



Forum for
Macroeconomics and
Macroeconomic Policies

Covid-19, Global value chain and China's Foreign Trade

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Agenda

- I. Covid-19 in China and policy responses**
- II. China's foreign trade during and after pandemic**
- III. GVC, China and Corona pandemic**
- IV. Concluding remarks**

I. COVID-19 IN CHINA AND POLICY RESPONSES

Covid-19 in China and policy responses

- The COVID-19 epidemic has taken the world by surprise.
- Initially, it was seen as a Chinese, and later South-East Asian, problem.
- However, the epidemic has quickly spread to other parts of the world.

Covid-19 in China and policy responses

In China :

- **The first case** was reported in Wuhan on **27 Dec. 2019**.
- Since Dec. 31, 2019 Wuhan CDC started daily Covid-19 briefing.
- Jan.1, 2020, Wuhan seafood wholesale market was closed
- Since 3 Jan. 2020, Chinese CDC started to report daily to WHO on development of Covid-19.
- **Jan. 11, the first death** in Wuhan recorded.
- **Jan. 23. Wuhan was locked down** completely. Domestic travel was restricted.



Covid-19 in China and policy responses

- Jan. 25, The Chinese CDC issued guideline on covid-19
- Jan 26, The CNY was extended. Schools and Universities were close.
- Feb.2, Free test and treatment for all confirmed and suspicious cases
- Feb.3, Wuhan started to build "cubic hospitals", in order to accommodate all the infected persons.
- By March 11, the new cases in China has reduced to single digital.

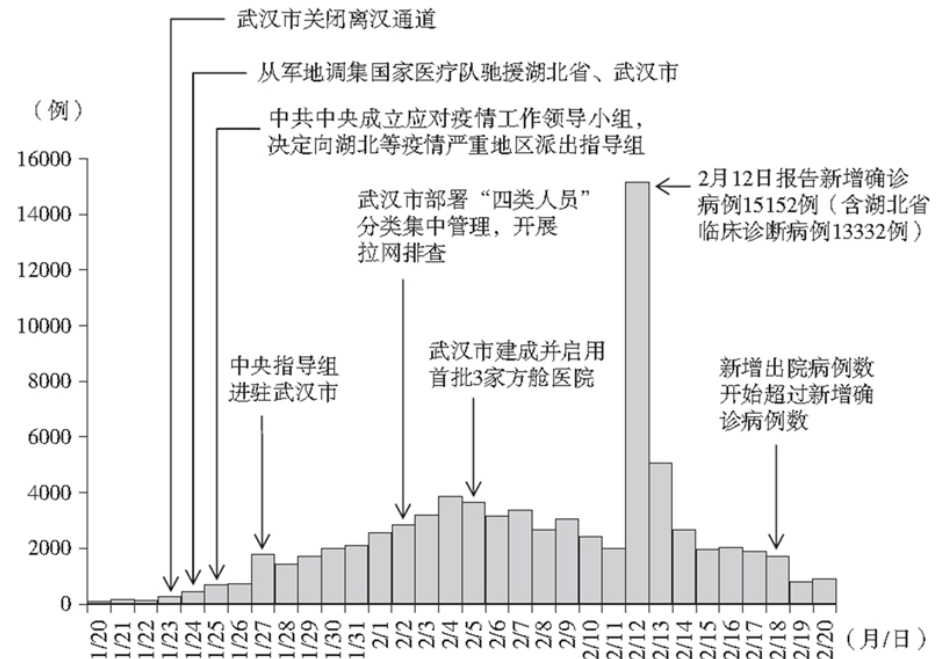
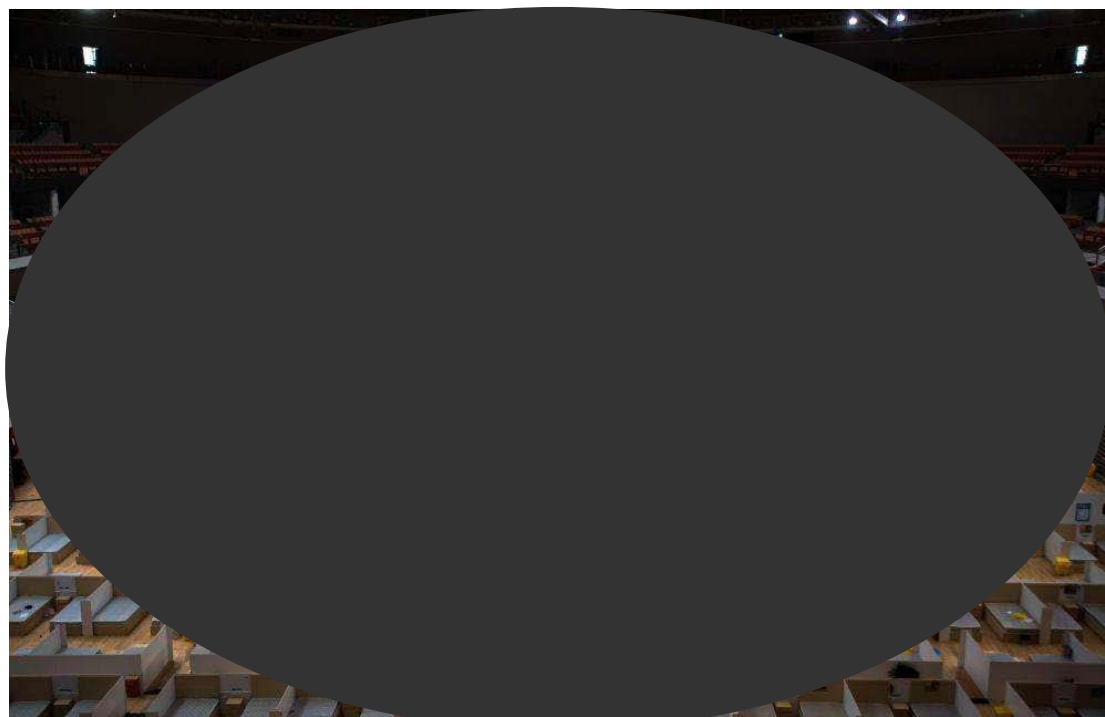
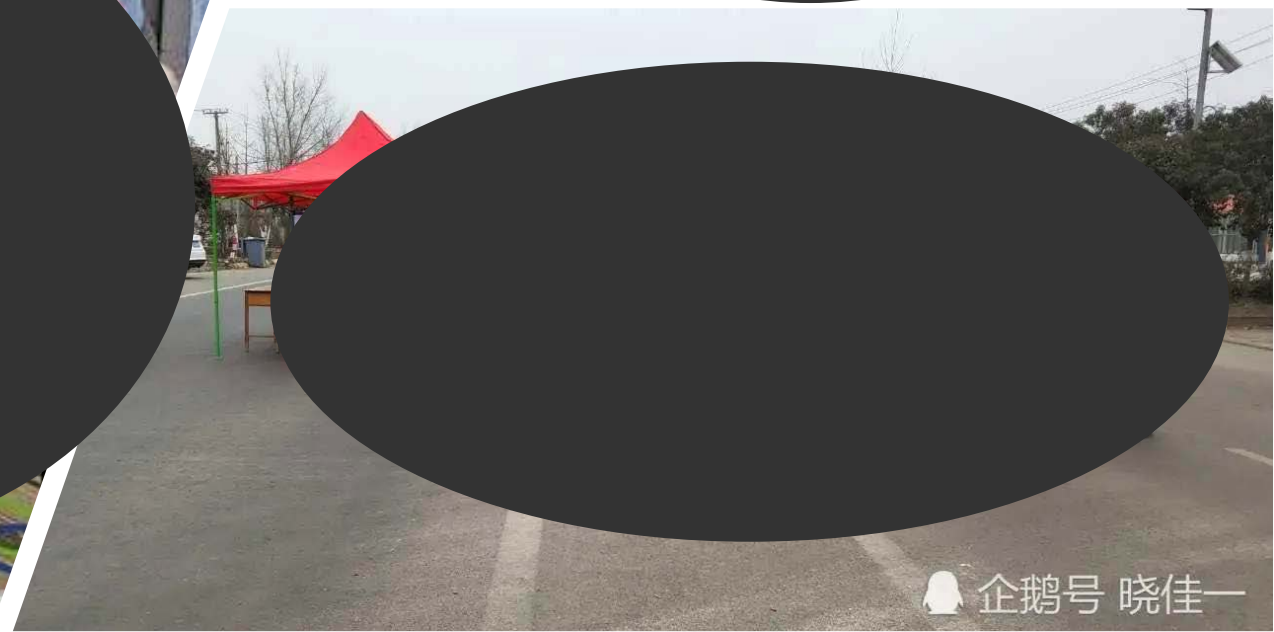
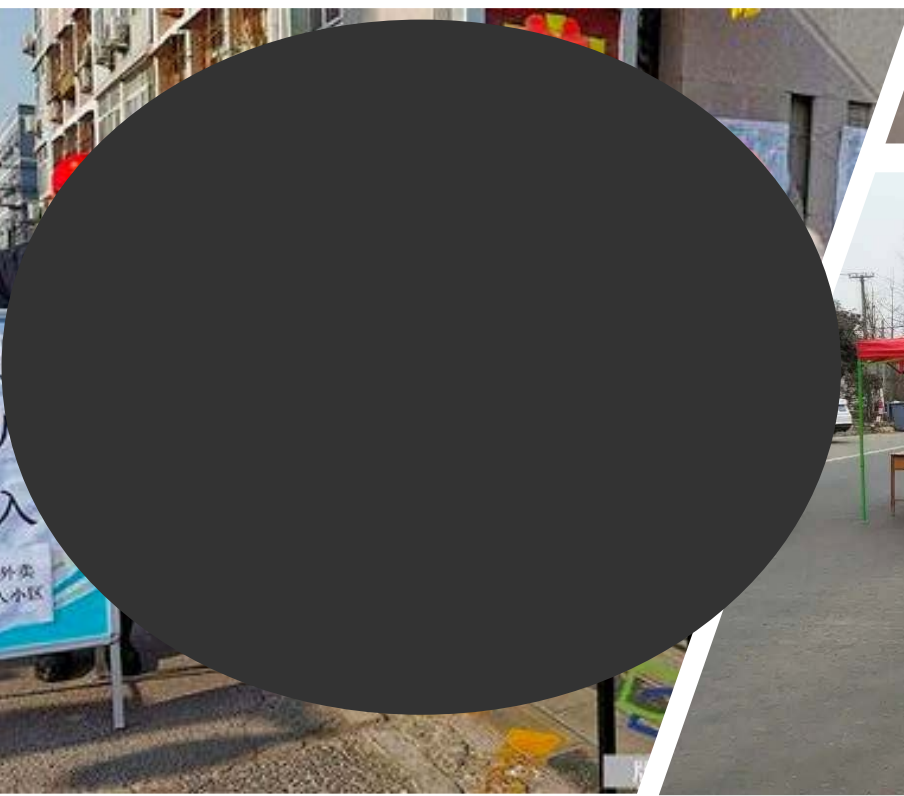
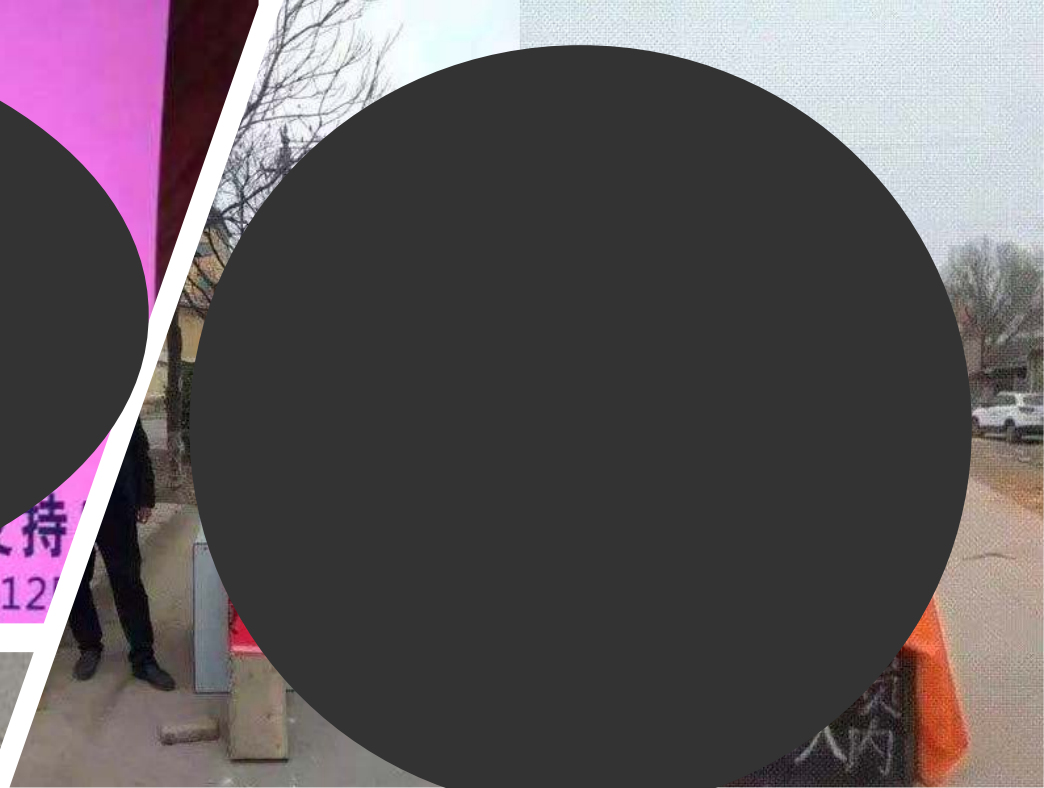
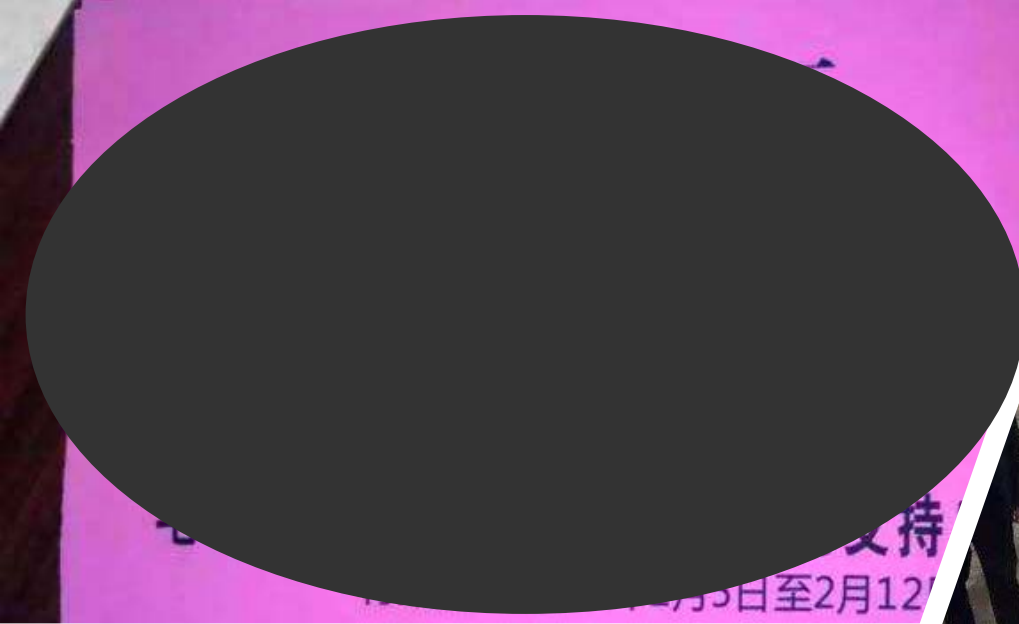


图5 中国境内新冠肺炎新增确诊病例情况(1月20日至2月20日)

Some policy responses and restriction measures

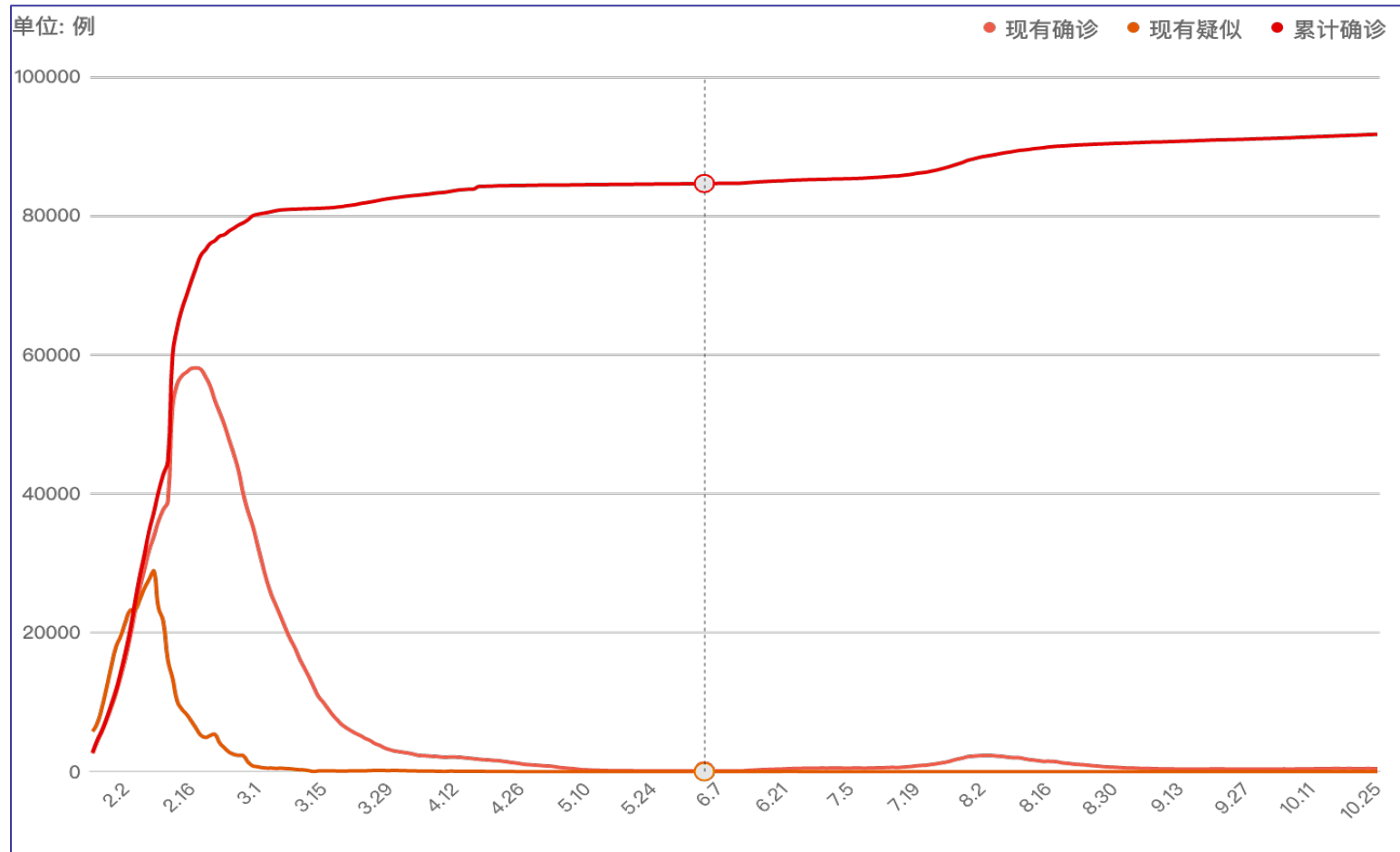


- Free test,
- Free treatment,
- Extensive tracing and tracking



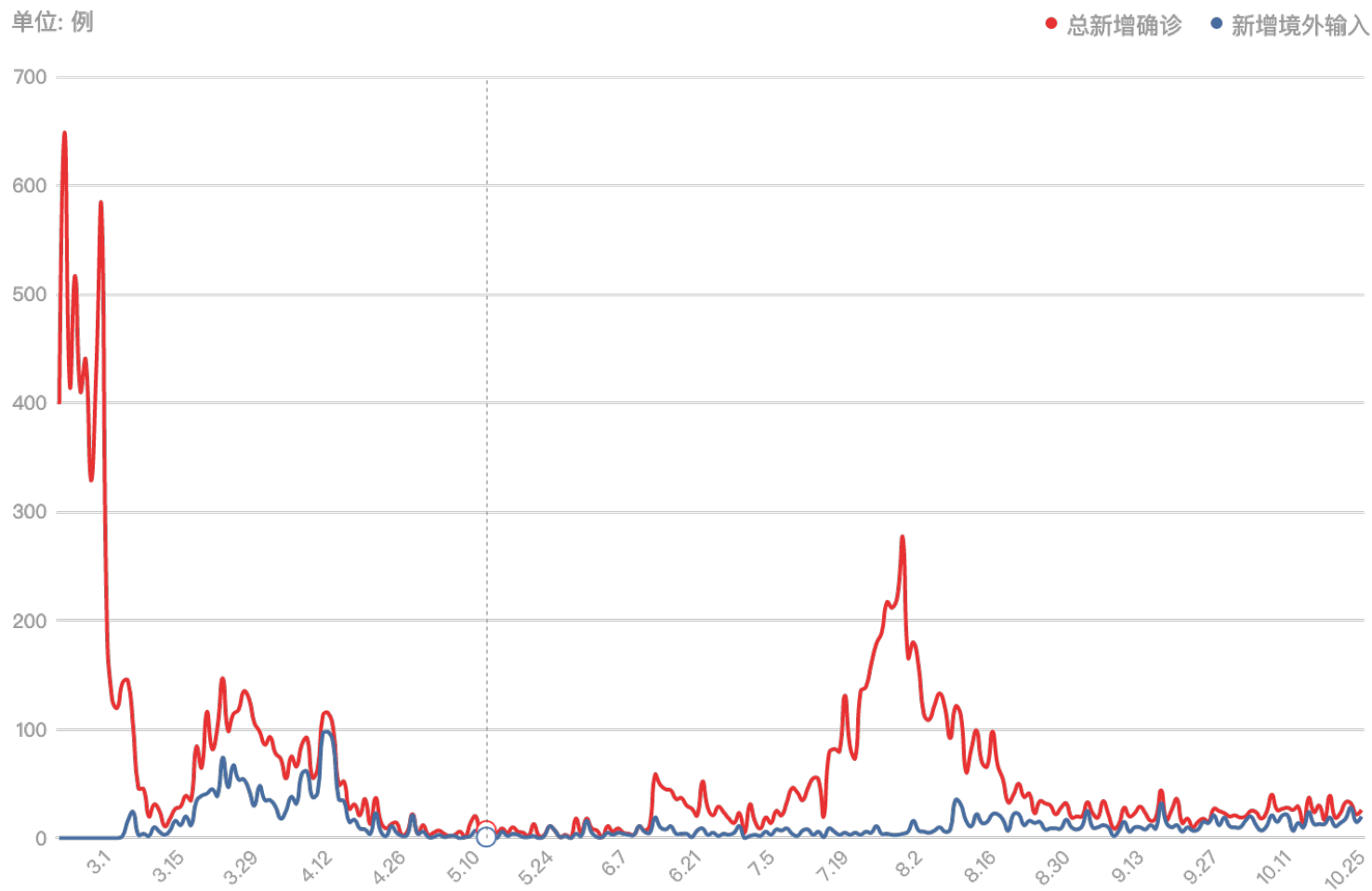
Covid-19 and policy responses in China

Confirmed new cases, Existing cases since Jan. 2020 till May 31.



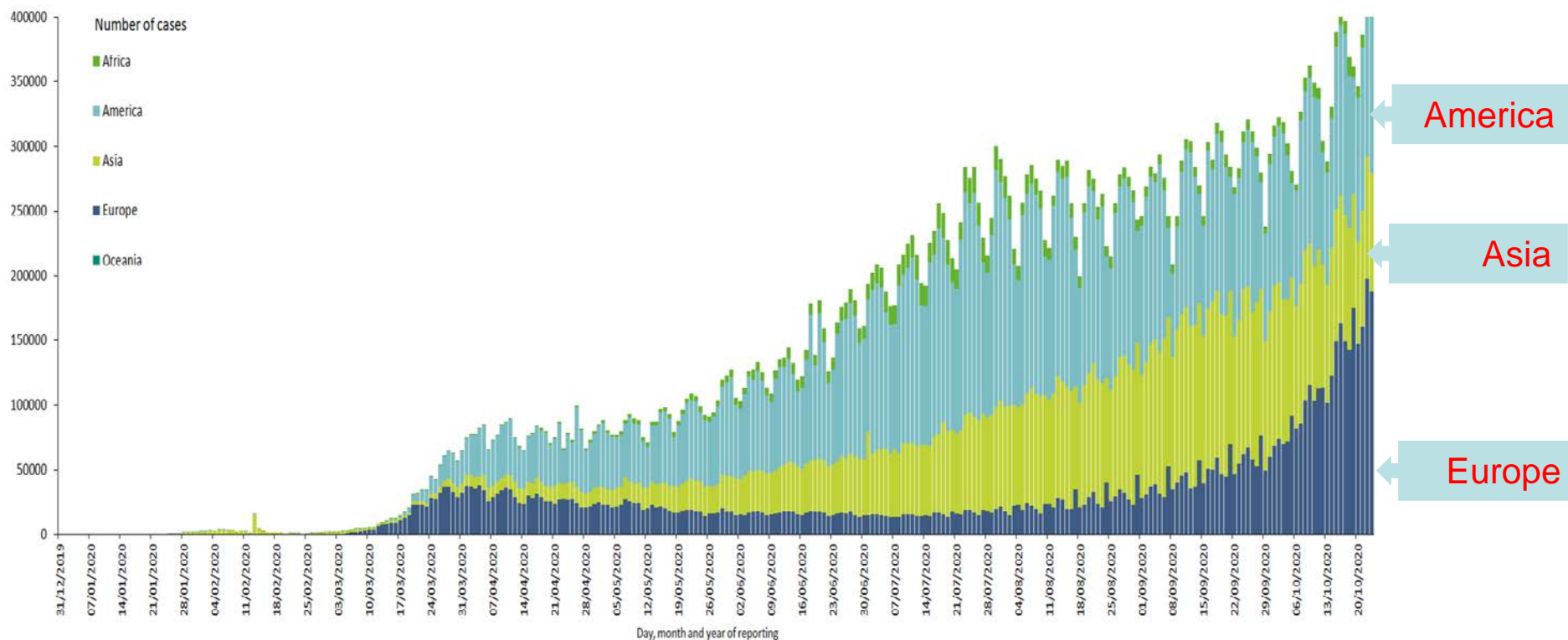
Covid-19 in China and policy responses

New infection cases since March till Now



Covid-19 in China and policy responses

Distribution of COVID-19 cases worldwide, as of 20 Oct. 2020



https://www.ecdc.europa.eu/sites/default/files/styles/is_full/public/images/novel-coronavirus-cases-worldwide-18-september-2020.png?itok=bdRzwGFq

Compare with SARS in 2003

Covid-19

- A global pandemic
- Global cases has passed 44 million, 21 countries has more than 10,000 deaths. China has 91000 cases and 4700 deaths.
- “Great Lockdown” in China and some countries
- There was a economic slowdown in China since 2010.
- Trade was growing 20%+ per year due to WTO accession

SAAS

- Mostly China and Asia
- The total cases in China was only 5327, with 349 death. Higher death ratio, but much small scale of infection ratio.
- No transport restriction, No border banning
- China’s industrial production was growing rapidly in 2003
- There is a trade war with US in 2019.

Compare with SARS in 2003

Covid-19

- Supply: significant disruptions in the global supply chain, factory closures, cutbacks in many service sector activities;
- Demand: a decline in business travel and tourism, declines in education services, a decline in entertainment and leisure services;
- Confidence: uncertainty leading to reduced or delayed consumption of goods and services, delayed or foregone investment.

SAAS

- Limited supply chain disruption in Asia
- Demand was only effected in effected area inside China. not effected in the world.
- Economic confidence was not effected. PMI index way above 50.

II. CHINA'S TRADE DURING AND AFTER PANDEMIC

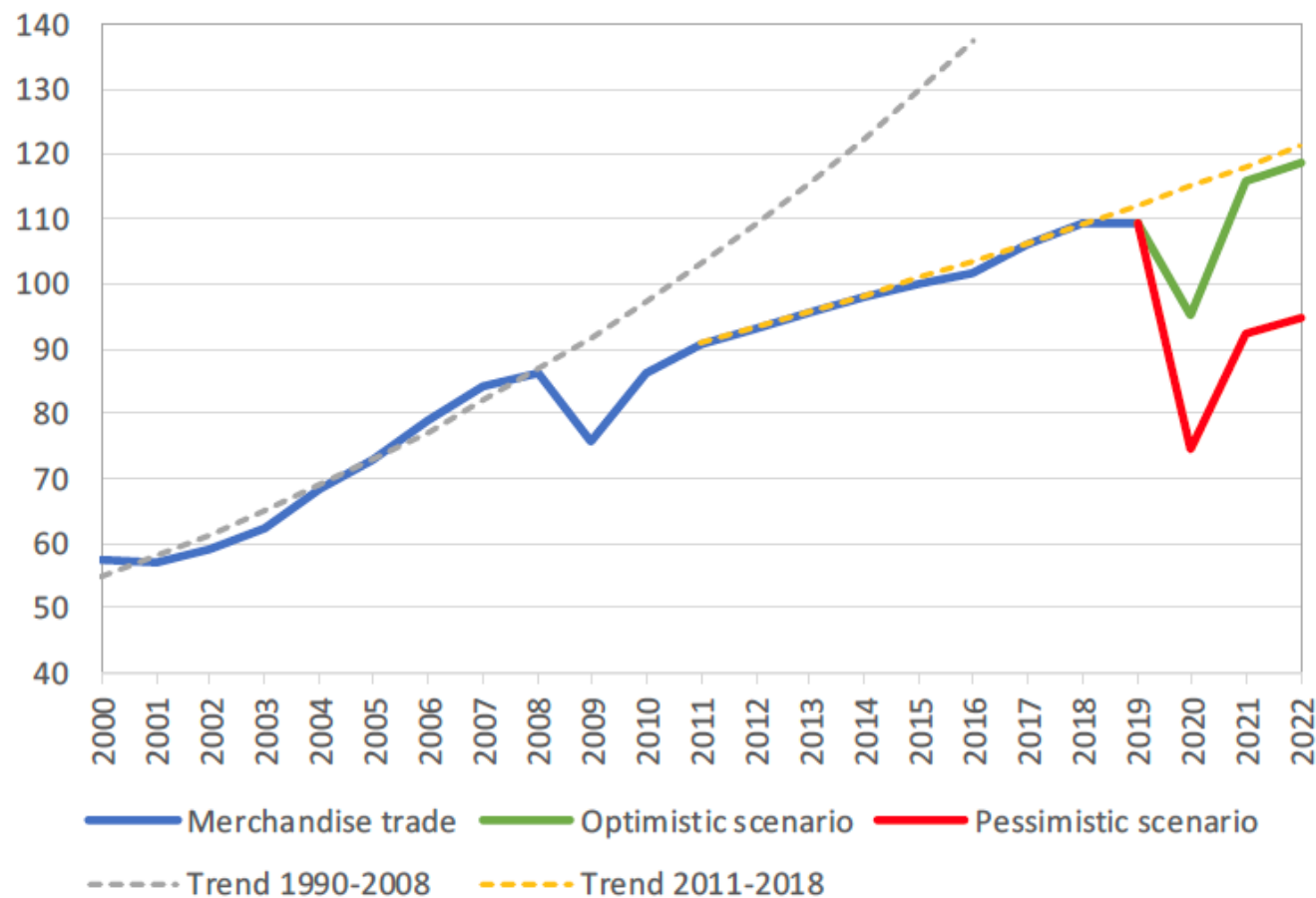
Impact of Covid-19 on global economy

- As far as the economic aspect is concerned, most experts and organizations expect a global recession in 2020.
 - IMF: Chinese economy -4.8% in 2020, and +3.4% in 2021
 - World Bank's forecast for Chinese growth rate: 1.0% in 2020, 6.9% in 2021
- International trade is one of the victims of the pandemic. But since the pandemic is not finished yet, the impact is not easy to measure too.
- The literatures on this topic is also limited:
 - Warwick McKibbin & Roshen Fernando, 2020. Global Macroeconomic Scenarios of the COVID-19 Pandemic.
 - Baldwin & Di Mauro, 2020. Economics in the time of Covid 19
 - Baldwin & Evernnet, 2020. COVID-19 and Trade Policy: Why Turning Inward Won't Work

GDP forecasts by the international institutions

Source	OECD (June 2020)				IMF (April 2020)		World Bank (June 2020)	
Country/Region	Single-hit Scenario 2020	Single-hit Scenario 2021	Double-hit Scenario 2020	Double-hit Scenario 2021	2020	2021	2020	2021
Unit	Average of Quarterly GDP Deviations from November 2019 Projections				Difference from January 2020 GDP Projections		Real GDP Growth	
Argentina	N/A	N/A	N/A	N/A	-6.30%	2.40%	-7.30%	2.10%
Australia	-0.78%	3.58%	-6.35%	5.35%	-7.70%	2.90%	-7.00%	3.90%
Brazil	N/A	N/A	N/A	N/A	-7.50%	0.60%	-8.00%	2.20%
Canada	-5.38%	4.63%	-11.80%	8.18%	-8.00%	2.40%	-7.00%	3.90%
China	N/A	N/A	N/A	N/A	-4.80%	3.40%	1.00%	6.90%
France	4.40%	3.18%	-7.38%	12.75%	-8.50%	3.20%	-7.00%	3.90%
Germany	2.83%	2.30%	-6.25%	6.65%	-8.10%	3.80%	-7.00%	3.90%
India	N/A	N/A	N/A	N/A	-3.90%	0.9%	-3.20%	3.10%
Indonesia	N/A	N/A	N/A	N/A	-5.40%	2.70%	0.00%	4.80%
Italy	2.25%	3.73%	-9.50%	13.68%	-9.60%	4.10%	-7.00%	3.90%
Japan	-0.60%	0.58%	-5.88%	2.10%	-5.90%	2.50%	-6.10%	2.50%
Mexico	N/A	N/A	N/A	N/A	-7.60%	1.40%	-7.50%	3.00%
Other Asia	N/A	N/A	N/A	N/A	-5.40%	2.70%	0.50%	6.60%
Other oil producing countries	N/A	N/A	N/A	N/A	-5.60%	0.80%	-4.20%	30.00%
Republic of Korea	-0.48%	2.28%	-5.45%	4.73%	-7.70%	2.90%	-7.00%	3.90%
Rest of Euro Zone	1.88%	3.20%	-8.38%	10.25%	-8.70%	3.10%	-9.10%	4.50%
Rest of OECD	-1.78%	3.73%	-9.35%	8.50%	-7.70%	2.90%	-7.00%	3.90%
Rest of the World	N/A	N/A	N/A	N/A	-6.30%	2.40%	-5.20%	4.20%
Russia	N/A	N/A	N/A	N/A	-7.40%	1.50%	-6.00%	2.70%
Saudi Arabia	N/A	N/A	N/A	N/A	-4.20%	0.70%	-3.80%	2.50%
South Africa	N/A	N/A	N/A	N/A	-6.60%	3.00%	-7.10%	2.90%
Turkey	N/A	N/A	N/A	N/A	-8.70%	3.10%	-3.80%	5.00%
United Kingdom	-1.45%	7.73%	-13.03%	16.10%	-7.90%	2.50%	-7.00%	3.90%
United States of America	-4.05%	4.60%	-9.48%	7.53%	-7.90%	3.00%	-6.10%	4.00%

WTO forecast: the great collapse of World merchandise in 2020 (2015=100)



Source: WTO (2020). Notes: Trade volumes are an average of exports and imports; Figures for 2020 and 2021 are projections.

Impact of China's trade: empiric analysis

- To analyze the impact of Covid-19 on China's foreign trade, We did one empirical study about impact of Covid-19 on China's foreign trade.

Model

$$Trade_{i,t} = \alpha_0 + \alpha_1 Covid_{i,t} + \alpha_2 Covid_{c,t} + \alpha_3 Health_{i,t} + \alpha_4 GDPper_{i,t} + v_i + v_t + \mu_{it}$$

Trade: the variables related to China's foreign trade

i: the trade partners of China

c: China

t: time

Covid: the new confirmed cases

Health: Health Index

GDPper: GDP per capita

Bench Regression

Benchmark regression results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Trade_Sum	Trade_Sum	Export	Export	Import	Import	NetExport	NetExport
<i>Covid_i</i>	-0.0355** (0.0174)	<u>-0.0240**</u> (0.0109)	-0.0421** (0.0206)	<u>-0.0225*</u> (0.0127)	-0.0206 (0.0368)	-0.0109 (0.0387)	-0.0038 (0.0109)	0.0017 (0.0096)
<i>Covid_c</i>	-0.2973*** (0.1026)	<u>-0.2278***</u> (0.0637)	-0.3920*** (0.1221)	<u>-0.2796***</u> (0.0748)	-0.1423 (0.2158)	-0.0830 (0.2264)	-0.0781 (0.0642)	-0.0505 (0.0564)
Health		0.3882*** (0.0202)		0.5759*** (0.0209)		0.2657*** (0.0713)		0.1876*** (0.0157)
GDPper		-0.3397 (0.2073)		-2.6177*** (0.2139)		2.3726*** (0.7312)		-2.2771*** (0.1611)
Constant	12.9661*** (0.8999)	1.9275* (1.0906)	13.7395*** (1.0686)	10.5111*** (1.1856)	8.4391*** (1.8928)	-15.5193*** (3.8576)	1.3226** (0.5619)	9.2635*** (0.8935)
<i>N</i>	402	351	398	347	380	340	394	346
R2	0.9906	0.9954	0.9889	0.9946	0.9789	0.9721	0.9543	0.9491
Individual fixation effect	yes	yes	yes	yes	yes	yes	yes	yes
Time fixed effect	yes	yes	yes	yes	yes	yes	yes	yes

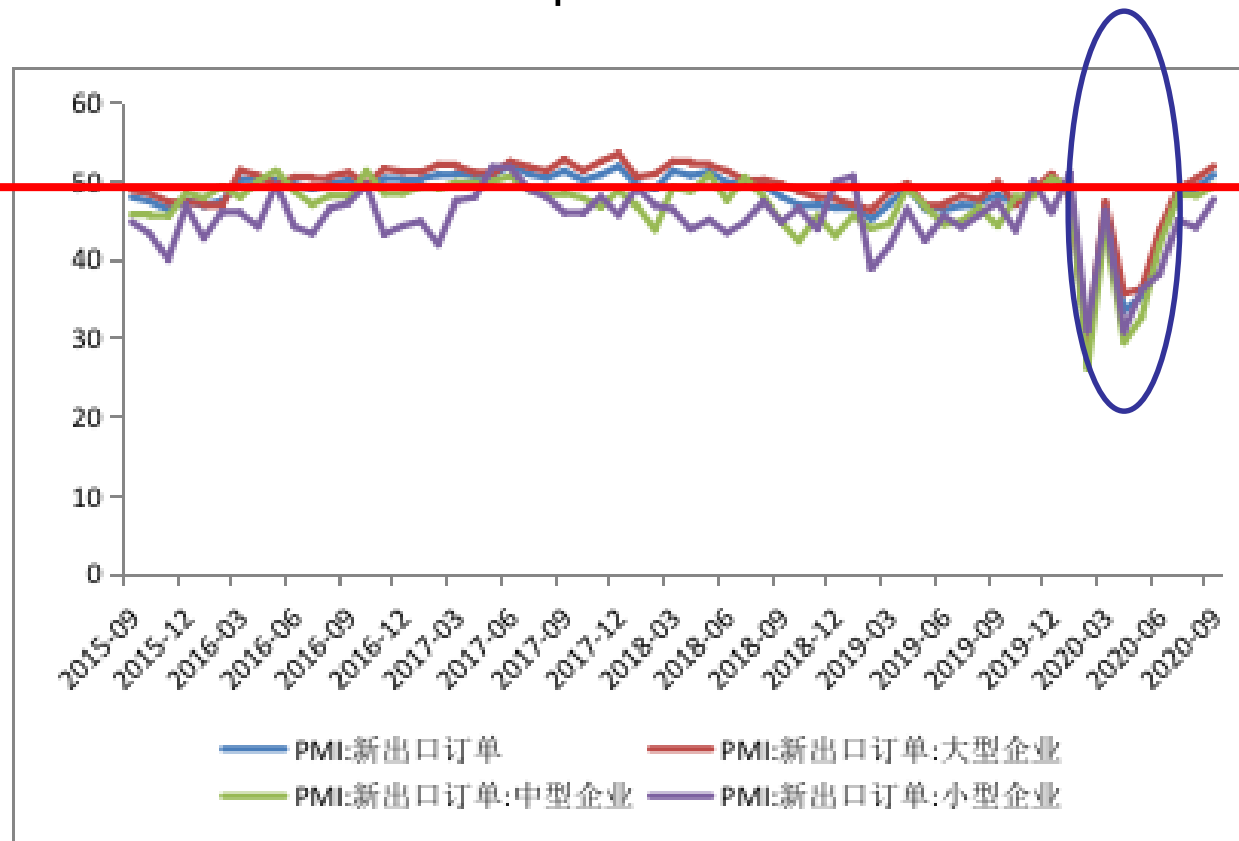
Note: the standard error is in brackets, *, **, ***, respectively represent the significance level of 10%, 5% and 1%, the same as the full text.

Covid-19 and China's trade: empirical study

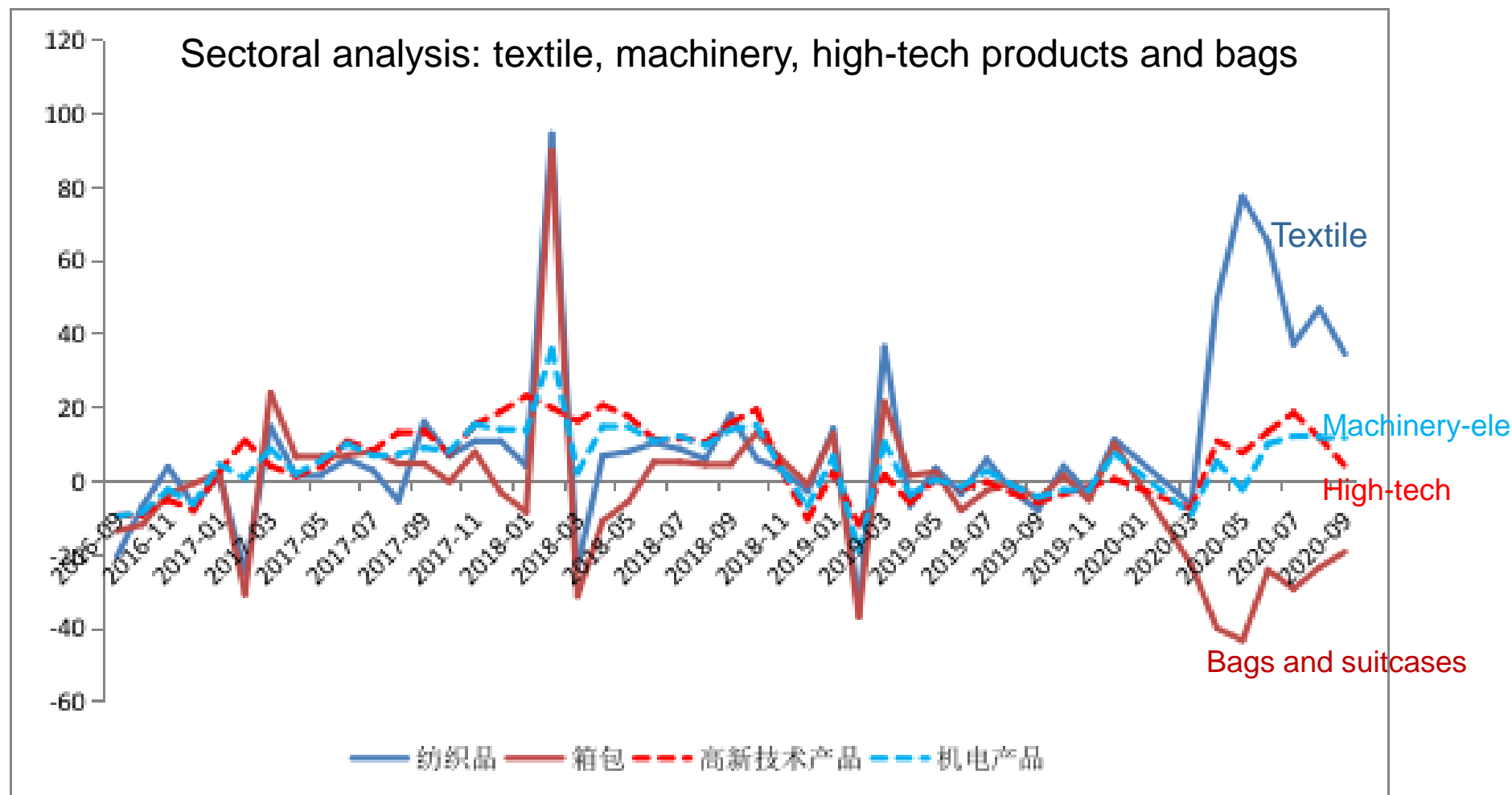
- The epidemic has caused a serious negative impact on China's foreign trade.
- The infection ratio of China's Trade partners have a significant negative impact on the total volume of trade and exports between China and the local area.
- China's own epidemic situation also has a significant impact on China's total import and export.
- Compared with the three months before the pandemic, the total volume of foreign trade, export and foreign trade surplus between China and all trade partners decreased significantly after the pandemic.

Impact on China's trade: results from factual data

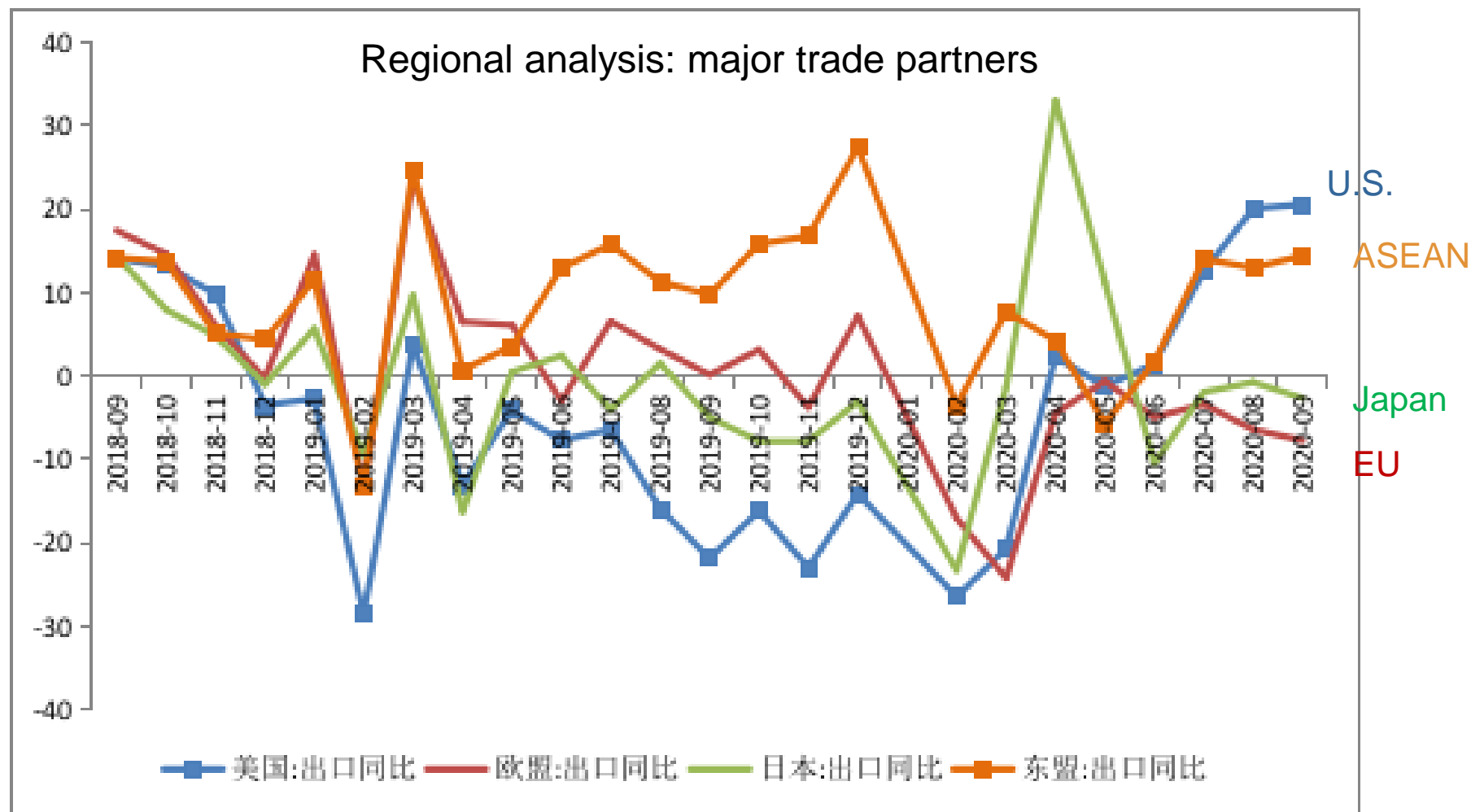
PMI-new export orders



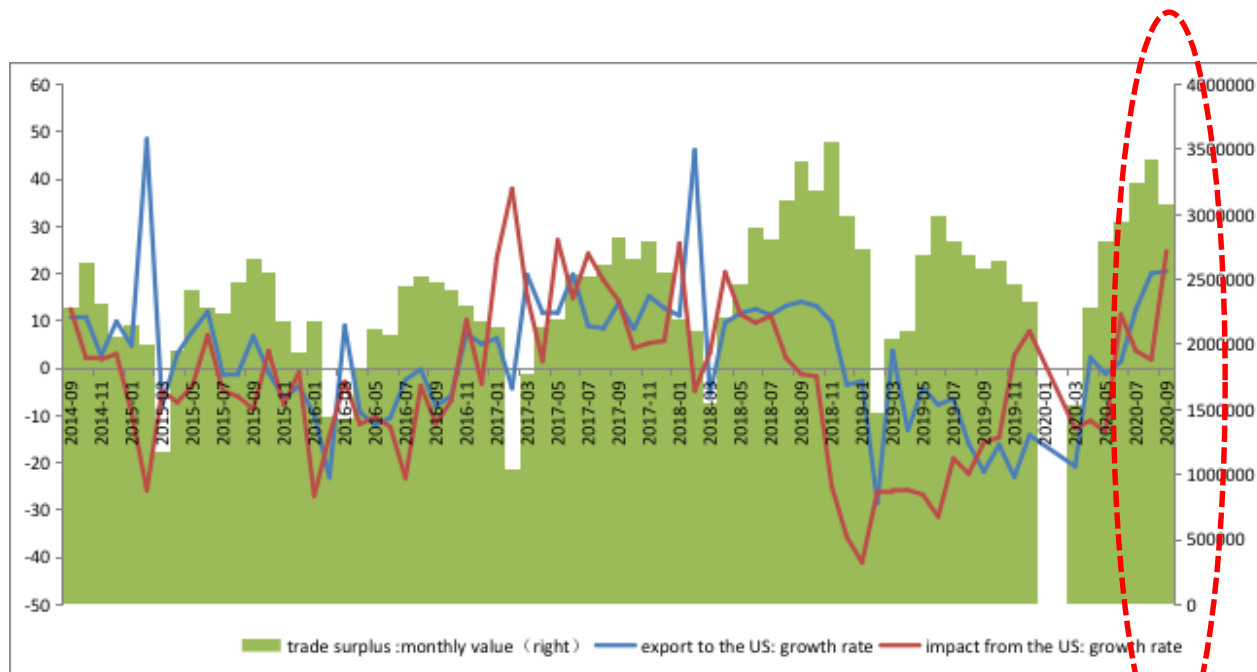
Impact on China's trade: results from factual data



Impact on China's trade: results from factual data



Trade with the US double effected : trade war and covid-19



Trade with US has recovered quickly since second quarter of 2020, surprisingly.

- It is partially because many export orders transferred from countries which affected by Covid-19 to China
- Partially because the phase I of US-China trade deal starts to effect

III. GVC, CHINA AND CORONA PANDEMIC

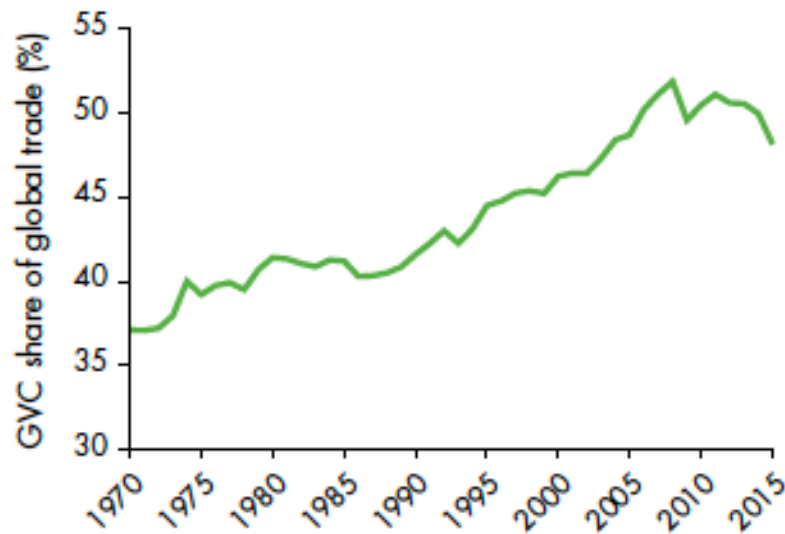
III. GVC, China and Corona pandemic

Some more questions we are interested:

- Where is China's position in Global value chain and how the world depending on the production of China?
- How will Covid-19 alter the trend of GVC?
- How will Covid-19 effect China's position in GVC and China's trade in the future?
- Ideally an I-O analysis to measure how GVC, RVC has changed/disrupted during and after the pandemic. But the Data is not available yet. Most of national IO table only updated every 5 years. WIOD only updated till 2014, EORA updated till 2016.

Reshoring, restructuring supply chain or decoupling from China

- Before the pandemic, there was a trend of reshoring and restructuring supply chain, due to the anti-globalization and Sino-US trade war.



- GVC trade grew rapidly in the 1990s but stagnated after the 2008 global financial crisis
- According to a survey of more than 3,000 companies by Bank of America, companies in Feb. 2020. In 10 of 12 global sectors said they intended to shift at least a portion of their supply chains from current locations (China).

Reshoring, restructuring supply chain or decoupling from China

- During the pandemic, a few countries has made the efforts to encourage their companies move out China or at least diversify their supply chain
 - Trump administration, “End our reliance on China”
 - Japan is paying 87 companies to shift its production back home or to South East Asia
 - “We are not going to ‘decouple’ or have an economic disengagement. You don’t see that in the European mindset.” van der Putten said in EU-China Summit.

Questions: How world is depending on "Made in China"

- As a result of the trade war, China's share in global supply chains in computers and tablets – the most affected sector – shrank by about 4 percentage points.
- Still, China produces 45% of global exports in this sector, and 54% of all phones worldwide.
- For furniture, clothing and household electrical goods, the shares are 34%, 28% and 42% respectively.

Source: Baldwin, 2020

Questions: How world is depending on "Made in China"

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Top five importers of personal protective equipment from the world, China and US, 2017 (\$ billion)

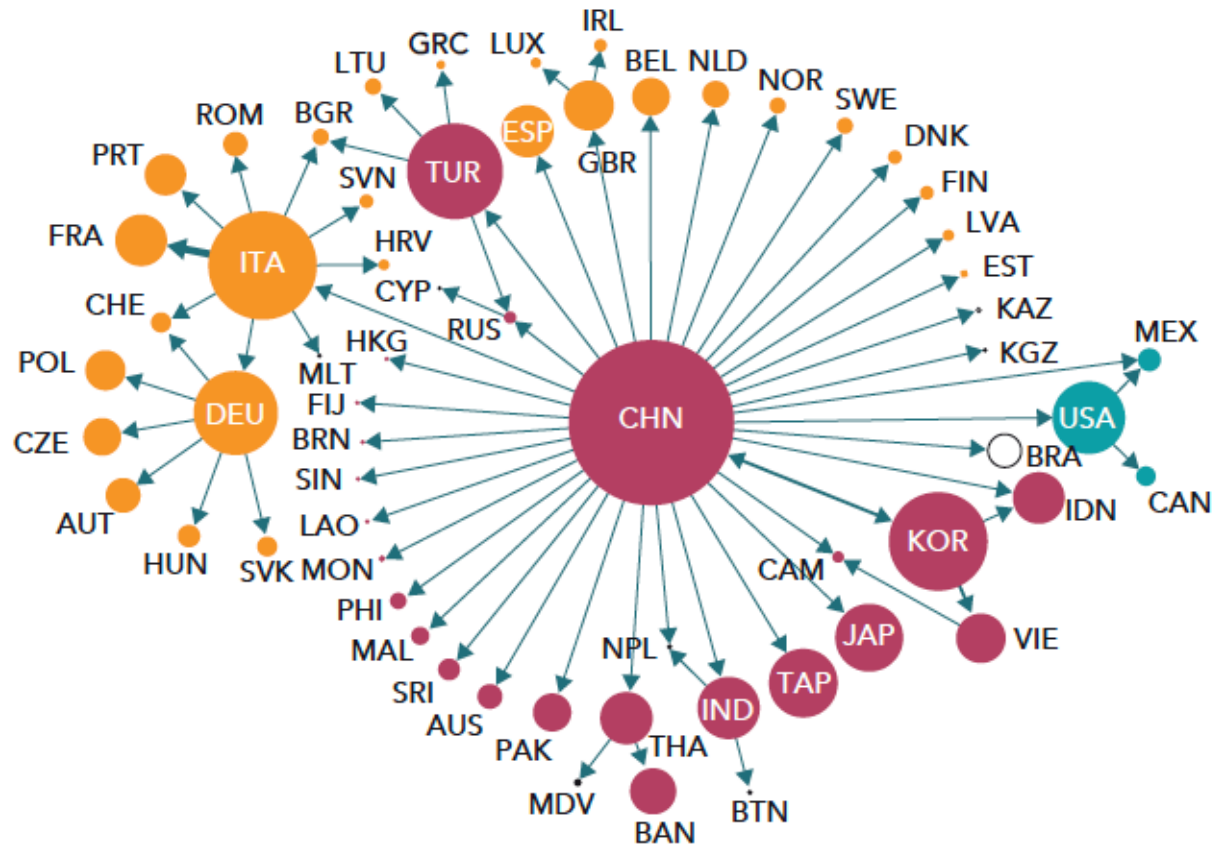
In 2017, the top five importers of personal protective equipment from:					
Importer	From the world	Importer:	From China	Importer	From US
US	15.0	US	6.4	Mexico	3.4
EU	11.7	EU	5.1	Canada	2.6
China	9.7	Japan	2.7	EU	2.0
Mexico	5.9	Hong Kong, China	1.3	China	1.4
Japan	5.1	Mexico	1.0	Japan	0.6

Source: Authors' elaboration of online WTO data; https://www.wto.org/english/tratop_e/covid19_e/covid19_e.htm

Source: Baldwin, 2020

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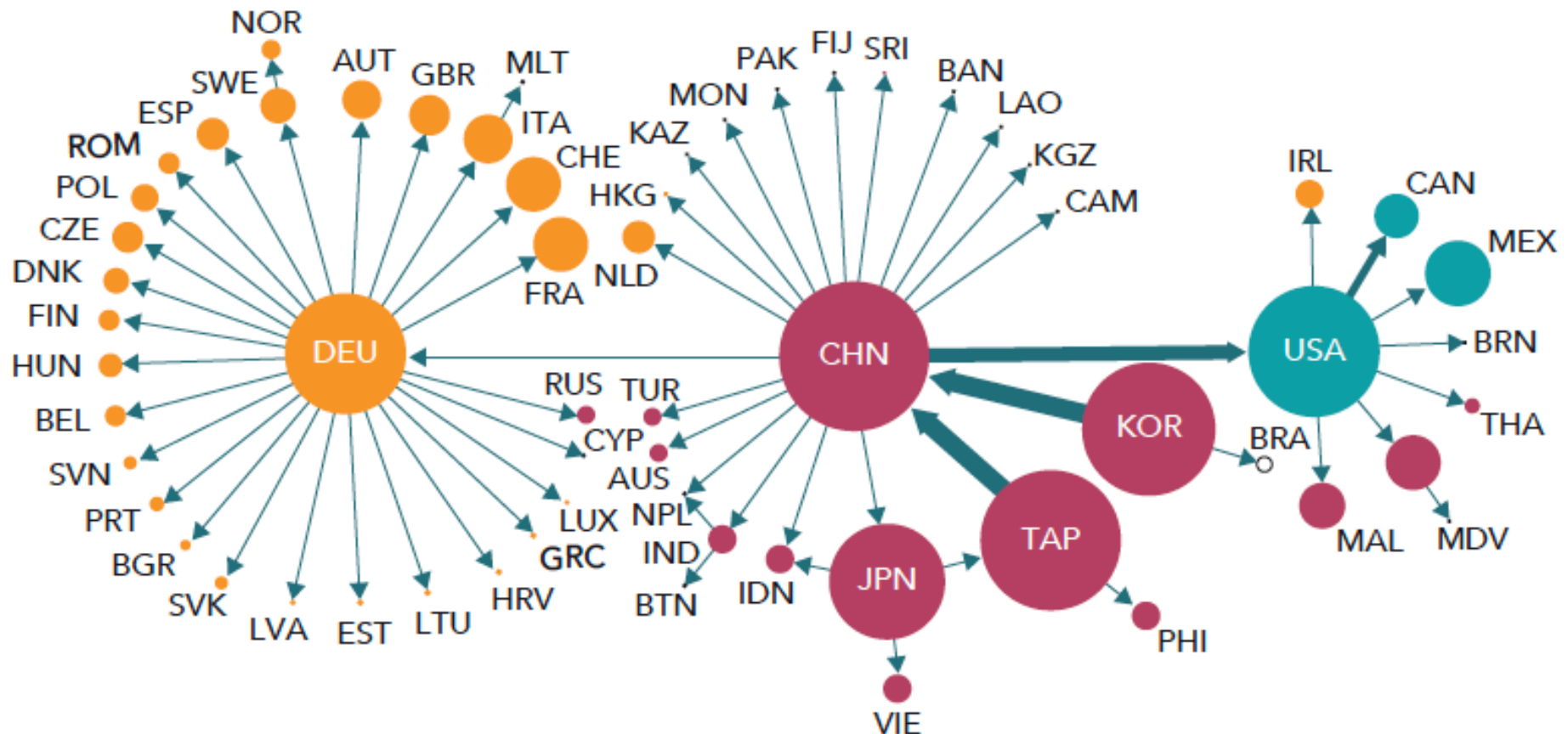
Three interconnected hubs in world's supply chain of textile goods



Source: WTO Global value chain development report

China in GVC

Three interconnected hubs of world's supply chain of ICT goods



Source: WTO Global value chain development report

Question: can companies leave China completely?

- Unfortunately we do not have the answered yet!
 - In 10 of 12 global sectors said they intended to shift at least a portion of their supply chains from current locations (China).
 - A survey of more than 3,000 companies by Bank of America in Feb. 2020.
 - 22% Japanese companies said they planned to expand their business in China, up nearly seven percentage points from March. Just 5.6% considering relocating out of China, down from 9.6% in March.
 - A survey by Japan External Trade Organization in April.
 - According to the survey, only 11% of European companies have considered moving their investments in China to other markets in 2020, compared with 15% in 2019 .
 - European Business in China Business Confidence Survey 2020 (BCS)

IV. Concluding remarks

- The epidemic has caused a serious negative impact on China's foreign trade at the beginning, but long term impact is not clear. Depending on the development of Covid-19 in next year and the restriction measures.
- China's integration in GVC will change after the pandemic but how and in what extent is not yet certain.
- It is expected that the GVC trade will continue to decline due to the strong anti-globalization sentiment in some countries.

Q&A

- *Thanks for your attention!*