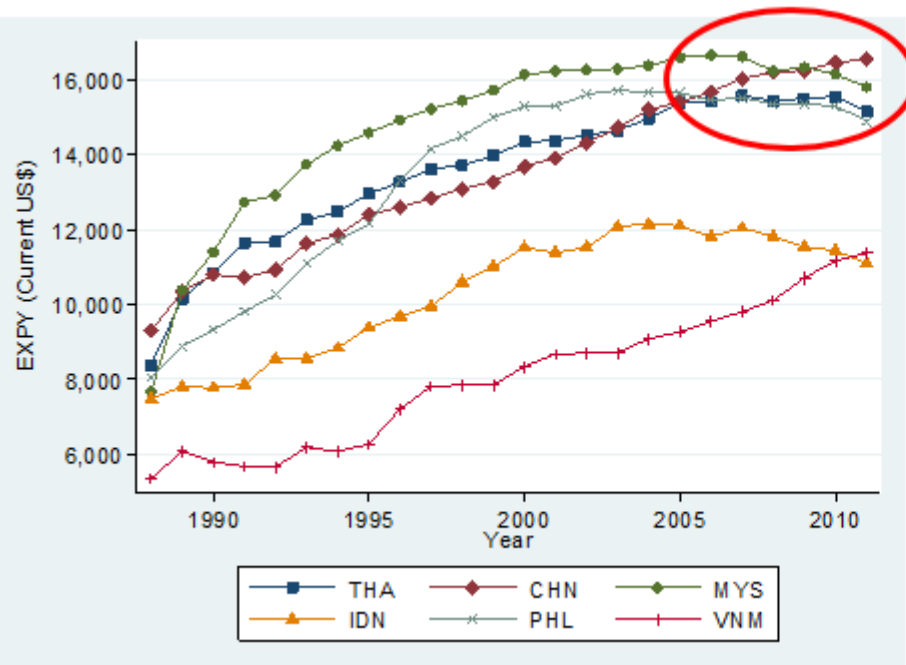


Sophistication: Technology content of exports

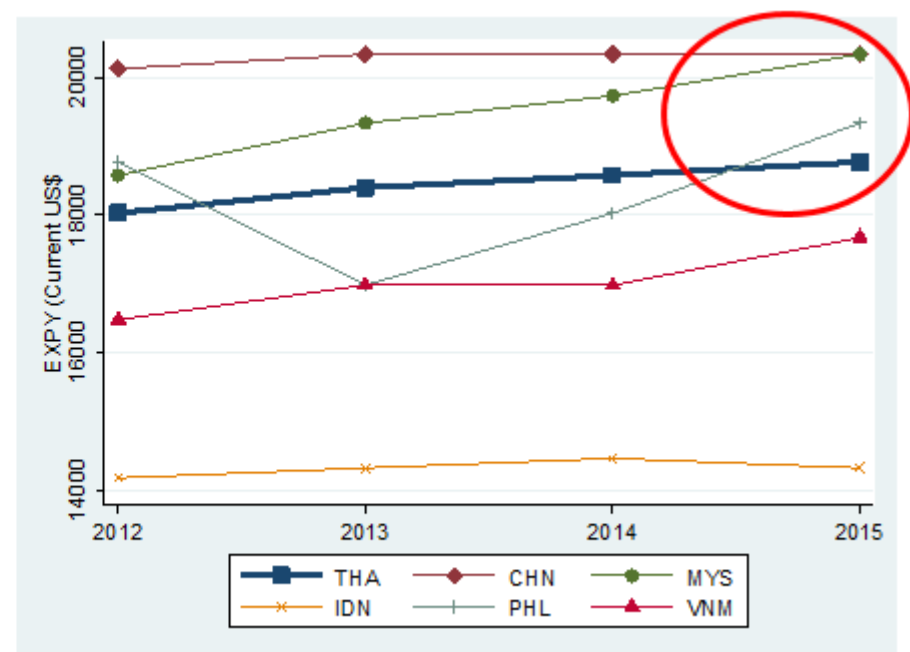
We can measure technology content of exports by using weighted average of GDP per capita of countries that export them. In this setting, Thailand's export sophistication has stopped increasing and has been surpassed by our neighbours.

Revealed **technology content** of non-oil exports

Thailand = 



1987–2011



2012–2015

Source: Author's calculation using data from UN Comtrade and Trade Outcome Indicators (WITS)

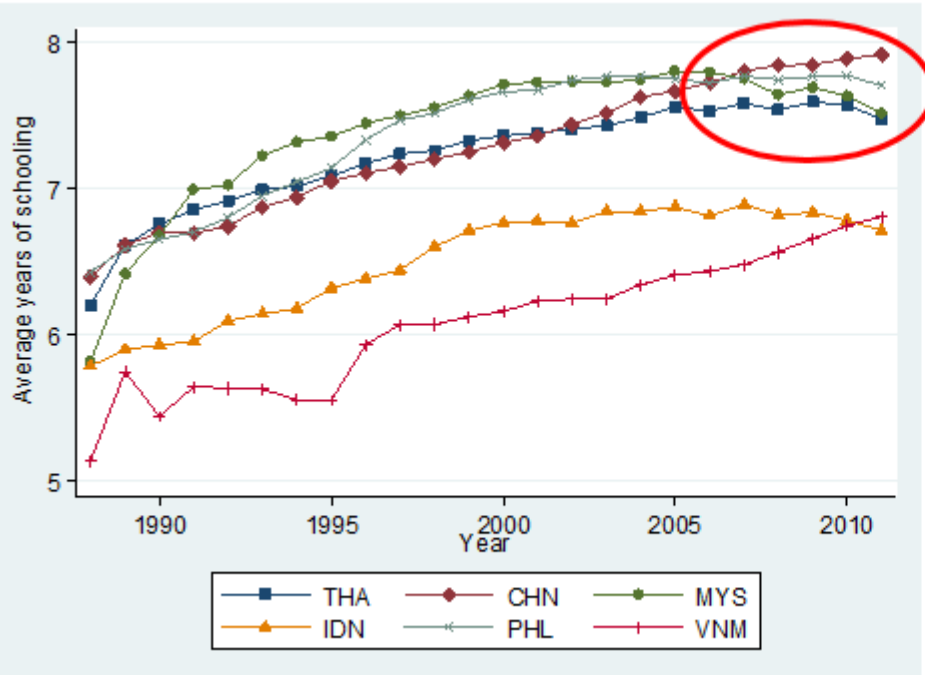


Sophistication: human capital and physical capital content of exports

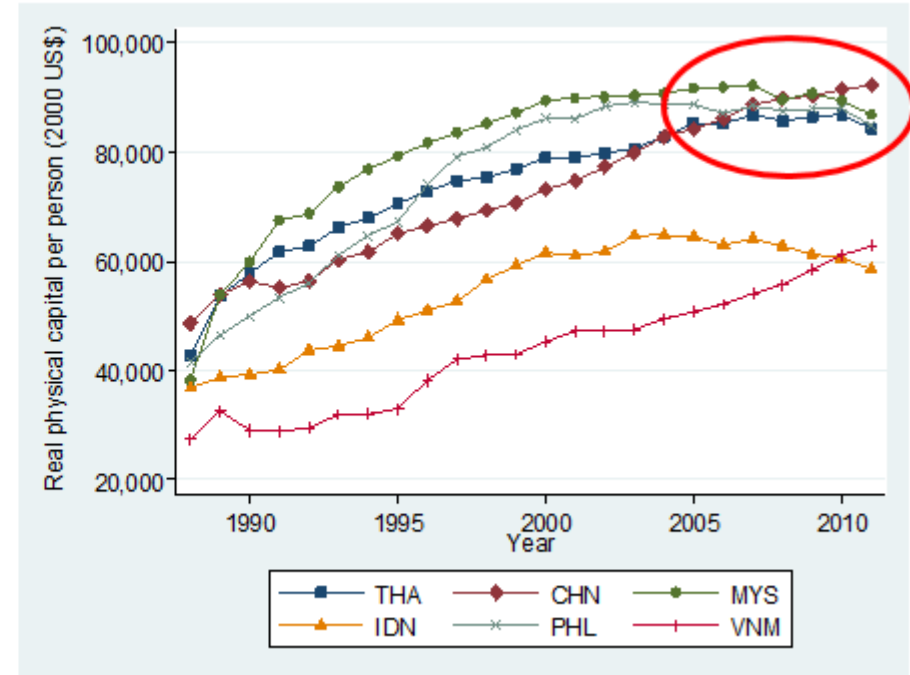
By the same token, we can measure human capital content and physical capital content of exports by using average years of schooling and real physical capital per person of countries that export them.

Again, **Thailand's export sophistication has been weakened.**

Revealed human capital content of non-oil exports



Revealed physical capital content of non-oil exports



Source: Author's calculation using data from UN Comtrade and World Development Indicators

Thailand =

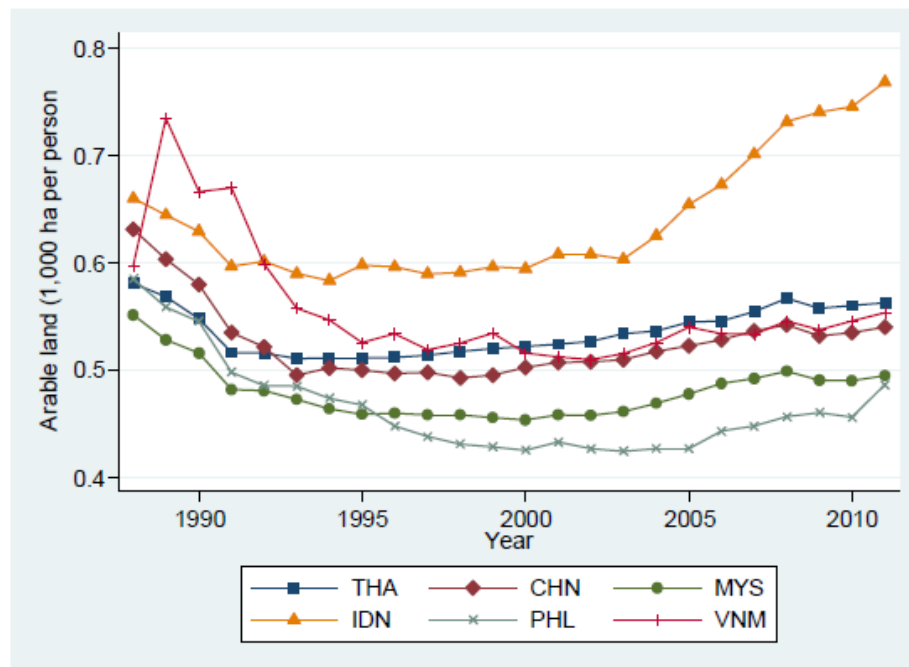


Sophistication: human capital and physical capital content of exports

Similarly, we can also measure natural resource content of exports by using, among others, arable land hectares per person of countries that export them (Shirotori, Tumurchudur, and Cadot, 2010).

Accordingly, ***the natural resource content of Thailand's exports is higher than our neighbours and has been on the rise.***

Revealed natural resource content of non-oil exports



Thailand = 

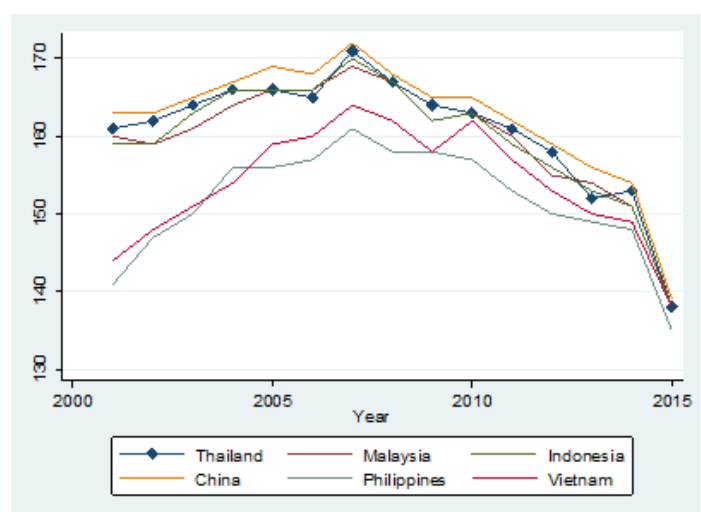
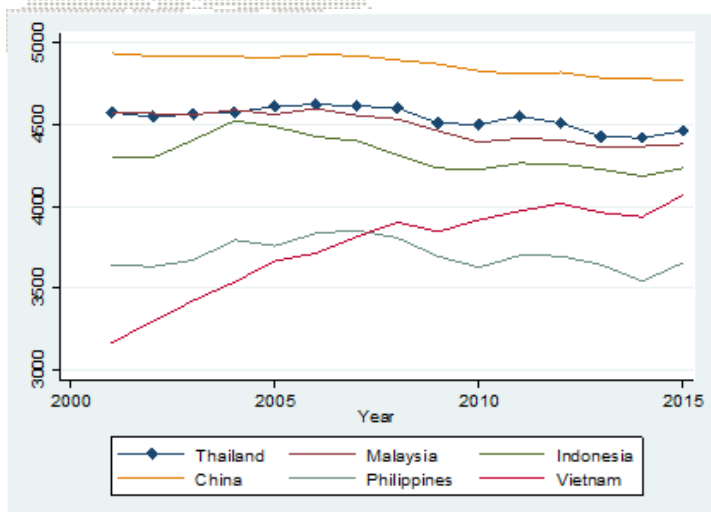
Source: Author's calculation using data from UN Comtrade and World Development Indicators

The drop in Thailand's export growth in recent years could be explained by the relative decline in export sophistication – we need to boost our export complexity!



Thailand's export diversification is among the best

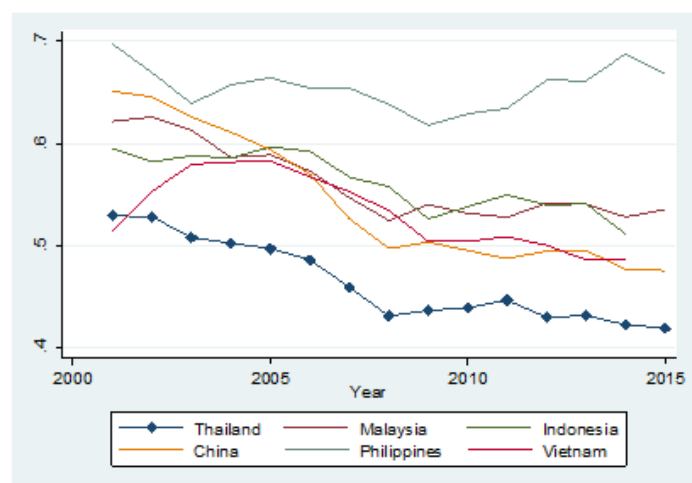
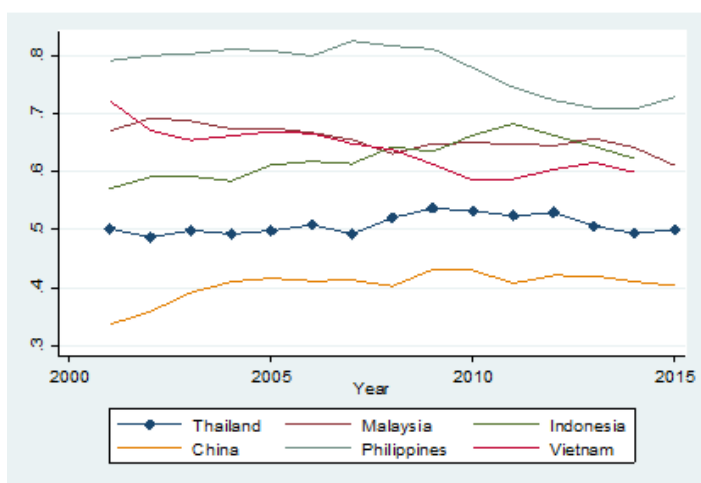
Quantity



Products

Markets

Share in total



Thailand =

Top 50 Products

Top 5 Markets





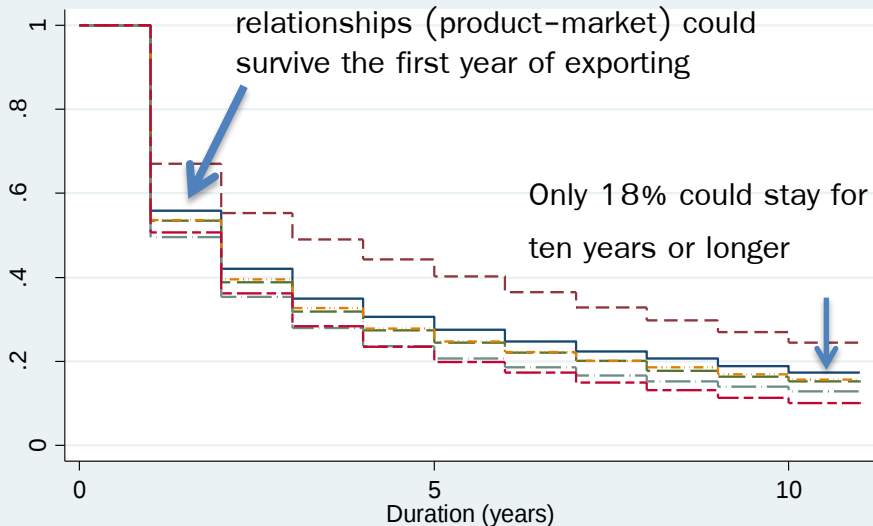
Thailand's export survival rate is neither too high nor too low.

Export survival rate (%)

Thailand = 

Only 56% of Thailand's export relationships (product-market) could survive the first year of exporting

Only 18% could stay for ten years or longer



2000–2011

Source: Author's calculation using data from UN Comtrade

Still 56% could survive the first year of exporting

Vietnam has improved significantly



2012–2015

Source: Trade Outcome Indicators (WITS)

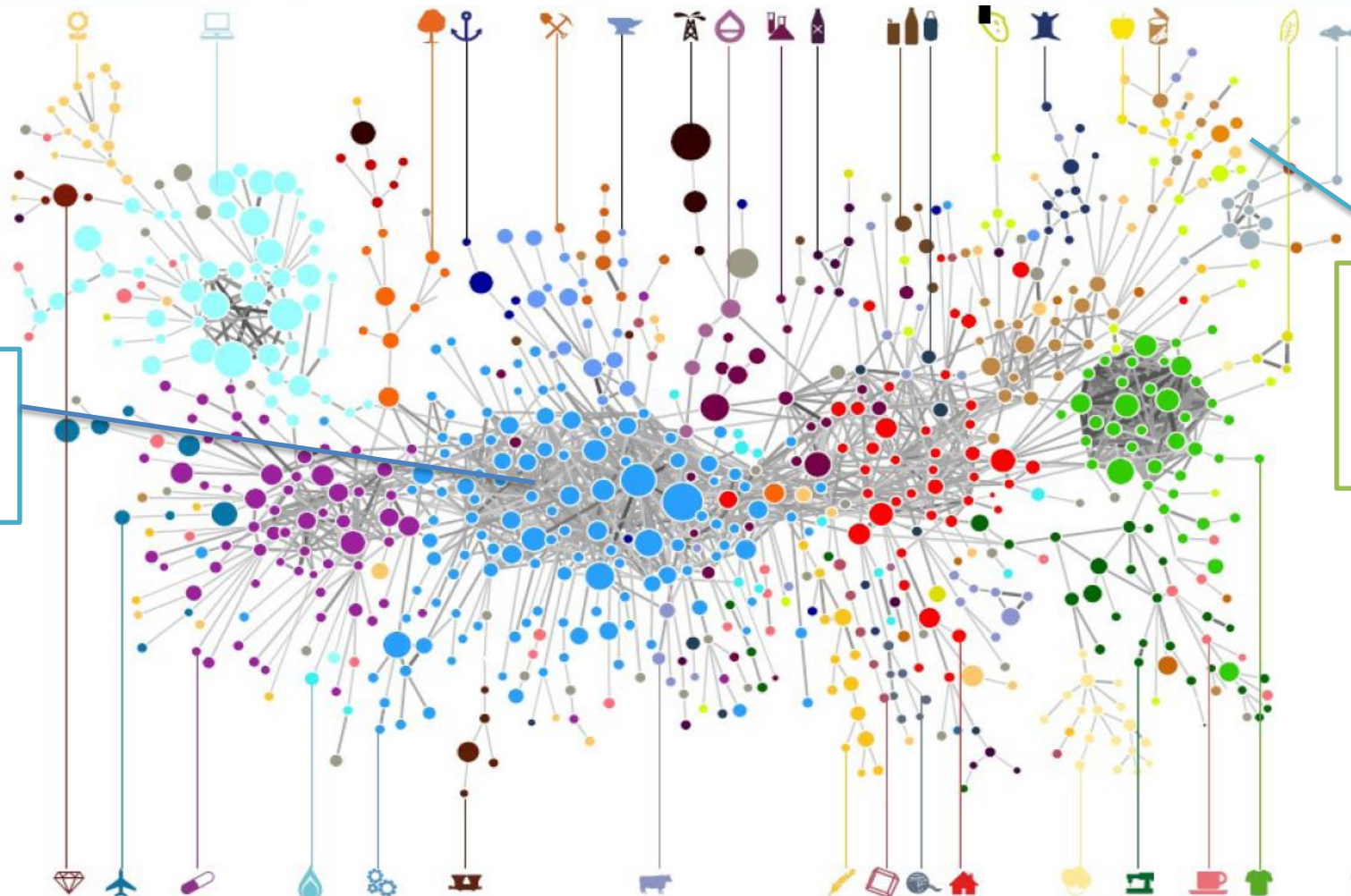


Analytical results

Factor	Ratings
Growth	
Diversification	
Sophistication	
Survival	



Product Space



High-tech products are at the core.

Primary products stay in the periphery.

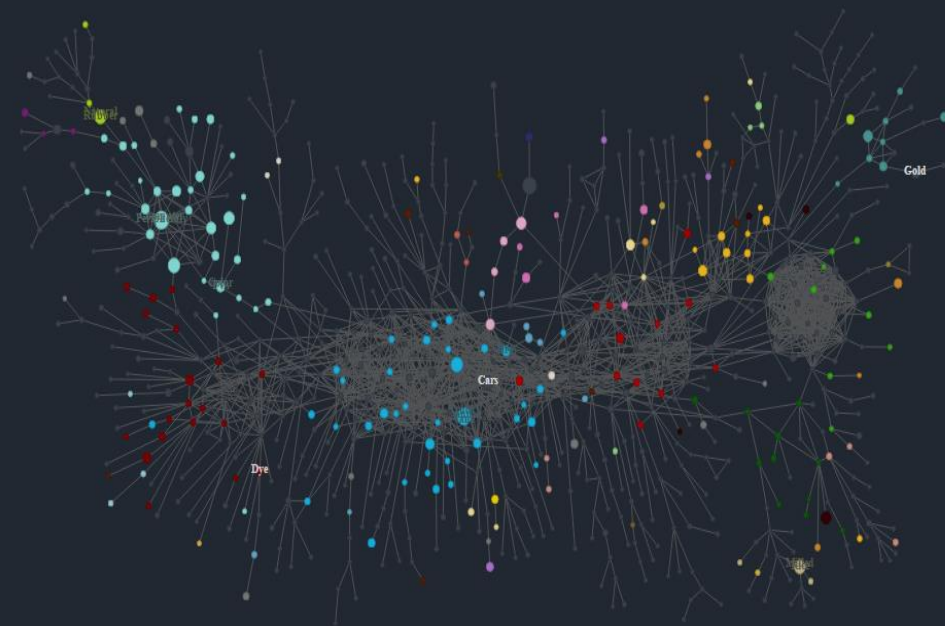


Product Space

< 2013

What does Thailand export? (2014)

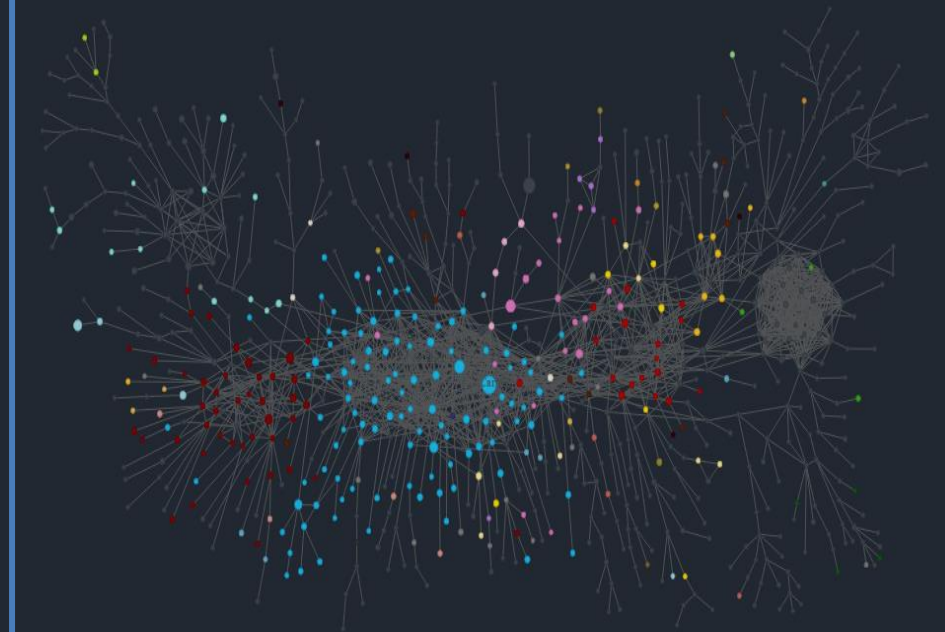
TOTAL: \$228B



< 2013

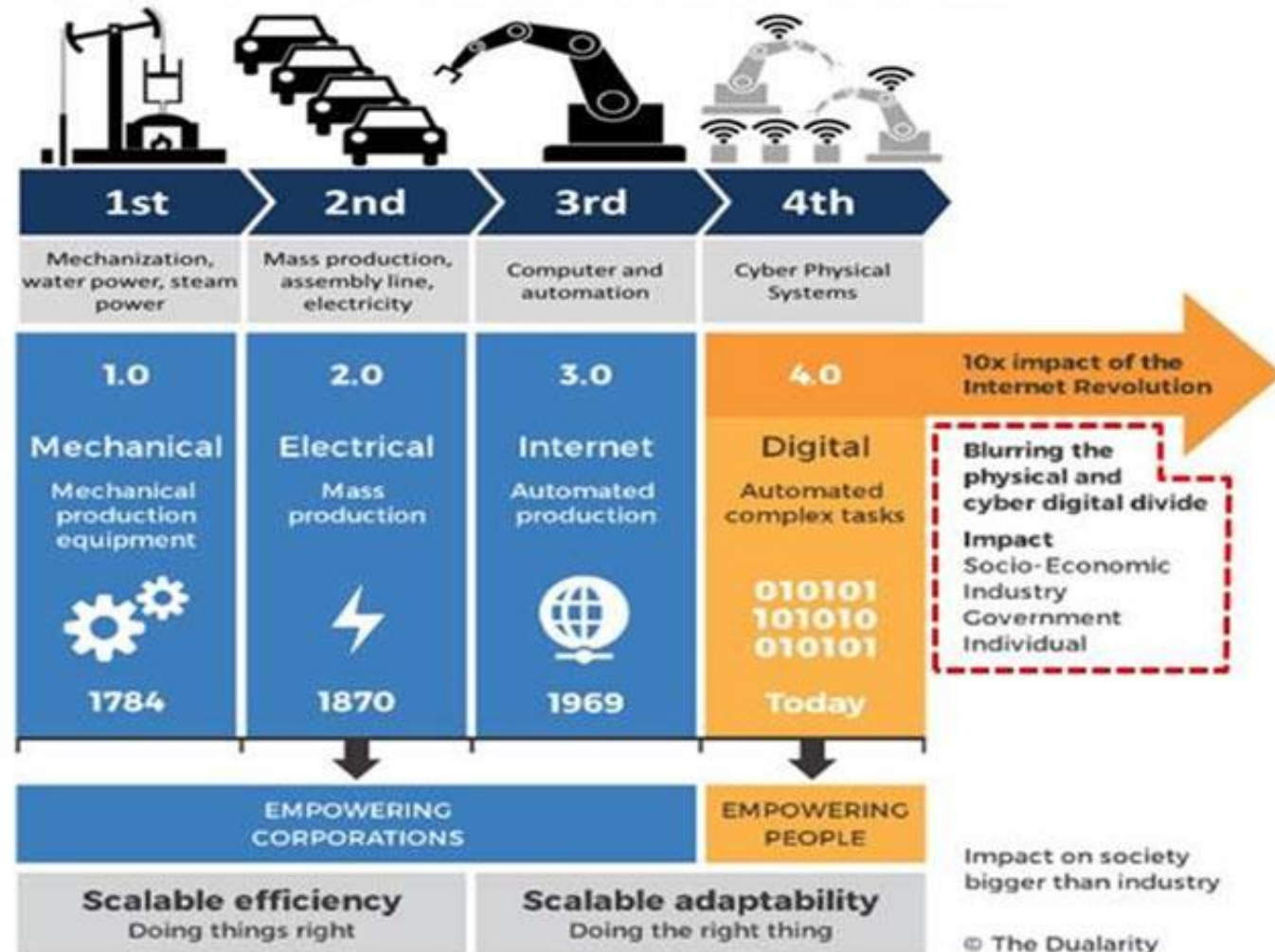
What does Germany export? (2014)

TOTAL: \$1.5T



Fourth Industrial Revolution

Welcome to the Industrial Revolution 4.0



Source: WEF, Christoph Roser at AllAboutLean.com, <https://www.theduality.com/industrial-revolution-4-0-2>

The biggest challenge to our long-run economic growth is the quality of our exports, i.e., how much our exports can meet the world demand.

Can our commercial policies address, if not overcome, this challenge?

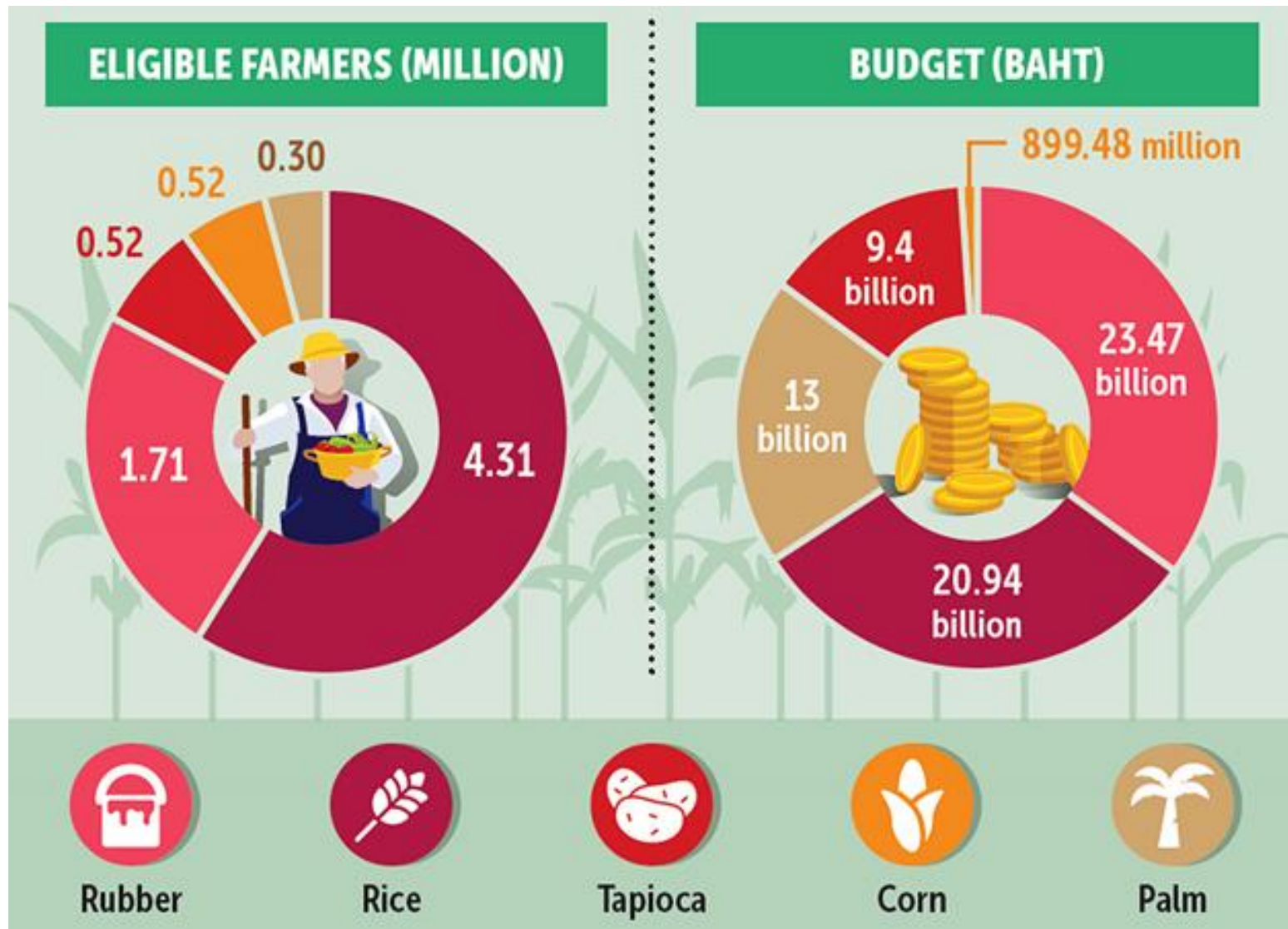
Policy Priorities of the Ministry of Commerce

TOP 10 COMMERCE MINISTRY PRIORITIES TO DRIVE THE ECONOMY

- ✓ Implement agricultural products price guarantee programme
- ✓ Conduct fair-price investigations of products and services
- ✓ Boost the country's exports
- ✓ Speed up current negotiations of all trade agreements
- Continue to improve the e-filing system
- Accelerate registration of intellectual property and geographical indications
- ✓ Modernise the economy through innovation and digital transformation
- Develop 'smart' traditional retail shops
- ✓ Promote and improve standards in the service sector
- Collaborate with all parties to drive strategies forward



Agricultural Income Guarantee Scheme



Price control and measurement

Deflation – Prices Decline



Money increases purchasing power, and it takes less units of currency to purchase the same units of goods or services.

Money loses its purchasing power, and it takes more units of currency to purchase the same units of goods or services



Inflation – Prices Rise

Possible Winners and Losers from High Inflation

One of the effects of inflation is that it can lead to arbitrary changes in the distribution of real incomes and wealth in a country

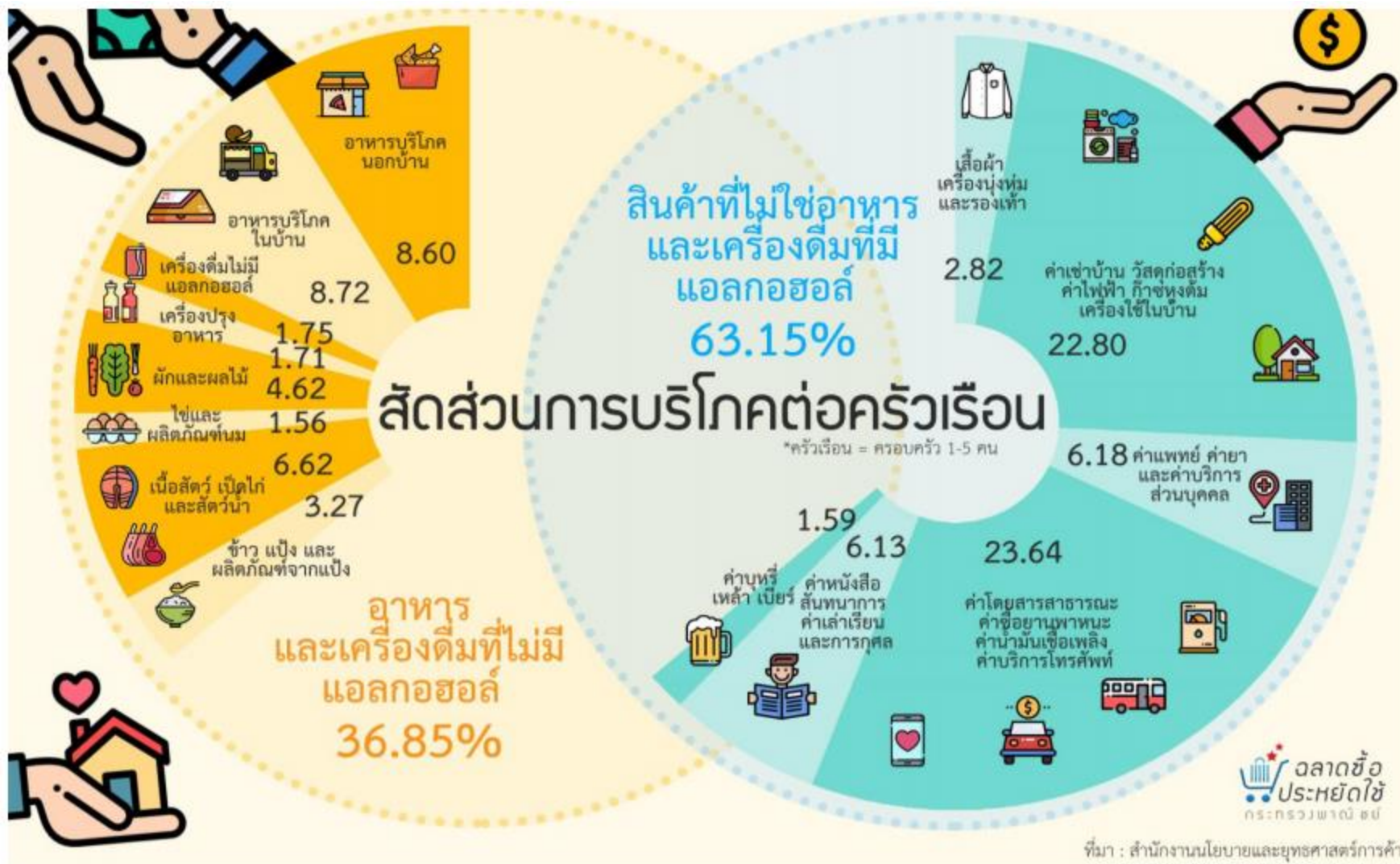
Winners

- Workers with strong wage bargaining power
- Debtors if real interest rates are negative
- Producers if prices rise faster than costs

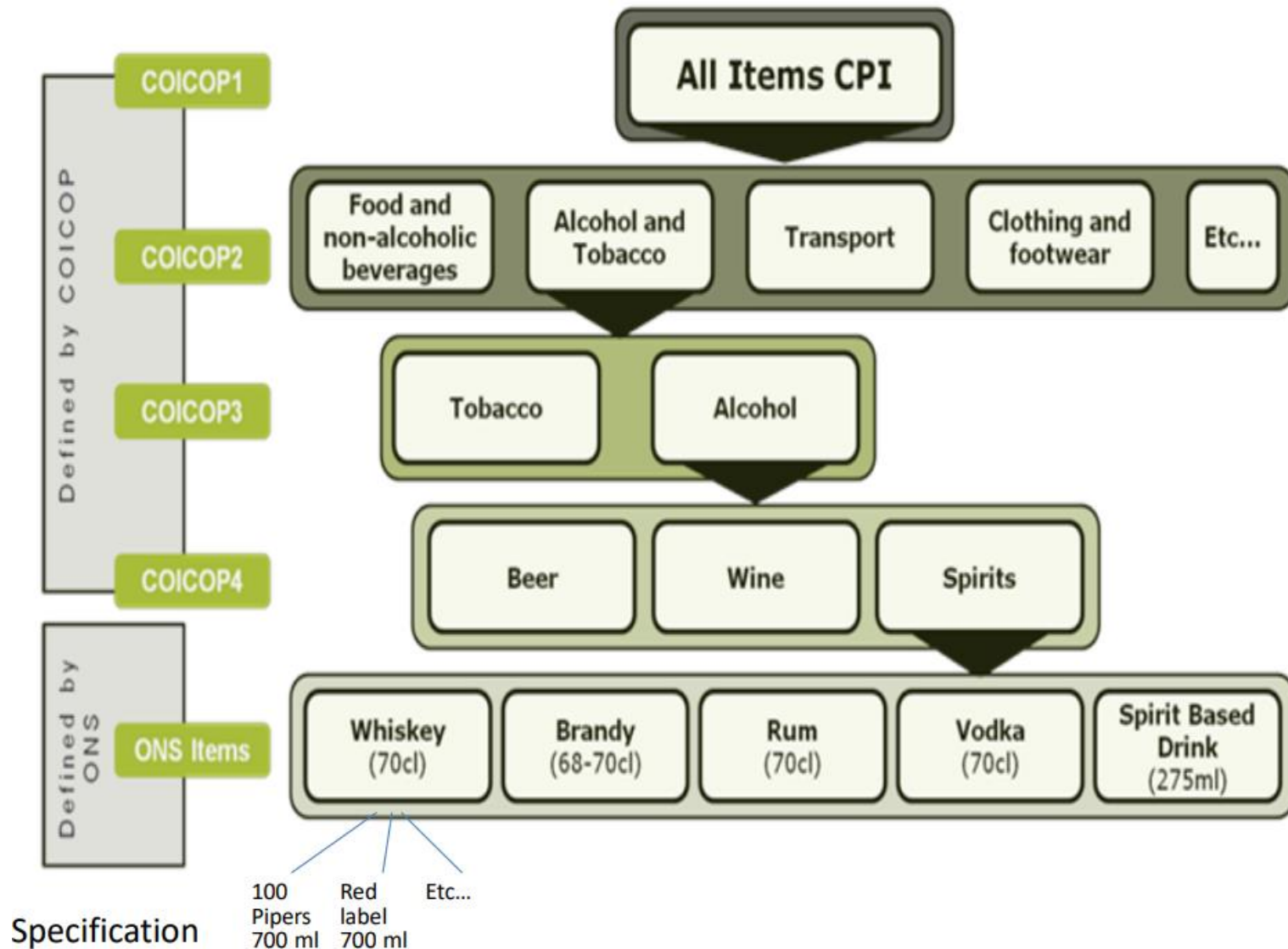
Losers

- Retired on fixed incomes
- Lenders if real interest rates are negative
- Savers if real returns are negative
- Workers in low paid jobs

Thailand's current consumption basket



CPI commodity structure



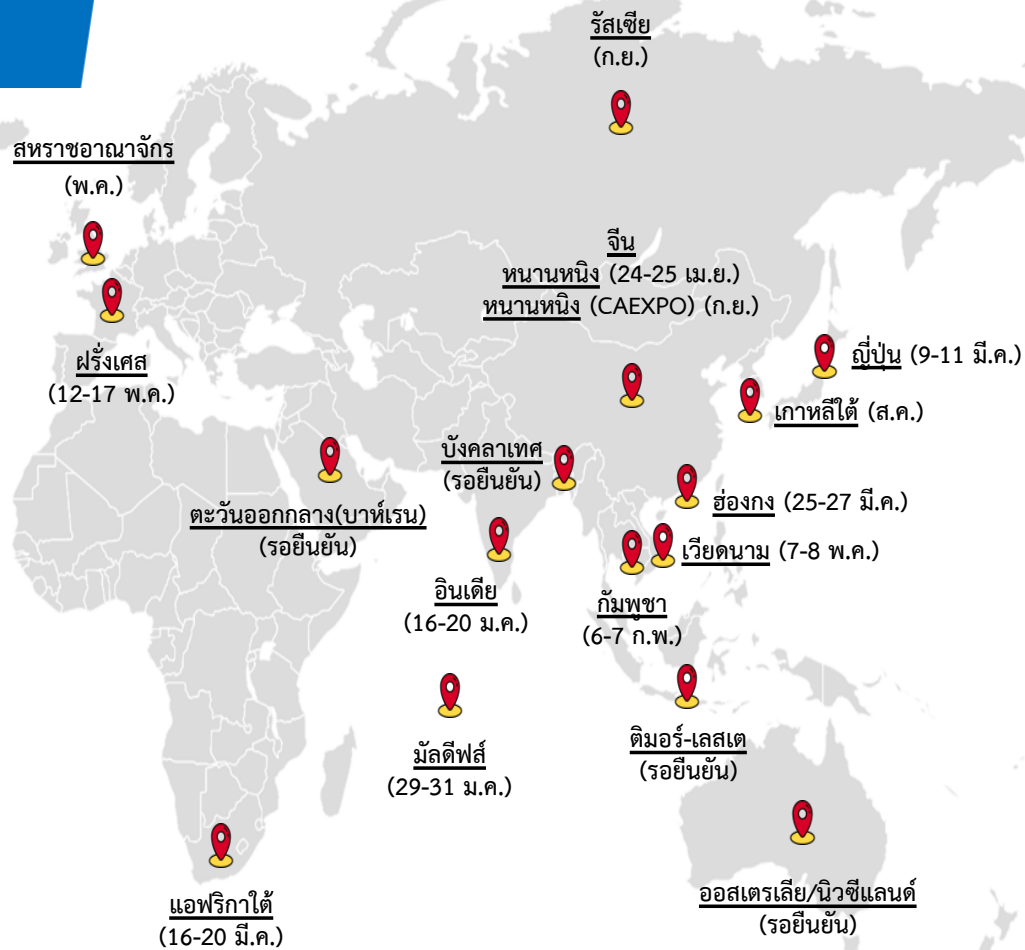
Way forward for CPI measurement

- Online prices of goods and services
- CPI workers
- Quality adjustment
- Scanner data and seeking more cooperation from retailers

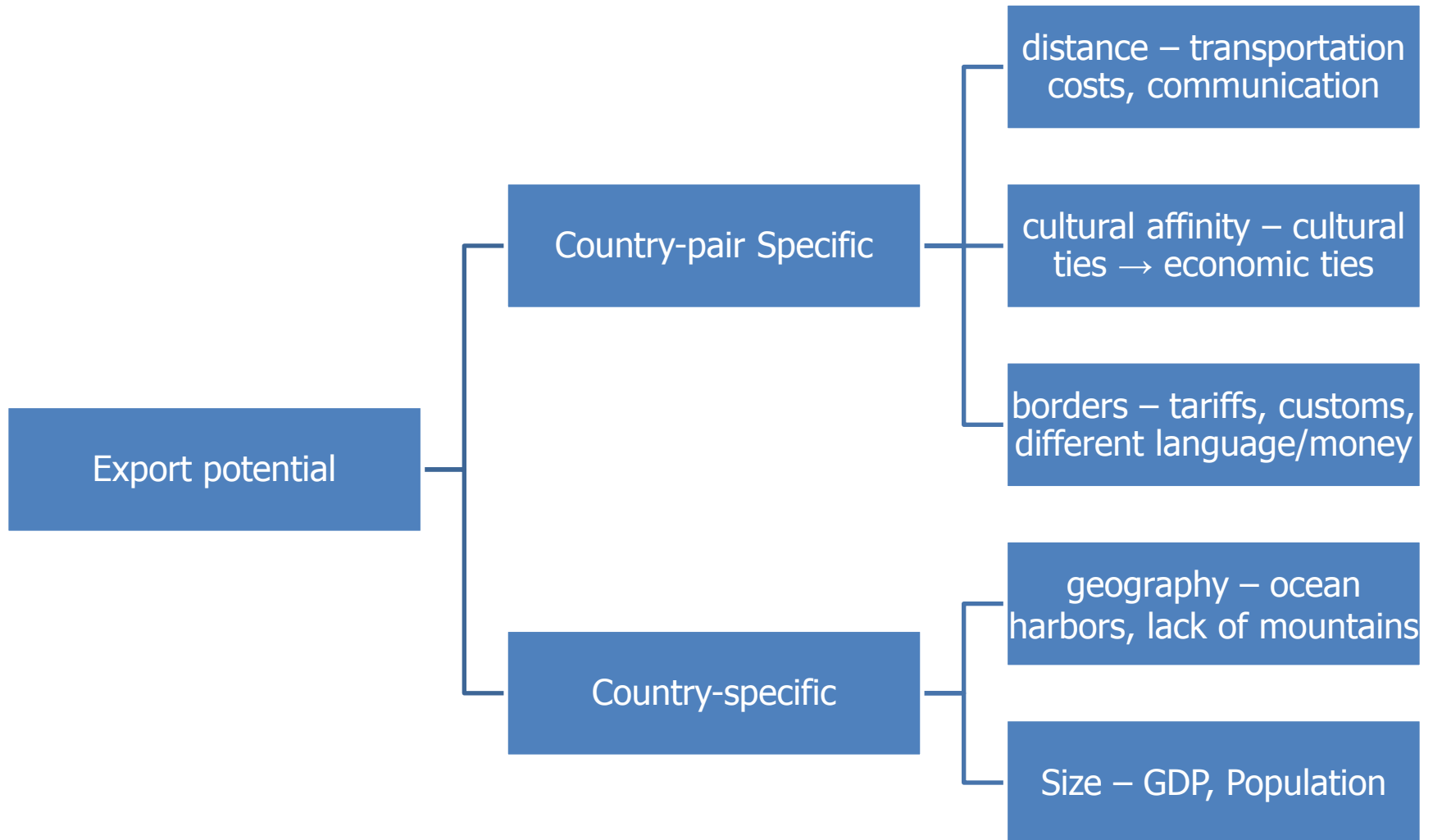


Deputy PM will lead the Thai delegation to promote exports in 17 markets

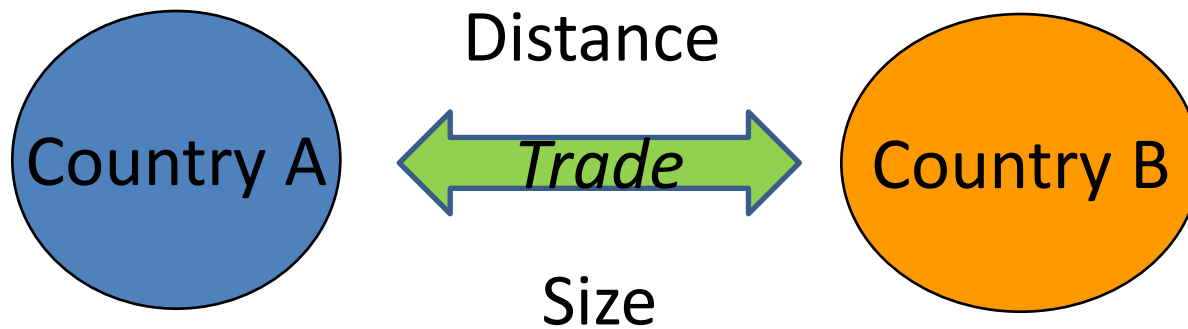
1. อินเดีย
2. มัลดีฟส์
3. กัมพูชา
4. ญี่ปุ่น
5. บาห์เรน
6. แอฟริกาใต้
7. ฮองกง
8. จีน (หนานหนิง)
9. เวียดนาม
10. ฝรั่งเศส
11. สหราชอาณาจักร
12. ออสเตรเลียและนิวซีแลนด์
13. เกาหลีใต้
14. บังกลาเทศ
15. รัสเซีย
16. ทิมอร์-เลสเต
17. จีน (CAExpo 2020)



Export Potential



Gravity model



For more details of the Gravity Model for international trade, see “A Practical Guide to Trade Policy Analysis” page 101-136 published by WTO

Gravity Model Specification

$$\ln EX_{ijt} = \alpha_0 + \alpha_1 \ln(tc_{ij}) + \alpha_2 DE_{it} + \alpha_3 DI_{jt} + e_{ijt}$$

$$tc_{ij} = d_{ij}^{\beta_1} * \exp(\beta_2 contig_{ij} + \beta_3 comlangoff_{ij} + \beta_4 comcol_{ij} + \beta_5 colony_{ij} + \beta_6 comleg_{ij} + \beta_7 comcur_{ij} + \beta_8 RTA_{ij})$$

คำอธิบายตัวแปร

i = ประเทศส่งออก j = ประเทศนำเข้า t = ปี tc = trade costs DE = ตัวแปรหุ่นประเทศส่งออก DI = ตัวแปรหุ่นประเทศนำเข้า

d = ระยะทางระหว่างประเทศส่งออกและประเทศนำเข้า (กิโลเมตร)

contig = 1 หากประเทศนำเข้ามีอาณาเขตติดต่อกับประเทศส่งออก , contig = 0 หากประเทศนำเข้าไม่มีอาณาเขตติดต่อกับประเทศส่งออก

comlang_off = 1 หากประเทศนำเข้าใช้ภาษาราชการเหมือนกับประเทศส่งออก , comlang_off = 0 หากประเทศนำเข้าใช้ภาษาราชการไม่เหมือนกับประเทศส่งออก

comcol = 1 หากมีการอพยพย้ายถิ่นฐาน ก่อนปี 1945, comcol = 0 หากมีการอพยพย้ายถิ่นฐาน หลังปี 1945

colony = 1 ประเทศส่งออกหรือประเทศนำเข้าเคยตกเป็นอาณานิคมกัน, colony = 0 ประเทศส่งออกหรือประเทศนำเข้าไม่เคยตกเป็นอาณานิคมกัน

comleg = 1 หากประเทศส่งออกกับประเทศนำเข้ามีการใช้ระบบกฎหมายเดียวกัน, comleg = 0 หากประเทศส่งออกกับประเทศนำเข้ามีการใช้ระบบกฎหมายต่างกัน

comcur = 1 หากประเทศส่งออกกับประเทศนำเข้ามีการใช้สกุลเงินเดียวกัน, comcur = 0 หากประเทศส่งออกกับประเทศนำเข้ามีการใช้สกุลเงินต่างกัน

RTA = 1 หากประเทศส่งออกมีข้อตกลงการค้ากับประเทศนำเข้า , RTA = 0 หากประเทศส่งออกไม่มีข้อตกลงการค้ากับประเทศนำเข้า

$DE_{it} = 1$ หากประเทศส่งออกคือประเทศ i และปีที่ส่งออกคือ t $DE = 0$ หากประเทศส่งออกไม่ใช่ประเทศ i หรือปีที่ส่งออกไม่ใช่ t DE ควบคุมปัจจัยเฉพาะของแต่ละประเทศที่ส่งเสริมหรือเป็นอุปสรรคต่อการส่งออก

$DI_{jt} = 1$ หากประเทศนำเข้าคือประเทศ j และปีที่นำเข้าคือ t $DI = 0$ หากประเทศนำเข้าไม่ใช่ประเทศ j หรือปีที่นำเข้าไม่ใช่ t DI ควบคุมปัจจัยเฉพาะของแต่ละประเทศที่ส่งเสริมหรือเป็นอุปสรรคต่อการนำเข้า

หมายเหตุ

- ที่มาของข้อมูล: <http://www.cepii.fr/>, UN Comtrade, World Development Indicators 2014

- วิธีการประมาณการ = panel data estimation

- ปีที่ใช้ประมาณการแบบจำลอง คือ 2011-2013

- จำนวนประเทศส่งออก = 158 ประเทศ จำนวนประเทศนำเข้า = 215 ประเทศ

- RTA ข้อมูลยังไม่พร้อม จึงยังไม่รวมอยู่ในแบบจำลองนี้

Estimation Result of Gravity Model for Thailand

$$\begin{aligned} \ln EX_{THA,j,2013} = & \alpha_0 - 1.78d_{THA,j} \\ & + 0.73contig_{THA,j} \\ & + 0.51comlangoff_{THA,j} + 0.68comcol_{THA,j} \\ & + 0.98colony_{THA,j} \\ & + 0.33comleg_{THA,j} + 0.23comcur_{THA,j} \\ & + 9.4THA_{2013} + \alpha_3 DI_{jt} \end{aligned}$$

```
Random-effects GLS regression              Number of obs      =      54290
Group variable: id                        Number of groups   =       158

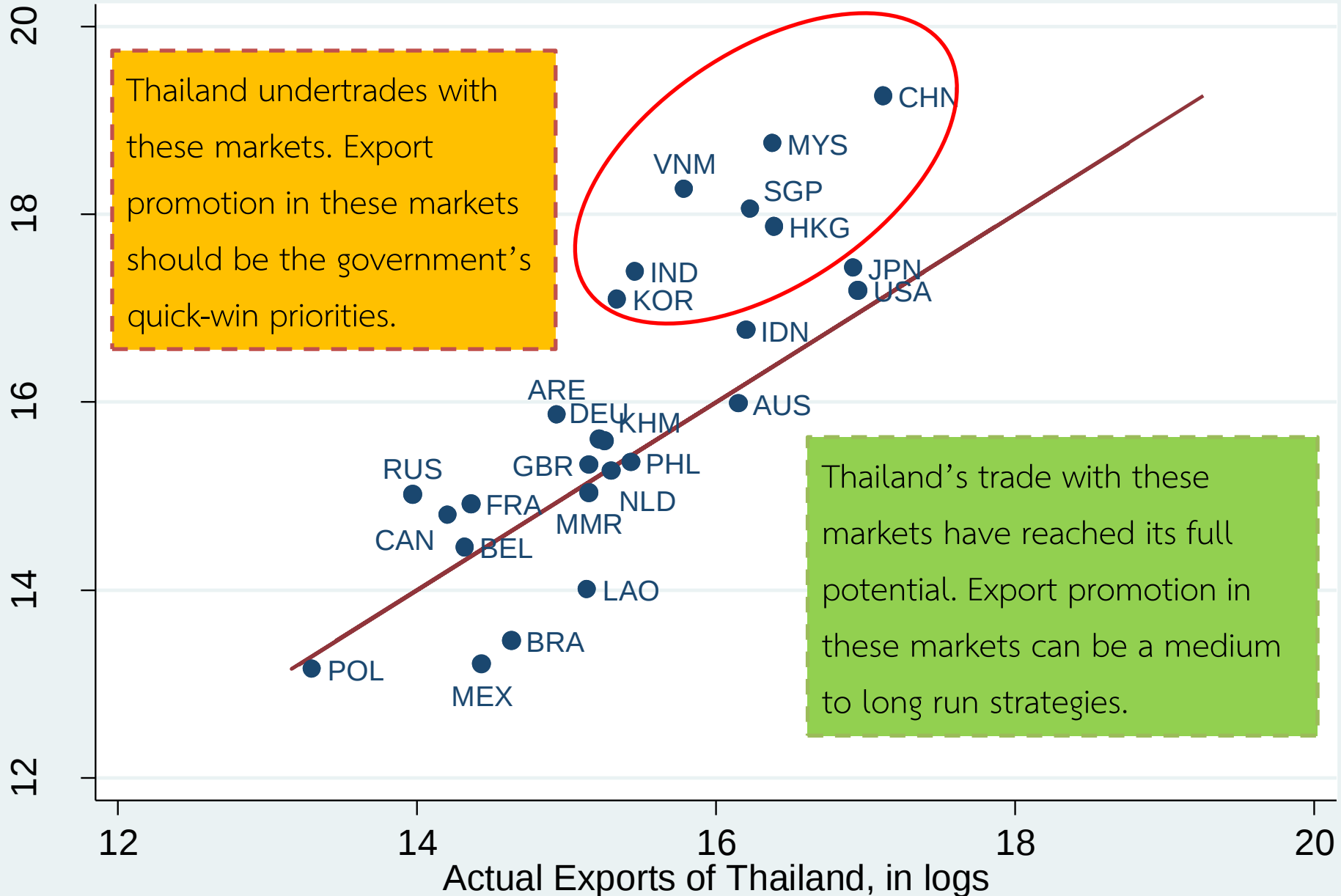
R-sq:  within  = 0.6508                    Obs per group: min =         7
       between = 1.0000                    avg      =      343.6
       overall  = 0.7477                    max      =      636

                                           Wald chi2(157)      =          .
corr(u_i, X)      = 0 (assumed)            Prob > chi2         =          .
```

(Std. Err. adjusted for 158 clusters in id)

value	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
distw	-1.781932	.0526689	-33.83	0.000	-1.885161	-1.678702
contig	.7321803	.1829397	4.00	0.000	.3736251	1.090736
comlang_off	.5095812	.0957195	5.32	0.000	.3219744	.6971879
comcol	.677356	.1320487	5.13	0.000	.4185452	.9361667
colony	.9840614	.1677238	5.87	0.000	.6553288	1.312794
comleg	.328066	.0590439	5.56	0.000	.2123421	.44379
comcur	.2301517	.142996	1.61	0.108	-.0501154	.5104188

Gravity Model Analysis of Thailand's Bilateral Trade

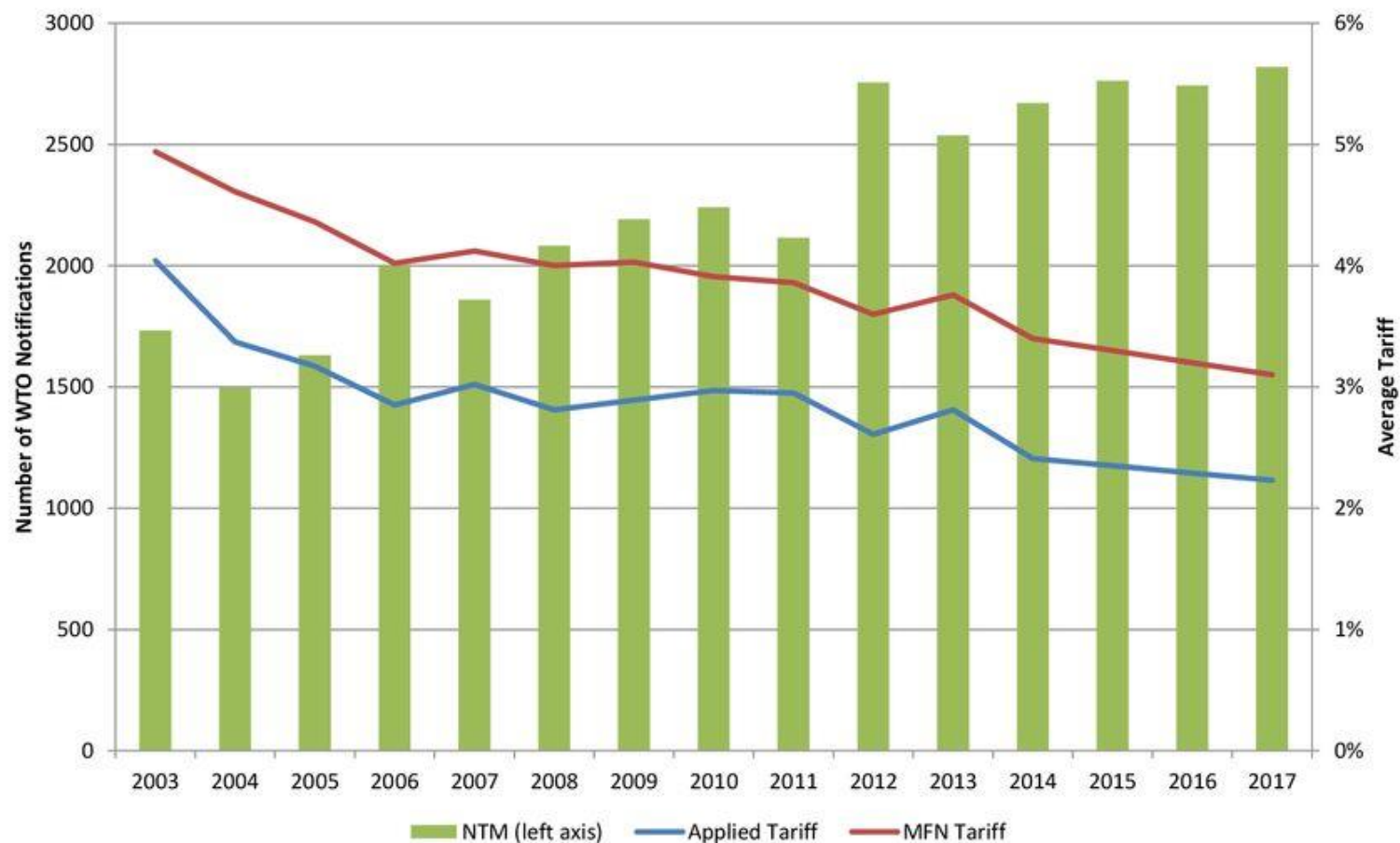


Trade negotiations

Existing FTAs	Ongoing FTA negotiations	Negotiations commencing in 2020
- AFTA - ASEAN – China - ASEAN – Japan - ASEAN – Korea, Rep - ASEAN – Australia – New Zealand - ASEAN – India - ASEAN – Hong Kong - Thailand - Australia - Thailand – New Zealand - Thailand – Peru - Thailand – Chile - Thailand - India	- RCEP - Thailand – Pakistan - Thailand- Turkey - Thailand- Sri Lanka - BIMSTEC FTA (Bangladesh Sri Lanka India Thailand Myanmar Nepal and Bhutan)	- Thailand – EU - Thailand – EFTA (Iceland Lichtenstein Norway and Switzerland) - Thailand – UK - Thailand - Eurasian Economic Union (EAEU) (Armenia Belarus Kazakhstan Kyrgyzstan and Russia) - Thailand – Bangladesh - Thailand – Hong Kong - CPTPP

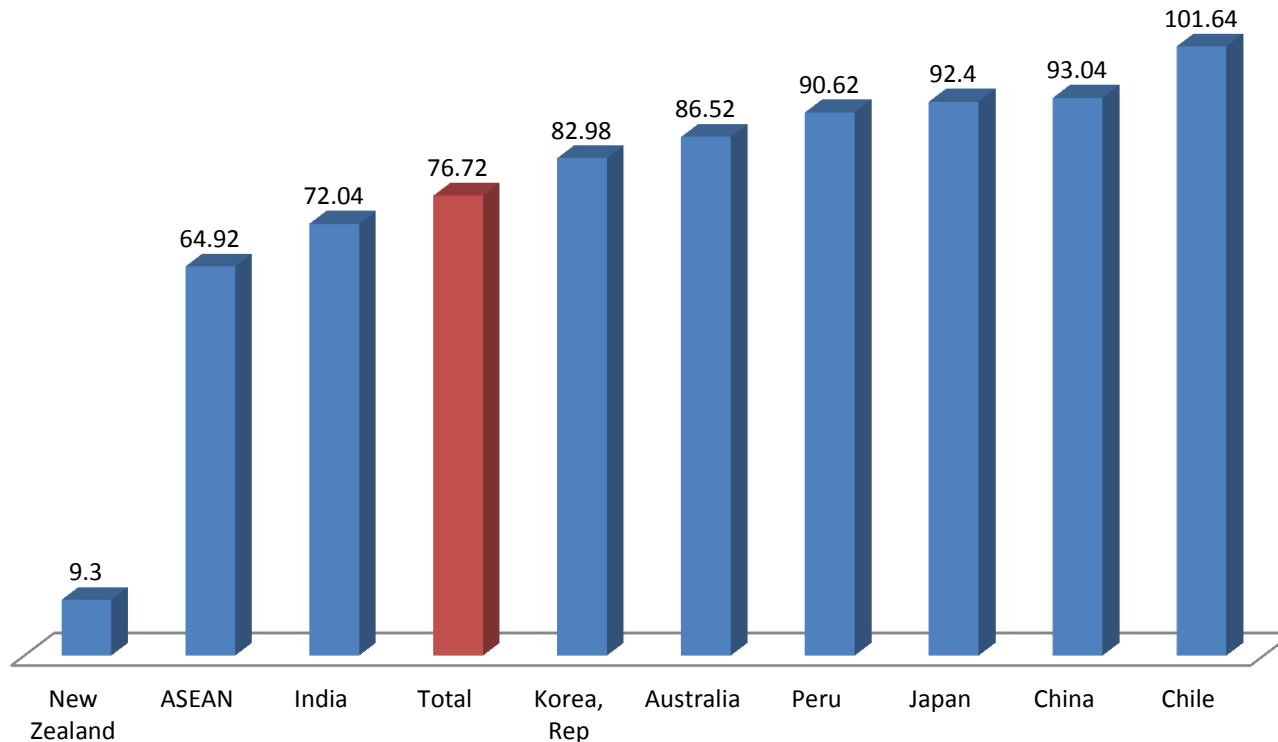
NTM are becoming very prominent

Trends: tariffs and non-tariffs measures



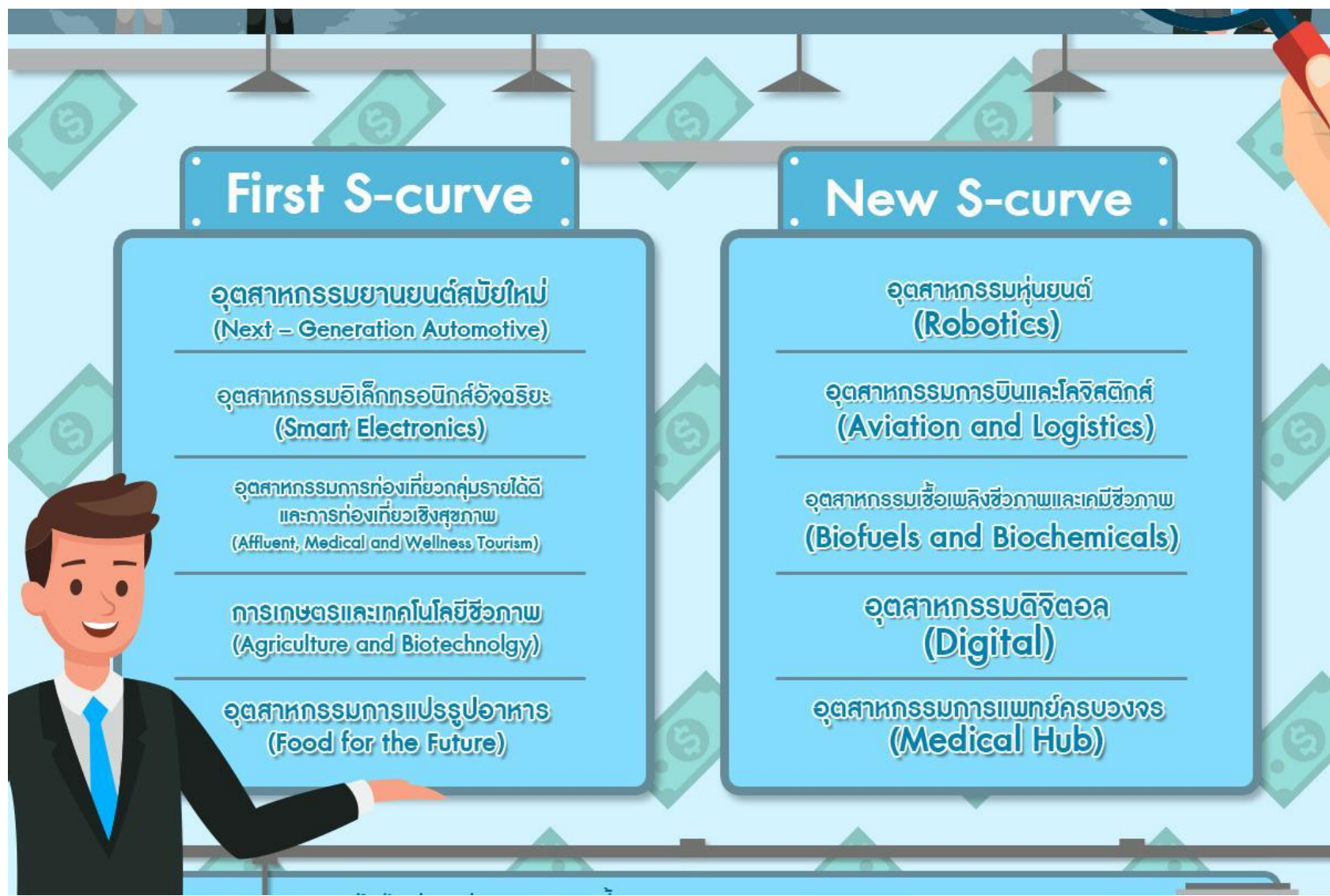
The number of FTAs is not as important as
how much FTAs are utilized.

Thailand's FTA Utilization (January – October 2019)



Source: Department of Foreign Trade

Thailand 4.0 and EEC



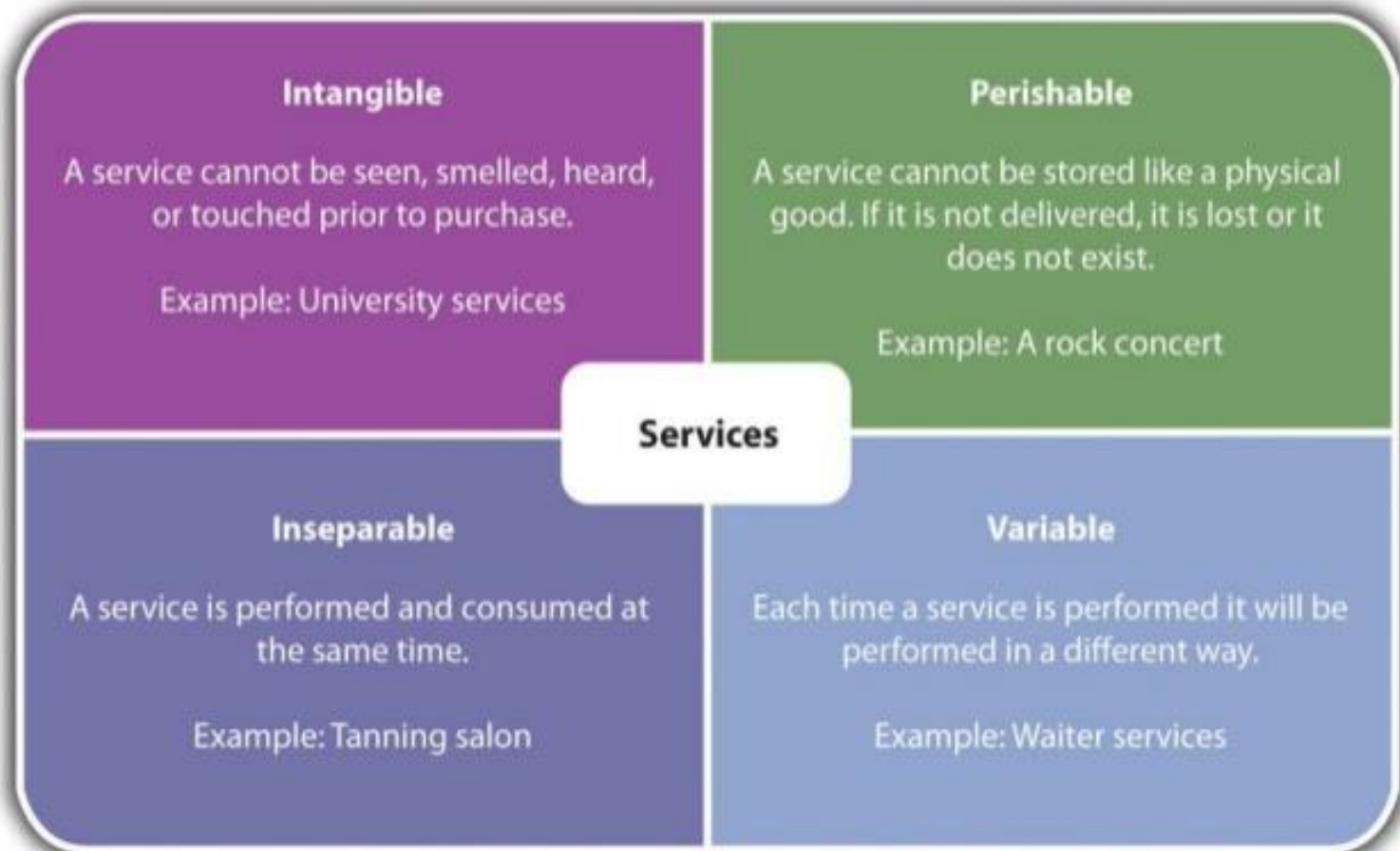
Digital technology and smart grocery store

- E-commerce
- E-logistics
- E-payments



Service sector

Distinctive Characteristics of Services

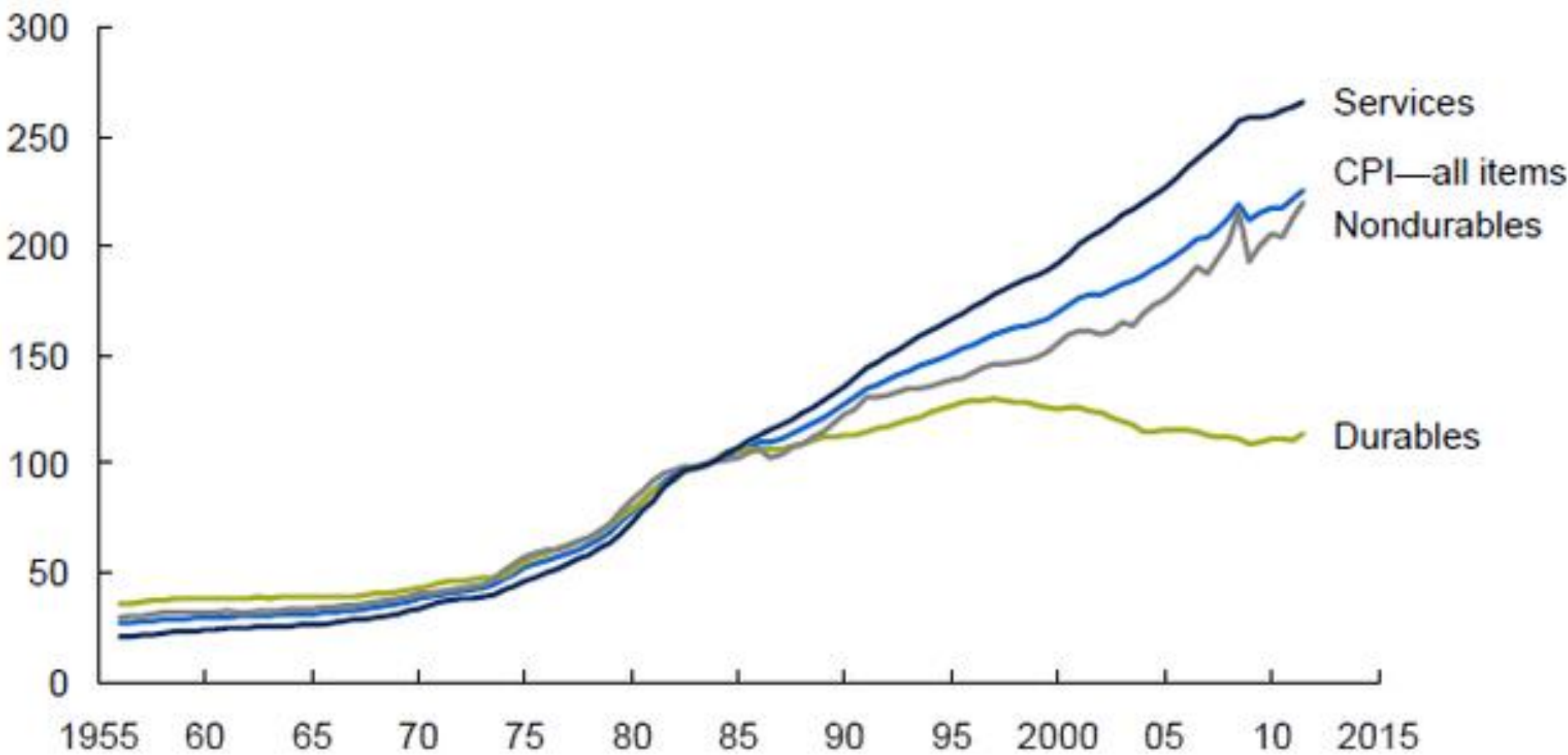


Which one is more expensive?



Manufacturing productivity gains are passed on to consumers in the form of lower prices

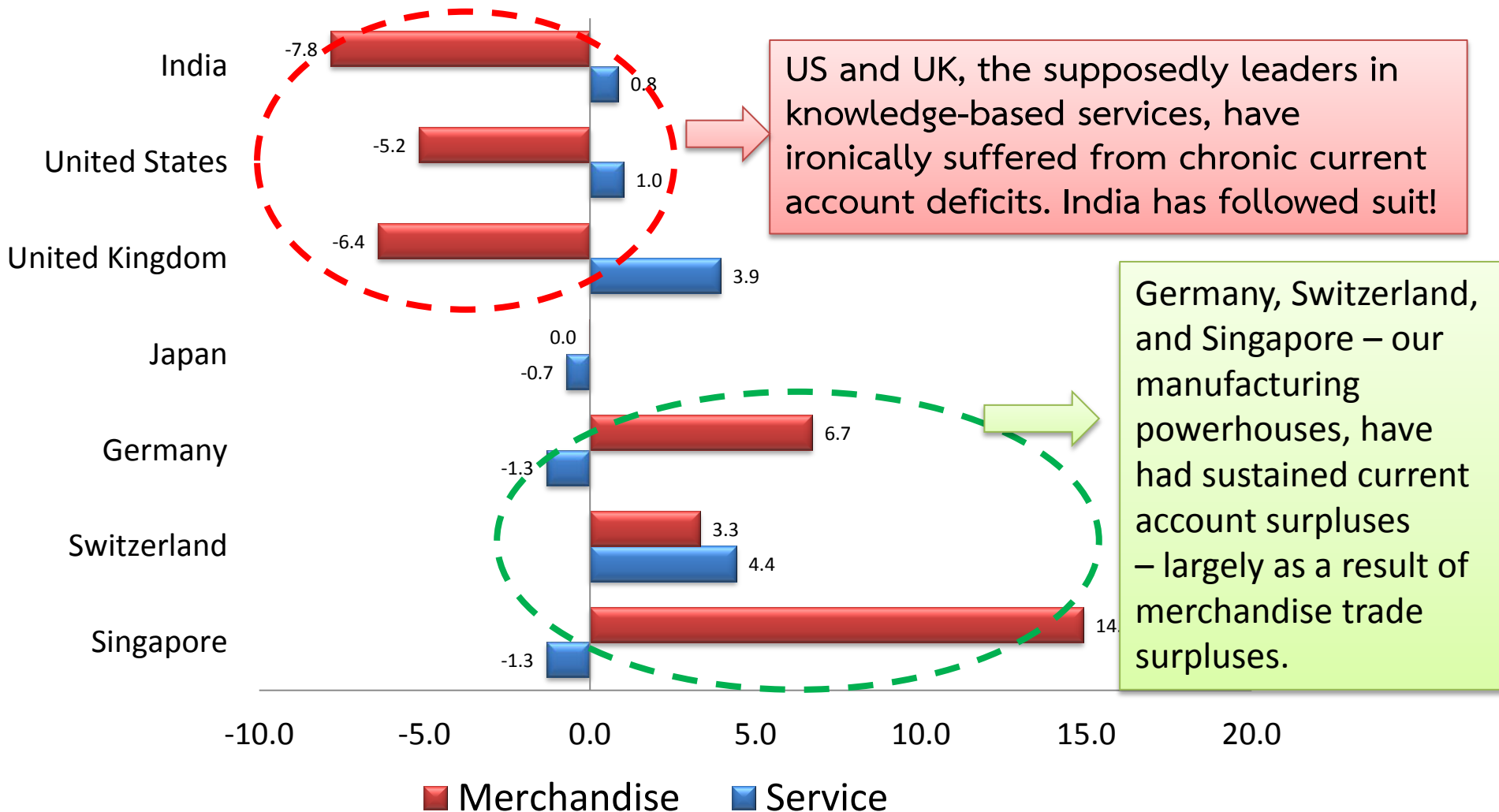
Seasonally adjusted, monthly consumer price index (CPI) for US urban consumers (current series)
100 = 1982–84



NOTE: Uses seasonally adjusted monthly data for each January and July.
SOURCE: US Bureau of Labor Statistics (BLS); McKinsey Global Institute analysis

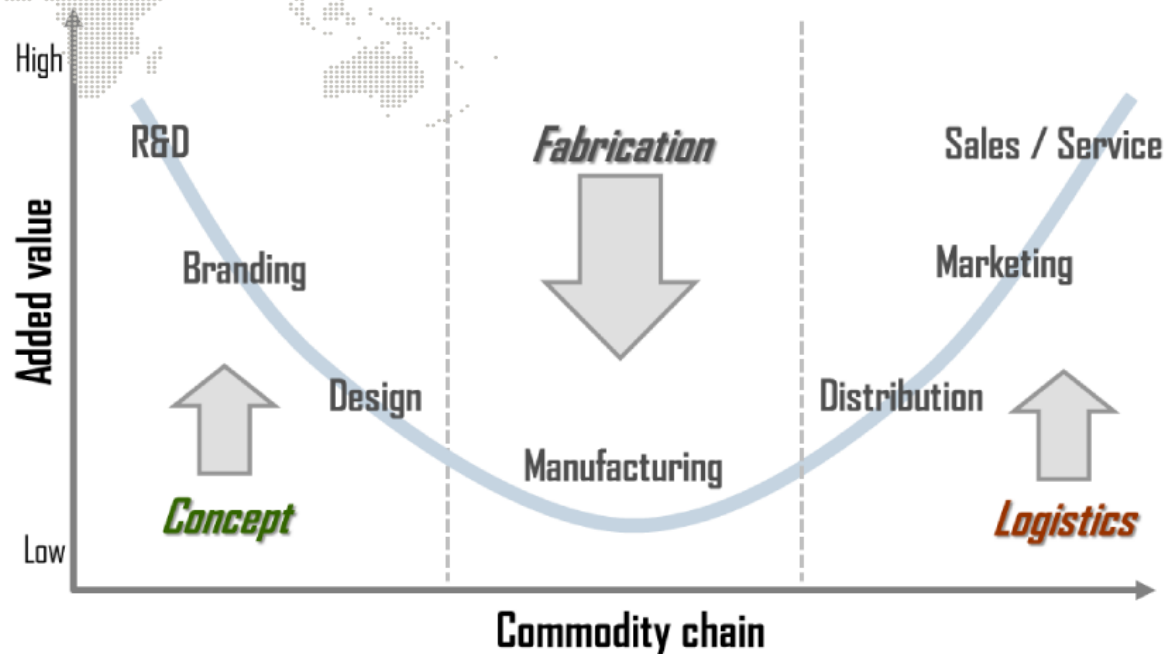
Service-based success story? The importance of trade in goods has never receded.

Trade balance as % of GDP, Average 2005-2014 (current US\$)





Services are increasingly embedded in manufactures. More productive services, therefore, mean more productive manufacturing



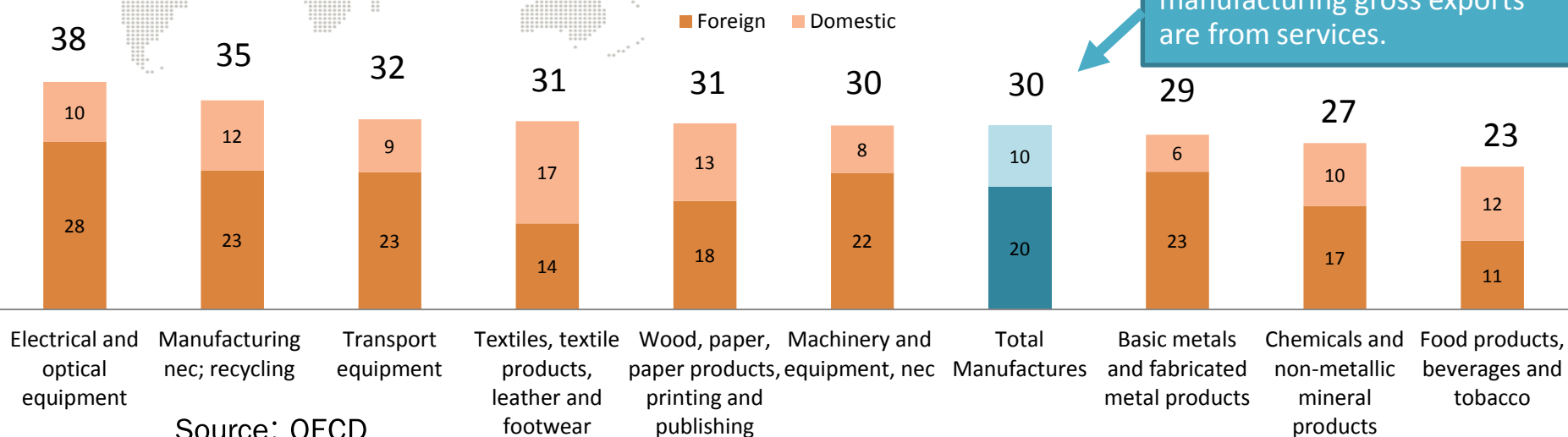
Services contribute to growth of manufacturing.

- Services as a glue and facilitator of GVCs.
- Services as outsourced inputs in global value chains
- Services as in-house inputs in global value chains



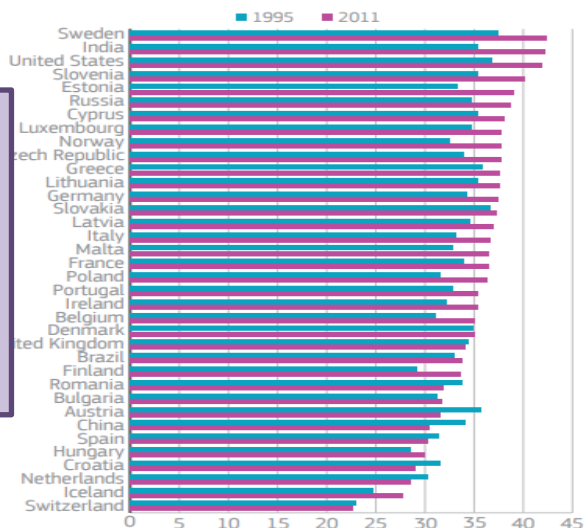
Servicification of Manufacturing

Service value added content of exports, Thailand, 2011 (%)



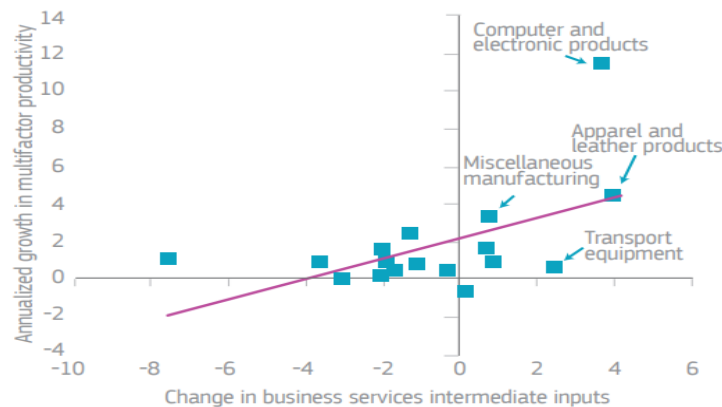
Almost one third of manufacturing gross exports are from services.

share of service value added in manufactured goods has increased from the already high levels.



US manufacturing sectors that buy more business services record greater productivity growth

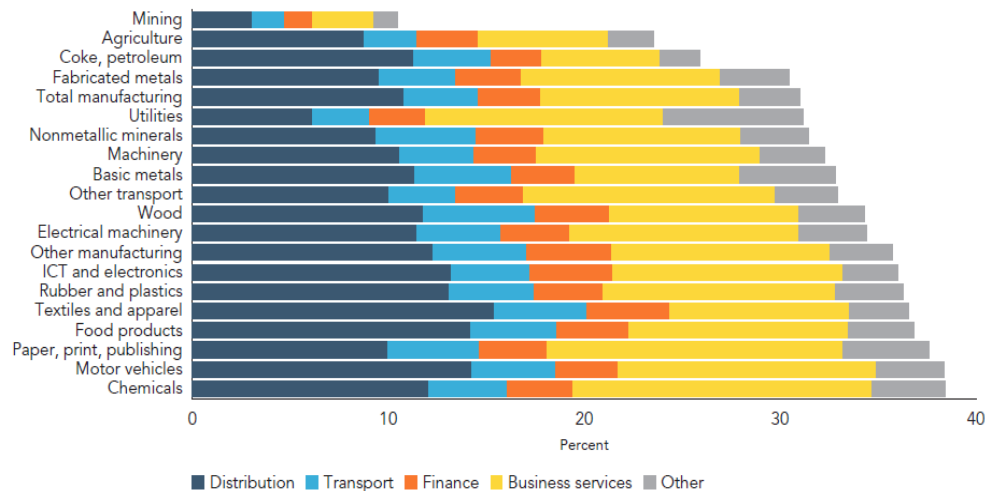
Percentage, 2002-2011 average



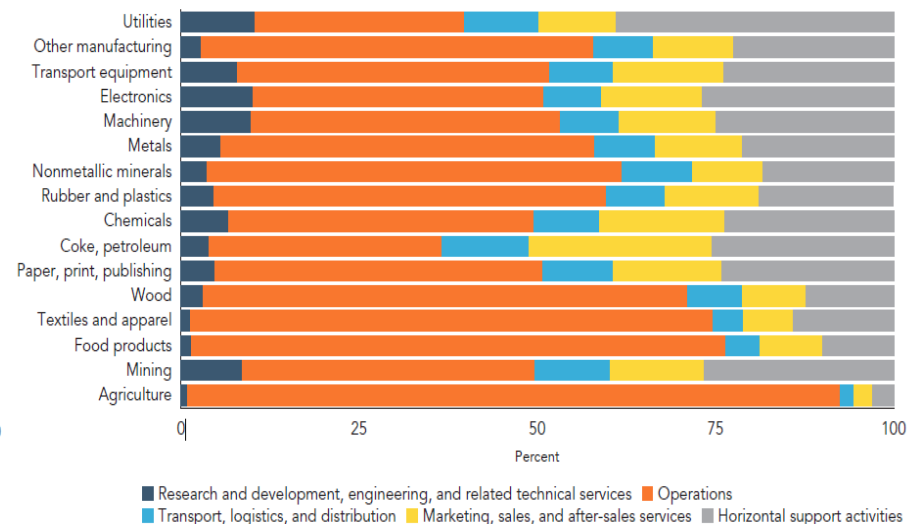


Servicification of Manufacturing

Decomposition of services value added in world gross exports, by manufacturing industry, 2011

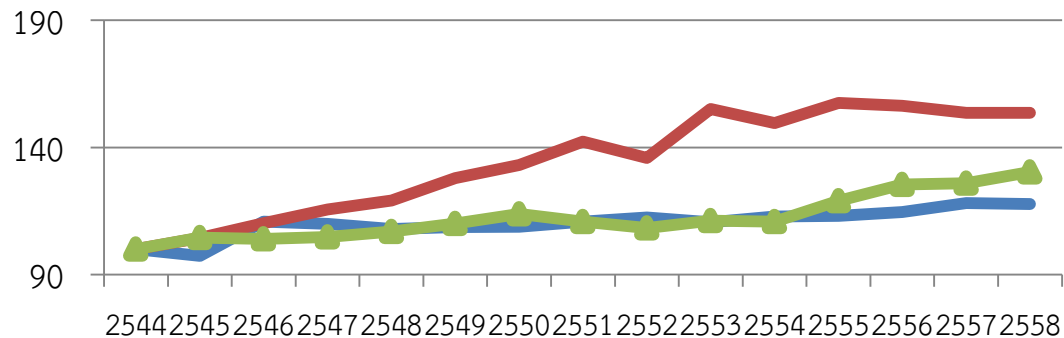


Decomposition of jobs embodied in gross manufacturing exports, by business function by industry, 2011



Distribution and business services account for 2/3 of manufacturing servicification. Transport equipment, Electronics, Machinery, Utilities are relatively R&D intensive.

Source: Global value chain development report 2017



Manufacturing

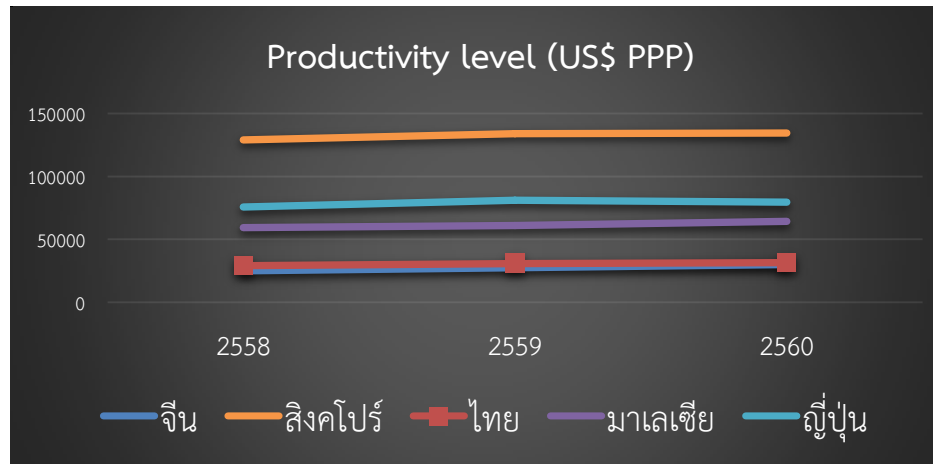
Service

Agriculture

- Service productivity must be increased.
- Data, data, data – service data are insufficient, fragmented, and largely undisclosed.

Source: Author's calculation using data from Bank of Thailand

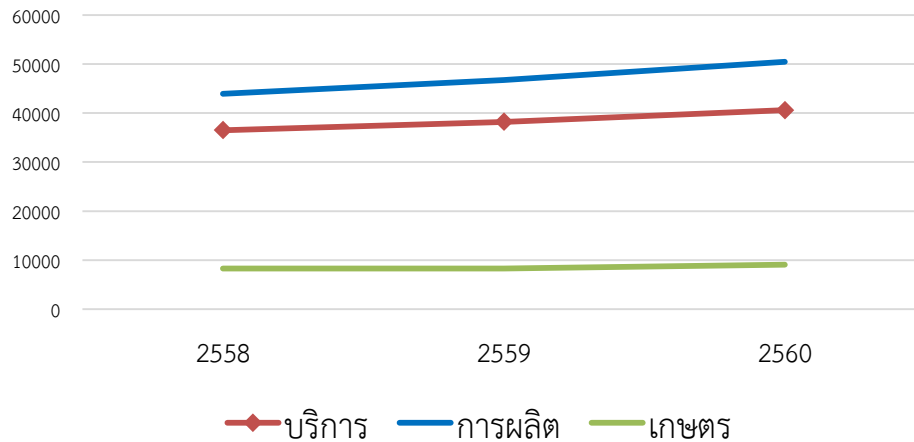
The biggest problem of Thailand's service sector is the low productivity



Thailand's service sector is less productive than Malaysia, China, and developed countries.

Source: IMD World Competitiveness

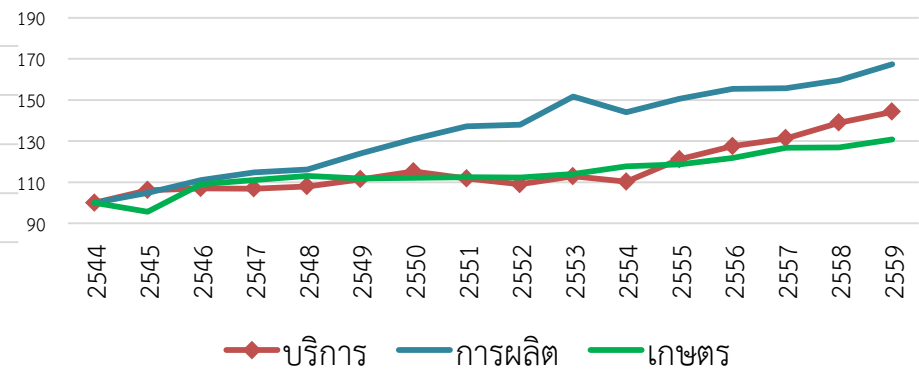
Productivity level by sector (US\$ PPP)



Service sector is less productive than manufacturing but more so than agriculture.

Source: IMD World Competitiveness

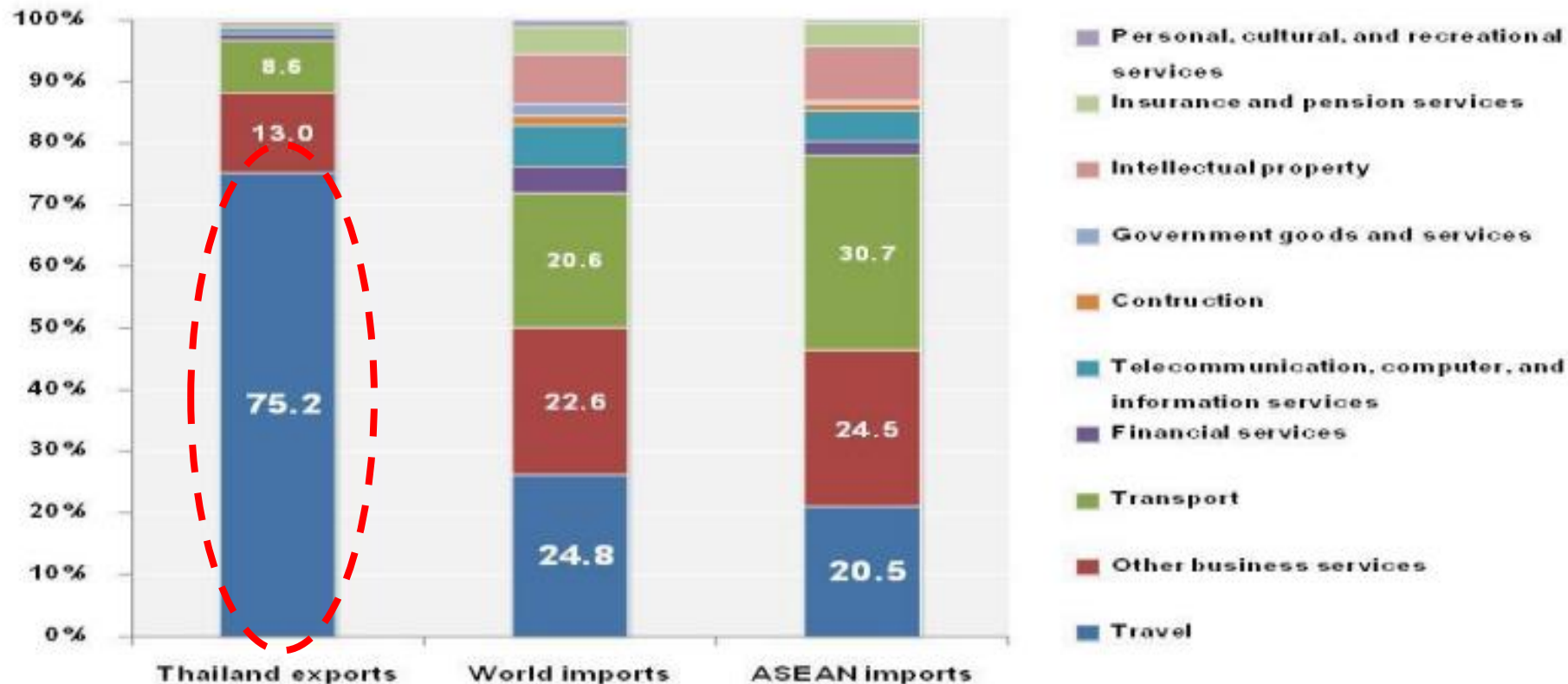
Index of labor productivity per hours worked for Thailand



ระดับผลิตภาพแรงงานของภาคบริการไทยขยายตัวช้า เมื่อเทียบกับภาคอุตสาหกรรมการผลิต แต่เร็วกว่าภาคเกษตรเล็กน้อย

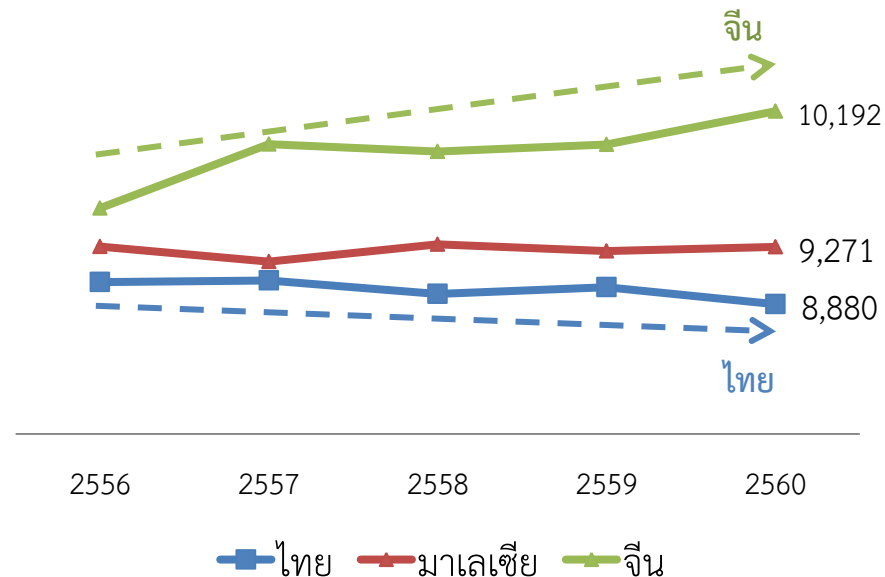
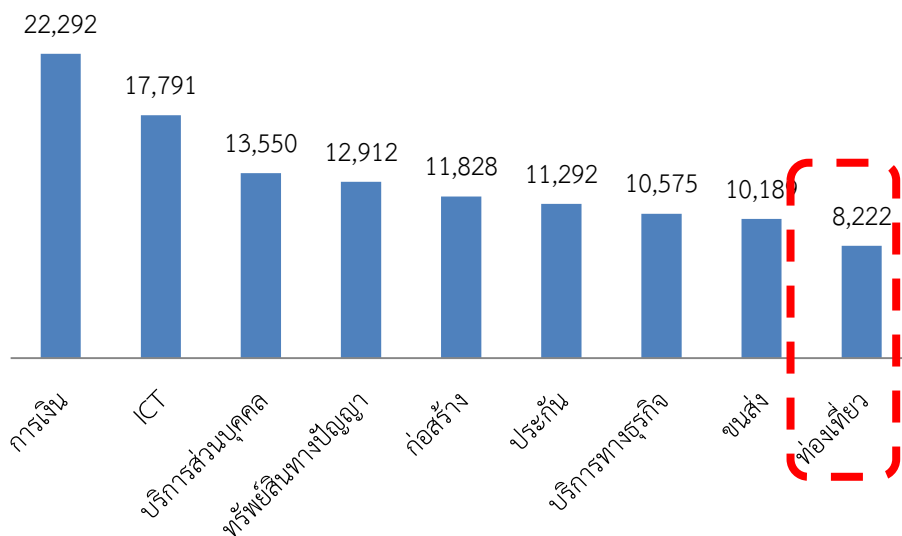
Source: Author's calculation using data from BOT.

▶ Dominated by tourism, the structure of Thailand's service sector is not in line with the global demand.



Source: Author's calculation using data from Trademap (2017)

Dominated by tourism sector, Thailand's service sector is less and less sophisticated over time.



More sophisticated

Less sophisticated

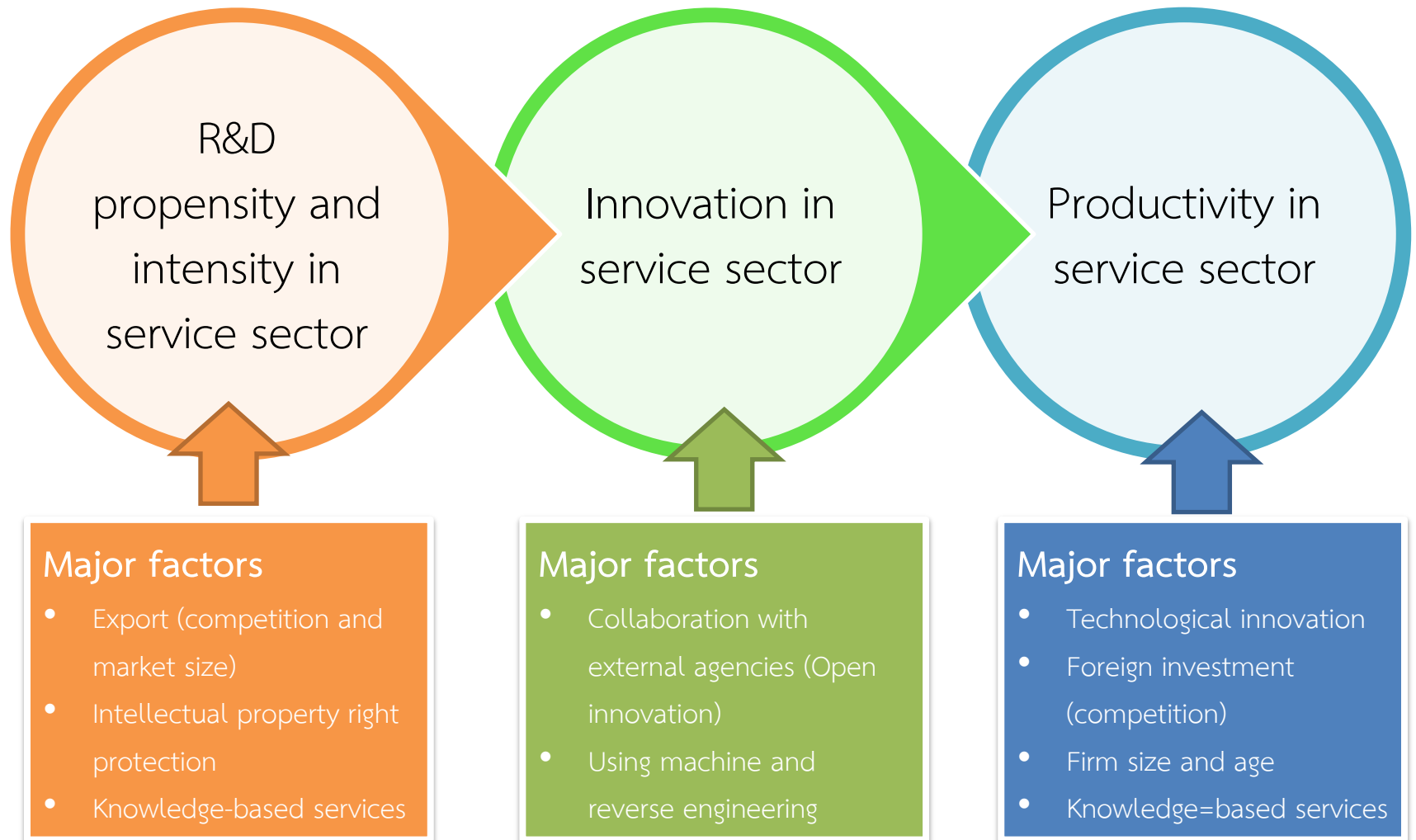
Thailand's service exports are dominated by the tourism sector which is a traditional, low-productivity, and less sophisticated service.

Sophistication of Thailand's service exports is lower than China and Malaysia and is decreasing while that of China is on the rise.

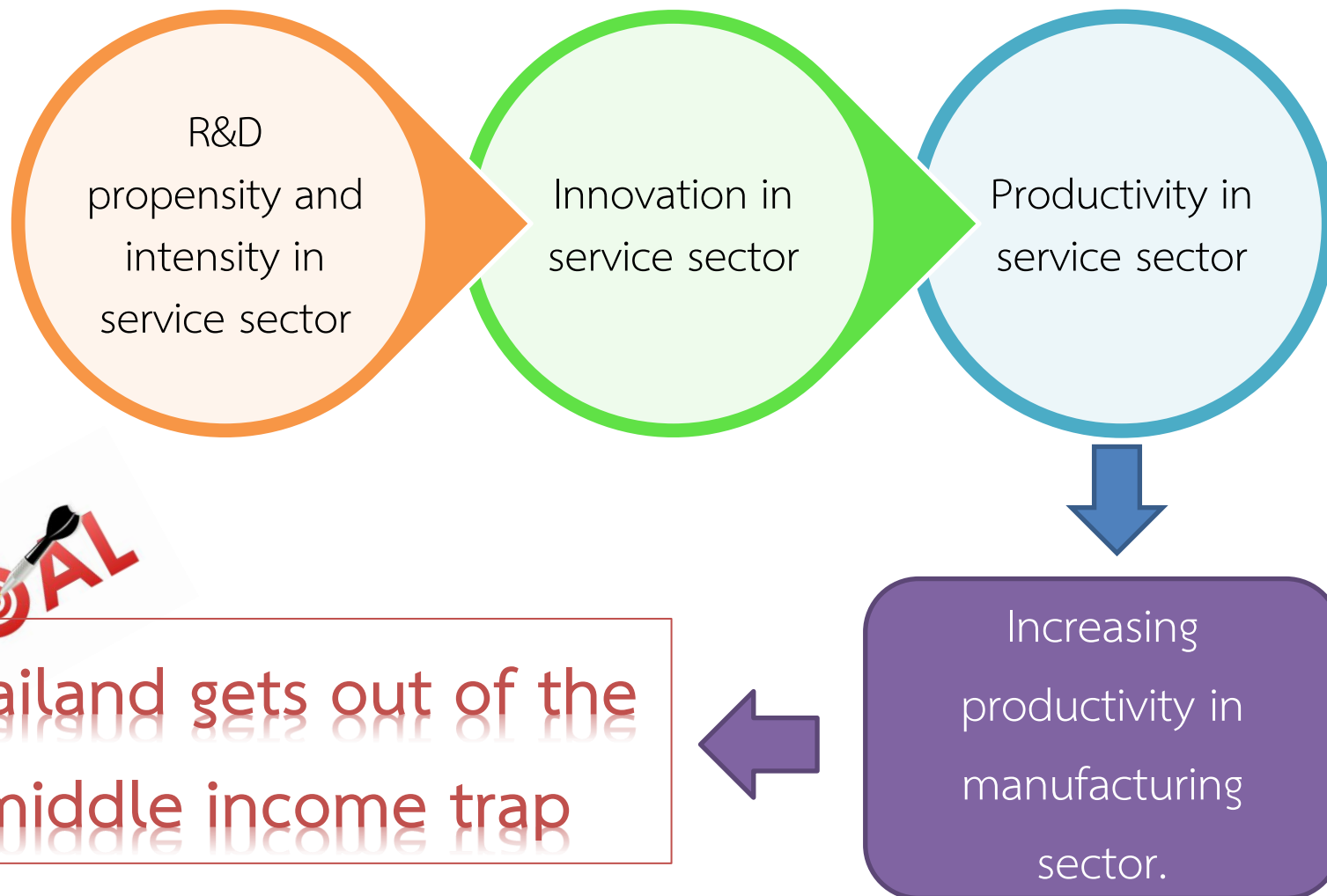
Source: Mishra, Lundstorm Gable, and Anand (2011)

Source: Author's calculation using sophistication values from Mishra, Lundstorm Gable, and Anand (2011)

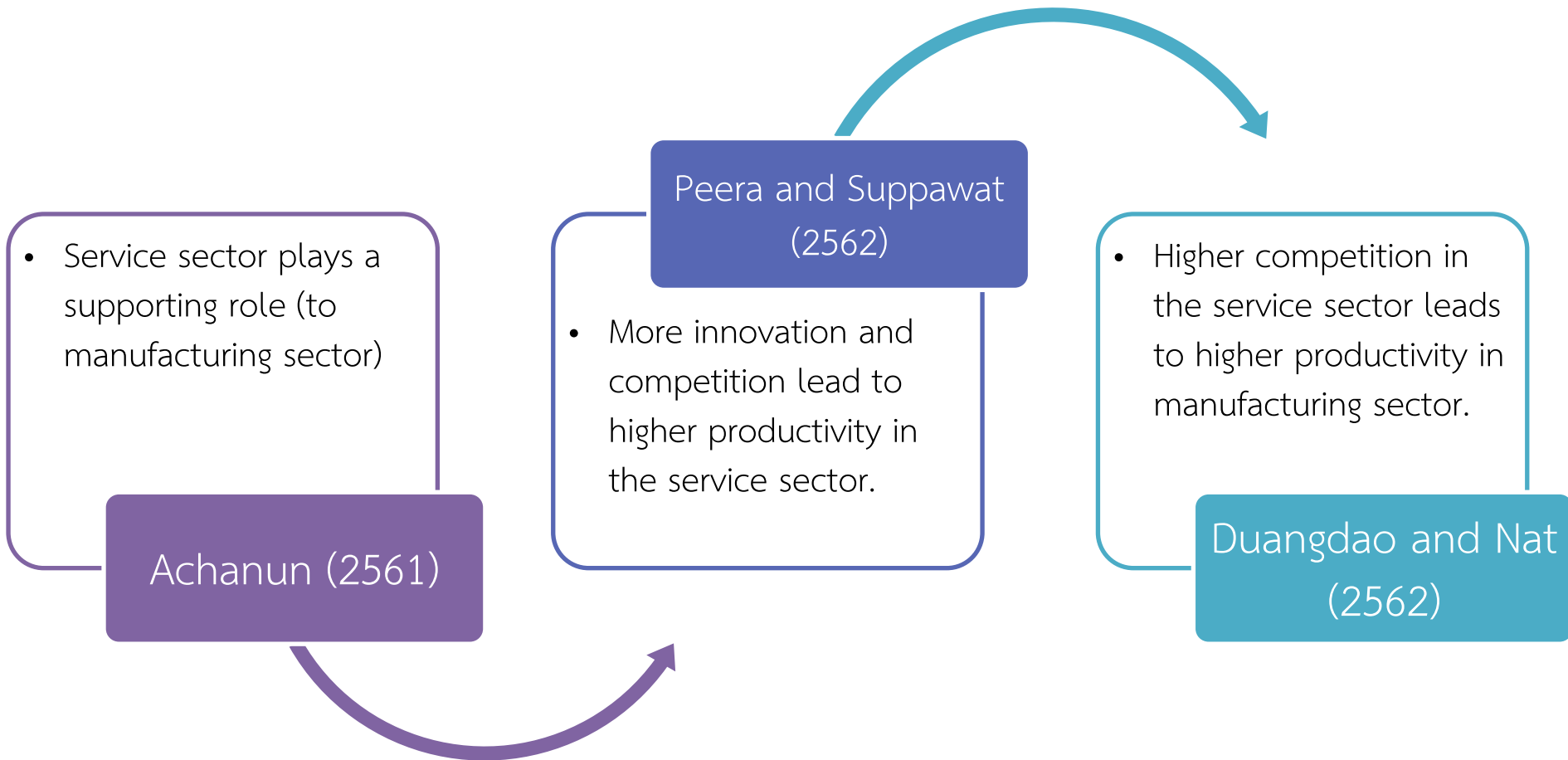
There is a statistically significant link between R&D, innovation, and productivity in service sector



▶ In addition, higher competition in service sector can significantly boost productivity in manufacturing sector.



Big picture of the literature on Thailand's research on service sector





We can do it!

When I spoke to some managers they informed me that it was impossible to change the habits of national heritage.”

An Australian management consultant on Japan in 1915

The Germans are a “plodding, easily contented people ... endowed neither with great acuteness of perception nor quickness of feeling ... It is long before [a German] can be brought to comprehend the bearings of what is new to him, and it is difficult to rouse him to ardour in its pursuit.”

John Russell, an English traveller, on the Germans in 1828.

Many Japanese “give an impression ... of being lazy and utterly indifferent to the passage of time.”

Sidney Gulick, an American missionary on the Japanese in 1903

The Koreans are “12 millions of dirty, degraded, sullen, lazy and religionless savages who slouch about in dirty white garments of the most inept kind and who live in filthy mud huts”.

Beatrice Webb on the Japanese and the Koreans during her 1911–12 tour of East Asia

Source: *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism* by **Ha-Joon Chang** (2008)