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Review

US–China Trade Disputes: Studying Long-Term Trade Patterns

Murthy

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US–China Trade Disputes: Studying Long-Term Trade Patterns

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Abstract

US–China economic ties have expanded substantially since China began reforming its economy and liberalizing its trade regime in the late 1970s. Total US–China merchandise trade rose from \$2 billion in 1979 (when China's economic reforms began) to \$636 billion in 2017. China is currently the United States' largest merchandise trading partner, its third-largest export market, and its biggest source of imports. There are multiple areas of disagreement that preceded the trade war. One ground is that China is buying off American assets. It is also alleged that China violates US patent rights. It is also stated by United States that China has restrictions on US companies entering certain areas in production in China. The scale at which US–China trade patterns are changing and ownership patterns of both countries' MNCs are changing results in a mystification of trade data due to intra-firm trade imports and exports. This may be a major reason why apparent trade patterns do not clearly serve as a guide for commenting on policy wars. This study examines the patterns in the US–China exports, mutual imports, and current account balances over a nearly 25-year period, to form a view about whether the trade war is justified. The general methodology in this paper has been to use a set of semi-log growth equations that enable comparison of various trade-related variables between the United States and China. The method focuses on the long-term patterns before and after global financial crisis (GFC), in the two countries, with the help of a standard dummy variable model. In conclusion, the US claims seem to be unfounded when studied through the lens of long-term trade patterns between the two countries. China's export performance is much better. The United States' dependence on imports from China has fallen drastically. Finally, the current balance of payments (BoP) of the United States continues to remain highly negative; whereas, in spite of the setback due to the GFC, China's BoP position all along continues to be positive.

Keywords: US–China trade disputes; Import patterns; Export patterns; Balance of payments.

1. INTRODUCTION

US–China economic ties have expanded substantially since China began reforming its economy and liberalizing its trade regime in the late 1970s. Total US–China merchandise trade rose from \$2 billion in 1979 (when China's economic reforms began) to \$636 billion in 2017. China is currently the United States' largest merchandise trading partner, its third-largest export market, and its biggest source of imports. Given this background, this paper investigates the long-term trends in the US–China trade.

There are multiple areas of disagreement that preceded the trade war. One of the allegations was that China is using espionage against the United States. Another is that China is buying off American assets. It is also alleged that China violates US patent rights. It is also stated by the United States that China has restrictions on US companies entering certain areas in production in China. There is great speculation over the US–China trade wars that have emerged in recent years. The US economy is appearing to face the prospect of going downhill in the ensuing phase of its business cycle.

The moot argument, therefore, is that recession is not good either for the two countries or for the world at large. This paper looks into the long-term trade pattern of the United States and China and attempts to

study what the long-term trends in China–US trade foretell. In the process, we try to estimate the impact of the global financial crisis (GFC) on the US–China trade pattern as a build-up toward the trade war. Ultimately, the paper tries to study whether long-term trends in trade justified the escalating trade war of the United States.

2. LITERATURE REVIEW

Before the trade war, in 2014, Chinese foreign reserves were highest, at over US \$4 trillion. Moreover, China was the largest holder of US assets in the world that declined thereafter, and raised speculation among analysts (Neely, 2017). Europe and Japan will be the gainers out of US–China trade conflict as their access to the United States and Chinese markets would increase. The United States may witness improvement in terms of trade with nonretaliatory regions due to adoption of optimal tariff policy and substitution of expenditures into home goods (Dong and Whalley, 2011). For China, this substitution of trade will lead to losses, but the results when measured through endogenous trade surplus model show that China and ROW regions have welfare gains whereas the United States and European regions have welfare losses. Higher bilateral tariffs cause European Union and Japan to gain out of trade diversions, due to cheaper imports and improved competitiveness, as prices adhesiveness in export sector for these nations increases (Bolt *et al.*, 2019). Using the EAGLE model for a multiregional study, for analyzing the macroeconomic impact of unilateral tariff adopted by the United States against China, they found that the Lerner symmetry theorem holds as China dampens US exports. Furthermore, some Asian countries benefitted from the US–China “Trade War.” Multilateral flows have a larger quantitative influence than bilateral flows due to exchange rate mechanism and also impact output levels (Cheung *et al.*, 2009).

Using the simulation model, IDE-GSM, Satoru *et al.* (2019) found that if both the countries impose additional 25% tariff on imports for 3 years, the economic impact of “full confrontation” for the United States will be -0.4% and for China it will be -0.6% and the overall impact upon global economy would be -1.7% , if all other countries impose additional tariff. Huang *et al.* (2018) made a firm level analysis to evaluate market response to US–China trade war and found that the US firms that are more dependent on imports and exports with China in short term had higher default risk, lower stocks, and lesser bond returns near to the announcement date.

Therefore, multilateral trading policies needed to be strengthened, sound global trading system needed to be developed, and rule of law should be strengthened. World Trade Organization (WTO) has directed development of state-owned enterprises, digitalized and subsidized trade, and better access to technology (Meltzer and Shenai, 2019).

3. US–CHINA WORLD EXPORT PATTERN

In Table 1, the export pattern of the United States and China is depicted. The unit of measurement is US\$ (1000s). Furthermore, a relative measure of the ratio of China exports to that of the United States is given, which shall be used in further analysis.

It would be of interest to know how the actual export pattern of both China and United States’ exports with the rest of the world has proceeded. Given below is the total export that, respectively, China and United States have had with rest of world.

It is uncanny that the pattern of China’s export resembles a “crouching dragon!” The low initial level of exports and the growth rate of China’s export are apparent from Figure 1. The initial growth pattern indicates a slow rise in China’s exports. However, keen observation shows that for the first decade, although the beginning is slow, the growth rate is exponential. Clearly, the year of the GFC witnesses a breakthrough in the pattern of exports by China. Although United States’ exports dip temporarily and so do China’s, the latter’s exports clearly pick up tempo and far outstrip the United States’ growth in exports.

Table 1. US–China World Export Pattern.

Year	US Export (US \$ Thousands)	China Exports (US \$ Thousands)	China/United States
1996	622784152	151047454.7	0.2425358
1997	687532540	182791585.8	0.2658661
1998	680434598	183808983	0.2701347
1999	692783809	194930778.5	0.2813732
2000	781830673	249202551	0.3187424
2001	729080421	266098208.6	0.3649779
2002	693068307	325595969.8	0.4697891
2003	724736583	438227767.4	0.6046718
2004	814844394	593325581.4	0.7281459
2005	901041411	761953409.5	0.8456364
2006	1037029245	968935601	0.9343378
2007	1162538150	1220059668	1.0494793
2008	1299898877	1430693066	1.1006187
2009	1056712078	1201646758	1.1371563
2010	1278099187	1577763751	1.2344611
2011	1481682202	1898388435	1.2812386
2012	1544932014	2048782233	1.326131
2013	1577587252	2209007280	1.4002441
2014	1619742864	2342292696	1.4460892
2015	1501845864	2273468224	1.5137827
2016	1450457291	2097637172	1.4461902
2017	1545609158	2263370504	1.4643874

Source: IMF: World Economic Outlook (WEO) Database, April 2019.

These patterns can be captured through a set of semi-log growth equations. The equation is estimated as follows:

$$\ln(\text{EXP}) = \alpha + \beta T + D2 + \beta_1 D2T + \epsilon_t \dots\dots\dots(1)$$

where

EXP = Exports (US \$ Thousand).

T = Time variable.

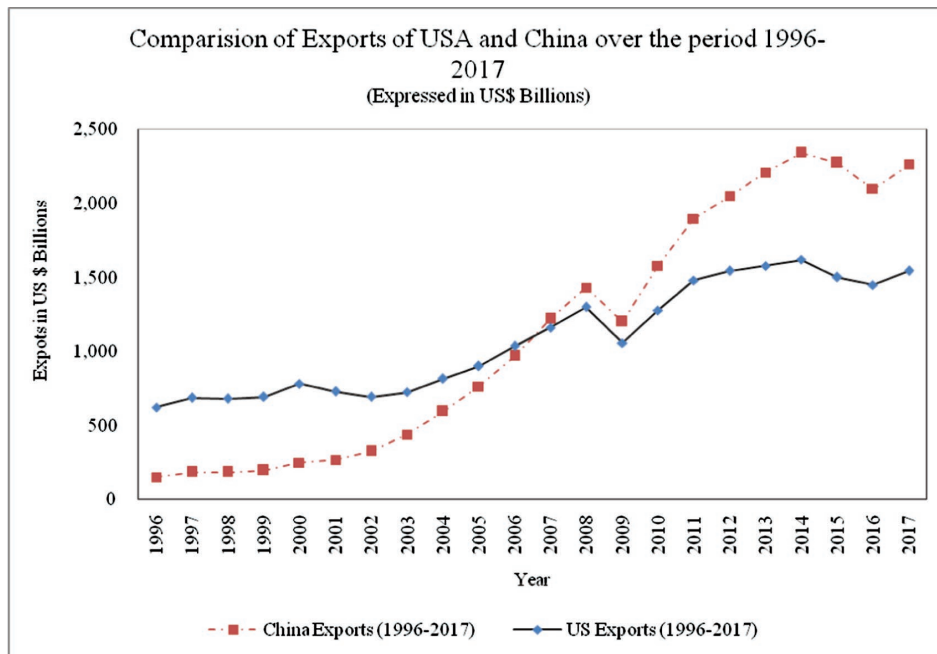
D2 = Intercept Dummy (for GFC).

D2T = Slope Dummy (for GFC).

ϵ_t = Error Term.

Given below in Table 2 are the regressions results of the Dummy Variable exercise.

During 1996-2007, the US exports rose at the annual compound rate of (0.0467) or 4.67%. After crisis, there was a dip of around 1.61%. Hence, after the GFC, US exports continued to rise but at a lower rate

Figure 1. Comparison of Exports of United States and China over the Period 1996-2017.

Source: IMF: World Economic Outlook (WEO) Database, April 2019.

Table 2. US Export Pattern.

US Export Pattern					
Regression Statistics					
Multiple R	0.965595652				
R Square	0.932374963				
Adjusted R Square	0.921104123				
Standard Error	0.097254927				
Observations	22				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	2.347355227	0.782451742	82.72453533	1.01009E-10
Residual	18	0.170253375	0.009458521		
Total	21	2.517608603			
Variables		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>p-Value</i>
Intercept	-70.94833693	16.27795466	-4.35855354	0.000378647	
Year	0.045677671	0.008132866	5.616430151	2.4954 E-05	
D2	32.62678956	27.00588926	1.208136093	0.242628701	
D2t	-0.016162577	0.0134459	-1.20204499	0.244922125	

Source: Author's own estimates.

of (0.0299) almost 3%. This is a decline of 1.67% p.a. On the other hand, China’s export growth pattern (Table 3) witnessed a significant jump in the overall level of exports from –368.03 to –107.44, a jump of 260.60. Before GFC, China’s exports rose at (0.21) or 21.37% annually. Later, they began to fall at –0.129722064, yet maintained a growth rate of (0.066) or 6.6 p.a. Despite the fall due to GFC, the growth rate of China’s exports out beats that of the United States by 3.6% p.a. This clearly shows that China has been showing a dynamic export pattern despite major setbacks like GFC. Temporary trade restrictions are unlikely to stop this growth pattern. In further analysis, we use a ratio of China’s exports to that of the United States’. We then build up a semi-log growth equation in ratio terms. The analysis incorporates two dummies one for the intercept at GFC and one for the growth rate after GFC. The results are given in Table 3.

Table 4 shows the relative pattern of exports. The ratio of China’s exports to the exports of the United States is mapped with the help of a semi-log growth equation. There are two dummies—one for change in the intercept at GFC and the other for the change in the slope of the growth equation after GFC.

The following equation has been estimated:

$$\text{Ln(EXPR)} = \alpha + \beta T + D2 + \beta 1D2T + \epsilon t \dots\dots\dots(2)$$

where

EXPR = Ratio of China Exports to US exports.

T = Time variable.

D2 = Intercept Dummy (for GFC).

D2T = Slope Dummy (for GFC).

εt = Error Term.

Given below in Table 3 & Table 4 are the regressions results of the Dummy Variable exercise.

Table 3. China Export Pattern.

China’s Export Pattern					
<i>Regression Statistics</i>					
Multiple R	0.991301764				
R Square	0.982679187				
Adjusted R Square	0.979792385				
Standard Error	0.142182959				
Observations	22				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	20.64482	6.881606505	340.4040651	4.90604 E–16
Residual	18	0.363888	0.020215994		
Total	21	21.00871			
<i>Variables</i>	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>p-Value</i>	
Intercept	–368.0317014	23.79774	–15.46498342	7.72585 E–12	
Year	0.193723625	0.01189	16.29307504	3.20647 E–12	
D2	260.5896997	39.48157	6.600287096	3.37527 E–06	
D2t	–0.129722064	0.019657	–6.599150292	3.38283 E–06	

Source: Author’s own estimates.

Table 4. Ratio of China to US Exports.

Ratio of China to US Exports					
<i>Regression Statistics</i>					
Multiple R	0.992555733				
R Square	0.985166884				
Adjusted R Square	0.982694697				
Standard Error	0.088103775				
Observations	22				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	9.279807	3.093268941	398.5002955	1.21675 E-16
Residual	18	0.139721	0.007762275		
Total	21	9.419528			
<i>Variables</i>	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>p-Value</i>	
Intercept	-297.0833582	14.74629	-20.14631343	8.49301 E-14	
Year	0.148045951	0.007368	20.09416832	8.88182 E-14	
D2	227.9628993	24.46478	9.318001703	2.61846 E-08	
D2t	-0.113559481	0.012181	-9.32289089	2.59785 E-08	

Source: Author's own estimates.

The estimates clearly show that before crisis the ratio to begin with favored the United States (-297.08). Even at the time of GFC, the ratio was in favor of the United States (-69.12). However, the ratio was growing at 16%. But, after GFC, the growth rate of the ratio fell and yet remained in favor of China with a growth rate of 3.5% per annum. When such strong trends are established over a 20-year period, it is quite impossible to reverse the trend. It is even more difficult to estop it with the help of noncompetitive measure. Essentially, the attempt of the United States has been to reverse such long-term trends.

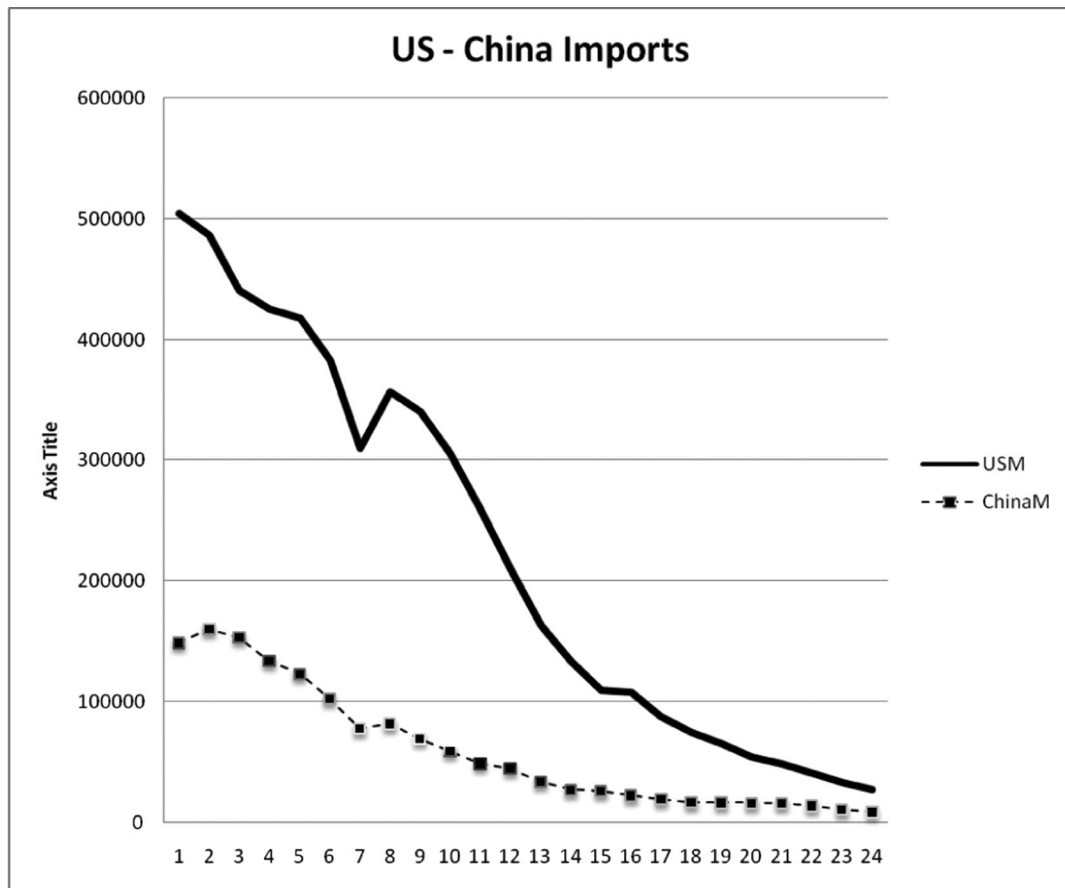
4. US-CHINA MUTUAL IMPORT PATTERN

The next question is about how China has managed its imports. The following figure shows the pattern of imports. Figure 2 depicts the pattern of imports. Here is a pointer of how the United States has managed its position vis-a-vis China. The pattern of imports clearly shows that the United States has been reducing imports from China.

Although China has also been experiencing a slow decline in imports from the United States, the decline in the United States imports is much more dramatic. We also measure the ratio of Chinese imports to that of the United States in Table 5. The average ratio was 26%, although the range was from 18% to -34%. However, the pattern of the ratio was very consistent with a coefficient of variation (CV) of only 20% (Table not reported). The ratio has risen in the later years. However, the individual patterns of the United States' import and that of China need to be studied as well.

For studying the import pattern in respect of mutual imports from China to the United States and vice versa, we have used a semi-log equation framework. That accounts for two periods before and after GFC.

Figure 2. Comparison of Imports of the United States and China over the Period 1996-2017.



Appropriate intercept and time dummies have been constructed for measuring the effect of GFC on both the intercept and growth rate. Similarly, import pattern from the United States to China has also been studied. The equation is estimated as follows:

$$\ln(\text{IMP}) = \alpha + \beta T + D2 + \beta_1 D2T + \epsilon_t \dots\dots\dots(3)$$

where
 IMP = Exports (US \$ Mill.).
 T = Time variable.
 D2 = Intercept Dummy (for GFC).
 D2T = Slope Dummy (for GFC).
 ϵ_t = Error Term.

The pattern of the United States’ imports shows that she had a high level of imports with China to begin with. In fact, GFC leads to a rise in the level from around 150 to 323. However, during the pre-GFC period, the imports of the United States began to fall at a rate of 6.6% p.a. Subsequently, after crisis, they began to fall at the rate of (−0.1437) 14.3% p.a. All these estimates show that the trends are highly significant. The bubble that appeared around crisis shows a high degree of uncontrolled rise in the US imports. On the other hand, the precipitate fall in imports of the United States also needs to be explained. Perhaps, the reason is that a lot of imports from China were being camouflaged as “intra-firm” imports. There are some studies that clearly state that “intra-firm trade” among subsidiaries or branches of Multinational Corporation does not

Table 5. US–China Mutual Imports.

United States from China Import Trade (US \$ Mill.)	China from United States Import Trade (US \$ Mill.)	(US \$ Mill.) Ratio: China–United States
504028.12	148693.1	0.29500945
486296.24	160064.5	0.32915021
440351.8	153394.9	0.34834616
425557.37	133765.8	0.31433087
417340.26	123124	0.29502069
382964.82	102734.2	0.2682601
309530.23	77755.1	0.25120357
356304.56	81585.56	0.22897703
340106.65	69547.96	0.20448868
305778.88	59314.27	0.19397765
259829.23	48741.36	0.18758998
210517.15	44747.87	0.21256164
163250.11	33944.17	0.20792739
133484.12	27261.1	0.20422729
109380.47	26217.38	0.23968977
107614.61	22374.57	0.20791387
87775.12	19486.93	0.22200972
75094.92	16883.46	0.22482826
65811.6	16301.51	0.24769965
54396.46	16155.12	0.29698844
48505.59	16118.44	0.33230067
41345.78	13893.69	0.33603647
33673.21	10687.33	0.31738376
27450.24	8900.94	0.32425727

Source: IMF: World Economic Outlook (WEO) Database, April 2019.

find their way to the reported Census data. Ruhl (2013) argues that, “There are two sources of data on US imports and exports of goods between associated parties: The intra-firm trade data collected by the Bureau of Economic Analysis in its surveys of multinational companies, and the related party trade data collected by the US Census Bureau from US customs declarations” (p. 1). The paper indicates inconsistencies in data trends between the two sources. More likely, however, US imports may have fallen precipitately because the former imports from China were substituted by international relocation of industry. In other words, that which was being recorded as import got converted into intra-firm trade within US MNCs. The lack of

Table 6. United States' Import Pattern.

US Imports (US \$ Mill.)					
<i>Regression Statistics</i>					
Multiple R	0.99775				
R Square	0.995506				
Adjusted R Square	0.994832				
Standard Error	0.068028				
Observations	24				
<i>ANOVA</i>					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	20.50287	6.83429	1476.774	1.24 E-23
Residual	20	0.092557	0.004628		
Total	23	20.59543			
<i>Variables</i>					
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>p-Value</i>	
Intercept	149.9976	11.38617	13.17366	2.57 E-11	
Time	-0.06855	0.005689	-12.0503	1.26 E-10	
D2	173.5105	16.15083	10.74313	9.35 E-10	
D2T	-0.08659	0.008045	-10.7624	9.07 E-10	

Source: Author's own estimates.

transparency and inaccuracy in definition as well the actual mass exodus of US firms' manufacturing hubs to China may have confused the long-term trends of US imports (See: Table 6 & Table 7).

It must be recognized that import trends are as important in understanding the pattern of trade as the trend in exports. In this section, we compare similar patterns of imports into China from the United States. In the case of China, the initial level of imports was around 260. It fell to 220 at the time of crisis, which in all probability was because China did not experience the bubble like the United States did around crisis. Moreover, China's process of relocation was small and slow. Imports fell at the rate of 11.65 p.a. before crisis and around 10% after crisis. The fall was nowhere as large as in the case of the United States. This clearly shows that the US bogey of China acquiring disproportionate assets in the United States is unfounded. However, before we consider such trends, an important measurement is the trend of the ratio of China's import to that of the United States'.

Given below is the equation for measuring this ratio in log terms:

$$\text{Ln(IMPR)} = \alpha + \beta T + D2 + \beta_1 D2T + \epsilon t \dots\dots\dots(4)$$

- where
- IMPR = Ratio of China's imports to the United States'
- T = Time variable.
- D2 = Intercept Dummy (for GFC).
- D2T = Slope Dummy (for GFC).
- εt = Error Term.

Table 7. China Import Pattern.

China Imports (US \$ Mill.)					
<i>Regression Statistics</i>					
Multiple R	0.995684				
R Square	0.991387				
Adjusted R Square	0.990095				
Standard Error	0.092917				
Observations	24				
<i>ANOVA</i>					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	19.87587	6.625289	767.3798	8.28 E-21
Residual	20	0.172673	0.008634		
Total	23	20.04854			
<i>Variables</i>	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>p-Value</i>	
Intercept	258.7822	15.55197	16.63983	3.5 E-13	
Time	-0.12359	0.00777	-15.9052	8.13 E-13	
D2	-38.9577	22.05984	-1.766	0.092657	
D2T	0.01927	0.010989	1.753659	0.094802	

Source: Author's own estimates.

The initial level of China's imports was 108.78. It was positive but such an intercept is not easy to evaluate in the case of a semi-log equation. What needs to be seen is the trend. There was an apparent fall at the time of crisis (-103.684), but once again the exact impact is difficult to interpret. However, a clear indicator is that China's ratio of imports was falling at the rate of 5.35% before crisis and suddenly began to rise at the rate of 5.2% p.a. This was a clear reversal of the trend. Given that this trend is about mutual imports between the United States and China, the unmistakable trend is that China has been the loser! What reason does the United States have to protest? How does it claim that China has been unduly buying out US interests and assets? Of course, this may need a complete study at the ground level of actual patterns of acquisitions among each other's countries but the trade data clearly show that China is the loser.

5. TRENDS IN BALANCE OF PAYMENTS

What has the net effect of all these trends in export and import patterns between the United States and China needs to be judged in the light of their respective balance of payment (BoP) positions (See: Tables 8, 9 & 10).

The BoP scenario has been quite opposite if we consider a comparison between China and the United States. All along, as is well known, the United States has had a negative balance, while China has had a positive BoP. The image is clearly a mirror image (See: Figure 3)!

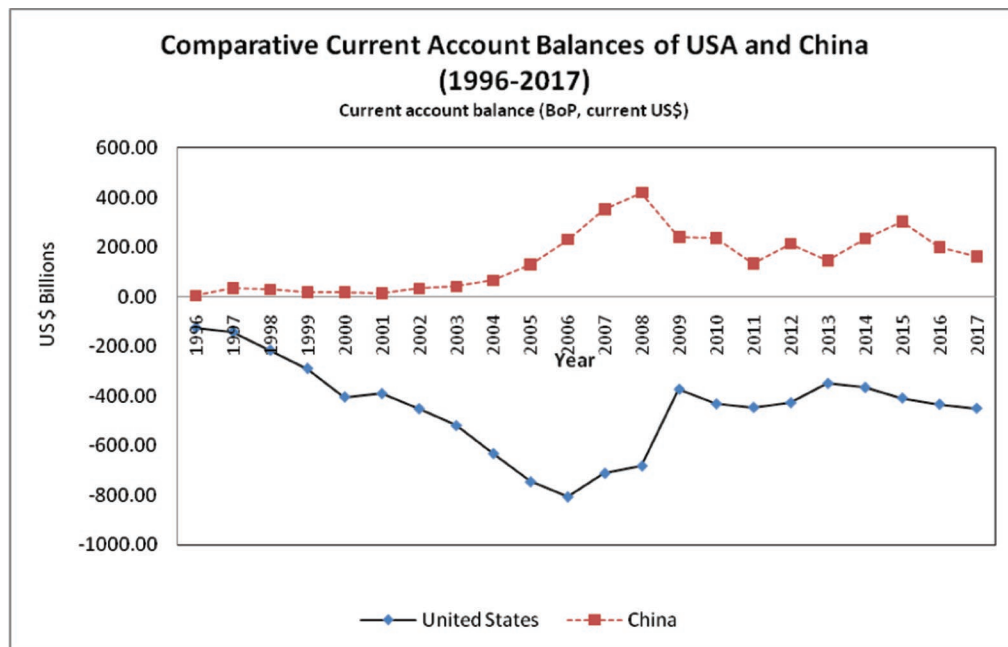
A simple analysis of the trend of current account balance of China reveals that the Chinese economy, currency, and trade have been gaining ground against US \$. With the help of a dummy variable semi-log

Table 8. China/US Ratio of Imports.

Ratio of Imports					
Regression Statistics					
Multiple R	0.914768				
R Square	0.836801				
Adjusted R Square	0.812321				
Standard Error	0.088514				
Observations	24				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	0.803451	0.267817	34.18328	4.5762 E-08
Residual	20	0.156695	0.007835		
Total	23	0.960146			
Variables	Coefficients	Standard Error	t Stat	p-Value	
Intercept	108.7845	14.81496	7.342881	4.27 E-07	
Time	-0.05503	0.007402	-7.43506	3.55 E-07	
D2	-212.468	21.01442	-10.1106	2.63 E-09	
D2T	0.105856	0.010468	10.11246	2.62 E-09	

Source: Author's own estimates.

Figure 3. Comparative Chart of Balance of Payment.



Source: IMF: World Economic Outlook (WEO) Database, April 2019.

Table 9. Current Account Balance (BoP, Current US \$).

Year	United States	China
1996	-124727100000.00	7243000000.00
1997	-140724500000.00	36963000000.00
1998	-215037000000.00	31472000000.00
1999	-288366000000.00	21115000000.00
2000	-403460000000.00	20518382000.00
2001	-389693000000.00	17401000000.00
2002	-450802000000.00	35421997979.65
2003	-518747000000.00	43051582861.33
2004	-631590000000.00	68940960688.56
2005	-745246000000.00	132378493766.40
2006	-805962000000.00	231843041064.41
2007	-711033000000.00	353182677237.32
2008	-681391000000.00	420568516143.55
2009	-372522000000.00	243256567919.62
2010	-431271000000.00	237810389607.96
2011	-445667000000.00	136096761577.55
2012	-426830000000.00	215391747469.44
2013	-348803000000.00	148203949879.88
2014	-365193000000.00	236046577873.63
2015	-407769000000.00	304164445643.02
2016	-432874000000.00	202203423877.64
2017	-449137000000.00	164886647435.18

Source: IMF: World Economic Outlook (WEO) Database, April 2019.

equation, we have estimated the annual compound growth rate of China's BoP over the period 1996-2017. The turning point is taken to be the GFC of 2007. The equation is estimated as follows:

$$\ln(\text{CCAB}) = \alpha + \beta T + D2 + \beta_1 D2T + \epsilon_t \dots\dots\dots(5)$$

where

CCAB = China's Current A/C Balance.

T = Time variable.

D2 = Intercept Dummy

D2T = Slope Dummy

ϵ_t = Error Term

Table 10. US Current Account Balance (BoP, Current US \$).

US Current Account Balance (Current US \$)					
<i>Regression Statistics</i>					
Multiple R	0.93285333				
R Square	0.870215335				
Adjusted R Square	0.848584557				
Standard Error	70415997098				
Observations	22				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	5.98E+23	1.99E+23	40.23042	3.45985 E-08
Residual	18	8.93E+22	4.96E+21		
Total	21	6.88E+23			
<i>Variables</i>	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>p-Value</i>	
Intercept	1.27413E+14	1.18E+13	10.81074	2.66 E-09	
Year	-63884809091	5.89E+09	-10.8491	2.51 E-09	
D2	-1.53521E+14	1.96E+13	-7.85147	3.2 E-07	
D2t	76641057576	9.74E+09	7.872486	3.08 E-07	

Source: Author's own estimates.

The coefficient of year (time variable) shows that, before GFC, China's positive BoP had grown at a rate of 0.314406053: 31% ACGR for the 11 years before crisis. For the 11 years after crisis, the rate of growth became -0.042770201 to the tune of 4.2% ACGR. The interpretation is that China's current account balance (CCAB) had risen from (-522.6458827) a very low and negative level to a high and positive level (636.7279035) just before the GFC. China had consolidated its position so much that the ensuing negative growth rate of -4.2% did not make a dent in the growth rate of CCAB.

In the 11 years following the crisis, China's BoP (See: Table 11) still continued to remain positive. Only the rate of growth had fallen due to crisis. The United States on the other hand has had a negative BoP throughout the 22-year period.¹ Before crisis, its CAB was falling at the rate of -63884809091, in absolute terms, per annum. After GFC, it began to rise at the rate of 12756248485 in absolute terms, per annum. In spite of this, during post crisis (11 years), the BoP of the United States continues to remain highly negative. In a comparative sense, China is still a gainer although it had a negative growth rate after crisis and the United States is still a loser although it had a positive growth rate after GFC. This reflects the overall strength of China trade. So it is evident, in this case, that China has lost the battle but won the war.

¹The semi-log growth equation and the similar dummy variable exercise for USA could not be done because throughout the 22-year period the United States' CAB was negative. It is not possible to take log of a negative number. Therefore, the trends of the United States' CAB have been estimated with a trend equation and not a growth equation. The results appear in absolute terms and therefore are not strictly comparable. The comparative analysis of the regression results only indicates the trend. The results table for the United States has not been reported. However, the emerging picture is clear.

Table 11. China's Current Account Balance (BoP, Current US \$).

China's Current Account Balance	Log Terms	Current US \$			
Multiple <i>R</i>	0.925181567				
<i>R</i> Square	0.855960933				
Adjusted <i>R</i> Square	0.831954422				
Standard Error	0.47788862				
Observations	22				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	24.42865325	8.142884418	35.65536557	8.77385 E-08
Residual	18	4.110795589	0.228377533		
Total	21	28.53944884			
<i>Variables</i>	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>p-Value</i>	
Intercept	-522.6458827	79.9861715	-6.534203011	3.84528 E-06	
Year	0.273384893	0.039963054	6.840940964	2.11004 E-06	
D2	636.7279035	132.7008052	4.798221854	0.000143955	
D2t	-0.317096685	0.066070101	-4.799397633	0.000143586	

Source: Author's own estimates.

6. A DIGRESSION ON INTRA-FIRM TRADE

We begin by arguing about who are the United States' biggest trading partners?

These are the biggest US trade partners:

- China—\$636 billion
- Canada—\$582.4 billion
- Mexico—\$557 billion
- Japan—\$204.2 billion
- Germany—\$171.2 billion
- South Korea—\$119.4 billion
- United Kingdom—\$109.4 billion
- France—\$82.5 billion

US merchandise exports to China in 2017 were \$115.6 billion, up 12.8% from the previous year. China was the third-largest US merchandise export market after Canada and Mexico. China was the second-largest US agricultural export market in 2017, at \$19.6 billion, 63% of which consisted of soybeans. From 2000 to 2017, the share of total US merchandise exports going to China rose from 2.1% to 8.4%. The top five US goods exports to China in 2017 were (1) aerospace products (mainly civilian aircraft and parts), (2) oil seeds and grains (mainly soybeans), (3) motor vehicles, (4) semiconductors and electronic components, and (5) waste and scrap. From 2002 to 2017, US exports to China rose, faster than the growth rate for US exports

to any of its top 10 export markets in 2017. During the first five months of 2018, US merchandise exports to China rose by 7.8% year-on-year (Morrison, 2018).

US–China economic ties have expanded substantially since China began reforming its economy and liberalizing its trade regime in the late 1970s. Total US–China merchandise trade rose from \$2 billion in 1979 (when China’s economic reforms began) to \$636 billion in 2017. China is currently the United States’ largest merchandise trading partner, its third-largest export market, and its biggest source of imports. In 2015, sales by US foreign affiliates in China totaled \$482 billion. Many US firms view participation in China’s market as critical to their global competitiveness. US imports of lower-cost goods from China greatly benefit US consumers (Morrison, 2018).

From all these trade figures, it seems that United States’ protest is unfounded.

The next question is as follows: What proportion of these figures is intra-firm trade with US MNCs in China and reciprocally within China’s MNC interests in the United States? The question is rather difficult to answer because trade data are mystified by such internal trade patterns.

Intra-firm trade consists of trade between parent companies of a compiling country with their affiliates abroad and trade of affiliates under foreign control in this compiling country with their foreign parent group.

The intra-firm trade data compiled by BEA are collected through its surveys of multinational companies. There are two separate surveys: a survey of US multinational companies and their foreign affiliates and a survey of the US affiliates of foreign parents. An overview of the data collected in the surveys of US multinationals is in Mataloni (1995); an overview of the data collected in the surveys of US affiliates of foreign parents is in Quijano (1990).

The relevance of this digression is that import and export data and their trends do not account clearly for such intra-firm trade. The scale at which US–China trade patterns are changing and ownership patterns of both countries’ MNCs are changing results in a mystification of trade data due to intra-firm trade imports and exports. This may be a major reason why apparent trade patterns do not clearly serve as a guide for commenting on policy wars.

7. CONCLUSION

There are multiple areas of disagreement that preceded the trade war. One ground is that China is buying off American assets. It is also alleged that China violates US patent rights. It is also stated by the United States that China has restrictions on US companies entering certain areas in production in China. Given that long-term foreign direct investments (FDI) are substitutes for trade, this study examines the patterns in the world exports, mutual imports, and current account balances over a nearly 25-year period.

In conclusion, the United States’ claims seem to be unfounded when studied through the lens of long-term trade patterns between the two countries. China’s export performance is much better. United States’ dependence on imports from China has fallen drastically. Finally, the current account balance, the BoP of the United States, continues to remain highly negative; whereas, in spite of the setback due to GFC, China’s BoP position all along continues to be positive. Consequently, it is evident, in this case, that China has lost the battle but won the war!

Intra-firm trade within the United States and China’s MNCs need to be delved into for gaining a clearer picture of claims and counterclaims. On the whole the United States’ fears seem to be unfounded. The long-term trends also show a dilemma that the United States faces: Whether to support free trade as its trading philosophy has been and allow China’s goods and investment to enter or whether to play spoilsport? Meanwhile, the United States may be precipitating another crisis.

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Conflict of Interest

None.

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