

China's Trade: Development, Challenges and Transformations

Junwei Liang

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China's Trade: Development, Challenges and Transformations

Junwei Liang
Shandong University

Since the reform and opening-up in 1978, China has witnessed an explosive growth in trade, especially in export of commodity. After the accession to the WTO, the linkage of “Made in China” to the international market has boosted competitiveness of China’s products, while more and more conflicts and contradictions between China and trade partners have been emerging vastly and vigorously. The trade policy of the Trump administration against China is quite non-political-friendly, more importantly, a very awful and frightful signal to the global free trade regime. This will pose great challenges on Chinese authorities and companies, even individuals. China will, in the foreseeable future, be continuing implementing reform and opening-up and some critical transformations will be made in a larger and deeper sense, although it might be a long way to go.

China's Trade Development

At starting point, I will present brief but detailed introductions on historical China’s trade development in value, trade balance, products varieties, partners, regions, goods and services both in export and import.¹

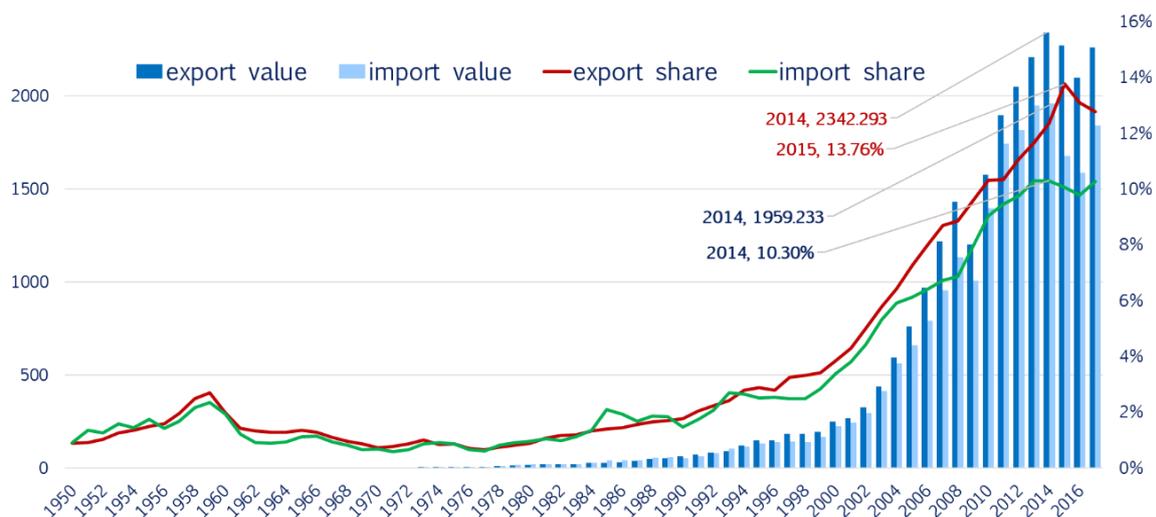
Value and Share

China surpassed Germany in commodity export value and ranked the first place in the world in 2009 when China contributed 9.57% of the world export by \$1.2 trillion of the value (see Fig. 1). In 2014, China’s export rocketed to \$2.3 trillion, nearly double of the 2009 statistics. And the share of China’s export in 2015 is close to 14% of the global export trade. Import went up by the same way as export, while the value was much less than the former, which explains well the reason of increasing trade surplus through a long period of time. The peak of value and share are both in 2014, with \$1.9 trillion and 10.3% respectively.

One thing to notice is the share of both export and import fluctuated smoothly before the year of 2015 (export) and 2014 (import), after the former has been declining continuously and the latter was going down and up violently in three years.

¹ Most of the data come from UNCTAD, WTO, IMF and other international organizations.

Figure 1 Trade Value and Share of China: 1950-2017



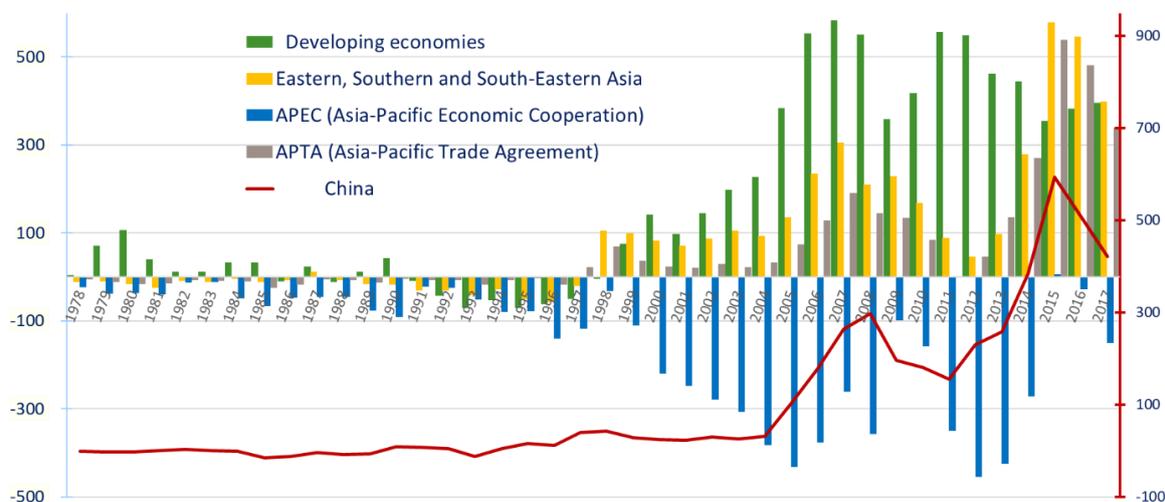
Source: UNCTAD, Billion USD, %.

Trade balance

Following Fig. 1, I go deeper to the trade balance of China by comparing with that of the other economies or organizations in Fig 2. Trade surplus in China’s trade of commodities has lasted since 1994. Just like what the main economies did, China jumped a cliff in 2008, and this tumbling should be attributed to the global economic crisis stemming from the subprime crisis in the U.S. And up to 2015, the surplus reached over \$590 billion, starting from the time when another free-fall shocked the trade balance until 2017 due to the European debt crisis.

For other economies, since 1998, most of the developing economies, East, South and South-East Asia and Asian Pacific Trade Agreement (APTA) are experiencing stable surplus, except APEC, which is undertaking a long history of deficit of nearly \$500 billion. 168 developing economies have been experiencing a steadier trade surplus during the two global shocks, thanks to the export structure of the developing economies. More primary goods are exported, less shock they will be confronted.

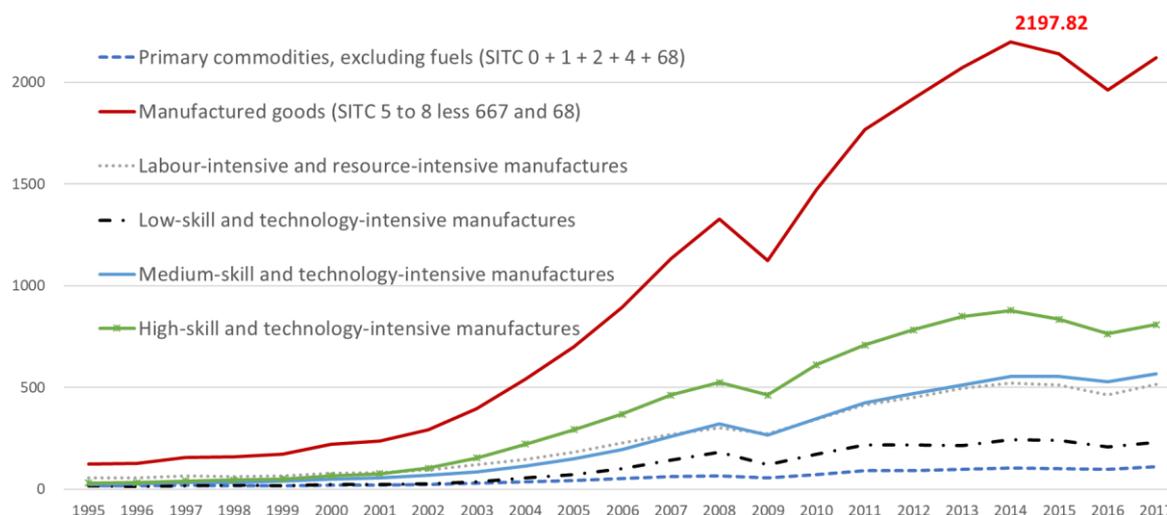
Figure 2 Trade Balance of China: 1978-2017



Source: UNCTAD, Billion USD.

Product Varieties

Figure 3 Product Varieties of China’s Export: 1995-2017

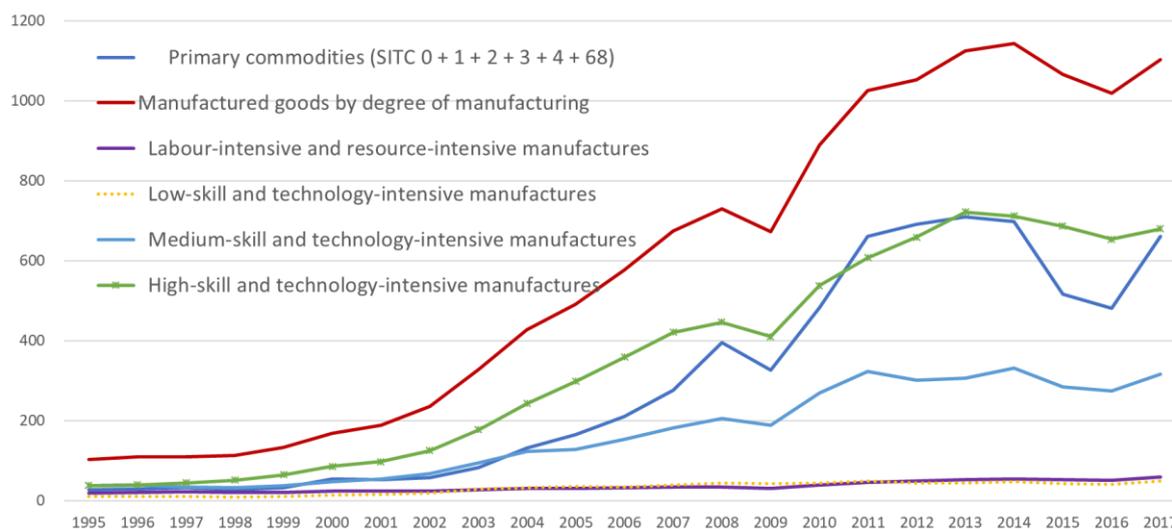


Source: UNCTAD, Billion USD.

Manufacturing is the most advantageous sector in exports since 1995, which has been increasing dramatically. The high-skill and technology-intensive manufactures contribute the largest value of exports, and medium-skill and labor-intensive and resource-intensive manufactures are going up together closely with almost the same magnitude.

The trend of import product varieties is not like export. The import of labor-intensive and resource-intensive, along with low-skill and technology-intensive manufactures is far less than that of medium-skilled and high-skilled manufactures. While China has been importing a great deal of number of primary commodities, the manufactures import is still ranking the first place.

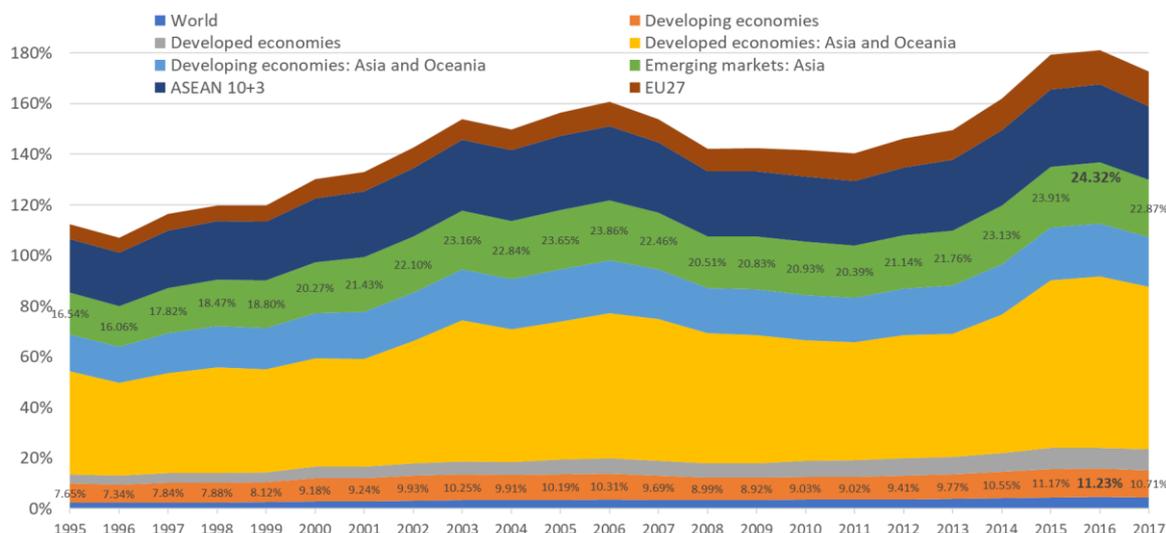
Figure 4 Product Varieties of China’s Import: 1995-2017



Source: UNCTAD, Billion USD.

If we go further to the detailed product varieties, things are more and more interesting. We set the share of China’s export/import of different degree of manufacturing over other economies or organizations as the indicator to analyze the relative advantage, which means relative advantage increases if the ratio increases year by year.

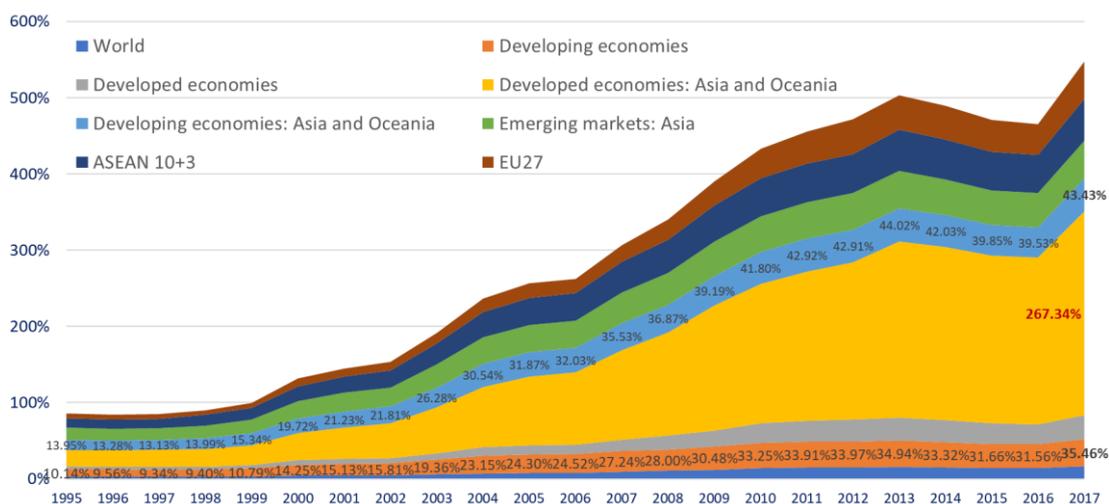
Figure 5 Share of China’s Export of Primary Goods (excluding fuel) Over Others



Source: UNCTAD (%).

As shown in Fig. 5, China’s export ratio of the global export is on average 3.4% and 9.4%. While the statistics of developed economies in Asia and Oceania rocket up to 2.4-fold, which may result from the little amount of Australia, Japan, Israel, New Zealand and Norfolk Island export, compared with China. For developing Asian and Oceanian economies, emerging Asian economies, ASEAN 10+3 and EU 27, China has exported 8.45% to 20.56% of what they do. More important is the fact that the share keeps almost unchanged for decades.

Figure 6 Share of China’s Import of Primary Goods (excluding fuel) Over Others

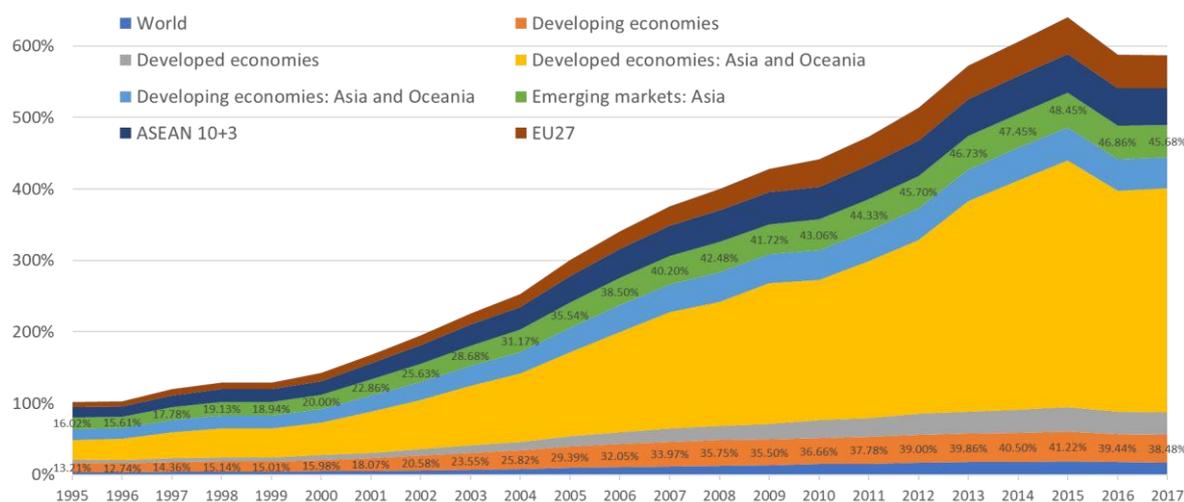


Source: UNCTAD (%).

As for the import side, see Fig. 6, the story is completely different. For most economies, China has imported more and more non-fuel primary goods by timeline than other economies and organizations. Especially, for developed economies in Asia and Oceania, China has imported almost 3-fold of what they do. One of the main products is

agricultural goods.

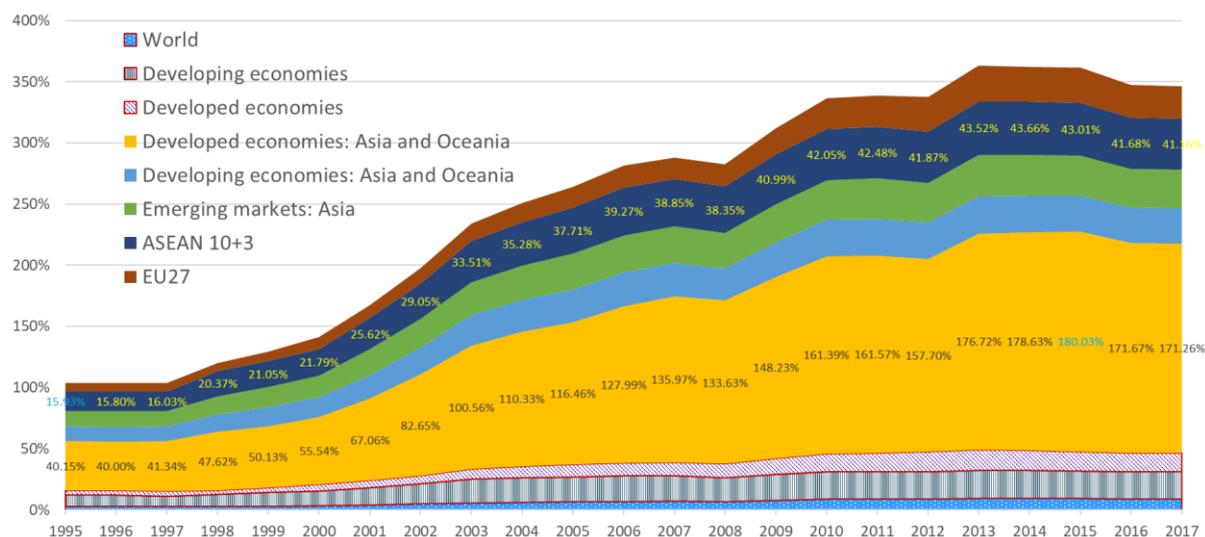
Figure 7 Share of China’s Export of Manufactures Over Others



Source: UNCTAD (%).

As another main products categories, manufactures are much more important in embodying the comprehensive power of one nation’s industries. The export of manufactures of China boosted since 2002 when China joined the WTO and completed the linkage to the world market in a real sense (see Fig. 7). As for the entire developing and developed economies, the share of China's export is more or less 1/3, developing economies in Asia and Oceania, emerging market in Asia, ASEAN 10+3 and EU27, the similar proportion. While for the developed economies in Asia and Oceania, China's export is more than 1.5 times of their figure averagely.

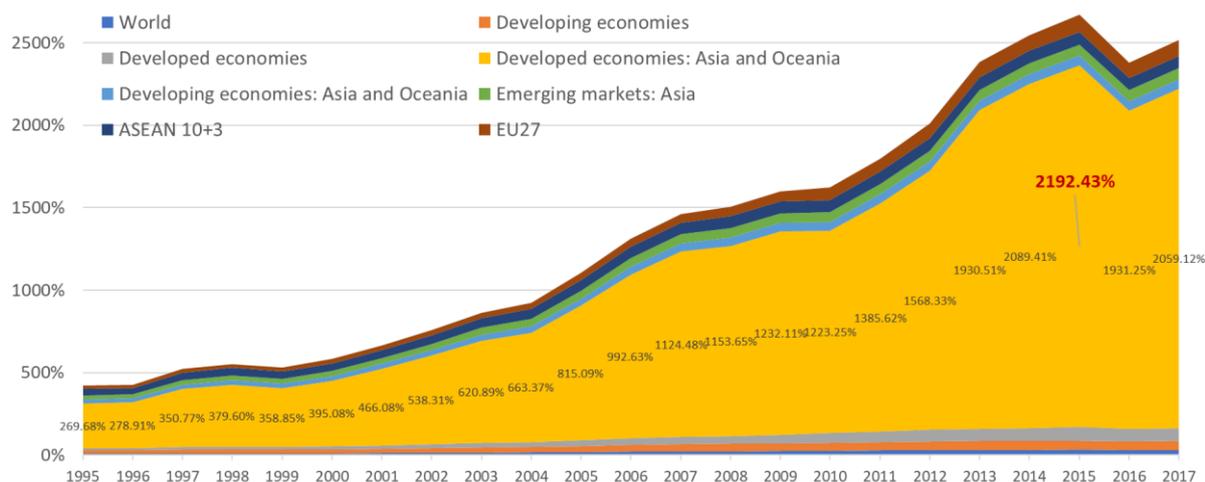
Figure 8 Share of China’s Import of Manufactures Over Others



Source: UNCTAD (%).

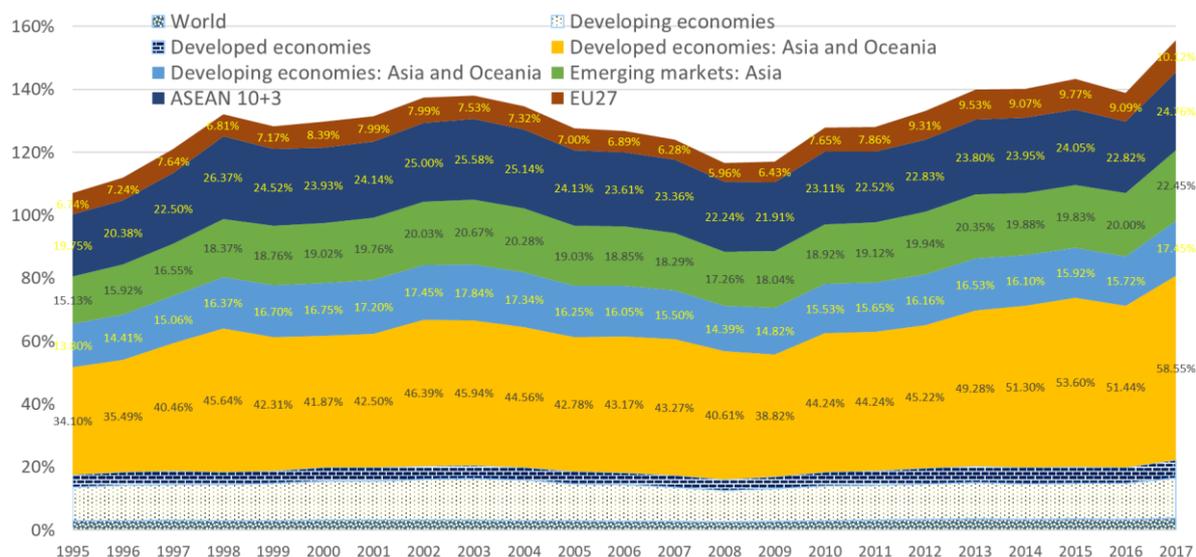
And the graph of import of manufactures is apparently in the same trend, which means China is in great both demand and supply capability in manufactures (see Fig. 8). And next step, we should go further for details of different degrees and factor intensity. We depicted the same figures of labor-intensive and resource-intensive, low-skill-and-technology-intensive, medium-skill-and-technology-intensive, high-skill-and-technology-intensive manufactures from both export and import sides and showed as follows from Fig. 9-Fig. 16.

Figure 9 Share of China’s Export of Labor-intensive and Resource-intensive Manufactures Over Others



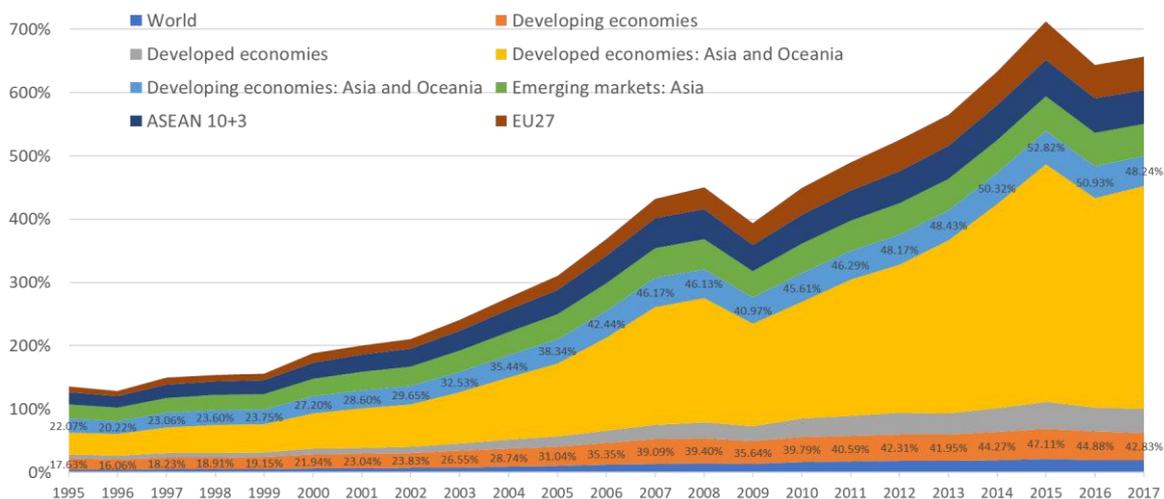
Source: UNCTAD (%).

Figure 10 Share of China’s import of Labor-intensive and Resource-intensive Manufactures Over Others



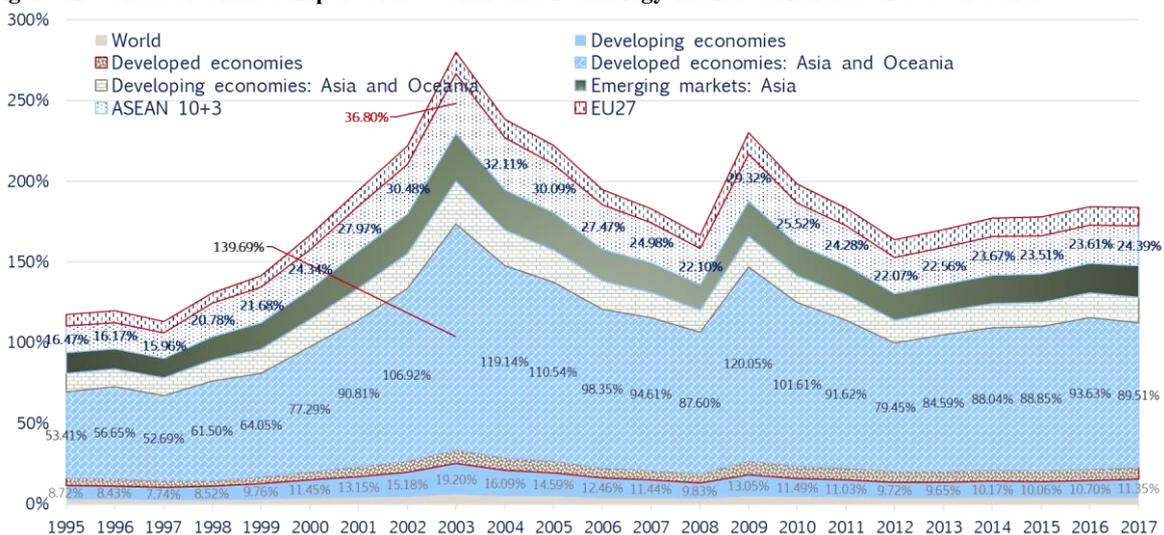
Source: UNCTAD (%).

Figure 11 Share of China’s Export of Low-Skill-and-Technology-Intensive Manufactures Over Others



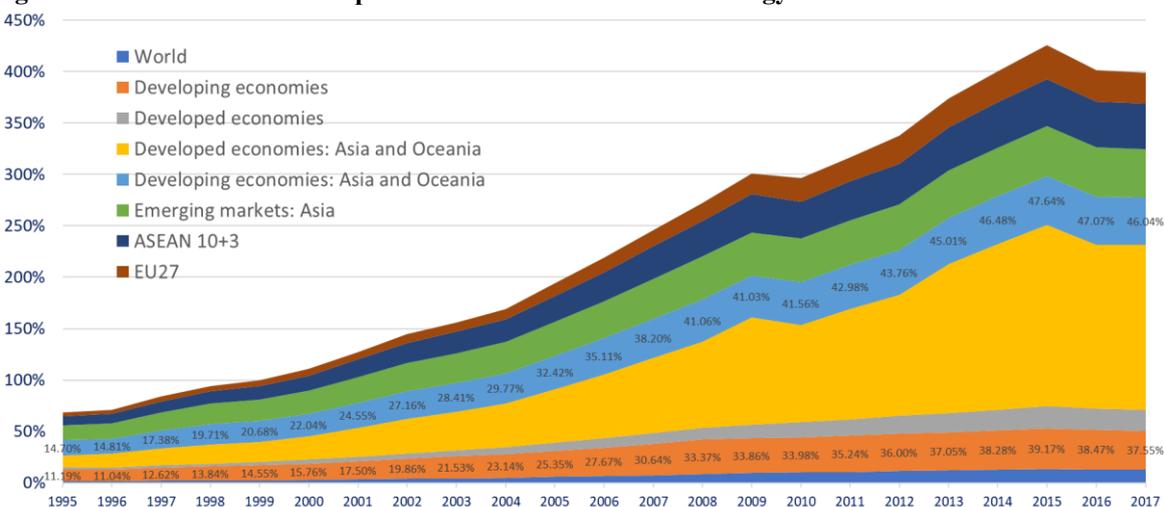
Source: UNCTAD (%).

Figure 12 Share of China’s Import of Low-Skill-and-Technology-Intensive Manufactures Over Others



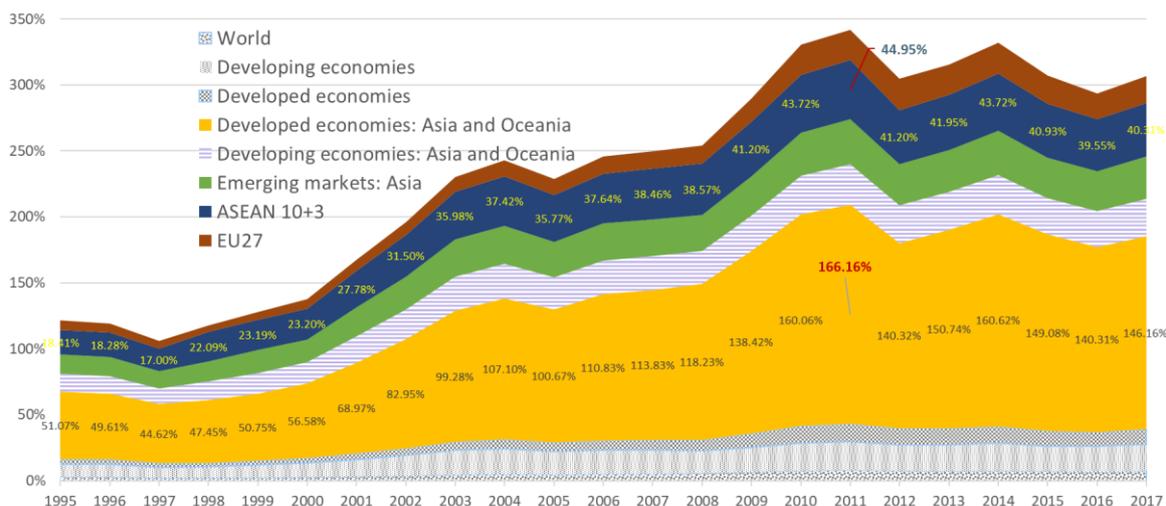
Source: UNCTAD (%).

Figure 13 Share of China’s Export of Medium-Skill-and-Technology-Intensive Manufactures Over Others



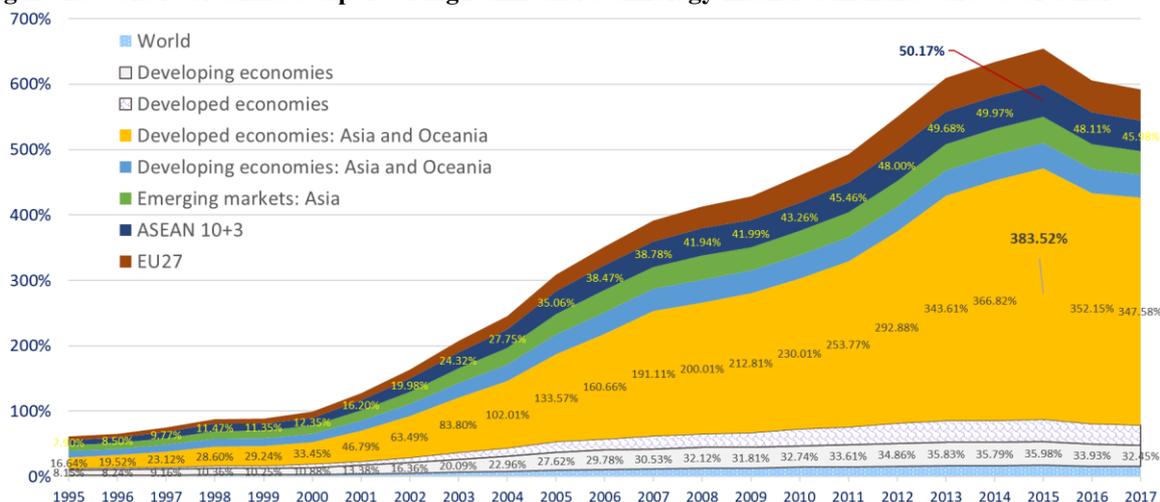
Source: UNCTAD (%).

Figure 14 Share of China's Import of Medium-Skill-and-Technology-Intensive Manufactures Over Others



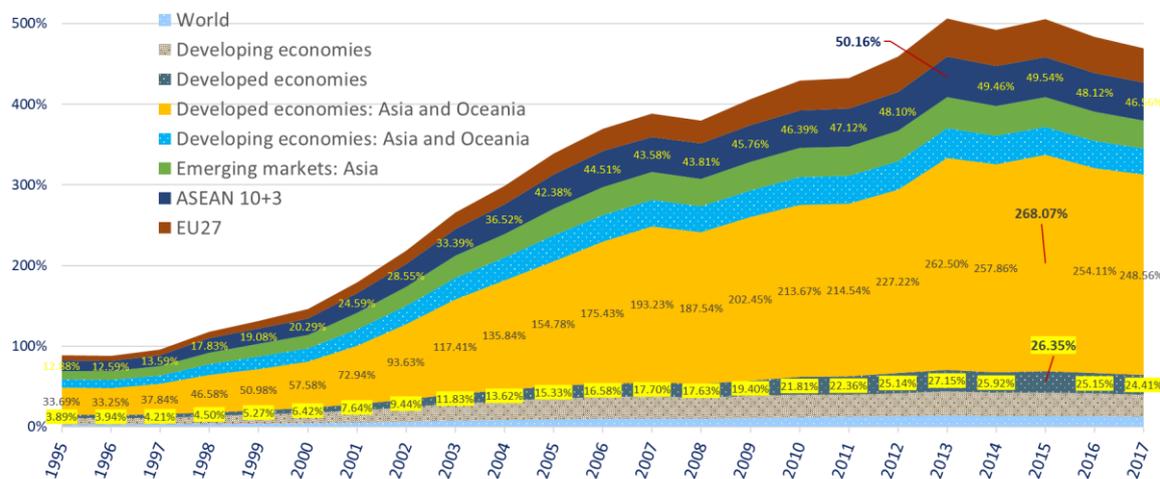
Source: UNCTAD (%).

Figure 15 Share of China's export of high-skill-and-technology-intensive manufactures over others



Source: UNCTAD (%).

Figure 16 Share of China's Import of High-Skill-and-Technology-Intensive Manufactures Over Others



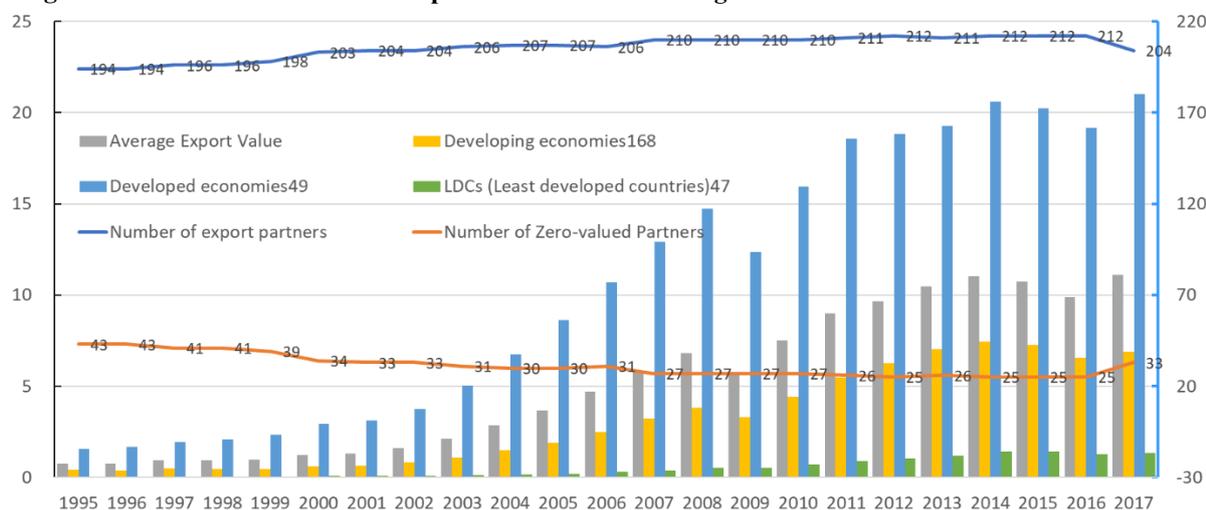
Source: UNCTAD (%).

From the above figures, the share of China’s import of labor-intensive and resource-intensive and low-skill-and-technology-intensive manufactures are mostly declining, while the rest are increasing by year, especially for the export side. A more profound finding is that most of China’s trade share lies in the developed economies in Asia and Oceania, which is powerful in defending against American’s trade arguments.

Trade Partners

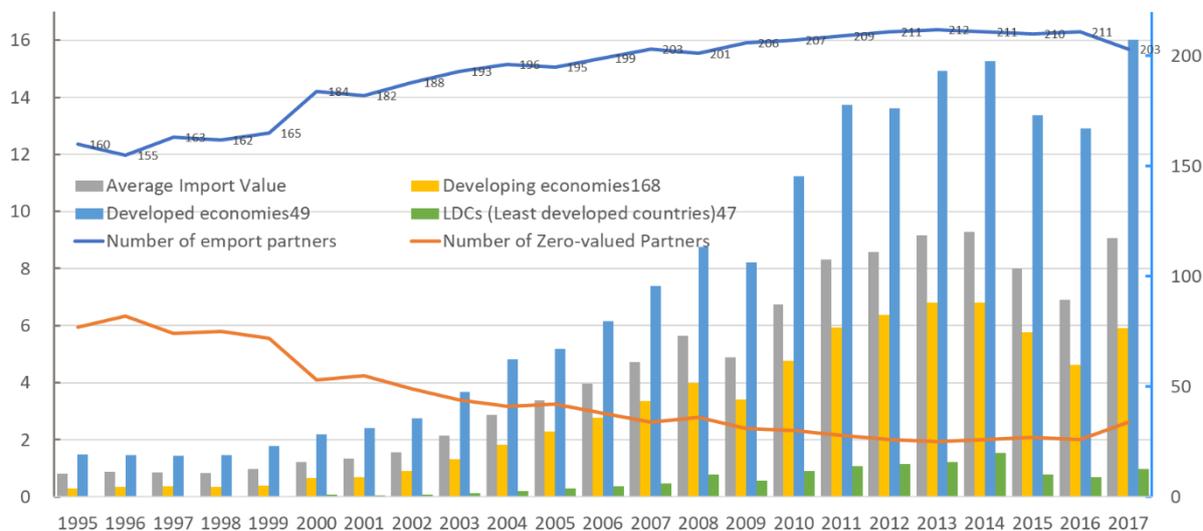
As China’s trade is expanding, an increase in trade volume and value is a key indicator, and the number of trade partner is another dimension to measure the geographical expansion. I find from Fig. 17 and Fig. 18 that in general, the number of export partners increases every year until 2016, and the number of zero-valued export partners is accordingly decreasing. The average export value of the world, developed economies, developing economies and LDCs are ranking from the highest to the lowest. Import partners are increasing more distinct from 155 to 212. And the average import value shows the similar distribution as export.

Figure 17 Partners of China’s Export: Number and Average Value



Source: UNCTAD, Billion USD.

Figure 18 Partners of China’s Import: Number and Average Value

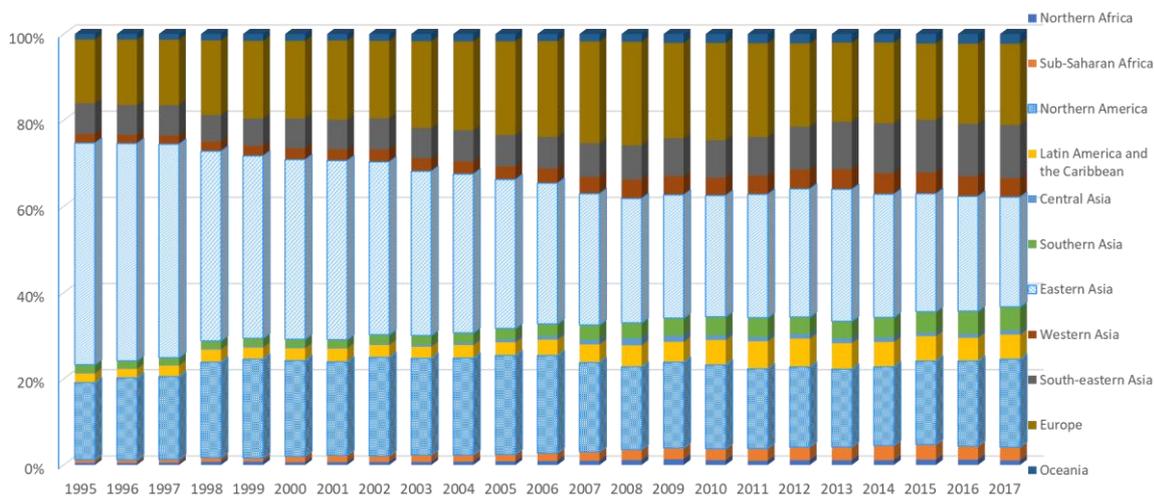


Source: UNCTAD, Billion USD.

Regional Characteristics

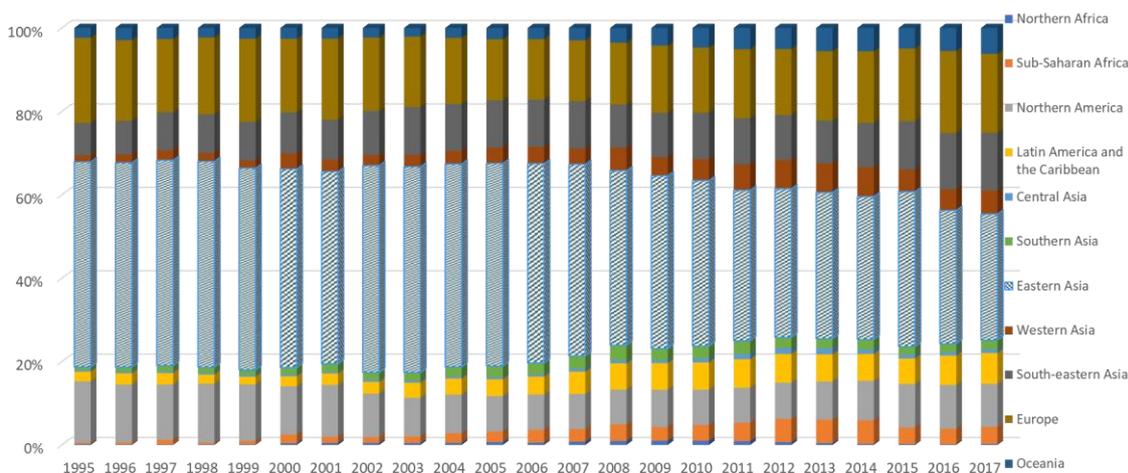
As to the regional structure, as Fig. 19 and Fig. 20 show, East Asia, Europe, North America, South-East Asia and Latin America and the Caribbean are basically the Top 5 exporting destinations and importing origins.

Figure 19 Share of China's Export Regions



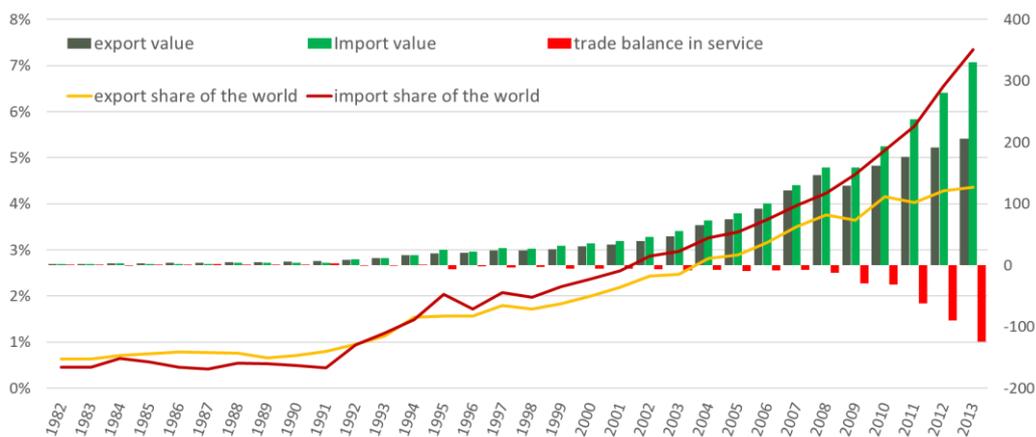
Source: UNCTAD (%).

Figure 20 Share of China's Import Regions



Source: UNCTAD (%).

Figure 21 Trade in China's Service: Value and Share



Source: UNCTAD (%).

Trade in Commodities and Services

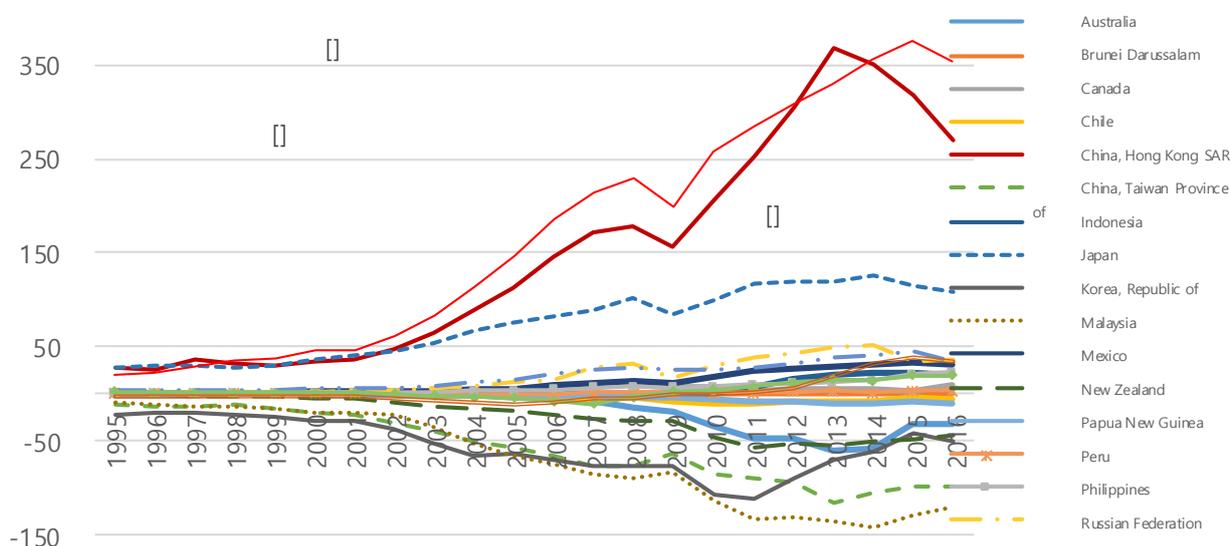
As the last part of trade development, it is not least to demonstrate a truth that with the rapid growth of China’s commodity trade for four decades, the trade in service is still deficit, which is continuously increasing, even the share of the world of both export and import is keeping on rising, see Fig. 21. And if we go deeper into the details of the trade of service, for example, in 2013, about a quarter of export and 40% of import of service is travel, while the export of other services takes almost 60% of total export in service, 38.59% of which is coming from other business services.

Influence of China’s trade on Asia-Pacific

Trade Balance

China is rising in the Asia-Pacific region, even in the world through trade. The economic influence in the Asia-Pacific is overwhelmed by the leading three nations, the U.S., China and Japan, while China is holding trade surplus against the rest two. For the U.S., the annual average surplus is almost \$180 billion, and \$75 billion for Japan. If we look at 21 economies of APEC as a whole, the annual average surplus is over \$700 billion. And nearly 60% of the economies is holding trade deficit with China (see Fig. 22).

Figure 22 Trade Balance of APEC Economies



Source: UNCTAD, Billion USD.

Export and Import Rank and Share

Statistics suggest that the share of APEC economies export to the world has changed violently from 1995 to 2017. I make a table about the rank according to the share of 1995 first, and sequentially that of 2002 when China joined the WTO, 2009 when the global financial crisis happened, and 2017, and the change compared with 1995, (Table

1). After completing some basic analysis, the U.S., Japan and China, Hong Kong SAR that ranked the first, second, and fourth place in 1995 have been switched to the second, third and fifth place. And Canada has been demoted to the sixth since 2009. One of the most remarkable facts is that China has ranked the first place since 2009 through 2017. In 2017, China has exported more than a quarter of the entire APEC commodities, which is more than the value share of the U.S. in 1995. And it seems the gap between China and USA is being widened.

If we go for import rank and share (see Table 2), China is not as contributive as what shows on export side. In 1995, China has contributed 9.48% of the import of APEC from the world, while merely 5.44% in 2017. This is not as consistent as the trend of China's import share of the world, which is going up along the timeline (see Fig. 1). For the U.S. the import share is also taking a downward road from more than a quarter in 1995 to 11.5% in 2017. And the rank is basically around the 6th or the 7th. One thing to note is that Korea has been on the first place of import share since 2003, when its share was 20.81% and the U.S. contributed 19.33%.

Another side of China's influence in the Asia-Pacific may come from the One-Belt One Road initiative (OBOR) and the Asia Infrastructure Investment Bank (AIIB), some nations treated them as notable exposure of China's proactive high-key in playing a more influential role in the Asia-Pacific region, even in the world. Actually, China's influence has been increasing in the region economically, not much geopolitically as some nations concerned or alleged since 1991 when China joined APEC, 2001 when China joined the Bangkok Agreement and 2003 when the ASEAN 10+3 mechanism was initiated. And more importantly, China's economic development, especially the trade development has been pulling and pushing the Asia-Pacific forward.

Table 1 Export Rank and Share change of APEC Economies

	1995		2002			2009			2017		
	Rank	Share	Rank	Share	Change	Rank	Share	Change	Rank	Share	Change
United States of America	1	24.87%	1	23.45%	0	2	18.71%	-1	2	17.56%	-1
Japan	2	18.90%	2	14.10%	0	3	10.28%	-1	3	7.93%	-1
Canada	3	8.15%	4	8.55%	-1	6	5.58%	-3	6	4.78%	-3
China, Hong Kong SAR	4	7.42%	5	6.83%	-1	5	5.83%	-1	5	6.25%	-1
China	5	6.35%	3	11.02%	2	1	21.28%	4	1	25.71%	4
Korea, Republic of	6	5.34%	6	5.50%	0	4	6.44%	2	4	6.52%	2
Singapore	7	5.05%	9	4.24%	-2	8	4.80%	-1	8	4.14%	-1
China, Taiwan Province of	8	4.75%	8	4.42%	0	10	3.60%	-2	10	3.61%	-2
Mexico	9	3.39%	7	5.44%	2	9	4.07%	0	7	4.65%	2
Russian Federation	10	3.34%	10	3.61%	0	7	5.34%	3	9	4.08%	1
Malaysia	11	3.15%	11	3.16%	0	11	2.78%	0	13	2.46%	-2
Thailand	12	2.41%	12	2.30%	0	13	2.70%	-1	11	2.67%	1
Australia	13	2.26%	13	2.20%	0	12	2.73%	1	12	2.61%	1
Indonesia	14	1.94%	14	1.93%	0	14	2.06%	0	15	1.92%	-1
Philippines	15	0.74%	15	1.19%	0	17	0.68%	-2	17	0.78%	-2
Chile	16	0.68%	16	0.59%	0	16	0.98%	0	16	0.79%	0
New Zealand	17	0.59%	18	0.49%	-1	19	0.44%	-2	19	0.43%	-2
Viet Nam	18	0.23%	17	0.57%	1	15	1.01%	3	14	2.43%	4
Peru	19	0.23%	19	0.26%	0	18	0.47%	1	18	0.50%	1
Papua New Guinea	20	0.11%	21	0.05%	-1	21	0.08%	-1	20	0.11%	0

Source: UNCTAD (%)

Table 2 Import Rank and Share change of APEC Economies

	1995		2002			2009			2017		
	Rank	Share	Rank	Share	Change	Rank	Share	Change	Rank	Share	Change
United States of America	1	58.70%	1	70.60%	0	1	44.99%	0	1	41.26%	0
Japan	2	25.59%	2	19.86%	0	3	15.50%	-1	3	11.50%	-1
China, Hong Kong SAR	3	14.93%	5	12.23%	-2	4	9.89%	-1	4	10.10%	-1
Canada	4	12.52%	4	13.09%	0	6	9.02%	-2	6	7.41%	-2
Korea, Republic of	5	10.29%	7	8.95%	-2	5	9.07%	0	5	8.20%	0
China	6	10.06%	3	17.36%	3	2	28.24%	4	2	31.55%	4
Singapore	7	9.48%	8	6.85%	-1	7	6.94%	0	8	5.44%	-1
China, Taiwan Province of	8	7.88%	9	6.62%	-1	9	4.91%	-1	9	4.45%	-1
Malaysia	9	5.87%	10	5.07%	-1	13	3.47%	-4	14	3.32%	-5
Mexico	10	5.52%	6	9.92%	4	8	6.58%	2	7	7.20%	3
Thailand	11	5.39%	12	3.80%	-1	12	3.76%	-1	12	3.85%	-1
Russian Federation	12	4.77%	13	3.59%	-1	10	4.80%	2	11	3.91%	1
Australia	13	4.37%	11	4.30%	2	11	4.65%	2	10	3.91%	3
Indonesia	14	3.10%	15	2.26%	-1	14	2.72%	0	15	2.70%	-1
Philippines	15	2.17%	14	2.42%	1	16	1.29%	-1	16	1.75%	-1
Chile	16	1.13%	17	0.90%	-1	17	1.20%	-1	17	1.11%	-1
New Zealand	17	1.06%	18	0.89%	-1	18	0.72%	-1	18	0.69%	-1
Viet Nam	18	0.62%	16	1.16%	2	15	1.96%	3	13	3.63%	5
Peru	19	0.58%	19	0.44%	0	19	0.61%	0	19	0.68%	0
Brunei Darussalam	20	0.16%	20	0.09%	0	21	0.07%	-1	21	0.05%	-1
Papua New Guinea	21	0.11%	21	0.07%	0	20	0.09%	1	20	0.05%	1

Source: UNCTAD (%).

Product Competitiveness

Traditionally, market share (MS), as shown above, is one common index to scale product competitiveness for goods in both domestic and international markets. There are some other better indicators that embody international competitiveness specifically. The results of Trade Competitiveness (TC) and Revealed Comparative Advantage (RCA, See Balassa 1965) are shown in the following.

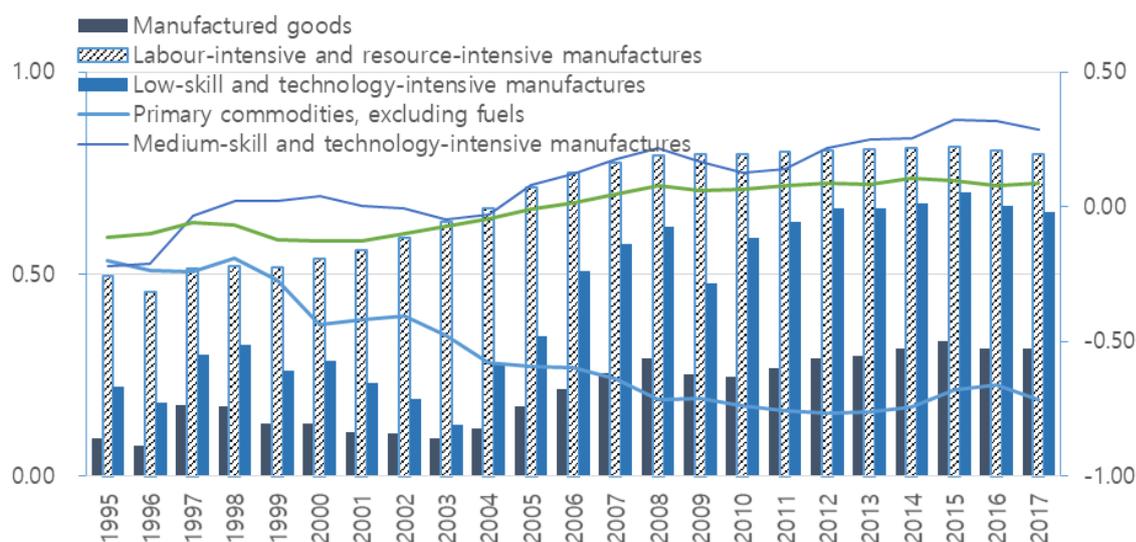
TC index is denoted as,

$$TC_{ij} = \frac{X_{ij} - M_{ij}}{X_{ij} + M_{ij}} \quad (1)$$

X_{ij} denotes the export of country i in product j , and M_{ij} the import. The results lie between (-1,1), it indicates country i is more competitive in product j when TC_{ij} is greater than 0, and less competitive when TC_{ij} is less than 0.

As shown on the right axis in Fig. 23, the non-fuel primary commodities, medium-skill, high-skill and tech-intensive manufactures are all less competitive compared with the whole world. Even the labor-intensive and resource-intensive, low-skill and general manufactured goods are more competitive. One thing worthy of attention is that medium and high skill manufactures are becoming more and more competitive, as well as labor-intensive manufactures go up. It is the fact that most of the competitiveness of China's export is coming from low-end manufactures. However, TC is not as good as RCA since the former may underestimate the economies with both huge import and export or overstate those with puny export and import. Thus, we will rectify the result with RCA index.

Figure 23 Trade Competitiveness of China Export of Products in the World



Source: UNCTAD.

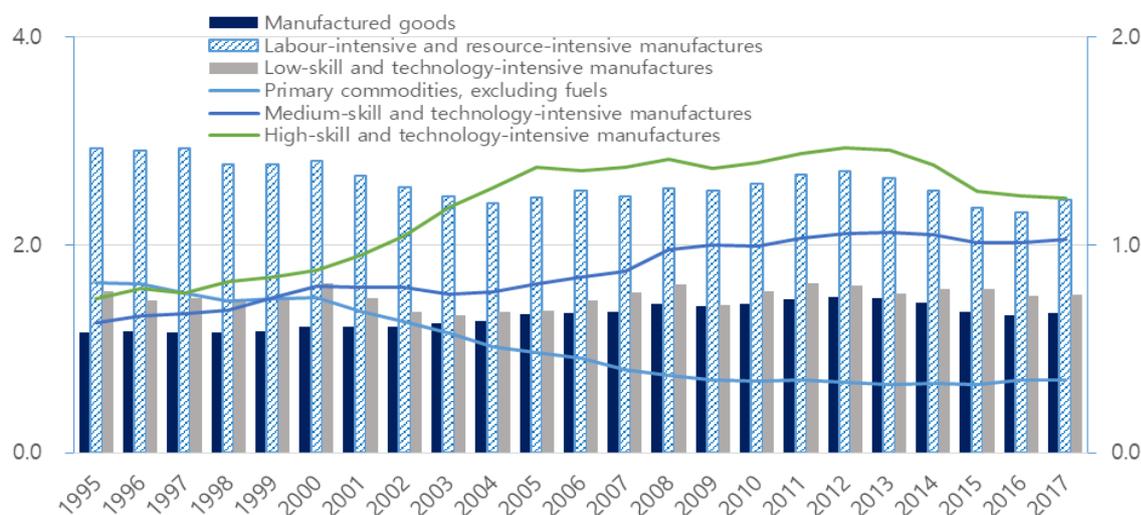
The RCA is expressed as follows,

$$RCA_{ij} = \frac{X_{ij}/X_i}{E_{wj}/E_w} \tag{2}$$

where X_i is the whole export of i , E_{wj} is the world export of product j , and the whole export of world. i is more competitively advantageous in export of product j if RCA_{ij} is greater than 1, and more competitively disadvantageous if RCA_{ij} is less than 1.

In accordance to my calculation, China has revealed comparative advantage in almost all varieties of the products except non-fuel primary commodities since 2009. However, the general trend of high-and-medium-skill manufactures are going up annually, and labor-and-resource-intensive manufactures are going down in RCA. These findings indicate that even, by now, the labor-and-resource-intensive manufactures are still the most advantageous products in the world market; the absolute level is declining, and the competitiveness of high-and-medium-skill manufactures are becoming stronger.

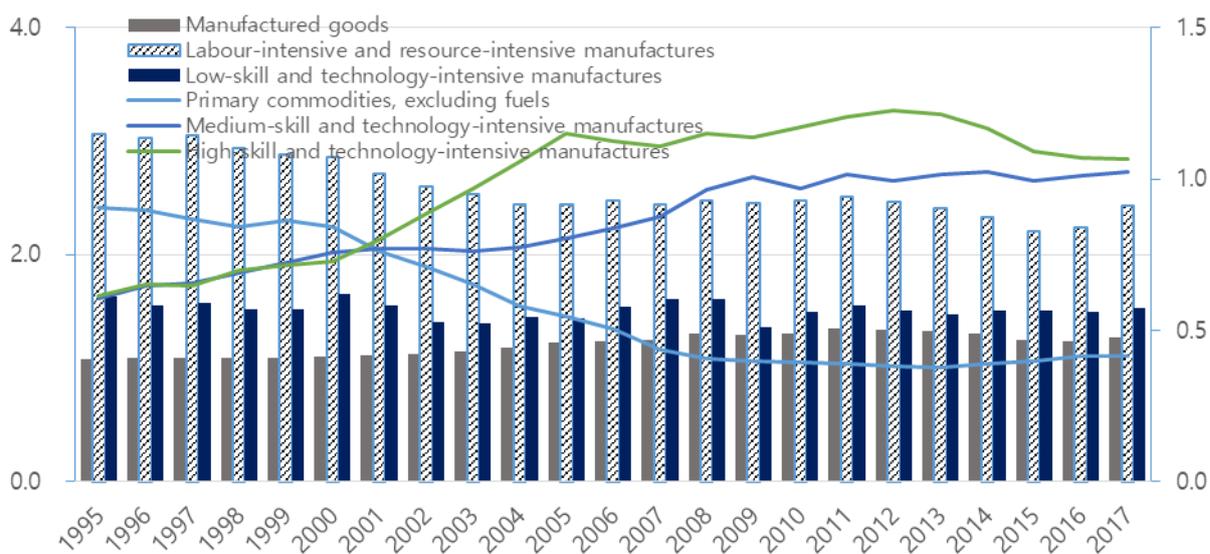
Figure 24 Revealed Comparative Advantage of China Export of Products in the World



Source: UNCTAD.

To understand the competitiveness of China's export in Asia-Pacific better, I estimated China's RCA in the Asia-Pacific area, as shown in Fig. 25. Except the non-fuel primary commodities and low-skill manufactures in some years, most of the RCA are less than the world counterparts, which means Chinese goods have weaker comparative advantages in the Asia-Pacific area compared to the worldwide, particularly for high-skill and tech-intensive manufactures. This difference between them may result from some economies of massive high-skill manufacturing capacity, such as Japan, Korea and the U.S. around the Asia-Pacific region.

Figure 25 Revealed Comparative Advantage of China Export of Products in the Asia-Pacific



Source: UNCTAD.

Conflicts, Contradictions and Challenges of China's trade

This section is showing more about the trade conflicts contradictions and challenges China faced, is facing and will face.

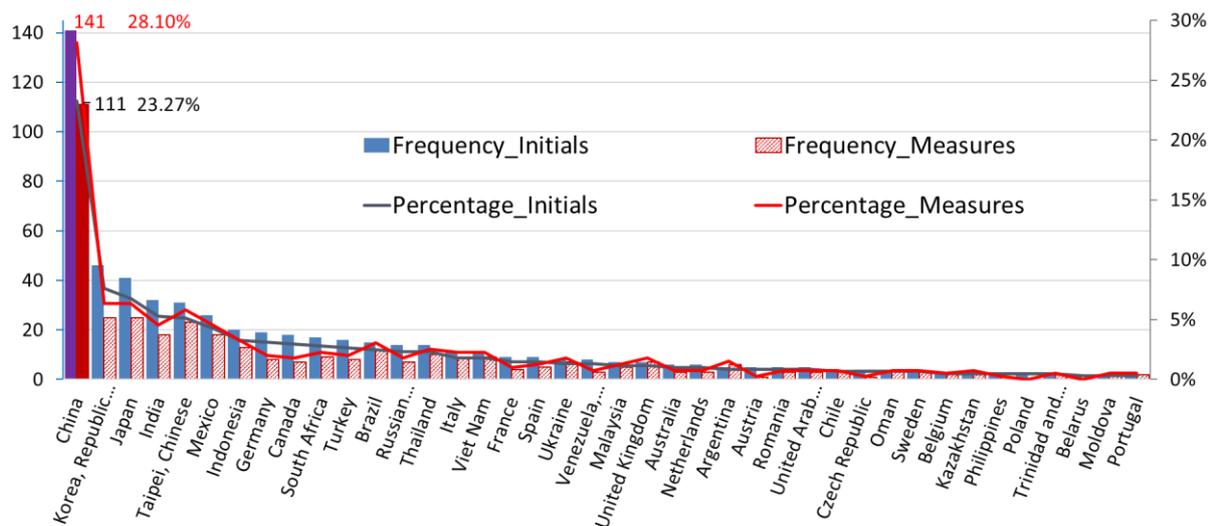
Tariff

As one of the most popular way of trade protectionism Tariff has been used as one of the most popular way of trade protectionism for many years before the multiple rounds of GATT negotiations. After GATT, the average bilateral tariff in the worldwide has been reduced by 80%. However, tariff is still a critical instrument to slap trade partners especially in the situation of long-time trade deficit, such as the US's case with China.

There is a saying about implementation of tariff against imports; it is like the shield to protect home products as well as firms from other counterparts, which is a way of seclusion and welfare loss at large. If there is a competition of tariff implementation between two trade partners, that means both are building higher and higher trade walls to protect their own market and both will earn deadweight losses. Therefore, looking back at the actions and counteractions between the U.S. and China in the trade war, it looks like two capricious kids playing and pretending.

Antidumping (AD)

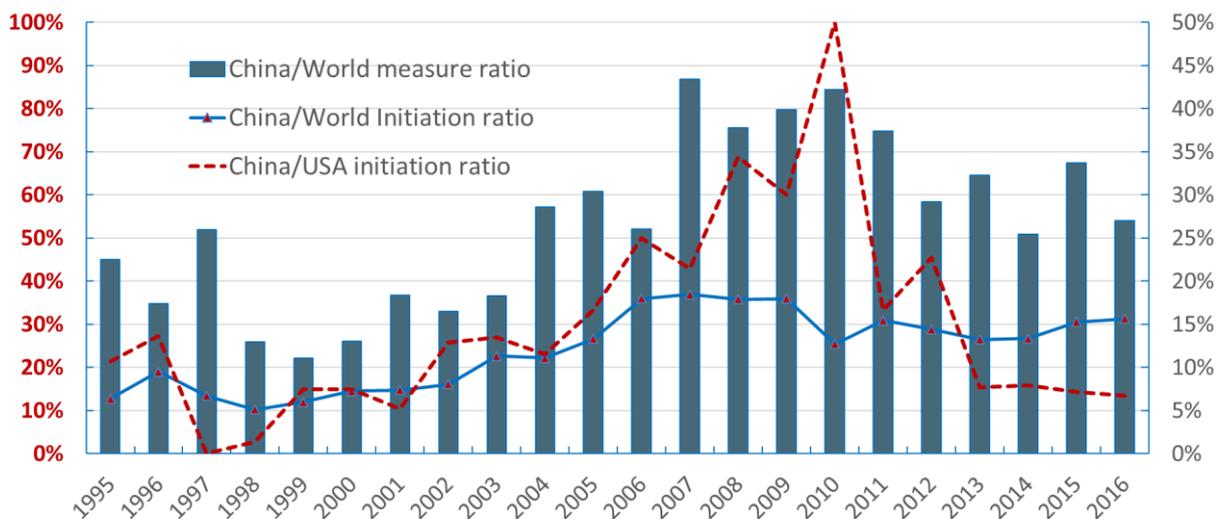
Figure 26 Frequencies and Percentages of Global AD Initiations and Measures



Source: WTO (%).

According to WTO, China accounts for nearly 30% of AD initiations and 23% of the world total amount, which is even higher than the second exporter, Korea and the global average level, see Fig 26. If we compare the ratio of global AD initiations and measures against China with that filed by the U.S., we can find a stunning difference. As shown in Fig. 27, the ratio of AD initiations against China over the total number against the rest of world filed by the U.S. is much higher than that filed by the world against China. The peak value is in 2010, when the ratio difference is almost 75%, which is evidence of some sort of discrimination.

Figure 27 The Share of AD Initiations and Measures against China Filed by the World and the U.S.

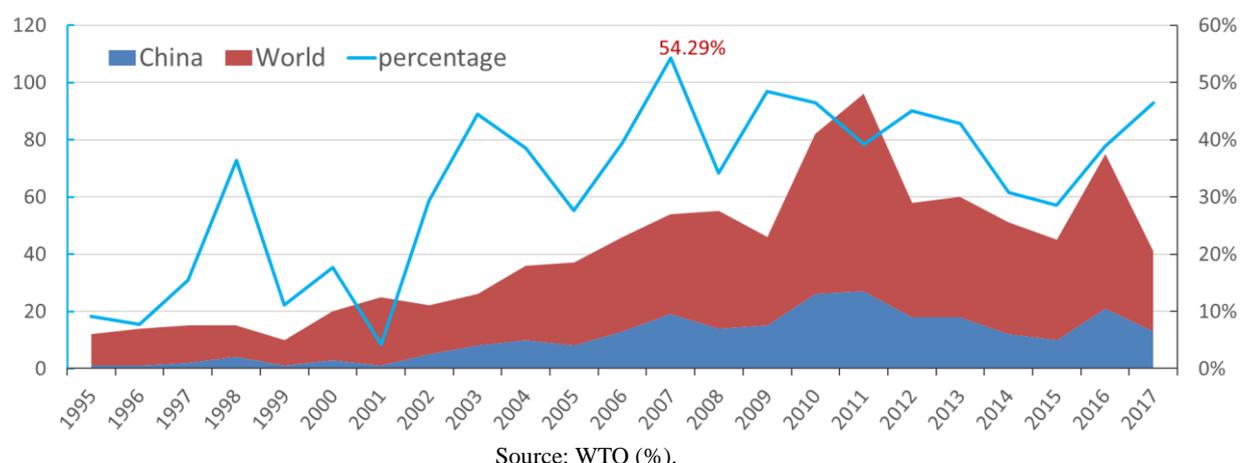


Source: WTO (%).

Other Non-Tariff Measures

337 investigation

Figure 28 337 investigation the U.S. has initiated on China and the rest of the World



Section 337 investigations conducted by the U.S. International Trade Commission most often involve claims regarding intellectual property rights, including allegations of patent infringement and trademark infringement by imported goods.

As for the 337 investigation, the U.S. has initiated more than 32% of the global total against China starting in 1995 through 2017, and reached almost 40% since China accessed to WTO. This can be called a Preference of the U.S. against China, see Fig. 28.

301 investigation

According to the Section 301 in the Trade Act of 1974, if the United States Trade Representative believed some trade partners violated trade agreements, or be unfair, unjust or unreasonable by the U.S. unilaterally, some unilateral and compulsory revenging measures should be launched accordingly, such as stopping trade agreements, increasing tariff, cancelling remission or enforcing trade agreements. There are three main types of 301 investigations: general 301, super 301 and special 301. Among them, the latter two are aiming at trade liberalization and IPR protection respectively.

Statistically, as shown in Table 3, the U.S. has launched 301 investigations against China six times since 1991, most of which could be seen as unilateral protectionism affirmed by USTR and revenge against China.

Table 3 301 Investigation of the U.S. against China

Year	Duration	Details
1991.04-1992.01	9 m	Special 301 investigation and IPR agreement signed in January 1992
1991.10-1992.10	12 m	301 investigation and Memorandum of Understanding on Market Access between China and the United States signed in October 1992
1994.06-1995.02	8 m	Special 301 investigation and second IPR agreement signed in February 1995
1996.04-1996.06	2 m	Special 301 investigation and third IPR agreement signed in June 1996
2010.10-2010.12	2 m	301 investigation and settled under the WTO Dispute Settlement Mechanism
2017.08-2018.03	8 m	301 investigation and trade war launched thereafter

Note: self-collected by author.

232 investigation

Section 232 of the Trade Expansion Act of 1962, as amended, gives the executive branch the ability to conduct investigations to determine the effects on the national security of imports.” Within 270 days of initiating any investigation, the Commerce Department issues a report to the President with the investigation’s findings, including whether certain imports threaten to impair America’s national security. The President has 90 days to determine whether he concurs with the findings and, if so, to use his statutory authority under Section 232 “to adjust the imports” as necessary, through tariffs or quotas.

What Will Spell out the Sino-American Trade War?

Since the President Trump’s inauguration in January 2017, precisely, just 3 months after the administration started running, the U.S. has initiated a series of investigations on China’s exports, see Table 3. On March 22nd, 2018, one year after signing a memo, punitive tariffs slapped on goods imported from China worthy of 60 billion USD in accordance with the result of 301 investigations, which says China has been stealing the Intellectual Property Rights of some American firms. And to fight back, China immediately cast a list of suspension of tariff concessions and additional tariff (see Table 5) on imports from the U.S. As a result the trade war was triggered.

Table 4 Timeline of Sino-American Trade War: on American side

Date	Investigation or Measures	Partners involved
04/20/2017	232 on steel, investigation	all
04/27/2017	232 on aluminium, investigation	all
08/18/2017	301 on China’s IPR stealing and forcing US firms to transfer technology, investigation	China
01/23/2018	Solar battery and parts and laundry machine, tariff	all, but more influencing on China and Korea
02/27/2018	Final affirmative decision that dumping and subsidy are verified in China’s aluminium foil export	China
03/08/2018	Tariff act on steel and aluminium by 25% and 10% on all importers	all
03/15/2018	ITC affirmative injury of China’s aluminium foil export on USA industries	China
03/22/2018	tariff on Chinese export of \$50 billion USD according to 301 investigation (announcement)	China
03/23/2018	Implementation of tariff act	all
04/03/2018	25% additional tariff on Chinese export of \$50 billion (implementation)	China
04/05/2018	Trump consider more tariff on another list of Chinese export of \$100 billion	China
04/16/2018-05/14/2018	ZTE sales ban for 7 years	China
06/30/2018	Control export and investment to China in specific goods and technologies	China
07/06/2018	25% additional tariff on Chinese export of \$34 billion	China
08/02/2018	American trade representative asserted increase additional tariff from 10% to 25%.	China

Note: self-collected by author.

Table 5 Timeline of Sino-American Trade War: on China side

Date	Reactions/Countermeasures	Value of imports involved
04/04/2018	Tariff Commission of the State Council decided to impose additional tariff of 25%	On American beans, autos, chemicals etc. and in all 14 classifications 106 items involved and \$50 billion beans imported from USA in 2017
05/04/-05/05/2018	Beijing meeting, round 1	Honest, efficient and constructive discussion, say, not productive
05/16/-05/19/2018	Washington meeting, LIU He	A consensus on taking effective measures to substantially reduce the United States trade deficit in goods with China
06/02-06/03/2018	Beijing meeting, round 2	China will significantly increase purchases of United States goods and services. This will help support growth and employment in the United States
06/15/2018	Tariff Commission of the State Council decided to impose additional tariff of 25%	On American agricultural products, autos, aqua etc. and in all 659 items worth \$50 billion
06/19/2018	Ministry of Commerce: China will react against the threat tariffs on an extra \$200 billion worth of Chinese imports	Proportionally value of import from USA
08/03/2018	Tariff Commission of the State Council decided to impose additional tariff of 5%-25% on imports from USA	On 5207 tax items import from USA worth \$50 billion, if USA imposes, China will do as well

Note: self-collected by author.

As the timeline mentioned above shows, the trade war was, de facto, targeting specifically China with deliberate investigations and intentional obstacles from the very beginning stage. And China is reacting and taking countermeasures passively and defensively. Then, what would spell out the Sino-American Trade war behind the scene of trade conflicts? The followings are my personal views on economic and noneconomic aspects.

Why Does Trade Deficit Matter?

Since the Presidential campaign, Trump has shown his concern about and discontent with the bilateral trade deficit with China. And following this basic clue, by the request of President Trump, the International Trade Administration (ITA) of the Department of Commerce initiated the “232” investigation on imported steel and aluminum from the world. However, anyone can find it is obviously focusing on China from the start since China is the biggest steel and aluminum manufacturer in the world, which will be generating a harassment and restriction effect. And what is more important is that most of the other exporters have granted tariff exemption, such as Canada, Mexico, EU, Argentina, Australia, Brazil and Korea. China was an exception, even though China is merely the fourth aluminum and the 11th steel exporter to the U.S.; its share is just 9.5% and 2% respectively. How will this magnitude threat American national security as stated in “232” section?

From Table 6, we can find evidence that roughly 34% (by value) of the Top 10 imported goods are not crucial to American industrial security, as mentioned in the documents of 232 investigations, and about 33% of the manufacture goods groups are not high-skill or high-technology, as the American President and trade representatives mentioned. At least, it is not as significant as stated.

Table 6 Top 10 products USA imported from China (2017)

Rank	Detailed Products by SITC	USD Billion		Manufactured goods by degree of manufacturing
1	Telecommunication equipment, n.e.s.; & parts, n.e.s.	77.62	218.33	High-skill and technology-intensive manufactures
2	Automatic data processing machines, n.e.s.	54.43	202.19	High technology manufactures: electronic and electrical (Lall classification)
3	Baby carriages, toys, games & sporting goods	27.51	146.20	Medium-skill and technology-intensive manufactures
4	Furniture & parts	26.81	107.99	Labour-intensive and resource-intensive manufactures
5	Parts, accessories for machines of groups 751, 752	21.58	106.39	Low technology manufactures: other products (Lall classification)
6	Footwear	14.84	75.67	Medium technology manufactures: engineering (Lall classification)
7	Electrical machinery & apparatus, n.e.s.	14.05	65.88	Low technology manufactures: textile, garment and footwear (Lall classification)
8	Articles, n.e.s., of plastics	13.46	35.27	Low-skill and technology-intensive manufactures
9	Television receivers, whether or not combined	11.71	13.74	Medium technology manufactures: automotive (Lall classification)
10	Articles of apparel, of textile fabrics, n.e.s.	10.86	13.41	Resource-based manufactures: other (Lall classification)

Note: Recollected from UNCTAD by author. This table presents merchandise trade by trading partner China and product based on the three-digit level of the SITC commodity classification, Revision 3. The grey highlighting products or groups are about even higher-technology and the turquoise are lower-technology.

If we go further for the detailed deficit of manufactured products groups (see Table 7), we can find that around 24% is from low-technology or labor-intensive industry, which means more than 3/4 bilateral deficit with China is coming from high-end manufacture. That may explain to some degree why the U.S. President and the trade representatives are that anxious and angry with ‘Made in China 2025’ strategy. And to be more precise, what matters is not the trade deficit from the manufacture industry, it is the long-term industrial strategy of China. What the U.S. is attempting to stem and suppress is not the export of China to the U.S., but the development and rising of the strategic industries in the long run.

Table 7 Main Trade Deficit Products Groups (2017)

Manufactured goods (SITC 5 to 8 less 667 and 68)	390.79
Machinery and transport equipment	204.30
Other manufactured goods (SITC 6 + 8 less 667 and 68)	188.57
High technology manufactures: electronic and electrical (Lall classification)	180.52
High-skill and technology-intensive manufactures	150.77
Miscellaneous manufactured articles	140.10
Medium-skill and technology-intensive manufactures	104.64
Labour-intensive and resource-intensive manufactures	104.10
Low technology manufactures: other products (Lall classification)	100.99
Parts and components for electrical and electronic goods (SITC 759 + 764 + 772 + 776)	97.91
High-skill: Parts and components for electrical and electronic goods (SITC 759 + 764 + 776)	93.55
Telecommunication and sound recording apparatus	93.50

Note: By SITC Rev.3, SITC5 denotes Chemicals and related products, n.e.s., SITC6 Manufactured goods, SITC7 Machinery and transport equipment, SITC8 Miscellaneous manufactured articles; SITC667 Pearls, precious & semi-precious stones, SITC68 Non-ferrous metals, SITC 759 Parts, accessories for machines of groups 751, 752; SITC 764 Telecommunication equipment, n.e.s.; & parts, n.e.s., SITC772 Apparatus for electrical circuits; board, panels, SITC776 Cathode valves & tubes. SITC 751 and 752 are Office machines and Automatic data processing machines, n.e.s.

What other Aspects Does the U.S. Censure China?

Evidently, the trade deficit is not the whole economic story which can explain the actions of the U.S. against China although the issues are primarily about trade. There must be something else that displeased and infuriated the U.S. If so, what are they?

First and foremost, the competitiveness may well explain the conflicts between the U.S. and China. The total GDP of China has been taking the second place in the world since 2011 when Japan has been surpassed by China, and some economists predict that the U.S. will be surpassed by China in 2030. That would be a dream that will come true after the good endeavor of 200 years for China. The “Made in China” with a higher quality in lower price is more competitive than “Made in America” in the global market even in some high-technology industries, like high-speed railways and trains. In the 2018 National Defense Strategy, it is clearly stated that “Inter-state strategy competition, not terrorism is now the primary concern of the U.S. national security” and that “China is a strategic competitor using predatory economics to intimidate its neighbors while militarizing features in the South China Sea,” which is the proof how the U.S. is looking at China’s rise from the strategic perspective.

Second, the President Trump and the members of his team are taking strong measures against China which triggered and worsened the situation. Steven Mnuchin, Secretary of the Treasury Wilbur Ross, the Secretary of Commerce, and Robert Lighthizer, the Trade Representative are three Hawks in the seven members when the first Beijing negotiation proceeded. Additionally, the Secretary of State, Mike Pompeo, the Secretary of State, John Bolton, National Security Advisor have taken the place of Rex Tillerson and Herbert McMaster, who are thought as the rational and safety valves in the White House. It is stated in the 2018 National Defense Strategy reports that *“A more lethal, resilient, and rapidly innovating Joint Force, combined with a robust constellation of allies and partners, will sustain American influence and ensure favorable balances of power that safeguard the free and open international order,”* which will be the mainstream orientation in the future strategy. The economic, political and military sides are closely related with the profound national interests of the U.S. With the rise of China, in economy, military and diplomacy, the achievements and ambitions of Beijing, they believe, have been sending a strong and clear signal that the first place will be challenged someday, just like the Thucydides’ Trap implied. The incumbent leader must react, even most of the guess is just kind of probability. For example, the military features in the South China Sea, the tough attitude against Taiwan Independence, the reinforcement of military and weapons after a serious of anticorruption measures, the One Belt One Road Initiative (no more strategy), the Asian Infrastructure Investment Bank and some other steps forward to RMB internationalization, etc. have been deemed as a potential challenge.

The last but not least, the conflict between style of President Xi and Trump is, to some degree, another reason behind the scene. The former is relatively more heroism and patriotism. The ambition in his deep heart and the firm hand of his governance and renovation in his administration is no stronger than his predecessors than ever before. While Trump is more or less capricious, either post arguments on Twitter or behaved in formal bilateral or multilateral diplomatic circumstances. Thus, when the Trump administration triggered a series of trade investigation and sanction measures along with all round censures and challenges against China, what the U.S. earned is a decisive and unhesitant response from the Chinese government. That is the China Style nowadays.

As for President Trump, he is more than patriotic, insightful and tactical in coping with economic and political issues. For example, when he announced to run for president in June 16th, 2015, he was a billionaire, aged 70, and had been enjoying family harmony for a long time. He was the oldest president candidate and oldest

president elect ever, who paid the campaign fund by himself. All of these implied that he was a patriot, and “Make America Great Again” was not just a campaign slogan, but a strong intention,² an American dream from the deep of his heart to come true.

Where Will the Status Quo Be Heading?

The conflict or dispute is not just about trade from the very beginning, even the two sides have been doing some endeavor to ease the bilateral tension. The determination is stick out of a mile, and unprecedented in conflicts between the two super powers after Cold War. And the competitions and conflicts are from all facades, and that would be a long run phenomenon.

First, the rise of China is definite. As the former Prime Minister of Australia Kevin Rudd said in TED, “China is today not only just woken up, China has stood up and China is on the March.” This will be a fact that both America and China must be confronted with. Even for the rest of the world, it would be right to envisage getting along with China, not tackling or coping, s would not stop, contain or restrain China. But the story does not seem to go like this. We can see very clearly the problems and toughness that China’s development and reform will be facing in the following decade.

Second, the reaction of the U.S. is definite. Since the collapse of the Soviet Union, the U.S. has been looking for opposing force (OPFOR) from the world, which is a proactive behavior on the one hand. On the other hand, these actions are also a show of arrogance and arbitrariness, like the old saying in Chinese that, “The sheriff can set fire, but civilians are not allowed to light lamps” (its English equivalence is, “One may steal a horse while another may not look over the hedge”). Even as the emperor on the globe, the U.S. with this philosophy of rudeness is neither rational nor enlightened. But at least, the U.S. is definitely determined to stem and suppress any competitor that is or would be challenging the hegemony.

Third, how will these two powers coexist and co-reside? This will be the key to the future of the trade war. In the same TED speech, Kevin Rudd also asked, “whether these two great civilizations, these two great countries can in fact carve out a common future for themselves and for the world?” He mentioned some key points of what and how some western countries concern about China if China does become the world largest economy. If the projection is right, it would be the first time that we will have a largest economy which is a non-English speaking non-western non-liberal democratic country. How would the U.S. and the world engage with China for the rest of the 21st century? Nobody has a clear picture for the future but it is an important question to explore.

China’s Coming Transformations in Trade

China will continue to maintain open economy and deepen reforms

² He is insightful in the change of the United States that during the process to be internationalized, the interests of massive labor forces have been neglected or squeezed by elites, interests of American have been threatened by immigrants from the rest of the world. And this “America First” is not like the traditional convention that USA should behave well politically and humanitarily in the world, but a keen reason for him to win the vote of massive electorates. Therefore, he was running for presidency with extraordinary tactics. The campaign team only consisted of 130 members, less than 1/6 of that of Hillary’s, and all the ad cost for campaign was \$74 million, while that of Hillary was more than \$200 million, which made the per vote cost as low as \$13.19. He changed his campaign manager twice during the whole process, while this Rarely Chaotic team resulted in the winner of the campaign.

The official documents and guideline of the 19th CPC National Congress confirmed comprehensive reform as a basic policy underpinning our endeavors to uphold and develop socialism with Chinese characteristics in the new era. It also put forward new tasks and further refined the overall objectives and roadmap for the comprehensive reform program.

Reform and opening-up is a great process that has helped China and the rest of the world achieve development and progress together. Opening-up is the path China must take to achieve prosperity and development. President Xi Jinping pointed out that “What has happened proves that opening-up was key to China’s economic growth over the past 40 years and in the same vein, high-quality development of China’s economy in the future can only be achieved with greater openness.” At present, the world is undergoing great development, transformation and adjustment. The road to world economic recovery is hard and tortuous; economic globalization experiences twists and turns; and unilateralism and protectionism are on the rise. These are the challenges that all of the countries are facing. Under the new conditions, China will adhere to its fundamental national policy of opening-up, actively promoting international cooperation under the Belt and Road Initiative, and striving to create a future that is open, innovative, inclusive and mutually beneficial. China will unswervingly promote opening-up on a higher level, significantly relax access to markets, create a more attractive environment to investment, implement high-standard policies of trade and investment liberalization and facilitation, build free trade ports with Chinese characteristics, and make a new ground to pursue opening-up on all fronts. China firmly supports an open world economy, defends WTO rules, supports the multilateral trading system, promotes regional economic integration, facilitates the building of free trade areas, opposes protectionism in all its forms and manifestations, takes the initiative in opening the market, and pushes economic globalization in the direction of becoming more open, inclusive, balanced and beneficial to all. The opening-up and reform will be deepening as socialism with Chinese characteristics has entered a new era, the principal contradiction facing Chinese society has evolved. What we now face is the contradiction between unbalanced and inadequate development and the people’s ever-growing needs for a better life. There will be accompanied by a couple of mechanism and systematic reform in the nationwide, which might be harder and tougher than anytime else in the history after four decades of reform and opening-up. The reform of import restraints and export encouragements, fair play of domestic market, guideline to industrial development, SOE behavior etc. will be involved in the future.

As the economist in IDEAS in Geneva, Xiankun LU stated in the speech at annual event 2018 of UIBE China “WTO and China,” nobody will deny that “using external force to advance domestic reform and opening-up” has worked well in China’s miraculously rapid growth in the past 40 years. However, with substantial changes on both China and the global landscape, it is probably the time to see whether that “external force” still exists and whether China should reflect upon how to advance its further reform and opening-up process with a better instrument. The rise of China and other emerging economies has substantially changed the perception of other members, in particular the developed major ones, around the role and responsibility of emerging economies. The mismatch of their respective positions has led to a total failure of years of efforts to find a solution, hence a full break on the rule-making function of the multilateral organization. Therefore, for China, the multilateral engine of “external force” is not providing the usual push for its domestic reform and opening-up process. This means that China should develop an intrinsic push and begin to take steps to push forward its reform and opening-up process. It will be a long and tough way to go.³

³ See Xiankun LU homepage of LinkedIn, “China Should Switch to a Different Gear for its Domestic Reform and Opening-

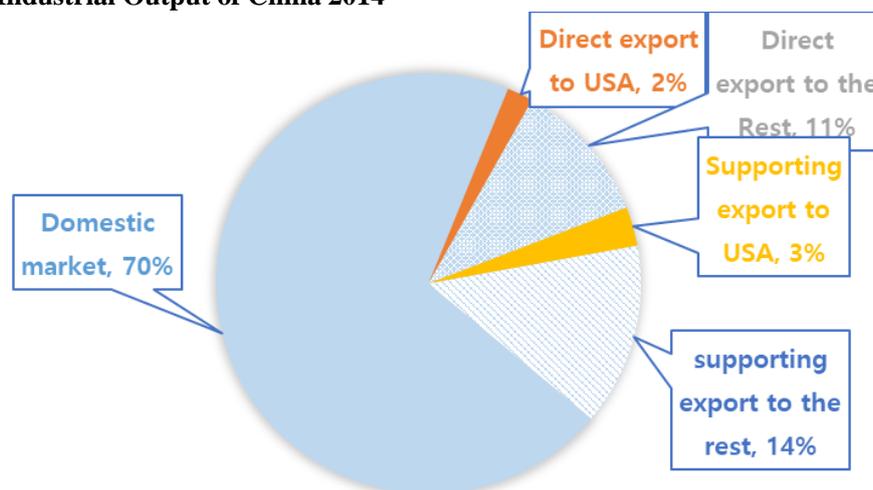
Trade mode and structure should be changed

Since China has been highly dependent on some leading foreign markets as well as some competitive commodities in the process of export-oriented reform. This mode of export has been lasting for a long period of time, and it is fairly dangerous on the ground that something happens with its global partners, markets or supply chains some day in the future, China should swerve to domestic counterparts. A rational portfolio of export destination and products varieties would be more functional for China's trade security. The shift from export-oriented tactics to consumption-oriented one should be another way out. Since China is possessing a huge domestic market to absorb massive commodities and the potential manufacturing capacity in the future.

Domestic Market and Foreign Market

According to Deutsche Bank Research on October 2nd, 2018, export contributed 30% of the entire industrial output, which includes 13% direct export (2% to USA and 11% to the rest) and 17% supporting industrial chain (3% for USA and 14% for the rest), see Fig. 29.

Figure 29 Industrial Output of China 2014

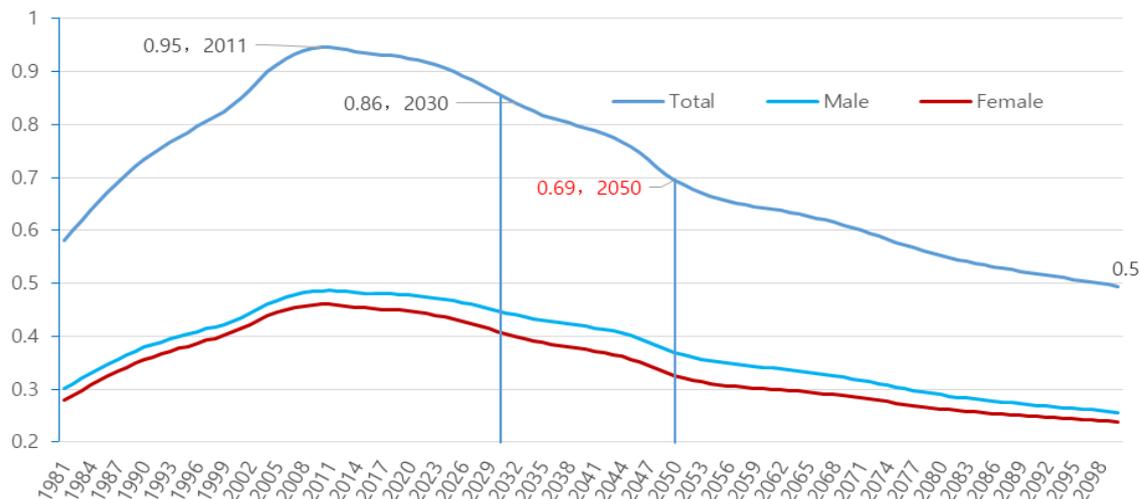


Source: Deutsche Bank Research

Since the start of trade war, more political discourse from American conveyed the optimistic expectation of victory of the U.S. By trade blow against China, the industrial chain will change or transmit from China back to America at last, like Steve Bannon, the former White House Chief Strategist stated in the interview of CNBC. While the statistics indicate that only small fraction of production chain will be affected, and the domestic consumption will be activated. Even though the real influence of trade war in fact has not been proved, these indications are informative. That is to say, China will initialize the revitalization of domestic consumption through series of stimulations and reforms in the future. Along with the further deepening up in trade liberalization, China will be able to survive massive disturbance of international market if the domestic market is working well.

Labor-intensive and Technology-intensive Products

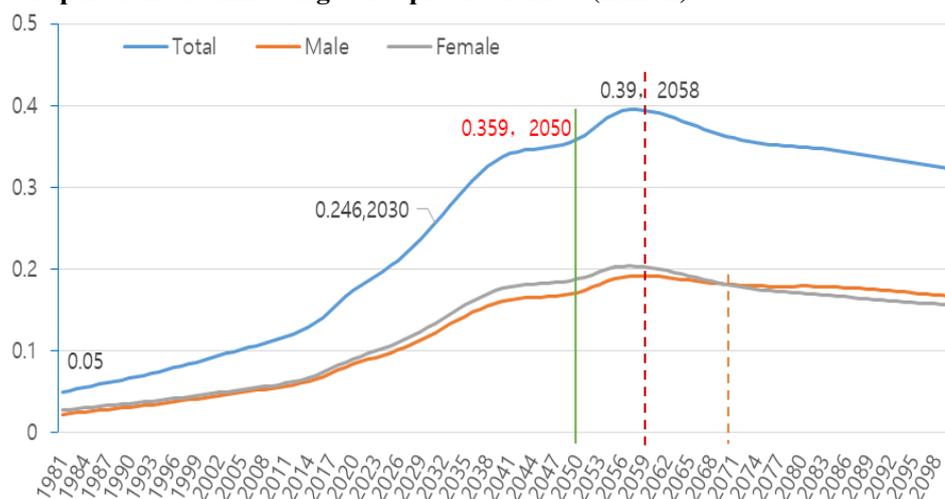
Figure 30 Population of China’s Labor Force: 1981-2100 (Billion)



Source: United Nations, World Population Prospects (2017 Revision).

No one can deny that China’s export has benefited much from the huge population born in 1950s, and the mass manufacturing capacity has been built since 2001. The main advantage of “Made in China” is stemming from low price of fundamental factors of production, labor, land, resources and even environment. In the foreseeable future, most of these factors are not able to maintain the advantage any longer. Taking labor for example, by analysis and evaluation of Department of Economic and Social Affairs of UN, the population labor force (15-59 years old) has been stepping on the way of reduction since 2011, when the peak value was 0.95 billion. Around 2030, 0.1 billion will be downscaled, and only 0.69 will be left in 2050. This prediction offers no reason to be optimistic for China’s potential export. That is not the whole story, however, if we take the increasing aged population (65 or older) into account, things might be worse.

Figure 31 Population of China’s Aged People: 1981-2100 (Billion)



Source: United Nations, World Population Prospects (2017 Revision).

The population of aged people is increasing notably since 2000, and the trend shows that up to 2030, about 0.25 billion aged people will retire and live on pension, and 0.36 billion till 2050, see Fig. 31. If we go deeper into the

statistics, we can conclude that in 1980s, every 100 labor force supported 8 aged people, while the figure reached 16 in 2017, and will be 28.6 in 2030 and 51.6 in 2050. Most of the aged people means cost of the economy, firms and families, which means that the labor force needs a higher wage to support the aged people. Therefore, the labor-intensive manufactures will suffer a diminishing of the comparative advantage someday.

As for the technology-intensive industry, as China is expanding the education base, more and more technicians will be joining the related industries, which will be helpful for the change of product mode of trade.

Import Tariff and Non-Tariff Measures Need Further Reduction

We must confess that China is still imposing higher tariff on imported goods, including for protection of the domestic competitors or for customs income. For example, the cars with cylinder capacity less than 3L are levied tariff (MFN rate) of 25% in 2017, which is coming down from 43.85% in 2002. When China graduated from the transition period in 2006 when China joined the WTO, the tariff rate remained at 25%, see Table 8.

Table 8 Car Tariff Negotiation Results of China's Accession to WTO (%)

Cylinder Capacity	Baseline Rate	2000	2001	2002	2003	2004	2005	2006.1.1	2007.7.1
<3L	80	63.5	51.9	43.85	38.2	34.2	30	28	25
Drop	16.5	11.6	8.1	5.6	4	4.2	2	3	
≥3L	100	77.5	61.7	50.7	43	37.6	30	28	25
Drop	22.5	15.8	11	7.7	5.4	7.6	2	3	

Source: WTO Tariff Analysis.

The average duty of China's import is 10.6% for dutiable goods in 2015,⁴ ranging from 1% to 65%. Compared with some other WTO members, some interesting points can be revealed. The data from the G7 economies are between 6.66% (EU) to 9.62% (Canada), not much less than that of China. Another point to speak of is the maximum duty are mostly more than that of China, except Japan. And for the rest of BRICs, only Russia imposes a lower duty than China on average and Brazil imposes a lower max tariff than China.

Table 9 Average Tariff of G7 and BRICs in 2015 (%)

Country	Average duty	Minimum	Maximum	Dutiable Lines
Canada	9.62	2	238	1930
Japan	8.32	1	61.9	5038
United States	7.31	0.1	350	5656
EU	6.66	0.7	74.9	6032
South Africa	18.85	3	82	2998
India	13.56	1	150	10444
Brazil	12.5	2	35	9306
China	10.6	1	65	7547
Russia	8.69	1.7	80	8104

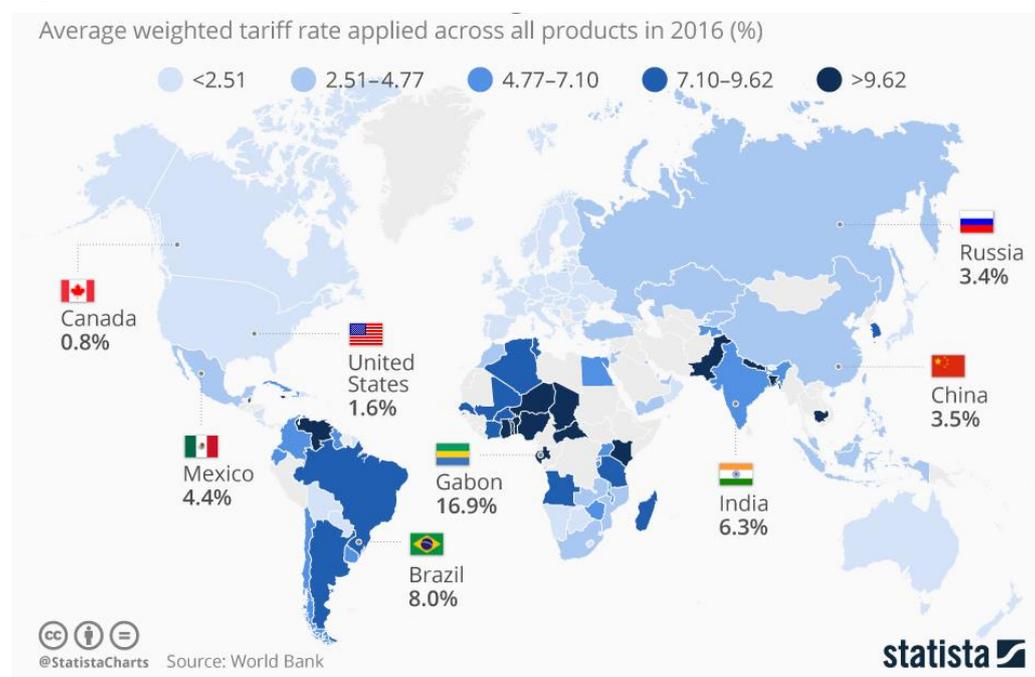
Source: WTO Tariff Analysis.

For better understanding of the tariff of China, I borrowed a chart (Fig. 32) showing the average weighted tariff rate applied across all products in 2016 covering all the economies. It is noticed that China has been experiencing

⁴ This year is not affected by the Sino-American trade war.

a sharp drop of average tariff by 7.1% from 2015 to 2016, which is attributable to the reform of related regime. China is so far a member of the low-duty club, whose rate is lower than 4.77%. Considering the huge number of importing items, there is still a spacious range for tariff cut, and more measures should be taken in the future to reduce tariff.

Figure 32 Global Tariff Rate in 2016



Source: Statista

However, we all know that, with rounds of tariff reduction negotiations under the scheme of GATT/WTO, in today's international reality, tariff is playing a much more limited role than other practices in distorting markets and restricting trade and investment, such as NTBs, domestic regulation, restrictive measures on investment, intervention through SOEs, etc. It is in these "not so good areas" that China has to do with much more changes.

No matter the purposes of all these measures are for, NTMs are a sort of profile of protectionism. China has already been a member of the antidumping club in the world. As shown in Table 10, China has ranked the 7th in total of AD initiations in the world.

Table 10 Top 10 Antidumping Initiations by Importers (1995-2017)

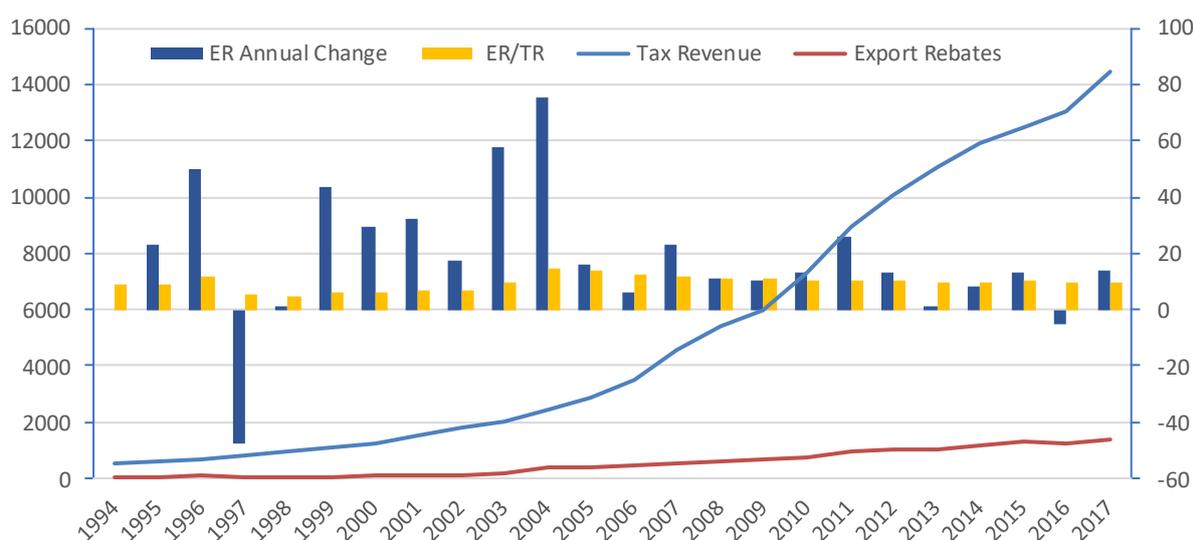
Rank	Reporting Member	1995-2000	2001	2002	2003	2004	2005	2006	2001-2006	2007-2017	Total
1	India	173	79	81	46	21	28	31	286	429	888
2	United States	181	77	35	37	26	11	8	194	284	659
3	European Union	218	28	20	7	30	24	35	144	140	502
4	Brazil	79	17	8	4	8	6	12	55	276	410
5	Argentina	133	28	10	1	12	9	10	70	149	352
6	Australia	118	24	16	8	9	7	11	75	139	332
7	China	16	14	30	22	27	24	10	127	115	258
8	South Africa	151	6	4	8	6	23	3	50	28	229
9	Canada	77	25	5	15	11	1	7	64	86	227
10	Turkey	20	15	18	11	25	12	8	89	112	221

Source: WTO

In addition, China is implementing some other controversial measures to stimulate export, including export

rebates and subsidy. Export rebates launched since 1985 and are effective until now, and while the rates have changed often, the total is increasing at large, see Fig. 33. The simple average of the share of export rebates over total tax revenue is 9.5%, like the growth rate of GDP. In the mechanism of WTO, subsidy is one of the feasible but sensitive measures for members to apply to encourage export, however, these might invite troubles if distortions emerge.

Figure 33 Export Rebates and Tax Revenue (1994-2017) (Billion, %)



Reforms of SOE, Monopoly and Other Market Distortions

Official talks and documents insist two principles of “two unswervingly” about economic reform, i.e. “to unswervingly consolidate and develop public economy and to unswervingly encourage, support and guide non-public economic sectors.” However, there are not much about the key reform areas in the competition mode between SOEs and private business. OECD published a series of books and reports on competitive neutrality. Competitive neutrality means that state-owned and private businesses compete on a level playing field. This is essential to use resources effectively within the economy and thus achieve growth and development. Therefore, the principle of competitive neutrality is gaining wide support around the world. But how to obtain it in practice in China for SOE, is a much more difficult question.

Like it or not, China has been rising economically through 40 years of rapid development, and the global economic-ecology landscape has been changed sequentially. The accompanying challenges arose at the same time, some of which result from problems of China and others from counterparts. Both sides need to be clear about the new global pattern and confront the reality and make necessary changes. As for the future, regardless of the result of Sino-American trade war, China will be looking ahead, and further measures should be taken for reform and opening-up in a deeper and wider range. ■

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Author's Biography

Junwei Liang was granted a PhD degree from Nanjing University in 2009 and is now an associate Professor at Shandong University. His research is focusing on International Political Economics, including welfare analysis of trade policies and NTMs on China's innovation on firm level. His findings have been published on both Chinese and English journals, such as *World Economy*, *Journal of Quantitative and Technical Economics*, etc. He is now the peer reviewer of several leading journals in China.

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For inquiries:

Sooyee Choi, Research Associate/Project Manager, Future of China Research Group
Tel. 82 2 2277 1683 (ext. 206) | Email: schoi@eai.or.kr

Typeset by Sooyee Choi

The East Asia Institute
#909 Sampoong B/D, Eulji-ro 158, Jung-gu,
Seoul 04548, South Korea