China’s Economic Growth and Its Impact on the World Economy

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Contents

1. The US-China Trade War: Will America crush China?

- Since March 2018, Trump administration of the US is on the offensive against China.
- On March 1st, the US invoked Section 232 of the Trade Expansion Act and imposed 25% tariff on steel imports and 10% tariff on aluminum imports.
- On March 22nd, the US announced that it would apply Section 301 of the Trade Act of 1974 on 1333 import items worth 50 billion dollars from China as a retaliation against China's infringement of US intellectual property rights.
- On April 16th, US Department of Commerce forbade American companies to transact with ZTE—a Chinese telecom equipment supplier—on the charge of illegal transaction with Iran.
- In May, negotiation between the US and China took place, resulting in the lifting of trade ban against ZTE and an agreement to "avoid trade war."

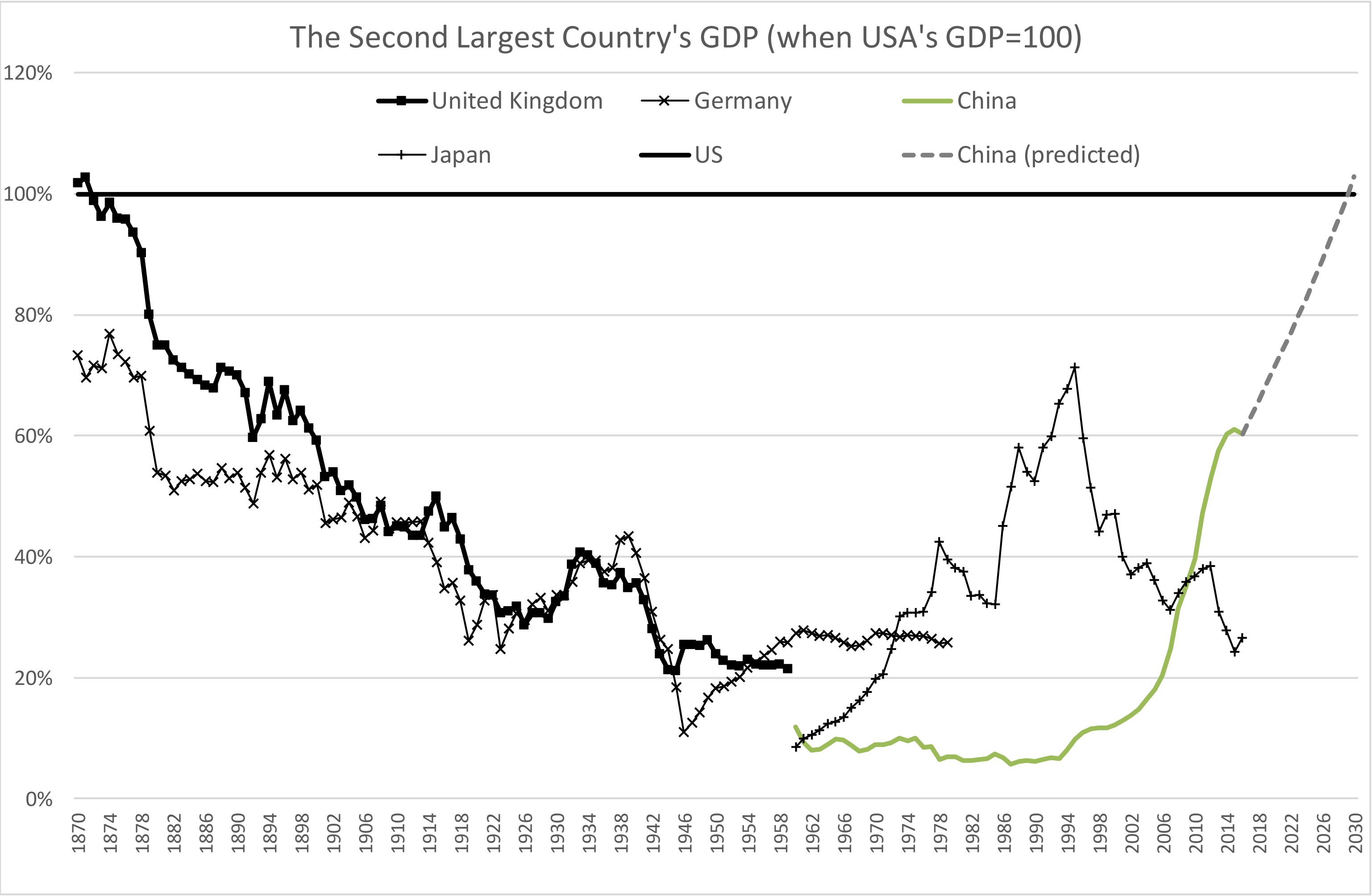
The US led trade liberalization until recently

- However, the US opened fire against China on July 6th by imposing 25% tariff on 34 billion dollars worth of imports from China. China retaliated on the same day.
- In August and September, the US taxed another 16 billion dollars and 200 billion dollars imports from China.
- Since the Second World War, the US has created the free trade regime—supported by GATT and IMF—in the world economy.
- Until 1970, the US ran trade surpluses and returned its earnings back to the world in the form of international investments. Since late 1970s, the US has been running trade deficits, which has expanded to 400-800 billion dollars in the 21st century. The US has financed its deficit by capital inflow from Japan, China, and others.

The US-China Trade War as a Turning Point

- Being a transitional and developing economy, China had protected its domestic industries by high trade barriers until the 1990s. Upon joining the WTO in 2001, China lowered its tariff but its average tariff rate is still around 10%. In October, China announced the reduction of its average tariff to 7.5%.
- Since Trump was elected president, the US has ceased to be the champion of the free trade regime, while China is advocating for its preservation.

Is the world heading towards the "Thucydides's Trap"?



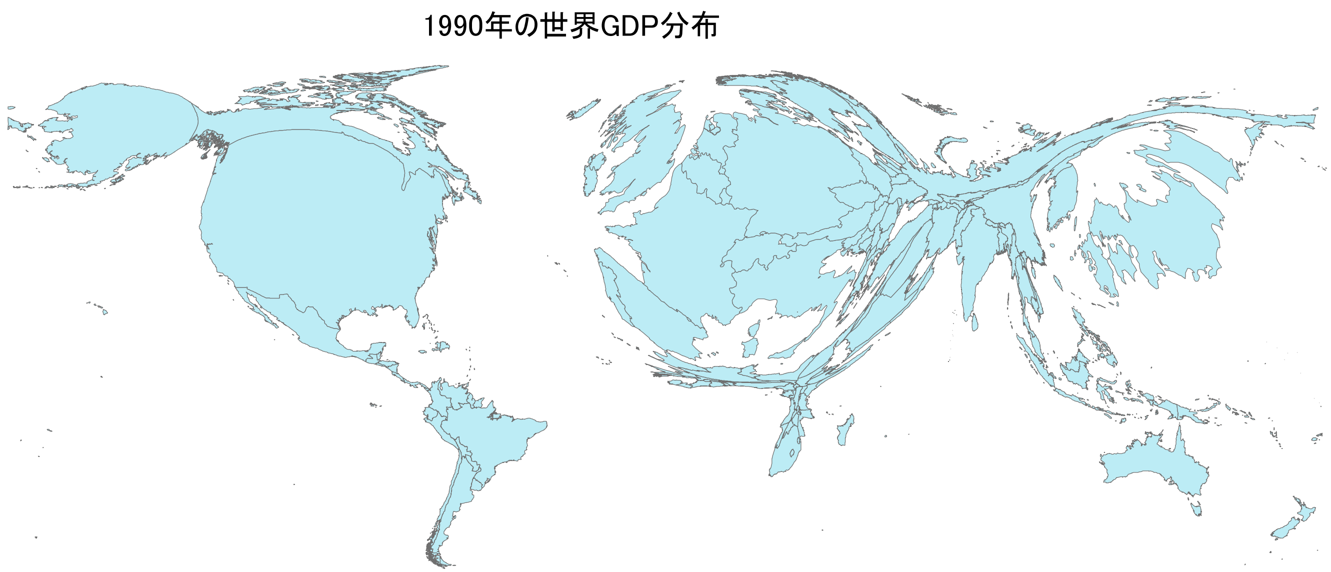
Japan’s GDP was 70% of US’s in 1995, but it was bloated by the appreciation of Yen. China’s rise is *real*.

Comparison of China and the United States

	Year	China	US	China's size when the US is 100
GDP	2017	$12.2 Tri.	$19.4 Tri.	63
GDP(Purchasing Power Parity)	2017	$23.3 Tri.	$19.4 Tri.	120
GDP per capita	2017	$8,827	$59,532	15
GDP per capita（Purchasing Power Parity)	2017	$16,807	$59,532	28
Trade Volume	2017	$4.10 Tri.	$3.96 Tri.	104
Export	2017	$2.26 Tri.	$1.55 Tri.	146
Import	2017	$1.84 Tri.	$2.41 Tri.	76
In Each Country's Trade	2016	Trade with China＞Trade with US		136 economies
	2016	Trade with US＞Trade with China		59 economies
In Each Country's Exports	2016	Export to China＞Export to US		75 economies
	2016	Export to US＞Export to Chia		120 economies
In Each Country's Imports	2016	Import from China＞Import from US		154 economies
	2016	Import from US＞Import from China		51 economies
Inward Foreign Direct Investment	2017	$168.2 bil.	$348.7 bil.	48
Outward Foreign Direct Investment	2017	$101.9 bil.	$424.4 bil.	24

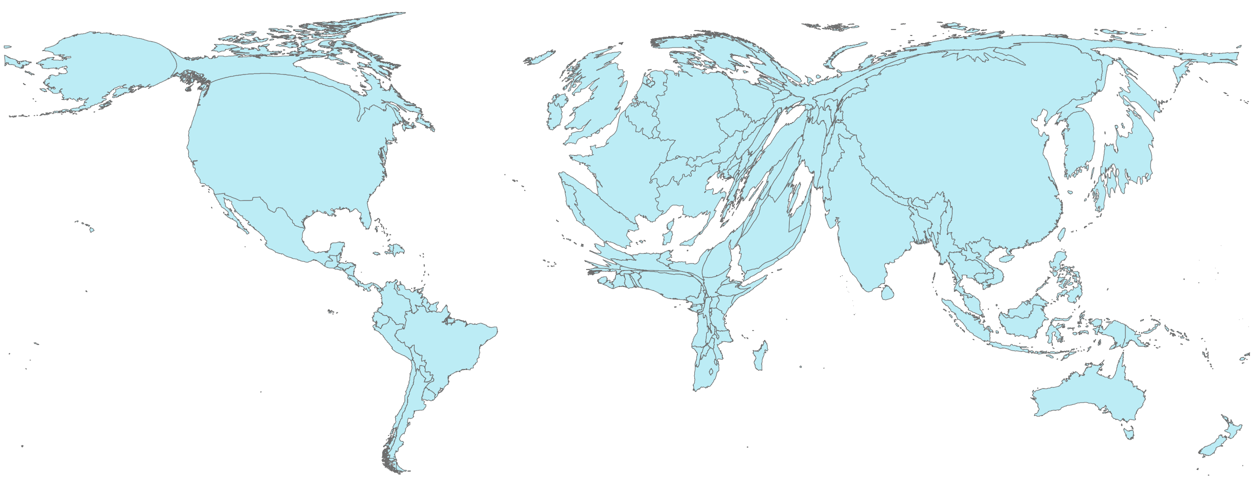
（Source）UNCTAD Stat, World Bank, *World Development Indicators*

In 1990, G7 (USA, UK, France, Germany, Italy, Canada, Japan) accounted for two thirds of the global GDP. China was very small.



In 2030, the distribution of world GDP will be like this picture. China will surpass the US. The importance of China and other emerging economies will increase. G7 will account for only one third of the world's GDP.

2030年の世界GDP分布



The necessity to change our views on the Chinese and world economies

- “China is ‘the factory of the world.’ It is a major production base of multinational enterprises” “China is a low-cost manufacturing base in the global value chain” ”Japan and Korea export machinery and core components to China, and China assembles end-products and export to the US.”
- These are the views shared by East Asian economists. They do depict one aspect of Chinese economy. But *another aspect* is gaining importance.

In the beginning of the 21st century, more than half of China's exports went to G7. In recent years, the emerging economies are gaining importance in China's export and import

China's Trade Partners

	Import				Export			
Year	2000	2005	2010	2015	2000	2005	2010	2015
Asia (ex. Japan and Hong Kong)	33.6%	39.4%	33.8%	34.9%	11.0%	13.9%	15.9%	18.7%
Africa	2.5%	3.5%	5.2%	4.6%	1.0%	1.7%	2.9%	3.7%
Latin America and the Carribeans	2.5%	4.4%	7.1%	6.7%	2.1%	3.7%	6.5%	7.4%
East Europe	0.5%	0.6%	0.9%	1.2%	1.1%	2.1%	3.2%	2.9%
Russia, Central Asia	3.1%	3.2%	3.1%	3.2%	0.6%	1.5%	2.5%	2.0%
Middle East	4.6%	5.2%	7.0%	6.8%	2.1%	2.9%	4.3%	5.5%
Oceania	2.7%	3.0%	5.1%	5.4%	1.6%	2.0%	2.4%	2.3%
Hong Kong	4.3%	2.0%	1.0%	0.8%	22.6%	13.2%	10.5%	10.8%
Japan	19.0%	16.6%	13.7%	9.3%	13.6%	10.6%	8.2%	6.6%
North America	12.0%	9.3%	9.1%	11.4%	26.5%	27.8%	22.8%	23.0%
West Europe	15.1%	12.7%	14.0%	15.7%	17.7%	20.6%	21.0%	17.0%
G7	40.7%	34.5%	31.9%	30.3%	52.2%	51.1%	44.3%	40.0%
Emerging Economies*	49.5%	59.3%	62.2%	62.8%	19.6%	27.9%	37.5%	42.5%

*Sum of Asia to Oceania in this table

（Source）UNCTAD Stat

2. China as a Capital Exporter

- 1978-1993: The *Developing Country* Stage
- China often sufferd from trade deficits. When the economy overheated, trade deficits increased, and the government adopted austerity.
- Trade deficits were financed by Capital inflow

China's Balance of Payments (Biliion US$)

Year	1993	2001	2011	2016	2017
Current Account	-12	17	136	196	165
Merchandise Trade Balance	-14	28	244	494	476
Service Trade Balance	3	-0	-47	-244	-265
Capital Account	22	-13	-128	27	57
Capital Account excluding Reserve Account	24	35	260	-417	149
Outward FDI	-4	-7	-48	-217	-102
Inward FDI	28	44	280	171	168
Portfolio Investment	3	-19	20	-62	7
Other Investment	-3	17	9	-304	74
Reserve Account	-2	-47	-388	444	-92
Foreign Reserve（Year-end）	21	212	3,181	3,011	3,140

FDI= Foreign Direct Investment

（Source) SAME

1994-2011: The *Newly Industrialized Country* Stage

- China enjoyed trade surpluses during this period
- Huge inflow of foreign direct investment
- Flow of portfolio investments and outward foreign direct investment (FDI) were restricted
- Since both current account and capital account had surplus, huge amount of foreign currency poured into the country, pressing the Renminbi to appreciate
- In order to avoid appreciation, the central bank kept on buying foreign currency in the foreign exchange market, which led to the accumulation of foreign reserves

After 2012: The *Advanced Industrialized Country* Stage

- China continues to enjoy huge trade surpluses
- Deficits in the service trade account enlarged, mainly because of the increase of outward tourism
- Outward FDI expanded. It even surpassed inward FDI in 2016.
- There were occasional outflows in portfolio and other investments, mainly caused by speculation
- China has become a major capital exporter, in the form of outward FDI and portfolio and other investments

Compared to China's position in international trade and capital investment, the presence of Renminbi in international transaction is still very small

- In December 2017, for example, US dollar was used in 41% of all international transactions, followed by Euro (39%), Pound Sterling (3.8%), Japanese Yen (3.6%), Canadian dollar, Swiss Franc, Australian dollar, and Renminbi (0.98%).
- Renminbi is not as useful as other international currencies, because China keeps on restricting capital account transactions.
- 97% of Reminbi's international exchange is with US dollars. In this sense, Renminbi is still a currency dependent on US dollar.

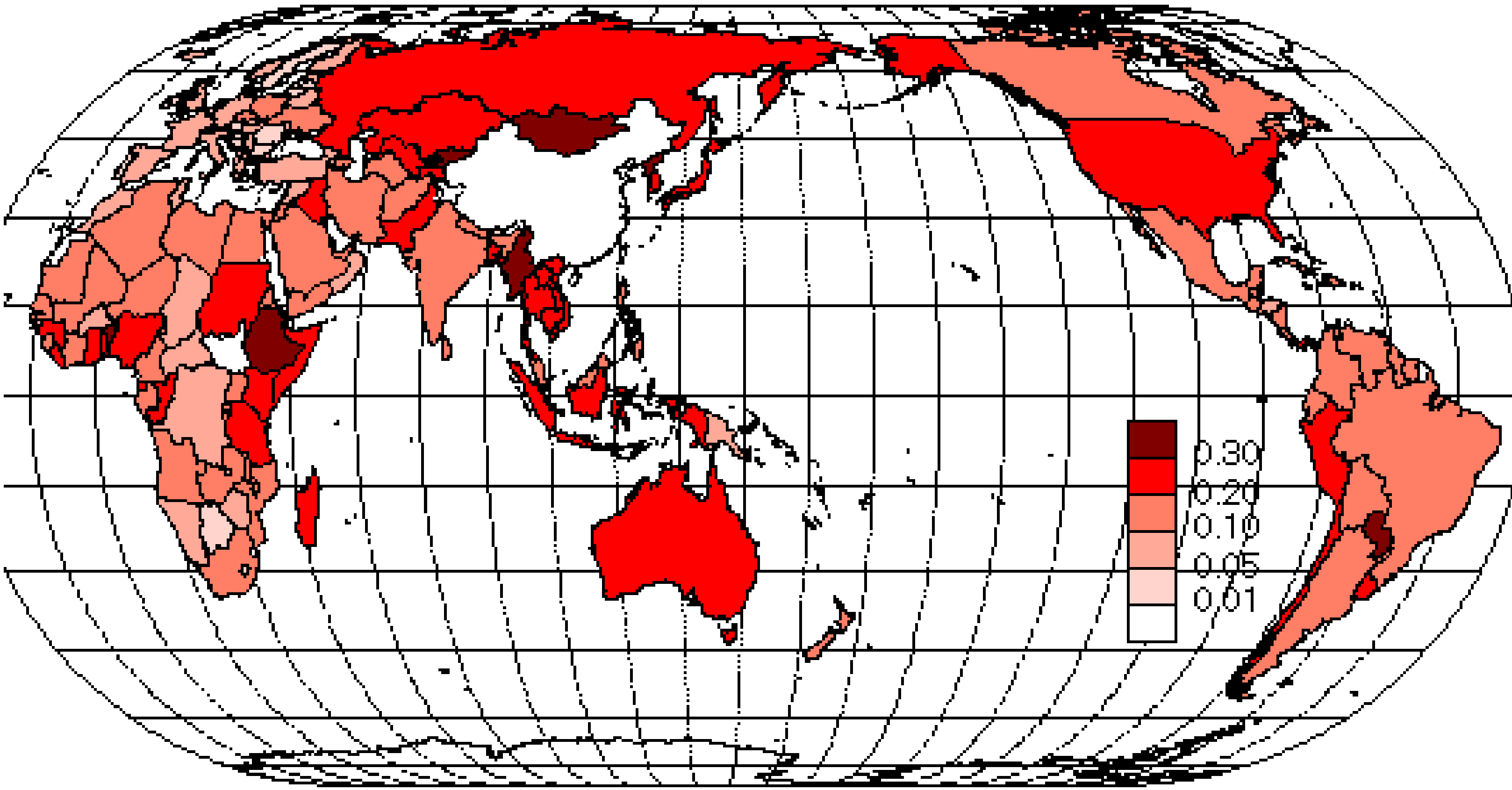
3. The Belt and Road Initiative: Expectations and Doubts

- Among 195 economies around the world, the amount of trade with China is greater than that with the US in 136 economies.
- Being the greatest trading nation in the world, China can no longer act as an ordinary developing country which mainly pursues its own interest.
- China must contribute to the preservation and development of the international trade regime (WTO) and the governance mechanisms of the world economy (IMF, World Bank).
- Especially when the US is taking an "America First" policy and has started destroying the regime, China's responsibility is even more greater.
- The Belt and Road Initiative (BRI) shows the willingness of China to assume such responsibility.

The Proposal of "One Belt One Road" (OBOR)

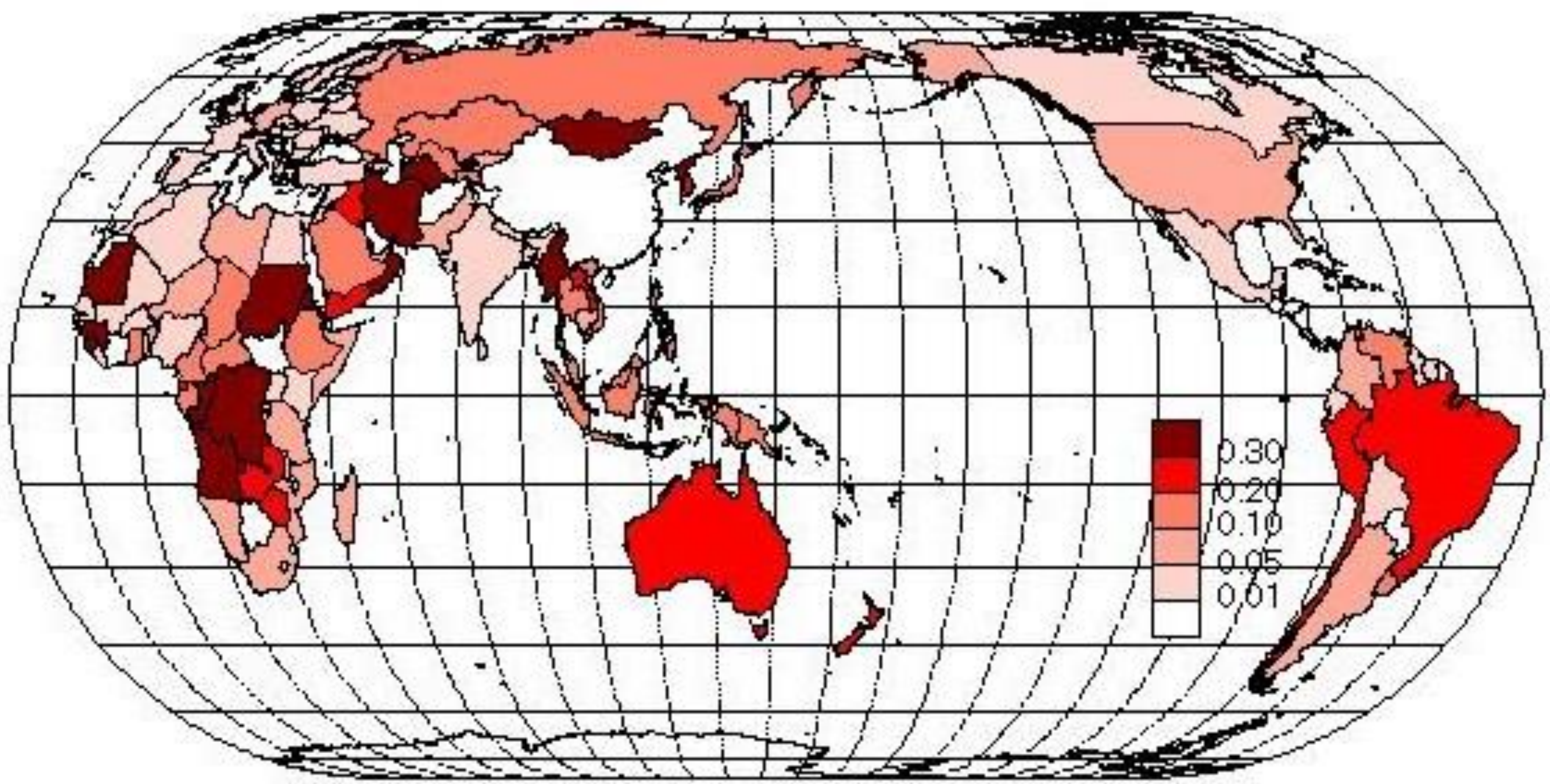
- In September 2013, China's President Xi Jinping advocated for the building of the "Silk Road Economic Belt" and the "Maritime Silk Road of the 21st Century".
- "Silk Road Economic Belt" is a development initiative that tries to connect inland China, Central Asia, Russia, Eastern Europe.
- "Maritime Silk Road of the 21st Century" is a development initiative in Southeast Asia, Sri Lanka, Pakistan, Middle East, and Southern Europe.
- State-owned banks provide the finance, state-owned construction companies build bridges, power stations, ports, etc.
- The Asian Infrastructure Investment Bank (AIIB) was established by China with the investments by more than 50 countries in 2015. AIIB has not granted loans to OBOR projects yet, but it is likely that AIIB will help building the OBOR.

The share of imports from China in total import of each country



Connections with Russia and Central Asia, South East Asia, Eastern and Western Africa will be important for China's exports

The share of exports to China in total export of each country



Connections with Africa, Middle East, Australia, and South America will be important for China's imports

From One Belt One Road (OBOR) to Belt and Road Initiative (BRI)

- As the former maps show, Europe has the weakest trade connection with China in the world. Trade with Africa, Asia (excluding Japan and Hong Kong), Latin America and the Caribbean is growing.
- The initial idea of OBOR was to build a trans-Eurasian transportation network to have a better connection with Europe. However, countries along the Belt and Road are more important as trade partners for China.
- “One Belt, One Road” has a Sino-centric tone. It is good that the BRI now includes Africa and Latin America. Japan can and will cooperate with China in individual projects.

Some Doubts

- Some people such as Vice President Pence of the US criticize that China is using loans and infrastructure projects to lure the countries in Asia, Africa, and Latin America to expand its influence.
- They say that China is placing “debt traps” and pressures poor countries to hand over the ownership of infrastructure projects.
- China needs to improve the transparency of its intension and invite foreign participation in the projects. China should consider improving the terms of loans in the favor of recipient countries.

4. The Expansion of China’s Trade and its Impact on Emerging Economies

The Case of Iron Ore

- Since 2013, China produces 800 million tons of steel every year, which is roughly a half of world production.
- China imports two thirds of iron ore traded internationally.
- Due to the surge of China’s demand, iron ore price increased six-fold from 2005 to 2011.
- But after 2012, because of the deceleration of China’s iron and steel industry and also the improvement in supply, iron ore price dropped by 80%.
- Sierra Leone, a country that depends heavily on iron ore export to China, suffered -20% GDP growth in 2015.

Which countries depend heavily on exports to China?

Countries which are highly dependent on exports to China

	Share of Exports to China in Total Export					Most Important Export Item	Its Share in Total Export to China in 2017	Other Major Export Items
	2000	2005	2010	2015	2017			
North Korea	3.1%	35.5%	55.6%	82.2%	91.2%	Coal	23.7%	Clothing
Mongolia	49.0%	51.3%	84.9%	83.5%	85.0%	Copper Ore	49.2%	
Turkmenistan	0.2%	0.4%	22.4%	57.7%	82.7%	Natural Gas	59.2%	
Solomon Islands	12.8%	44.8%	64.3%	63.5%	65.9%	Wood in the Rough	86.9%	
Hong Kong SAR	34.5%	44.6%	52.5%	56.3%	54.1%	IC, Transistors, Tubes	37.8%	
Eritrea	0.4%	1.6%	6.7%	32.0%	47.6%	Vegetables	28.7%	Ores of base metals
Angola	23.4%	35.3%	39.8%	43.2%	46.2%	Crude Oil	99.7%	
Congo	10.3%	36.9%	24.7%	33.0%	43.0%	Crude Oil	91.5%	
DR Congo	0.1%	11.4%	43.0%	39.3%	42.9%	Non-ferrous base metals	57.4%	
Oman	30.5%	25.5%	29.3%	46.0%	40.6%	Crude Oil	87.2%	
Sudan	35.7%	59.5%	66.1%	35.7%	39.6%	Crude Oil	93.4%	
Gambia	0.0%	0.5%	13.0%	32.0%	39.1%	Wood in the Rough	94.0%	
Myanmar	6.3%	6.9%	5.5%	39.6%	38.9%	Natural Gas	24.2%	Sugar
Sierra Leone	0.0%	0.9%	2.6%	22.7%	34.5%	Iron Ore	72.4%	
Guinea	2.1%	0.2%	2.0%	1.5%	31.3%	Aluminium Ore	60.8%	
Mauritania	0.8%	0.4%	39.7%	33.1%	31.3%	Iron Ore	60.2%	
Iran	6.3%	12.2%	18.7%	30.3%	31.0%	Crude Oil	63.2%	

Which countries depend heavily on exports to China? (continued)

Countries which are highly dependent on exports to China

	Share of Exports to China in Total Export					Most Important Export Item	Its Share in Total Export to China in 2017	Other Major Export Items
	2000	2005	2010	2015	2017			
Australia	5.4%	11.6%	25.3%	32.5%	29.6%	Iron Ore	58.5%	
Laos	1.8%	4.3%	27.3%	33.6%	29.5%	Copper Ore	35.6%	
New Caledonia	0.1%	6.4%	3.7%	32.7%	28.8%	Pig Iron	63.6%	
Zambia	4.6%	7.9%	29.0%	20.5%	27.8%	Copper	90.6%	
Chile	5.0%	11.7%	24.4%	26.1%	27.6%	Copper	39.6%	Copper Ore
Equatorial Guinea	25.4%	21.6%	6.2%	16.9%	27.5%	Crude Oil	69.4%	
Yemen	19.9%	41.8%	29.5%	37.3%	26.6%	Crude Oil	81.0%	
Peru	7.0%	10.9%	15.2%	22.0%	26.3%	Copper Ore	61.8%	
South Korea	10.7%	21.8%	25.1%	26.0%	24.8%	IC, Transistors, Tubes	29.0%	Hydrocarbons
Taiwan	2.9%	21.6%	28.0%	25.4%	22.5%	IC, Transistors, Tubes	27.2%	Optical Instruments
New Zealand	3.2%	5.1%	11.1%	17.6%	22.3%	Milk Products	25.9%	Wood in the Rough
Macao SAR	6.8%	12.3%	6.3%	8.0%	21.9%	Waste Plastics	26.2%	Electrical circuits
Brazil	2.0%	5.8%	15.2%	18.6%	21.8%	Oil seeds	42.8%	
Zimbabwe	5.3%	7.0%	10.9%	18.0%	21.6%	Tobacco	67.9%	
Iraq	3.8%	2.2%	11.9%	23.5%	20.7%	Crude Oil	100.0%	
Japan	6.3%	13.5%	19.4%	17.5%	19.0%	Industrial machinery	8.5%	IC, Transistors, Tubes
Uruguay	4.0%	3.6%	5.4%	13.9%	18.8%	Beef	41.0%	Oil seeds

One percent growth in exports to China leads to 0.002-0.0055 percent point increase in the growth rate

Panel Analysis of the Relationship between the Growth of Exports to China and GDP Growth
Dependent Variable: GDP Growth Rate

	(1)		(2)		(3)		(4)	
Investment/GDP	0.094 **	(2.00)	0.064 **	(1.96)	0.28 ***	(4.40)	0.16 **	(3.61)
Inflation Rate	-0.099 ***	(-2.91)	-0.071 **	(-2.49)	-0.15 ***	(-2.68)	-0.089 *	(-1.83)
Growth of Exports to China	0.0020 *	(1.87)	0.0020 **	(1.97)	0.0051 ***	(2.85)	0.0055 ***	(3.13)
Constant	2.446 **	(1.99)	2.985 ***	(3.20)	-1.910	(-1.18)	0.465	(0.36)
Model	Fixed effect		Random effect		Fixed effect		Random effect	
Obs	430		430		207		207	
Countries	48		48		23		23	
R square	0.27				0.27			
F-statistic: γ_i=0	2.75 ***				3.51 ***			
LM test: Var(γ)=0			39.62 ***				21.7 ***	
Hausman test		3.71				10.64**		

Figures in parenthesis indicate t values
*** significant at 1%
** significant at 5%
* significant at 10%

The Impact of China's Exports on the Manufacturing Industries in other Countries

- Since 2009, China has become the number 1 exporter in the world. In 2016, China's exports accounted for 13.1% of the world's total.
- 93% of China's export are manufactured goods. The manufacturing industries of other countries are pressured by goods imported from China.
- In South Africa, for example, the total employment of manufacturing decreased from 1.5 million in 1990 to below 1.2 million in 2010. Industries such as garment, shoes, textile, and furniture were heavily damaged by the inflow of Chinese goods. In 2007, the South African Government imposed a tariff on garment imports to protect the domestic industry.

Trade with China pressures South African manufacturing through three routes

- First, Chinese goods compete with domestic goods in the domestic market
- Second, Chinese goods flow into other countries in southern Africa, which have been the export market for South African manufacturing.
- Third, South African currency appreciates due to the surge of export of primary goods such as iron ore to China, which leads to the difficulty of exporting manufactured goods from South Africa.
- Other resource-rich, industrialized countries in the global South, such as Brazil, Indonesia, Thailand, and the Philippines are experiencing similar pressures from China.

Some of the industrialized countries in the South are pushed back to the status of primary goods exporters mainly because of the trade with China

Share of Primary Goods in Exports to China and to the World

	Year	2000	2005	2011	2016
Philippines	to World	7%	10%	17%	14%
	to China	25%	6%	16%	21%
Malaysia	to World	18%	23%	35%	28%
	to China	32%	27%	32%	28%
Indonesia	to World	41%	50%	62%	50%
	to China	62%	70%	82%	70%
Thailand	to World	21%	21%	27%	21%
	to China	40%	31%	36%	34%
Brazil	to World	37%	43%	63%	58%
	to China	78%	78%	93%	91%
South Africa	to World	28%	28%	37%	36%
	to China	48%	50%	84%	71%
Australia	to World	58%	62%	74%	74%
	to China	80%	84%	92%	92%

（Source）Uncomtrade

One percent growth in imports from China leads to 0.0082-0.028 percent point decline of domestic manufacturing in the next year

Panel Analysis on the Relationship between Imports from China and Domestic Manufacturing Growth
Dependent variable: Real growth rate of Value added in Manufacturing

	(1)		(2)		(3)		(4)	
GDP Growth Rate	1.05 ***	(17.94)	1.12 ***	(14.9)	1.40 ***	(12.73)	1.57 ***	(10.85)
Growth Rate of Imports from China (previous year)	-0.0082 ***	(-2.65)	-0.0083 **	(2.27)	-0.028 **	(-2.55)	-0.031 ***	(-2.59)
Constant	-0.99416 ***	(-3.26)	-1.18 ***	(-3.49)	-2.02 ***	(-3.14)	-2.65 ***	(-3.35)
Model	Pooling		Fixed effect		Pooling		Fixed effect	
Observations	955		955		350		350	
Countries	153		153		53		53	
R square	0.26		0.26		0.33		0.33	
F test: γ_i=0			1.03				0.87	

Figures in parenthesis are t values
*** significant at 1%
** significant at 5%
* significant at 10%

A Revival of the Center-Periphery Structure

- Raul Prebisch, who established ECLAC and UNCTAD in the United Nations, and Hans Singer pointed out in 1950 that the world economy consists of an industrialized "Center" and an underdeveloped "periphery" that supplies primary goods to the center.
- They argued that countries that specialize in primary goods exports tend to grow slower than industrialized countries.
- Now China is becoming the new center, while pushing the Asian, African, Latin American countries towards more specialization in primary goods exports.

The curse of natural resources

- The Prebisch-Singer Thesis has once been forgotten because of the rise of oil exporting countries. It was the basis of “import substitution” strategy in Latin America, which is regarded to be a failure.
- Sachs and Warner (2001) revived the Thesis under a new name, “the Curse of Natural Resources.” They showed that countries that export primary goods tend to grow slower than industrialized countries.
- I think the crucial advantage of industrialized countries is their *flexibility*. They can easily switch from one export item to another, while it is difficult for primary goods exporters to switch from one to another. In the case of agriculture, it takes at least one year.

5.The Future of the World Economy

- The per capita GDP of China in 2017 was $8,827. By increasing it by 40%, China will reach the threshold of a high income country ($12,500). At this point, China’s whole GDP will be almost equal to the US.
- I forecast that this will happen during 2025-2030.
- However, at that point China’s population will reach its peak of 1.44 billion, and then it will start to decrease.
- China’s working age population (aged 16-64) has already started to decrease since 2014. China’s economic growth will be constrained by its labor supply.

The Future of the World Economy

- China's growth will also be constrained from the demand side. First, domestic infrastructure investments has had a great progress during the past ten years. The length of high-speed rail has surpassed 22 thousand kilometers. However, there will be few promising new projects. Secondly, it will be difficult for the Chinese people to consume as much as the Americans, because of its high population density.
- The US's population, which is currently 329 million, is forecast to keep on increasing, surpassing 400 million in the 2050s.
- Therefore, although China's GDP will exceed that of the US before 2030, China will not become the sole economic hegemon of the world. China and the US will be the two largest economies in the world.

The Problem of Sino-US Relationship

- The cause of the US's trade deficit is its budget deficit.
- As long as the US has a very strong economic power, other countries will be willing to buy its Treasury bonds and keep them as foreign reserves. As long as other countries keep on buying Treasury bonds, trade deficit is not a problem for the US.

Military Expenditure, Budget and Current Account Deficits （Billion US$)

Year	2013	2014	2015	2016	2017
Military Expenditure	640	610	596	600	610
Federal Budget Deficit	680	485	438	585	665
Current Account Deficit	350	374	435	452	466
Trade Deficit	701	750	762	751	807

（Source）Military Expenditure : SIPRI, Federal Budget : Congressional Budget Office,
Current Account : World Bank,
Trade Deficit : US Census Bureau, Economic Indicator Division

The Problem of Sino-US Relationship

- The United States‘ net international liability at the end of 2017 stood at 7.7 trillion dollars, which was 40% of its GDP. Foreigners owned 6.2 trillion dollars of US Treasury securities, of which 19% was owned by China, 17% by Japan.
- The US has supplied a huge amount of international currency through its budget deficit and international liabilities. For the lenders such as Japan and China, there has been a potential risk of US dollar’s depreciation. However, so far that risk has not materialized.
- The main cause of US budget deficit is its huge military spending.
- The US bears 36% of all military expenditures in the world, while its GDP is only 22% of the world’s total.

The Future of the World Economy

- Should each country bear military spending in proportion to its GDP? That will end up in an arm race between China and the US, and the world will fall into the Thucydides's trap.
- The ultimate solution is to let the world evolve into a "modern state", where the military force is monopolized by a single global state.
- It may sound too idealistic. However, the world already has several governance mechanisms that have supra-national power, such as WTO, IMF, UNFCCC, etc.
- China's BRI should also be incorporated in an international setting, such as the AIIB, which is led by China, but has many other stakeholders.