Currency misalignment: The China case

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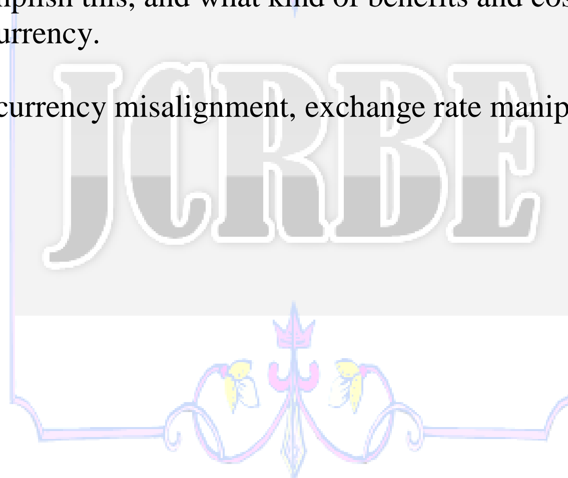
ABSTRACT

Exchange rate misalignments have begun to attract more attention in recent years, with expanding global markets. Because the case of China is a very interesting example of understanding the power of the exchange rate in determining trade and growth trends of countries, the focus of this case study is on this country. Since the United States is the largest trading partner of China, it is the most affected country by China's misaligned currency. Different actions are taken in the U.S. to smooth these negative effects. For example, there have been numerous calls by the international community led by Mr. Charles Schumer, a Democratic senator from New York, who has been active in searching for new congressional actions against China's perceived undervalued currency and trade policies since 2004. This case study helps people understand and critically analyze such arguments by answering the questions of how exchange rates are determined in free markets, why some countries try to manipulate their currency, how they accomplish this, and what kind of benefits and costs are observed in the existence of a managed currency.

Keywords: China, USA, currency misalignment, exchange rate manipulation, trade



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INTRODUCTION

The exchange rate is the price of one currency relative to another currency. Since the exchange rate has a direct impact on international prices of goods and services, as well as financial assets, the relative values of currencies are essential in determining exports and imports of countries and the exchange of financial assets in global markets. Given the significance of the exchange rate in everyday life, this case study highlights the following objectives: 1) understand how exchange rates are determined in free markets; 2) identify the factors determining exchange rates; 3) understand how exchange rates are manipulated by governments; 4) identify possible benefits of higher (or lower) value of a currency in domestic and foreign markets; 5) identify possible costs associated with a higher (or lower) value of a currency in domestic and foreign markets.

Exchange rate misalignments have begun to attract more attention in recent years, with expanding global markets. Because the case of China is a very interesting example of understanding the power of the exchange rate, the objectives listed above are explained using China as an example.

INCREASING ECONOMIC ROLE OF CHINA IN THE WORLD

China became one of the leading developing countries thanks to its impressive growth record. The country is now considered as the engine of growth for the world economy, especially after the start of the economic and financial crisis in 2008. Figure 1 (Appendix) illustrates the case. The data source of all the figures presented in this case study is the calculations based on World Economic Outlook Database of the International Monetary Fund. The growth rate of real gross domestic product in China is easily 7 percentage points higher than the world average between 1991 and 2010 and it is expected to grow at higher rates. One of driving forces behind this economic miracle is exports. Figure 2 (Appendix) shows the increasing share of China's exports of goods and services in global exports. It climbed from 1.5 percent in 1991 to almost 10 percent in 2010. China has been able to easily compete in international markets and increase their exports at a growing rate due to its low cost of production (especially low labor cost) and an allegedly undervalued currency.

Since the continuing economic success of China is strongly linked to its competitiveness in international markets, policy makers of the country closely follow policies keeping the value of its currency low.[1] China has attempted to manage its currency by pegging it to the U.S. dollar first, and then a basket of currencies. Figure 3 (Appendix) presents the value of China's Yuan relative to the US dollar overtime. China has started to peg the currency to the US dollar starting in 1995 up to 2005. During this period, the value of Yuan was almost flat against the US dollar. After using the fixed exchange rate policy for a long period of time, China allowed its currency to fluctuate within limits, starting 2005. But despite this new currency policy, the government allowed only for small and slow changes in the value of the Yuan; it never made the expected

[1] There is a large literature assessing the foreign exchange policy of China. For example Wu, Rongfang and Di (2010) summarize the history of the Yuan pegging; Feldstein (2011) shows that the values of real exchange rates need to be adjusted to correct the current account imbalances in the US and China; Cheung, Chinn and Fujii (2009) present that the value of the Yuan in real terms is undervalued and its correction can lead to the correction of trade balances between the US and China; Frankel (2006) shows that if China changes its pegged-exchange-rate policy to a flexible one, it would benefit from this policy change; Frankel and Wei (2007) study China's exchange rate regime; and McTeer (2010) shows that the Yuan is undervalued due to the Chinese government's policies.

major adjustment in the value of the Yuan which had called by the international community. Between 2005 and 2008, the Yuan appreciated by 20 percent, but critics argue that it still needs to appreciate at least 20 percent more to make its value close to its free market value against the dollar. With the start of the financial crisis, China re-pegged the Yuan to the dollar in 2008.

While the large international community consisting of the competitors of China in international markets has been accusing China for the currency manipulation, it rejects the accusations that the value of the Yuan is too low.[2] China claims that its trade surplus has fallen and that the US trade deficit is not due solely to any currency imbalance but is due to structural issues in the US economy.

Since the U.S. is the largest trading partner of China, it is affected China's pegged exchange rate policy. There have been numerous calls by the international community led by Mr. Charles Schumer, a Democratic senator from New York, who has been active in searching for new congressional actions against China's perceived undervalued currency and trade policies since 2004. But after the recent financial and economic crisis, he increased the pressure on China.

To understand and critically analyze the arguments of Mr.Schumer, in the following sections, it is discussed how exchange rates are determined in free markets, why some countries try to manipulate their currency, how they accomplish this, and what kind of benefits and costs are observed in the existence of a managed currency.

DETERMINATION OF EXCHANGE RATES IN FREE MARKETS

The determinants of exchange rates in free markets are classified as long- and short-run. While long-run factors work through product and labor markets, short-run ones are linked to changes in domestic and international financial markets.

Changing inflation rates, differences in interest rates, or changes in expected exchange rates all have an impact on current exchange rates in the short run. As inflation slows, domestic interest rates increase; or foreign interest rates drop, they all lead to it can lead to a higher demand for the domestic currency and as a result the value of the currency increases or appreciates. Conversely, as the demand for a currency drops in domestic or international financial markets (possibly due to lower domestic interest rates, higher foreign interest rates, a higher domestic inflation rate, or lower expected value of the currency), the currency depreciates or loses its value relative to other currencies.

The major long-run factors determining exchange rates are: trade policies, differences in price levels of products in domestic versus foreign countries, differences in productivity, and preferences for foreign versus domestic products. The general rule is that if the demand for any country's goods and services increases relative to the demand for foreign goods and services in international or domestic markets, the value of this country's currency rises, leading to an increase in export prices and fall in import prices. After these price adjustments, the law of demand suggests that the demand for exports will fall and the demand for imports would rise, which lowers the trade balance of the country. Overall, relatively productive countries, countries with low inflation and higher trade barriers tend to have a relatively higher value of their currency.

[2] There are other countries accused of controlling the value of their currencies, but the accusations against China has taken on particular important since its share in world exports is significant.

Within this framework, if China had let its currency to fluctuate freely, the value of the Yuan was expected to be much higher since the demand for Chinese products has been continuously increasing across the world, which puts upward pressure on its currency. The higher value of the Yuan would have lowered China's exports due to more expensive international prices of its products.

MANIPULATION OF EXCHANGE RATES

The stability of currencies can be essential especially for long-term planning of countries' international trade and export-oriented production. This fact is understandably considered as China's main aim to peg its currency to the US dollar. The value of any currency relative to other currencies has a one-to-one impact on international prices of goods and services. As the value of any currency increases, the price of this country's products in international markets rises as well. Conversely, as the value of its currency drops, the price of goods and services produced by this country gets relatively cheaper in international markets. For example, assume that the current value of one Yuan is 0.15 U.S. dollars. In this case, the price of a 100 Yuan worth bag produced in China will be 15 dollars in the U.S., assuming that there are no import and export tariffs or transportation costs. If China allows its currency to fluctuate freely and be determined by the market forces, its value would increase. For instance, if the rate jumps to 1 Yuan equals 0.25 U.S. dollars, the price of the same bag will rise to 25 dollars in the U.S. Since Chinese products get more expensive, the demand for them in the US is expected to drop. This is expected to lead to less exports of China to the U.S. after the appreciation of the Yuan. It should be noted that the concept is illustrated using the example of the US versus China; but it is true for any comparison between China and its trade partners, such as Euro-zone countries.

Manipulating the value of a currency mainly requires an intervention of central banks. By pegging its currency to the dollar, state banks and the Central Bank of China have started purchasing U.S. dollars or U.S. denominated financial assets, especially US Treasury bonds, to keep the demand for the US dollar artificially high (see Figure 4 (Appendix) for accumulation of reserves in China versus the US). Because of these purchases, nearly 60 percent of foreign assets in the Central Bank of China, which correspond to approximately 1.3 trillion U.S. dollars in 2009, were issued by the U.S. Treasury or U.S. agencies such as Fannie Mae and Freddie Mac.

BENEFITS AND COSTS OF UNDERVALUED CURRENCY IN CHINA

Benefits

China has planned its economy based on export-oriented growth, similar to some other Asian countries which had accomplished this aim successfully before China, such as Japan, South Korea, Singapore, Malaysia, and Thailand. If domestic markets are not well-developed enough to absorb domestically produced goods and services, targeting foreign markets can be considered as a good strategy to increase production to stimulate the economy. But it is not that easy to reach these higher export targets. Countries aiming at export-oriented growth have to aggressively compete with many other countries which are also trying to sell their products and services in international markets. The two main advantages of China in this tough competition were its low production costs, especially the cost of labor, and increasing efficiency thanks to the enormous amount of public and private investments on fixed capital and infrastructure. In

addition to these two advantages, keeping the value of the Yuan constant against the US dollar, which led to undervaluation of the Yuan in real terms overtime, helped to increase its exports because this policy has allowed keeping international prices of Chinese products to remain relatively low in global markets. The share of its exports in GDP increased significantly as shown in Figure 5 (Appendix) and the country's growth rate has reached to the point which could be only dreamed off by so many other countries. This impressive development process paid off and China became the second largest economy in the world after the US, placing Japan to the third position.

Costs

An undervalued currency is helpful for exporters, but its main negative impact in a country is expensive imported products. China's economy heavily depends on imported raw materials and oil for production. If the Yuan is undervalued, it means that domestic prices of imported products in China are expensive. These high prices of imported inputs increase the cost of production and push domestic prices of final products up in China. It is given as main reason for currently rising inflation in China.

Another negative impact of an undervalued Yuan on China is excess accumulation of foreign financial assets to continue to keep the value of the currency low. If the value of the dollar drops or interest rates on newly issued U.S. financial assets increase sharply, the value of China's financial investment drops significantly. This fact lowers the flexibility of China in terms of using its monetary tools effectively. For example, increasing inflation is a current problem in China. It requires increasing domestic interest rates to restrict the domestic demand to keep prices under control. Thus it took a while before China follows this expected policy change because they needed to keep domestic interest rates low to keep the value of the Yuan low against other major currencies.

Another issue is that the undervalued Yuan causes imbalances throughout the world, which eventually affects China as well. The US was able to borrow in international markets easily because China was always there to purchase all type of US financial assets to peg the value of the Yuan to the US dollar. It led to low interest rates in the US for a long period of time, which increased the risk level significantly. This is considered as one of the main reasons for the recent global financial and economic crisis. Such global crisis affects China similar to all other export-oriented countries in a negative way because they cannot export as much as they want and lower exports restrict growth because a large share of China's gross domestic production is sold to foreign countries rather than domestically consumed.

BENEFITS AND COSTS OF THE UNDERVALUED YUAN IN THE US

Costs

The major negative impact of a manipulated currency is that it can cause imbalances in international markets such as large current account deficit or surplus if it is a dominant country's currency. Since China supplies relatively cheap products in international markets due to the low value of its currency, low cost of production, and its increasing efficiency, countries throughout the world cannot compete with China. This introduces imbalances in international trade in favor of China. The U.S. is one of the most affected countries from these imbalances in trade. The

trade deficit has been continuously increased in the U.S. since the trade agreement was signed between China and the U.S. While the share of imports to the U.S. from China has been increasing significantly, the share of U.S. exports in the world has been dropping significantly. Figure 6 (Appendix) compares the share of China and US exports in total world exports. It can be seen that the share of China has been continuously rising from 1.5 percent in 1990 to almost 10 percent in 2010, while the share of US exports dropped from 13 percent in the 1990s to 10 percent in 2010.

Mr. Schumer argues that China's undervalued currency is importing unemployment from China to the US. There are two sources of increasing unemployment in the U.S. First, because the U.S. cannot export as much as they desire due to the currency manipulation by China, this lowers export-oriented production in the U.S. and increases unemployment in the country. Second, due to increasing imports from China, domestic production in the U.S. gets lower because they cannot compete with cheap Chinese products in U.S. markets. The natural result of dropping domestic production in the U.S. is the higher unemployment problem. Overall both foreign and domestic demand for US goods and services have been dropping, leading less employment opportunities in the US due to lower production.[3]

Another major negative effect on the US economy is that US became debt-dependent to China. The only way of artificially changing the value of a currency goes through Central Banks' intervention in foreign exchange markets through adjusting the level of their foreign financial assets. If any country wants to keep the value of their currency low relative to other currencies, they need to increase the demand for foreign currencies that they peg their currency to these foreign currencies' value can remain high relative to its currency. In this process, financial assets can heavily accumulate in one country if the country's economic size is large. China is now the major lender to the U.S. economy because it has accumulated a huge amount of US bonds to undervalue the Yuan. The concentration of debt assets in the hand of China puts the U.S. in a weaker position against China from the U.S. perspective.

Because China has been purchasing US financial assets extensively even at high prices to keep the value of its currency low, it led low-cost borrowing for the US. Without such heavy purchases of assets, as it borrows more had to pay higher interest rates. But this did not happen in the US. It was able to borrow more at low interest rates. The problem was that, because interest rates remained low such a long period of time, even people with a high probability of default were able to borrow money, especially in the US mortgage market. Their failure to pay back their mortgage loans was considered as one of the triggering factors of the recent financial crises.

The negative impact of low interest rates felt in the U.S. housing market through mortgage markets as well. The high demand for houses, which had been fed by cheap credits, caused house prices to increase dramatically in the US market and led to a major bubble. When the bubble burst, it started to shack all related markets such as subprime mortgage markets.

Benefits

The cost of the undervalued Yuan was quite high for the US, but there have been some benefits at the same time. The biggest benefit to the U.S. is the availability of cheap Chinese

[3] China's counter argument for this claim is that there are other internal reasons for high unemployment rates in the US. China may have a right point on the issue given that the dropping value of the US dollar against all major currencies in 2010 did not help much increase US exports.

products in its domestic markets. This was given as one of the reasons why the inflation rate remained low in the U.S. despite increasing energy prices after 2000. Low prices help consumers have a higher purchasing power. It means that they can purchase more with same amount of income. It is especially important for the poor who are the main consumers of cheap Chinese products.

Another benefit of the undervalued Yuan in the U.S. was low domestic interest rates. Because the Central Bank of China was continuously purchasing U.S. dollar denominated financial assets, especially Treasury bonds, the U.S. government was able to borrow at lower cost and keep interest rates low.

PROBLEMS IN FRONT OF THE FREE YUAN

Despite strong international pressures, China consistently resisted any demands to raise the value of China's Yuan. There are several reasons for this resistance.

First, China faces a powerful export lobby which makes any currency adjustment tough in the country. In case of upward adjustment of the currency, Chinese exporters' ability to compete in international markets will fall. A sharp appreciation of the Yuan may not be desired by other countries either. With appreciation, Chinese export-oriented manufacturing industry may slow down. It means that the current engine of growth in the world slows down.

If the Yuan appreciates against the dollar, meaning that the US dollar depreciates, the value of U.S. financial assets in China drops significantly. Given that China holds an enormous amount of dollar denominated assets, this may have a serious impact on the wealth accumulation in China.

CONCLUSION

Keeping the value of the Yuan low relative to the US dollar has helped China in the economic development process. Its exported products were able to compete in international markets. But the burden of keeping the value of a currency low for a long period of time (for example, increasing cost of imported inputs; excessive accumulation of foreign financial assets, most of which have been offering relatively low interest rates; international pressure from other countries) has started to make China think about alternative policies to replace the existing exchange rate policy. They need to focus more on domestic consumption than exports and start accepting the Yuan for international transactions. They have already started taking required steps, especially after the global crisis of 2008, to increase its domestic private consumption, which has been perceived as a new source of growth for China in addition to exports. The Chinese authorities have been still working on how they would manage to free the currency. As a first step, it was announced in June 2010 that the Yuan would be pegged to a basket of currency instead of the US dollar only. In addition to many implications of this change in international markets, it has a direct effect on the role of the US dollar in the world. As China pegs its currency to a basket of currency, it accumulates less US dollar denominated assets, which depreciates the value of the US dollar further makes it less desirable in the world (Oksanen, 2010). It is even argued now whether and how the Yuan can be a new global currency (Wu, Rongfang and Di, 2010). It is understandable that it is not an easy process for China as well as for the US; but it has to be completed to restore imbalances in current and capital accounts across countries. The smooth transition towards the freer Yuan will help continue to promote the free

trade concept in the world because some countries including the US have been thinking about introducing new trade barriers (lowering quotas or imposing import taxes on imported products) to slow down imports from China, to correct its own current account balance. This way they are hoping that domestic production may replace imports from China and the unemployment rate can drop faster. But it is always a question mark how useful such anti-free-trade policies would be successful in boosting the economy.

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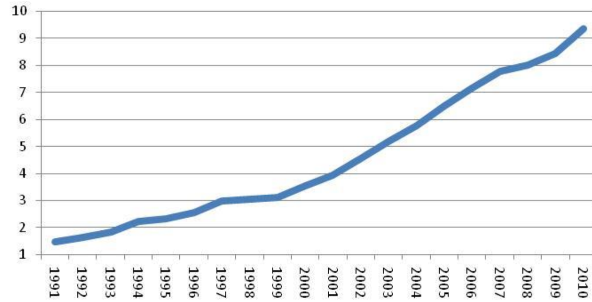
Figure 1 - China: Growth Rate of Real GDP (in percentages)

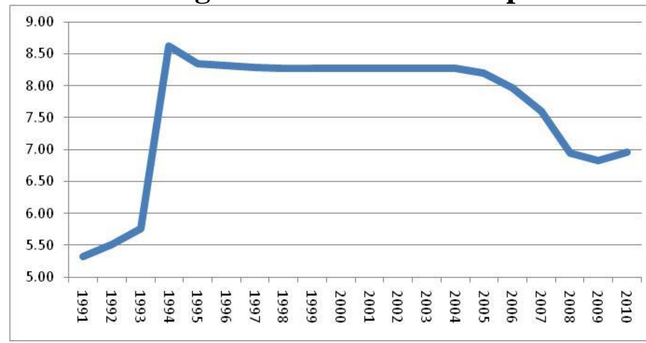
Source: Author's calcuation based on World Economic Outlook.

Figure 2 - Share of China's Exports in World Exports (in percentages)



Source: Author's calcuation based on World Economic Outlook.

Figure 3 - Exchange rate: Chinese Yuan per U.S. Dollar



Source: Author's calcuation based on World Economic Outlook.

Figure 4 – Stock of reserves in China versus the US (in billions of US dollars)

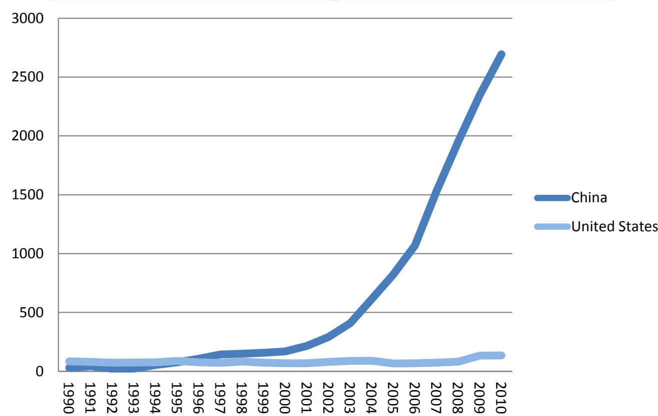
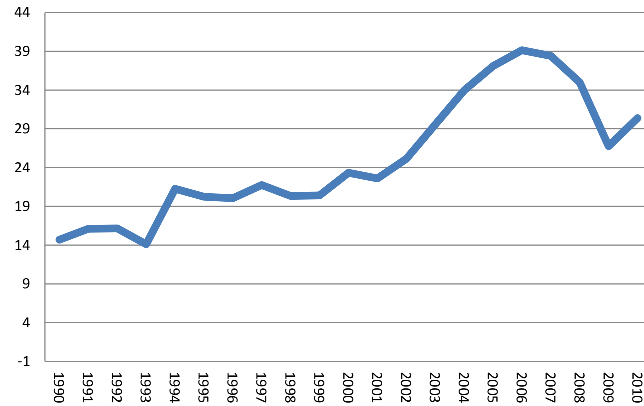
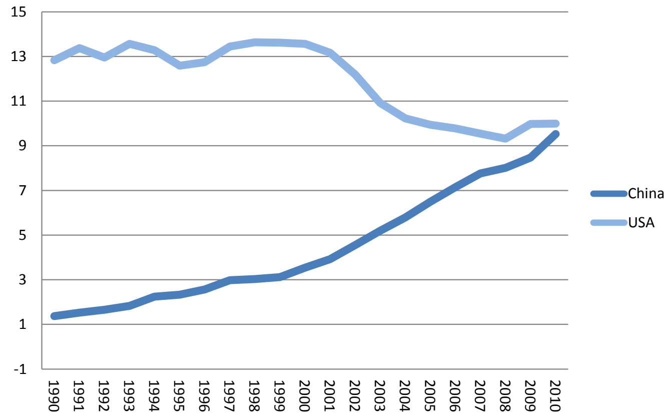


Figure 5 – Share of China's exports in GDP (in percentages)



Source: Author's calcuation based on World Economic Outlook.

Figure 6 – Share of the US and China's Exports in World Exports (in percentages)



Source: Author's calcuation based on World Economic Outlook.