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Currency SWAP Agreement with China: A new paradigm to penetrate the Markets

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Abstract: This paper evaluates the impact of currency SWAP agreements between China and various countries from 2008 to 2016. Therefore, this paper's main objective is to analyze the effects of these agreements on the trade balances of various countries and the direct Chinese investment flowing to these countries. The study also exposed the fundamental goals that prompted the various countries to enter into these agreements to reduce pressure on their dollar reserves and activate their trade exchange with China. But in fact, these countries helped China to penetrate their domestic markets, and this caused adverse effects on their economies. Therefore, the agreements did not achieve the main objective of their establishment. Instead, they achieved China's interests in most cases and did not affect it negatively except within narrow limits.

Keywords: trade balance, foreign direct investment, fierce competition, gross domestic product, Currency Swap agreement.

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1. Introduction

During the first decade of the twenty-first century, a new international financial instrument appeared, the Currency Swap. It is an agreement between two states, or more precisely, between the two central banks of the two countries, to exchange local currencies for both of them according to predetermined terms and conditions. Accordingly, the central bank in either country can obtain liquidity from the local currencies of the other country from its central bank for a specified period. After the expiry of the maturity period, whether it is short (usually a year) or long (ranging from 3 to 10 years), each country recovers its currency From the other country. In addition, the two countries agree on interest rates on their currencies (usually expressed in the inter-bank lending rate in the two countries' markets).

AS for the Types of currency swap: firstly, a fixed-rate currency swap is a transactionin which two countries exchange their respective currencies in return for a fixed interest rate on each currency. It consists of three steps: the exchange of agreed-upon principal, periodic interest payments, and the re-exchange of principle with maturity (Sivakumar& Mathew, 1996). Secondly, Fixed-Floating Currency Swap (Circus Swap): A circus swap is a cross between a standard interest rate swap and a currency coupon swap. For a currency swap, this form uses a combination of fixed and floating interest rates. It is achieved in two steps. This entails paying a fixed interest rate on one currency while earning a floating interest rate on the other. The Third type, Floating-Floating Currency Swap: This type allows market forces to decide interest rates applied to the two currencies to be swapped (floating rates).

In the context of this new financial instrument, China has rushed, since 2008, to establish such types of agreements. For example, in 2008, a currency exchange agreement was established between it and South Korea (a significant trade ally of China). Then, in 2009, Hong Kong, Malaysia, Belarus, Indonesia, and Argentina. And in 2010, with Iceland and Singapore. In 2011, with New Zealand, Uzbekistan, Mongolia, Kazakhstan, Russia, Thailand, and Pakistan. In 2012, with UAE, Turkey, Australia, and Ukraine. In 2013, with Brazil, UK, Hungary, Albania, and the EU. In 2014, with Switzerland, Sri Lanka, Qatar, Canada, and Nepal. In 2015, with Suriname, Chile, Tajikistan, and South Africa. In 2016, with Egypt.

After this large number of agreements comes the question: Do these agreements have positive or negative effects on the economies of these countries? To determine this more precisely, we carry out the following analysis.

2. Method

Theoretical analysis:

1- Potential effects:

a. They are reducing pressure on dollar reserves of countries involved in currency SWAP agreements Because these countries pay their import bill in American dollars. Thus, the availability of the Chinese Yuan currency helps relieve pressure on its dollar reserves.
b. We are activating trade exchanges between the two countries.

2- Actual effects:

a. At the level of trade relation:

From 2008 to 2016, China signed about 33 currency exchange agreements between it and other countries, see Table (1). These agreements resulted in varying effects between different countries, and these effects on trade between these countries and China were classified into five major groups.

Table1:China Bilateral Currency Swap Agreement with other countries

Swap agreement date	country	Swap amount (000,000,000, CNY)	Exchange rate as of 2019
2008	south Korea	360	1 CNY=172.8 KRW
2009	Hong Kong	400	1 CNY=1.15 HKD
	Malaysia	180	1 CNY=0.6 MYR
	Belarus	7	1 CNY=0.31 BYN
	Indonesia	100	1 CNY=2107.15 IDR
	Argentina	70	1 CNY= 6.63 ARS
2010	Iceland	3.5	1 CNY= 17.92 ISK
	Singapore	300	1 CNY= 0.20 SGD
2011	new Zealand	25	1 CNY=0.22 NZD
	Uzbekistan	0.7	1 CNY=1238.36 US
	Mongolia	15	1 CNY= 392.06 MNT
	Kazakhstan	7	1 CNY=55.71 KZT
	Russia	150	1 CNY=9.61 RUB
	Thailand	70	1 CNY=4.65 THB
	Pakistan	10	1 CNY=20.81 PKR
2012	UAE	35	1 CNY=0.54 AED
	Turkey	10	1 CNY=0.91 TRY
	Australia	200	1 CNY=0.21 AUD
	Ukraine	15	1 CNY=3.84 UAH
2013	Brazil	190	1 CNY=0.58 BRL
	UK	200	1 CNY=0.11 GBP
	Hungary	10	1 CNY=42.22 HUF
	Albania	2	1 CNY=16.1 ALL
2014	Switzerland	150	1 CNY=0.15 CHF
	Sri Lanka	10	1 CNY=25.83 LKR
	Qatar	35	1 CNY= 0.53 QAR
	Canada	200	1 CNY=0.20 CAD
	Nepal	0.6	1 CNY=16.38 NPR
2015	Suriname	1	1 CNY=1.09 SRD
	Chile	22	1 CNY=100.24 CLP
	Tajikistan	3.2	1 CNY=1.38 TJS
	south Africa	30	1 CNY=2.1 R
2016	Egypt	18	1 CNY= 2.51 EGP

Source: PBC Database, http://www.pbc.gov.cn.

The first group: increasing the surplus in the Chinese trade balance

Immediately after the agreement, there was an increase in the surplus in the Chinese trade balance with Hong Kong, Malaysia, Uzbekistan, Pakistan, the Emirates, Turkey, the United Kingdom, Albania, and Sri Lanka. Consequently, this had adverse effects on the foreign trade balances of these countries as a result of the fierce competition for Chinese products. See table 2:

Table 2: trade balance between China and the first group's countries

(Billion$)

Hong Kong,	2009	2010	2011	2012
	157.51	206.04	252.5	305.5
Malaysia	2009	2010	2011	2012
	12.7	26.6	34.3	21.8
Indonesia	2009	2010	2011	2012
	1.1	1.2	2.1-	2.3
Uzbekistan	2011	2012	2013	2014
	0.55	0.69	0.67	1.1
Pakistan	2011	2012	2013	2014
	6.3	6.1	7.8	10.5
UAE	2012	2013	2014	2015
	18.7	20.6	23.3	25.5
Turkey	2012	2013	2014	2015
	12.1	13.3	15.6	15.7
UK	2013	2014	2015	2016
	31.9	33.4	40.7	37.6
Albania	2013	2014	2015	2016
	0.089	0.2	0.30	0.4
Sri Lanka	2014	2015	2016	2017
	3.5	4	4.1	3.8

Source: Trade Statistics For International Business Development (trade map): ***https://www.trademap.org/Bilateral_TS.aspx?***

Notes: The validity period of the agreement is usually three years, so the analysis is done since the year of signing the agreement and the following three years.

Hong Kong

The agreement was signed with China in 2009, and the surplus in the Chinese trade balance was 157.5 billion dollars, and that surplus increased to 206 billion in 2010, then to 252.5 billion in 2011, and finally to 305.5 billion in 2012.

Malaysia

The agreement was signed with China in 2009, and the surplus in the Chinese trade balance was 12.7 billion dollars, and that surplus increased to 26.6 billion in 2010, then to 34.3 billion in 2011.

Indonesia

The agreement was signed with China in 2009, and the surplus in the Chinese trade balance was $ 1 billion, then it increased to 1.2 billion in 2010. A temporary deficit occurred in 2011 but quickly turned into a large surplus of 2.3 billion in 2012.

Uzbekistan

The agreement was signed with China in 2011, and the surplus in the Chinese trade balance at that time was 0.55 billion dollars, and that surplus increased to 0.69 billion in 2012, then slightly decreased to 0.67 billion in 2013, but soon it increased again by 1. 1 billion in 2014.

Pakistan

The agreement was signed with China in 2011, and the surplus in the Chinese trade balance was 6.3 billion dollars. And the surplus in the Chinese trade balance decreased slightly to 6.1 billion$ in 2012, then it increased again to 7.8 billion in 2013, then to 10.5 billion in the year 2014.

The Emirates

The agreement was signed with China in 2012, and the surplus in the Chinese trade balance was 18.7 billion dollars, then it increased to 20.6 billion in 2013, then to 23.3 billion in 2014.

Turkey

The agreement was signed with China in 2012, and the surplus in the Chinese trade balance was 12.1 billion dollars, then it increased to 13.3 billion in 2013, then to 15.6 billion in 2014.

United Kingdom

The agreement was signed with China in 2013, and the surplus in the Chinese trade balance was 31.9 billion dollars, then it increased to 33.4 billion in 2014, then to 40.7 billion in 2015.

Albania

The agreement was signed with China in 2013, and the surplus in the Chinese trade balance was 0.089 billion dollars, then increased to 0.2 billion in 2014, then to 0.4 billion in 2015.

Sri Lanka

The agreement was signed with China in 2014, and the surplus in the Chinese trade balance was 3.5 billion dollars, then increased to 4 billion$ in 2015, then to 4.1 billion$ in 2016.

The second group: the decrease in the Chinese trade balance deficit and its transformation into surplus

China's dealings with this group of countries resulted in a decreased Chinese trade balance, deficit, and transformation to a surplus. These countries were represented in Belarus, Argentina, Mongolia, Kazakhstan, Russia, and Thailand. The deficit also decreased but did not surplus with Switzerland, South Africa, and Qatar. See table 3:

Table 3: trade balance between China and the second group's countries

(Billion$)

Belarus	2009	2010	2011	2012
	0.24-	0.31	0.10	0.3
Argentina	2009	2010	2011	2012
	0.8-	0.7-	2.2	1.3
Mongolia	2011	2012	2013	2014
	0.96-	1.3-	1.1	2.9
Kazakhstan	2011	2012	2013	2014
	5.8-	3.7-	3.5-	3
Russia	2011	2012	2013	2014
	1.5-	0.081-	9.9	12.1
Thailand	2011	2012	2013	2014
	13.3-	7.4-	5.8-	4-
Switzerland	2014	2015	2016	2017
	52.6-	38-	36.8-	29.8-
Qatar	2014	2015	2016	2017
	6.1-	2.3-	2.5-	4.7-
South Africa	2015	2016	2017	2018
	14.3-	9.6-	9.9-	10.9-

Source: Trade Statistics for International Business Development, (trade map):,*https://www.trademap.org/Bilateral_TS.aspx?*

Belarus:

The agreement was signed with China in 2009, and the deficit in the Chinese trade balance was 0.24 billion dollars. This deficit turned into a surplus in the Chinese trade balance in 2010 by about 0.31 billion, and then this surplus decreased slightly in 2011 to 0.1 billion, but soon It increased again, reaching 0.3 billion in 2012.

Argentina

The agreement was signed in 2009, and the deficit in the Chinese trade balance reached 0.82 billion dollars, which decreased to 0.7 billion in 2010, then the deficit turned into an enormous surplus, which reached 2.2 billion in 2011.

Mongolia

The agreement was signed in 2011, and the deficit in the Chinese trade balance was 0.96 billion dollars, which increased to 1.3 billion in 2012. However, the deficit quickly turned into an enormous surplus, amounting to 1.1 billion in 2013 and then doubling to reach 2.9 billion in 2013.

Kazakhstan

The agreement was signed with China in 2011, and the deficit in the Chinese trade balance was about 5.8 billion dollars, then it decreased to 3.7 billion in 2012. After that, it decreased to 3.5 billion in 2013, but in 2014 the deficit turned into a large surplus that reached To 2.9 billion.

Russia,

The agreement was signed with China in 2011, and the deficit in the Chinese trade balance was extensive, reaching 1.5 billion dollars, dropping this deficit to 0.8 billion in 2012. Then the deficit turned into a large surplus in 2013, amounting to 9.9 billion.

Thailand

The agreement was signed in 2011, and the deficit in the Chinese trade balance was 13.3 billion dollars, which decreased to 7.4 billion in 2012, then to 5.8 in 2013, then to 4 billion in 2014, and then turned into a surplus in 2015, amounting to 2.5 One billion.

Switzerland

The agreement was signed with China in 2014, and the deficit in the Chinese trade balance was 52.6 billion dollars, then it decreased to 38 billion in 2015, then to 36.8 billion in 2016.

Qatar

The agreement was signed with China in 2014, and the deficit in the Chinese trade balance was $ 6.1 billion, then it decreased to 2.3 billion in 2015 and then increased slightly to 2.5 billion in 2016.

South Africa

The agreement was signed with China in 2015, and the deficit in the Chinese trade balance was 14.3 billion dollars; this deficit decreased to 9.6 billion in 2016 and then increased slightly to 9.9 billion dollars in 2016. However, the deficit did not return to its value in 2014.

The third group: decrease, then increase the surplus

This case occurred with South Korea, Singapore, Canada, Suriname, Canada, Egypt, and Iceland. Where the surpluses decreased after the agreement. But quickly, the surplus returned to increase, see table 5:

Table 5: trade balance between China and the fourth group's countries

(Billion$)

Iceland	2010	2011	2012	2013
	0.029	0.0009	0.006	0.007
Singapore	2010	2011	2012	2013
	7.6	7.4	12.2	15.8
Canada	2014	2015	2016	2017
	8.8	3.1	9.4	11.2
Suriname	2015	2016	2017	2018
	0.15	0.11	0.15	0.16
Egypt	2016	2017	2018	2019
	10	8.2	10.2	11.2

Source: Trade statistics for international business development (trade map): *https://www.trademap.org/Bilateral_TS.aspx*?

Iceland

The agreement was signed with China in 2010, and the surplus in the Chinese trade balance was 0.029 billion dollars; this surplus decreased to 0.0009 billion in 2010 and increased again in 2012 to 0.006 billion, then to 0.007 billion in 2013.

Singapore

The agreement was signed with China in 2010. The surplus in the Chinese trade balance was about 7.6 billion dollars, which decreased slightly to about 7.4 billion dollars in 2011, then increased significantly in 2012 to 12.2 billion, and then to 15.8 billion in 2013. This indicates that the agreement helped China to penetrate Singapore's domestic markets.

Canada

The agreement was signed with China in 2014, and the surplus in the Chinese trade balance of $ 8.8 billion, down in the next year to 3.1 billion, then returned and rose to 9.4 billion in 2016 and rose finally reached a significant increase to 11.2 billion in 2017.

Suriname

The agreement was signed with China in 2015, and the surplus in the Chinese trade balance was 0.15 billion dollars, which decreased to 0.11 billion in 2016, and then returned to increase after that, to 0.15 billion in 2017, then to 0.16 billion dollars in 2017.

Canada

The agreement was signed with China in 2014, and the surplus in the Chinese trade balance was 8.8 billion dollars, which decreased to 3.1 billion in 2015, but quickly increased to 9.3 billion in 2016, and then to 11.2 billion in 2017.

Egypt

The agreement was signed with China in 2016, and the surplus in the current Chinese balance was 10 billion dollars. However, this surplus decreased to 8.2 billion in 2017 and then rose again in 2018 to 10.2 billion.

The fourth group: the decline in Chinese trade balance surplus

China's dealings with this group of countries resulted in a decrease in the surplus achieved before the agreement, with only four countries, Hungary, Nepal, Tajikistan, and Canada. Consequently, the agreement had a positive impact on the economies of these countries. See table 4:

Table 4: trade balance between China and the third group's countries

(Billion$)

South Korea	2008	2009	2010	2011
	1.3	1.1	1.1	0.7
Hungary	2013	2014	2015	2016
	2.9	2.5	2.3	1.3
Nepal	2014	2015	2016	2017
	2.2	0.8	0.85	0.99
Tajikistan	2015	2016	2017	2018
	1.7	1.67	1.3	1.3

Source: Trade Statistics for International Business Development (trade map): *https://www.trademap.org/Bilateral_TS.aspx*?

South Korea

The agreement was signed with China in 2010,One of the first agreements made by China,so it was necessary to give China a positive outlook to other countries, that China is working to their advantage. The surplus in the Chinese trade balance in 2008 amounted to about 1.3 billion dollars, decreased to 1.1 billion in 2009, then to 1.08 billion in 2010, and reached the lowest value of the surplus in 2011 by 0.7 billion. Soon, the surplus increased in 2012 by about 1.02 billion. But after China signed the agreement with 19th other countries.

Hungary

The agreement was signed with China in 2013, and the surplus in the Chinese trade balance was 2.9 billion dollars, which decreased to 2.5 billion in 2014, then to 2.3 billion in 2015, and then to 1.3 billion in 2016.

Nepal

The agreement was signed with China in 2014, and the surplus in the Chinese trade balance was 2.2 billion dollars, which decreased to 0.8 billion in 2015, and increased slightly in 2016, with a total of 0.85 billion. But it did not return to its value in the year of the agreement.

Tajikistan

The agreement was signed with China in 2015, and the surplus in the Chinese trade balance was 1.7 billion dollars, down to 1.6 billion in 2016, then to 1.3 billion in 2017.

The Fifth Group: The increase in the Chinese trade balance deficit

This case only occurred with New Zealand, Chile, and Brazil due to China's dependence on crude oil and minerals, Chile and Brazil. See table 6:

Table 6: trade balance between China and the fifth group's countries

(Billion$)

new Zealand	2011	2012	2013	2014
	1.2-	1.9-	4.1-	4.7-
Brazil	2013	2014,	2015	2016
	18.4-	16.7-	16.9-	23.5-
Chile	2015	2016,	2017	2018
	5.4-	5.5-	6.4-	11.1-

Source: Trade Statistics for International Business Development (trade map): https://www.trademap.org/Bilateral_TS.aspx?

New Zealand

The agreement was signed with China in 2011, and the deficit in the Chinese trade balance was about 1.2 billion dollars, which increased to 1.9 billion in 2012 and then more than doubled, amounting to 4.1 billion in 2013.

Brazil

The agreement was signed with China in 2013. The deficit in the Chinese trade balance was about 18.4 billion dollars; this deficit decreased in the following year to 16.7 billion, but quickly increased again in 2015 to 16.9 billion, and then increase in 2016 to 23. 5 billion.

Chile

The agreement was signed with China in 2015, and the deficit in the Chinese trade balance was about 5.4 billion dollars, which increased to 5.5 billion in 2016 and then to 6.4 billion in 2017.

There are also countries with a diversified trade balance between deficits and surpluses, such as Australia and Ukraine.

B- At the level of Chinese direct investment outflow:

Most of the countries with which China has concluded currency exchange agreements receive direct Chinese investments. The summit of these countries in 2018 comes to Hong Kong with a total of 86870 million dollars, Singapore 6410 million, Australia 1990 million, Indonesia 1860 million, Malaysia 1660 million, Canada 1560 million, the United Arab Emirates 1080 million, the United Kingdom 1030 million and Russia 725 million (China Statistical Yearbook,2020).

Consequently, what forces China to make its investment flows in US dollars, and therefore it is natural for each country to use the currency of each country in its investment flows? As a result, the host countries lose the Chinese direct investment in foreign currency represented by the US dollar.

3. Findings and Discussions

1- China has made significant gains by signing currency SWAP agreements with most countries; it can be classified as follows:

- A- The first group china aimed to increase surpluses in its trade balance, such as Hong Kong, Malaysia, Uzbekistan, Pakistan, the Emirates, Turkey, the United Kingdom, Albania, and Sri Lanka
- B- The second group, china, aimed to transform the deficit in trade balance to surpluses, such as Belarus, Argentina, Mongolia, Kazakhstan, Russia, and Thailand.
- C- The third group China aimed to deceive some countries that the agreements served their interests, reducing the surplus in its trade balance. Still, it soon increased again after agreeing, such as Singapore, Canada, Suriname, Canada, and Egypt.

2. China has had adverse effects on its trade balance but within narrow limits with some countries.it can be classified as follows:
    - A- the fourth group, china, has a decline in its trade surplus: Hungary, Nepal, Tajikistan, and Canada.
    - B- The fifth group where china's deficit increases with some countries, such as New Zealand, Chile, and Brazil.
3. All countries will suffer from adverse effects, represented in the loss of the US dollar that they would have obtained from Chinese direct investment because it will flow in the host country's currency.
4. China used currency SWAP agreements to penetrate the markets of various countries.

4. Conclusion

China seeks to achieve its economic interests by invading its exports of goods and services to the world's markets. To achieve this goal, it always seeks to create new tools to achieve it. When China adopted currency exchange agreements between it and many countries, it claimed that it is in the interest of all parties and achieve common interests. But in fact, these agreements have only served the interests of China itself.

Accordingly, many countries rushed to sign currency exchange agreements with China, claiming that this would compensate them for using the dollar in trade exchange and thus reduce pressure on their reserves. But the study proved that the country loses more of its dollar reserves due to losing Chinese foreign direct investment in dollars, so the flow of this investment will be in the local currency of the host country. Also, the deficit in the trade balance of these countries with China will make the Chinese yuan expire before the expiry of the agreement period. Thus the country will return to dealing in US dollars in its dealings with China again.

Through currency exchange agreements, China achieved a large surplus in its trade balances with many countries by penetrating the markets of these countries. Thus its local industries suffered from fierce competition from cheap Chinese products, which leads to increased unemployment rates and a decrease in the gross domestic product (GDP) of these countries. Therefore, the importance of this paper is to explore the harmful effects of such agreements to avoid them in the future and develop tools to address their harmful effects.

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