The diplomatic consequences of Renminbi undervaluation

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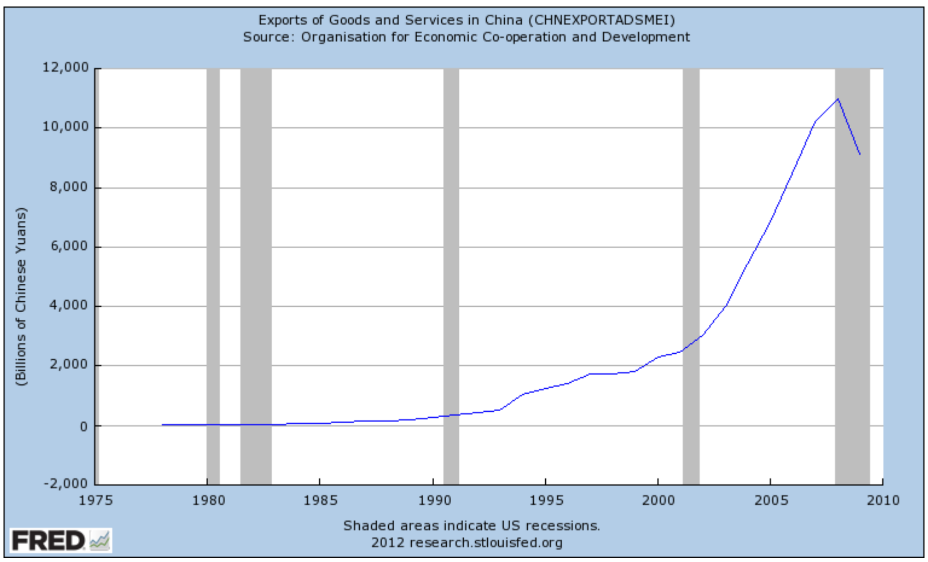
1 The debate among economists

1.1 Reasons for China's export success

Exports of Chinese goods and services to the world market have risen dramatically over the last decade.



During the same period, imports of foreign goods to China have risen much less. Around the year 2010, China exported much more goods than it imported. In economic terms, China was running a *current account surplus*. In absolute terms, such a current account surplus is unprecedented.

But why are Chinese goods so competitive on the world market? One might be tempted to point out the hard work, innovation and creativity of the Chinese working force.[1] Not being convinced by this, economists have brought forward several other, more structural explanations:

One factor is *labor arbitrage*:[2] Chinese workers are willing to work at lower wages than workers in importing countries. Importantly, accepted wages are not only lower in absolute terms but also in terms of purchasing power: A typical wage in China allows for a lower standard of living than a typical

[1] As [**?**, p. 18] indirctly does.

[2] This factor was hinted at by Xu Mingqi of the Institute of World economy of the Shanghai Academy of Social Sciences in a talk to our class on September 4 2012.

wage in an industrial country, thereby allowing Chinese firms to produce with much lower (absolute and relative) labor costs.
In addition to cheap labor Chinese producers find other *cheap factors of production*, namely energy and land rents.[3] These markets are not liberalized and prices can therefore be strongly influenced by government policy. Since for Chinese officials - as well on the local as on the federal level - GDP growth is a major ambition, energy and land use prices are cheaper on average than in industrial countries and even cheaper than in other emerging economies.
Another factor explaining strong Chinese exports has been introduced in 2005 by Ben Bernanke, shortly before he was named chairman of the US Federal Reserve.[4]: The *saving glut hypothesis*. According to Bernanke a special series of circumstances has lead to exceptionally high saving rate, i.e. the percentage of income that is saved. These circumstances include repercussions of the financial crises in emerging economies in the late 90's, but also the unique saving behaviour of Chinese households. Partly due to the lack of social security institutions and to the One-Child-Policy, the saving rate of Chinese households is among the highest in the world - in 2007 it was 53% as opposed to Switzerland's 17,5%.[5][6] These savings drive down interest rates in China and allow the local producers to access very cheap loans, which in turn allows them to expand production.[7]
Besides all these factors, *China's exchange rate policy* is another factor that might possibly explain part of the competitiveness of Chinese goods. In order to illustrate the relevance of the exchange rate of the Chinese Currency, the renminbi (RMB), we introduce a fictional story about two companies in the next section. The story takes place in a hypothesized world where we assume the RMB to be *undervalued*.

1.2 An illustrative story of two firms

Based on a very successful prototype, Fluttr, a US mass manufacturer of pop art, has decided to massproduce 250000 miniature christmas trees made in parts with porcelain fixtures and in their search for a supplier they've come across MingFix, a Chinese porcelain producer, who can produce fixtures at a rate much cheaper than american companies producing similar products.

[3] [**?**, pp. 25].
[4] **?**
[5] [**?**, pp. 20].
[6] Swiss Federal Statistics Office, http://www.bfs.admin.ch/bfs/portal/en/index/themen/00/09/blank/ind42.indicator.4
[7] This explanation is also favoured by [**?**, pp. 41].

A contract is signed and Fluttr owes MingFix the net sum of 23 million RMB. However, Fluttr being an american company will have to exchange their dollars to RMB to fulfil their part of the contract, something they do by selling their dollars to a chinese bank.
Since the RMB is undervaluated in our hypothetic scenario both Fluttr and MingFix benefits from trading in RMB. For Fluttr it's advantegous because a good exchange rate makes the porcelain fixtures cheaper for them to buy, and MingFix benefits because it increases their ability to compete on an international market as long as they aren't reliant on importing products from the US.
The christmas trees were a great succes and Fluttr are looking into out sourcing the production and decides to invest in Chinese factory facilities in partnership with MingFix. To start production they invest 42 mllion RMB in China in the form of wages, land rent, buildings machinery and laywers typing up contracts. This money is based on Dollars as before, and again the People's bank of China steps in to sell RMB to Fluttr for their Dollars. Both Fluttr and MingFix benefit from a cheap exchange rate once again, since this gives them more value for their money on Chinese soil.
Half a year down the road Fluttr starts to see their market shares in porcelain christmas trees diminishing due to a new Chinese competitor calling themselves Flittle and selling similar products much cheaper. While the Dollar RMB exchange rate original benefitted Fluttr, they are now at a disadvantage by having large part of their design and administration working in the US. This makes their profit margins for each product sold much smaller than Flittle who benefits from a cheap exchange rate when they export their goods because the dollars their consumers pay are exchanged to RMB's at a beneficial rate.
Fluttr are forced to lay off a large part of their staff in the US as a response and since none of the executives are willing to relocate to China and start a new life there under better circumstances for their company, they instead spend their evenings writing angry letters to their senators pushing them to put pressure on China to increase the value of the RMB. They might have benefitted from the exchange rate for a while, they readily admit, but there is no way they can compete with an entirely Chinese company and they would much rather give up their collaboration with chinese suppliers than competing against chinese companies.

1.3 Impact of the exchange rate

The above example illustrates that the exchange rate between the RMB an the US Dollar has a very direct impact on american and chinese companies. If the value of the RMB drops by 10%, the porcelain fixtures of Mingfix and the miniature christmas trees of Flillte for a price 10% lower than before on the world market and become much more competitive.[8] A low-valued RMB might therefore also explain part of the competitiveness of Chinese export goods.

There is yet another function of the currency exchange rate. Let's look at what happens when Fluttr buys goods from MingFix: they buy RMB from a Chinese commercial bank, paying with US Dollars. They do the same again when they invest in China. But they are not the only ones doing so - if Chinese products, for whichever of the above-mentioned possible reasons, are very competitive, *many* US firms will buy RMB, paying with US Dollars. This drives the demand for RMB on the world market of currencies up. Other things equal, according to very basic supply-demand models of economics, this should drive the price of the RMB up. At the same time, the US Dollars being sold on the market raise the supply of US Dollars and should thereby lower their price. If the currency market was a completely competitive and open market, the exchange rate would always be balanced at a point where demand and supply for RMB are stable - the same for US Dollars. Macroeconomic theory postulates, that for every two currencies at every moment, there is such a balanced exchange rate, called the *equilibrium exchange rate*.[9]. If a currency is below this hypothetical rate, it is undervalued. If it is above it, it is overvalued.

If the market for currencies was completely competitive with firms, banks and private persons being able to buy and produce money at will, all exchange rates would always be at their equilibrium rate. But of course money cannot be produced by anyone. It is National Banks that issue money. They and only they can - figuratively speaking - print a discretionary amount of money in their own currency.[10]. Doing this they follow a monetary policy.

[8] The issue becomes somewhat more complicated when Chinese producers buy components of their products outside of China. The lower value of the RMB makes imports more expensive and offsets part of the price gain. This analysis therefore applies only to products where more than half of the value is added in China, certainly a large part of Chinese exports.

[9] [**?**, p. ?]

[10] The process is somewhat more complicated than printing bank notes, but the effect is the same for the purposes of this section.

1.4 Exchange rate policy

The standard monetary policy of western countries is to define a target for inflation, normally around 2%. The National Banks are mandated to control the supply of money such that this target is met. Currencies of these countries are then traded freely against each other and their exchange rate fluctuates with varying demand.
But nations can also chose to exercise a tighter control of the value of their exchange rate. This is very common: Some national banks even use their money supply to 'peg' their currency to another, so that exchange rates are fixed. For example, the Swiss National Bank (SNB) offers every vendor of an euro CHF 1.20 in exchange. Since the SNB controls the money supply of Switzerland, it will never run out of CHF and the exchange rate of the Swiss franc. As a consequence the euro will never be lower than 1.20 until the SNB changes its exchange rate policy. As another example, the national bank of Denmark controls the supply of Danish kronor so that the exchange rate of the kronor and the euro constantly remains at 0.134 (with a small bandwith of +/-2.25%).
In these cases monetary policy becomes exchange rate policy: It does not focus mainly on inflation or other measures but on the exchange rate.
Since manipulating the exchange rate can be beneficial for a nation's exports and foreign investments, National Banks might feel tempted to promote their country's exports by holding the exchange rate low. However this behaviour forces trading competitors to take similar steps in order to protect their own exports, which easily leads to a situation where countries are competing to devaluating their currencies in order to compete, a policy known as 'beggar thy neigbour'. After such an episode during the Great Depression, such behaviour was internationally recognized as nonbeneficial for all partners involved and international institutions were instantiated to create a set of rules for all countries and observe if National Banks abide by these rules. The most prominent of these today are the IMF (International Monetary Fond), the WTO (World Trade Organization) and the EU (European Union).

1.5 The case against China's exchange rate policy

China has been accused by prominent US politicians of 'manipulating' its currency and keeping the Chinese currency, the Renminbi[11] 'undervalued'. This accusation against China can be restated in terms introduced in the

[11] abbreviated to CNY. The basic unit of the Renminbi is the Yuan.

previous sections: It claims that China is using monetary policy to keep a fixed exchange rate *below* the equilibrium rate.

1.5.1 Deviation from the equilibrium exchange rate

There is a number of various different theoretical methods for estimating an equilibrium exchange rate in the literature that we broadly group in two approaches:

- Estimates based on purchasing power parity (PPP)
- Estimates based on macroeconomic balance ideals

The basic idea of PPP approaches is to declare the exchange rate as ideal, at which you could buy exactly the same goods in two countries. A famous example of such an approach is The Economist's Big Mac Index.[12] If a Big mac costs 1 USD in the US and 5 RMB in China, the ideal exchange rate would be 1 to 5. You can then calculate the deviation of the actual exchange rate to the ideal equilibrium exchange rate. Of course this is also done with a more sophisticated basket of goods than a Big Mac.
A problem of PPP approaches is, that the price level in emerging economies is generally lower than in advanced economies. According to the so called Balassa-Samuelson effect, this is mainly because services and non-tradeable godds (e.g. a haircut or a restaurant meal) are much cheaper in emerging economics.[13] There are attempts to take account of such effects and calculate a revised PPP equilibrium exchange rate, with mixed results: Depending on the detailed assumptions, such attempts result in a wide range from the RMB being *over*valued to a *under*valuation of 47%.[14] Some attempts reach no statistically significant results.[15] Since most such calculations show a undervaluation of the RMB, some economists conclude the RMB must be undervalued, and they then estimate the degree of undervaluation to an average of the different approaches.[16]
Estimates based on macroeconomic balance ideals focus a macroeconomic factor.

[12] http://www.economist.com/markets/Bigmac/Index.cfm
[13] [**?**, pp. 82].
[14] [**?**, pp. 72].
[15] [**?**, p. 83].
[16]

However, to understand them it's necessary to introduce the notion net foreign asset (NFA) as well as the concepts of current and foreign account (CA and FA)[17].
The net foreign asset is the value of the assets that a country owns minus the value of assets from that country which is owned abroad. Assets in this sense is usually state bonds but can also be stocks and goods.
The current and financial account are measures for how the NFA changes. The current account constitutes the balance of trade and money transfers while the financial account constitutes the balance of financial assets, that is the debt or amount of money lent to other countries.
The two accounts are related by the current account plus the financial accout being equal to zero. This makes sense intuitively since if a nation buys more goods than it can finance with exports it needs to finance this by selling state bonds instead. In this case, the negative trade balance translates to a current account deficit, while the influx of money coming from the sale of state bonds translates to a finance account surplus.
When it comes to estimating the equilibrium exchange rate these three measures are heavily used because they gives us an idea of how stable an economy is, judging from how assets and goods are flowing in and out of the economy. In particular a report was released in 2008 by the Internation Monetary Fund outlining three methods that can be used to estimate the disparity between the real and equilibrated exchange rate[18]:

1. The macroeconomic balance approach looks at projections of a country's current account and tries to estimate how much the exchange rate would need to be adjusted for it to stabilize within a certain level

2. The reduced-form equilibrium real exchange rate approach tries to estimate the equilibrium directly as a function of the NFA as well as a number of trade indicators

3. The external sustainability approach tries to find the exchange rate that would stabilize the NFA of a country to within a certain level

In practice these techniques have been used by Cline and Williamson in their yearly policy brief on equilibrium exchange rates[19]. Their estimates are based largely on the first and third methods proposed by the IMF, designating debt and trade surplus above 3% of GDP as abnormal and

[17] For a more in depth explanation **?**KrugmanTextbook provides a good introduction
[18] The Report: **?**Lee08
[19] **??**

calculating how much the exchange rate would have to change to bring the current account within a normal treshold. In 2009 their results showed that the Chinese RMB was undervaluated by 21.4%, a number which has been much quoted since then. Especially in relation to the fact that they found the US dollar 17.4% percent overvaluated, futher contrasting the value gap between the two currencies.
Instead of trying to find the equilibrium exchange rate, a different approach is to do the exact opposite. If we pick a comparative point in time or statistical measures based on other countries, we can measure how much the current exchange rate deviates from a factor that remains constant.
If we pick the unit price of labour as our constant and 1998 as our point of reference it is straightforward to show that the RMB is 25 percent undervalued when compared to at least the American Dollar[20].

1.5.2 Circumstantial evidence for RMB manipulation

Estimating the equilibrium exchange rate is hard and different methods lead to different results. Critics of China's monetary policy therefore often supplement their model-based estimates with a more theory-based circumstantial case. The structure of this argument is to ask what a National Bank would do according to textbook economics if it were trying to manipulate its currency and then to point out that China is doing exactly (or roughly) this.
So how would a National Bank keep a rate below its equilibrium rate? According to textbook economics this can be done in three ways:[21]

1. The government can shift supply and demand for its currency by intervening on the foreign exchange market. Buying foreign exchange and selling the local currency drives the price of foreign exchange up and that of the local currency down.

2. The government can shift supply and demand by means of monetary policy, namely by keeping interest rates low. Lower interest rates mean lower returns for foreign investors. If foreign investors refrain from investing locally, the demand for the local currency decreases, driving the price of the local currency down.

3. The government can impose foreign exchange controls, forbidding foreigners to buy the local currency, therefore again reducing demand

[20] **?**

[21] [**?**, pp. 514]

and therefore the price of that currency.

According to Goldstein and Lardy[22] this is what the People's Bank of China has been doing for a decade:

1. The Chinese government has intervened on the foreign currency market on a massive scale: It has been buying foreign currencies, mainly US Dollars (in the form of US government debt) in exchange for RMB to the amount of 10% of its GDP, i.e. 10% of the value of all goods and services produced in China.

2. Interest rates in China are relatively low: When the interest rate is adjusted for inflation, the so called *real* interest rate, interest rates have actually being negative for the most part since 2006.

3. China imposes foreign exchange controls that prevent international investors or other governments to buy RMB.

As a result, critics of Chinas exchange rate regime say, China's export sector has become extremely competitive.
But the circumstantial evidence goes further than this. If the Chinese government buys foreign currency paying with RMB, it is increasing the amount of money in the economy.[23] Again according to standard economic models[24] an increase in the money supply raises the price level in the domestic economy, leading to inflation.[25] As a result, goods produced in China would become more expensive on the world market not due to currency appreciation, but because production costs (e.g. wages of Chinese workers) rise with inflation. According to this model, even though the People's Bank of China (PBC) keeps the *nominal* exchange rate fixed, the *real* exchange rate, i.e. the exchange rate would float.[26] Therefore, inflation would in the long run offset the competitive advantage of Chinese goods on the world market gained by the low(er) nominal value of the RMB.
China has indeed seen some inflation during the last ten years. But it was only moderately higher than in other countries - the real and the nominal exchange rate roughly moved in unison during the last ten years.[27]Critics

[22] [**?**, pp. 40]
[23] In economical jargon it is expanding the *monetary base*, what (other things equal) leads to an increase in money supply
[24] [**?**, pp. ?]
[25] Maybe quickly explain the assumed mechanism?
[26] [**?**, p. 509]
[27] source: http://www.clevelandfed.org/research/trends/2010/1110/01intmar.cfm

of China attribute this to China's *sterilization* of the money inflows. Since 2003, China hast prevented about 40% of the money inflows of entering the monetary base by raising reserve requirements of Chinese commercial banks.[28]Raising reserve requirements limits the amount of loans the commercial banks can issue, therefore 'extracting' money out of the economy. This in turn limits inflation and prevents the real value of the RMB to rise. This is another manifestation of China manipulating the RMB exchange rate: Not only does it keep the nominal exchange rate artificially low, it also intervenes on the real exchange rate, preventing the 'natural' offset on nominal currency manipulation.

1.5.3 In the name of the Chinese people

Critics of China sometimes supplement their case with the assertion, that a higher-valued RMB would actually be in the interest oft the Chinese people, if not its export sector.

First, for an ordinary Chinese factory worker, having a cheap RMB might on one hand mean that their factory is doing great on foreign markets, but at the same time buying foreign products like European cars or American gadgets becomes very expensive.

Second, artificially low interest rates, in combination with inflation, deprive Chinese citizens of attractive saving options on their bank accounts. Due to capital controls they cannot place their money in foreign banks where interest rates are higher. In absence of a comprehensive social welfare state, retirement provisions become a major concern for many citizens.

Third, lacking other saving opportunities, many Chinese invest their money in real estate as a saving asset, driving real estate prices up. This not only has macroeconomic risks of overheating int the construction sector, but primarily confronts less affluent citizens with serious difficulties to find habitation in urban areas. Infamously high housing prices, e.g. in Shanghai, have become a major social issue, also reflected in popular culture.

1.6 Replies in favor of China's exchange rate policy

Many economists are more sceptical if the RMB is indeed undervalued. We present first the arguments attacking the above-mentioned estimates of equilibrium exchange rates, followed by the arguments responding to the more circumstantial evidence for manipulation of the RMB.

[28]IMF, via Cleveland Fed, http://www.clevelandfed.org/research/trends/2010/1110/01intmar.cfm

1.6.1 Difficulties in estimating the equilibrium exchange rate

The equilibrium exchange rate is an elusive concept. The above-mentioned calculations have been heavily critized.
The approaches based on purchasing power parity (PPP) are considered problematic, because they yield such different results.[29] The result depends heavily the method chosen and its assumptions, too much so as to serve as a guide for exchange rate policy.
Approaches based on macroeconomic balance ideals also face problems:

1.6.2 Circumstantial evidence against RMB manipulation

The reply to the more circumstatial case against China's policy is at the same time more difficult and easier to make than the case against estimations of the equilibrium exchange rate. It is difficult because the case is based on textbook macroeconomic reasoning and nobody disputes that the People's Bank of China is actually taking measures suited to lower the price of the RMB: The accumulated Dollar reserves, low interest rates and capital controls cannot be questioned.
But the reply is also easier because the case against China itself is not completely clear and the alleged undervaluation of the RMB is not quantified. It is based on many 'judgement calls' and as such it is vulnerable.[30]
In addition there are equally circumstantial cases to make against a alleged RMB undervaluation. First, as pointed out in the first section of this chapter, China's export success can be explained with a variety of factors. Different authors point to different reasons: Huang Yiping focuses on factor cost distortions.[31] Charles Wyplosz's and Helmut Reisen's focus is on the high saving rate in China.[32]. What they have in common is the insistence that there is no need to invoke the alleged RMB undervaluation to explain China's success on the export market.
Second, one might point out the symmetry of the world market.[33] While China is running a current account surplus, the US in turn run a current account deficit. According to Wyplosz, this deficit is caused by the low saving rate of US households and the budged deficit of the US government. Instead of trying to explain China's export success with the alleged undervaluation

[29] [**?**, p. 16] and [**?**, pp. 82]
[30] [**?**, p. 85]
[31] Huang2010, http://www.voxeu.org/article/china-us-and-renminbi-rejoinder-krugman
[32] [**?**, pp. 40] and **?**Reisen2010
[33] [**?**, pp. 39-40].

of the RMB, one could with equal justification explain the US deficit with the *over*valuation of the US Dollar.
Third, each of the practices taken by the POBC may also have legitimate purposes. China is no the only country that pegs its currency to another currency - we already mentioned Switzerland and Denmark doing so. A fixed exchange rate has the advantage of giving firms and consumers certainty about the future value of a currency.[34] Lowering interest rates to spur growth is also a tool widely used by National Banks worldwide. And limiting inflation is considered to be one of the main goals of *any* National Bank.[35].
Finally, many other countries - among them Japan, Germany and Switzerland - run current account surpluses that are as big as China's, relative to their GDP.

1.6.3 it is over

The last point to make against the accusations against China is extremely straight-forward: Even if the RMB was undervalued in the past, it is not so any more. Even some of the most ardent critics of China's exchange rate policy now reach this conclusion.[36]

1.7 Wrap up: Up to 15% or more

2 Politics

The diplomatic debate between the US and China takes many different shapes. While the dialogue is defined by continuous attempts from the US to convince China to appreciate the RMB, the methods span from passive domestic policy statements to efforts of using international bodies to persuade China to change their economic policies.
In this section we will explore the different means of diplomatic pressure that has been in use during the last decade. For each method we will look at the following characteristics:

1. The Argumentation: What is the specific reasoning brought forth in the economic debate?

[34][**?**, p. 515]

[35]China's capital controls might be the only exception, but their importance pales against that of China's foreign exchange reserves.

[36]**?**http://krugman.blogs.nytimes.com/2012/10/22/an-issue-whose-time-has-passed/ and **?**

2. The Channels of Communication: Where does the debate take place and with what authority?
3. The response: What is the reaction to the debate from China's side?
4. The Context: Under what political or economic circumstances is the debate brought forth?

2.1 Pressure Points

2.2 The Domestic Debate

With each American election, a new batch of politicians parade their toughness on China's economic policies promising tougher measures and severe consequences. This is a popular agenda amongst many Americans who see the consequences of China's entrance on the global manufacturing market in their own lives. For every American product out competed by a cheaper Chinese alternative American jobs are lost, and a candidate who chastises China and vows to take measures to stop this will likely be received well.
This point hasn't escaped the players on the political scene who regularly promises to label China as a currency manipulator if they are elected[37].
Both candidates follow a remarkably similar argumentation to support their claim, basing their argument on the trade ramifications of a purportedly under appreciated RMB. It is telling that Obama is making this statement during a speech to the 'Alliance of American Manufacturing' (An interest organization representing a part of the US manufacturing industry).
Labeling China a 'currency manipulator' doesn't do anything in itself, but as Levy details in **?**, China has so far kept Obama from living up to his promise, something that was ardently pointed out in the election of 2012. China's motives behind avoiding the label 'currency manipulator' is closely connected with the us political debate where the label could be an excuse for eager senators to mandate tariffs on Chinese imports.
In 2009 a bill was proposed by the republican senator Timothy Ryan (Ohio), aiming to introduce a tariff with the stated purpose "*To amend title VII of the Tariff Act of 1930 to clarify that countervailing duties may be imposed to address subsidies relating to a fundamentally undervalued currency of any foreign country*"**?**. The bill died in the senate after passing the house, but had it been instated it would make it very likely that China would had been forced to implement equal measures leading to a trade war with negative

[37] Recent examples include Barack Obama in 2008**?** and Mitt Romney in 2012**?**

economic consequences for both nations as argued by Levy in chapter 20 of **?**.

Official China is silent under these debates but it can be argued that the hostility towards China reflected by the tough stances are reflected by a similar attitude amongst Chinese politicians seeking to appear strong by not caving in to American demands[38]. The domestic debate on economic policy in China is focused much more on the continuation of growth than on the role of China economic policies in an international context.

2.3 Behind Closed Doors

The most direct way for the US administration to put pressure on China is for them to talk directly with Chinese policy makers, trying to influence their decisions. Since these conversations are rarely released for public consumption, there are very few indicators of the nature of the arguments. What can be examined however is the argumentation put forth by high standing officials presenting the US in their public speeches. It is of course not given that the bilateral US-Sino diplomatic exchanges follow the same arguments, but assessing the arguments that are laid forth by public figures might give us a gist of their contents.

One interesting example of such a public figure is the head of the US Treasure, Ben Bernanke. In a speech at the Chinese Academy of Social Sciences, Beijing he argued that: "*Greater scope for market forces to determine the value of the RMB would also reduce an important distortion in the Chinese economy, namely, the effective distortion that an undervalued currency provides for Chinese firms that focus on exporting rather than producing for the domestic market*"[39]. Given to a Chinese audience, Bernanke attempted to make the point that Chinese consumers would benefit from a stronger RMB as it would give them access to cheaper imports and strengthen Chinese companies on the domestic market. With this rhetoric he mirrors the politicians focusing on the currency value as a driver of product prices.

However, in the same Speech Bernanke points out that one of the most effective ways to increase the welfare of Chinese households would be to reduce the domestic savings rate. This argument plays nicely together with a line of reasoning he presents at a lecture in Virginia a year earlier, which shows a significant shift away from the manufacturing driven argumentation[40].

[38] As presented in **?**

[39] The transcribed speech **?** used the term 'subsidy' which created a lot of debate in the US, but the word was never uttered by Bernanke himself while giving the actual speech**?**

[40] The speech can be read found here **?**

In this speech the main argument centers around how the savings rate of Chinese citizens distorts international economy. Here Bernanke argues that the poor welfare offered by the Chinese state forces a most Chinese to set aside a lot of money for retirement and medical self insurance. As the money is deposited in bank accounts, it gets reinvested in domestic and international projects, and particularly the US is a big receiver of foreign investment, which creates a current account deficit. The main point of this argument is the idea that the current account deficit or surplus is largely driven by the international economic environment and as such is not solely a domestic issue. Following this line of reason, it is not solely the responsibility of the US to eliminate their deficit with budget cuts, but equally the responsibility of large international players like to China to take measures to assure a balanced world economic. In the particular case of China this could be done for example by strengthening their currency.
These speeches were given at a point in time where China was giving up their peg of the RMB to the Dollar, slowly increasing the value over a 4 year period between 2006 and 2010.

2.4 International Bodies

In the world of international finance there are several agencies responsible for coordinating various aspects of the world economy. A big part of the role of these organizations is to offer an avenue to settle disputes between member nations.
The three most relevant of these organizations in this context is the G20, the International Monetary Fund (IMF) and the World Trade Organization (WTO).
The G20 is a group of 20 finance ministers and central bank governors from 20 major economies that try to promote economic cooperation and a venue for discussions on the international finance system. Pushed by the US several attempts at making the participating leaders pledge their allegiance to economic policies that would prevent countries from manipulating their currencies. However the strongest statement so far was reached at the 2009 Summit in Pittsburgh where the leaders agreed "*to adopt the policies needed t lay the foundation for strong, sustained and balanced growth in the 21st century*". Later attempts at further defining exactly what is covered by "balanced" have failed[41].
An alternative approach would be to go through the IMF which stated goal

[41] An interesting account of this process can be found in **?**

is to stabilize exchange rates and lend money to countries that might need them. In fact Dominic Strauss Kahn has on behalf of the IMF publicly stated that the RMB is undervalued in 2009, and the IMF has repeated this sentiment with slight modifications since then**?**. Despite these statements no action has been taken by IMF to regulate or penalize China, largely because the organization lacks the means to influence countries that aren't dependent on it for borrowing money.
Last the World Trade Organization is deliberately set up to supervise and liberalize international trade. In **?** several chapters are devoted to an extended discussion about the interpretation of the ruleset laid out by WTO to ensure free trade. The central question being whether there are provisions in WTO agreements that can be used to prosecute China. However as discussed in **?** the WTO is unable to cope with such a situation even if there were an article clearly stating that China was being guilty of economic misconduct.
In China the IMF labeling the RMB as undervalued elicited a strong response. After the label of the RMB as "moderately undervalued" in 2011, the chief of the Institute of International Finance at the East China Normal University, Huang Zeming conceded that " *it is certain that the RMB exchange rate has been underrated, but there is no fixed standard that could be used to test whether the appraisal method is proper*"[42], arguing that the conclusions made by the IMF are meaningless.

3 Discussion

Seeing that one decade of intense discussion hasn't answered the question of whether China should appreciate their currency, so it might be a little ambitious to aim for a definitive conclusion on this matter. Instead, what we set out to do in the following part is two-fold. We will first try to look at how the viewpoints from the two sides of the academic debate diverges. Secondly we will assess the political debate looking at the motivations to argue one way or another.

3.1 Academic Tug of War

At the center stage of the Academic debate we see the discussion surrounding the equilibrium exchange rate. Every single way we choose to measure this rate shows us that the RMB is severely under appreciated creating a strong

[42] A more in depth response can be found in **?**

argument in favor of appreciation. Supporting this idea we have Goldstein and Lardy enumerating how the Chinese state is guilty of doing everything you would expect a currency manipulator to do.

However, the response in defense of China's economic policies points out that this critique completely misses the point. Their argument is shortly summarized in two parts: 1) The monetary policy of China is a reasonable response in light of the economic circumstances and 2) Historically other nations such as Vietnam and Japan has been pressured into appreciating their currency with negative consequences to follow.

Economically speaking this highlights a clash of economic cultures. One the one side we see an economics tradition based on complex modelling and theoretical frameworks to understand the world. The idea driving this work is that we can deduce economic policies based on a deep understanding of the key factors the play a role in macro economics, i.e. by estimating a theoretical property such as the equilibrium exchange rate, we can deduce the policy that should be implemented.

The other side of the debate is represented in a larger degree by a practical and empirical method. Here the theoretical argument is discarded because it is too vague and imprecise. Instead the policy is based on using a set of practical tools (sterilization, foreign currency accumulation, etc.) used to obtain growth and prosperity. From this angle it is much more important to look at past experiences from other countries and learn practical lessons from their mistakes and successes, than it is to adhere to a theoretical model of how the perfect economic policy would look like.

3.2 Motivations

While the theoretical approach can easily look far fetched and out of touch with reality, the danger of the practical approach is that it might miss the big picture and end up shortsightedly driving the world economy towards a sub optimal economic environment. After all, a well-functioning domestic economic policy might easily work at the expense of neighboring nations, like the classical "beggar thy neighbor" situations introduced earlier. No man is an island, and similarly no economy stands alone in a global market. The question that lingers is to what extend a nation should be limited in it's internal affairs to the benefit of other countries.

Historically China has been a small player on the world market for most of the past century despite its population size. Being a small player comes with the advantage that your economic policies affect other countries in a very minor degree which permits a wide liberty in setting them. China's economy can by no means be called small anymore, but the attitude put forth in their economic policies still mirrors those of a China that would best like to be left to do as they wish with regards to their own internal affairs.

The US on the other hand has historically been promoting free trade with the rest of the world, using IMF and WTO as instruments to open up the global market partly to their own advantage. Economically speaking the US has a history of meddling in the affairs of other countries convincing for example Japan and Vietnam to appreciate their currencies when it was seen as economically beneficial for the US that they do so.

These extremes set the stage for negotiations where any argument made by the opponent side can easily be distorted to reflect the more extreme part of their position. If the US tries to find common ground on currency speculation they can quickly be labeled as imperialistic, while any attempt China makes to retain control over their economic development could be categorized as protectionist.

3.2.1 Manufacturing Jobs

In his article "Assessing China's Exchange Rate Regime", Jeffrey Frankel and Shang-Jin Wei[43] starts by looking at the yearly US Treasury Reports. They found that the whether China would be labeled as a currency manipulator correlated not just with the current account ration as expected but also with metrics that aren't usually deemed to have an effect on China's currency policy such as the trade balance or the unemployment rate on election years.

There is no doubt that China to a certain extend serves as a scapegoat when manufacturing jobs are disappearing, and not without right. Manufacturing jobs are to a large extend being moved away from industrialized countries, often because of circumstances similar to those that the company Fluttr faced in our fictional example. It is however nonsense to expect that raised exchange rates is enough to stop this trend. If jobs aren't going to China, there are countries like Malaysia, Indonesia and India ready to step in, and if the RMB strengthens, those countries are where the jobs will go, and not the US.

With this in mind it's clear that presidential candidates like Obama in 2008 and Romney in 2012 are merely paying lib service to the large share of dissatisfied voter groups that they hope will help them win the election. In

[43] ?

US domestic policy China is an easy target because invoking the Chinese problem evades looking at domestic causes for the same problems.
This doesn't mean however that China couldn't potentially gain from strengthening the RMB. When Bernanke argues that raising the value of the RMB could be a win/win, he is not necessarily merely protecting national interests by perpetrating the myth of the disgruntled manufacturing industry. As we mention earlier, China needs to take strong measures to prevent inflation on their domestic market. On top of that the cheap RMB makes it difficult for Chinese people to buy products abroad, limiting their experienced prosperity in spite of the staggering growth rates.

3.2.2 Responsibilities

Academics are free to poke at China with a stick arguing that the RMB is under valued according to this or that model, and American politicians and manufacturers can complain about the joblosses that China's policy is leading to. However they won't get results unless either Chinese policy makers decide that it is in their best interest to appreciate the RMB or an international organization is able to pressure China into doing it anyway. Outside of a modest appreciation between 2006 and 2010 neither happened despite consistent pressure from the US. Depending on your viewpoint this end result can be seen either as a confirmation that China never had an obligation to react, or that China neglected to step up to their responsibilities as a major economic power.
The idea of a savings glut introduced by the chair of the US Fed Ben Bernanke gives a strong argument for the latter by demonstrating how Chinese policies create a situation where enormous amounts of liquidity is created by the Chinese savings rate which gives an imbalanced investment abroad which to a certain extend explains both the current account deficits of the states and part of the current account surplus experienced by China. Because this savings rate is tied up to domestic economic policies in China but has global consequences, it would be frivolous to let China get away with manipulating it in ways that hurt other economies.
China is naturally not interested in giving up this kind of autonomy, and so far they have not seen any initiative that could challenge them to that right. In the current situation it is hard to judge if they are taking unfair advantage of a broken system, or if they have every right to remain sceptic of foreign attempts at influencing their policies. However what the conflict shows very clearly is that had it been the case that China had been wrongfully taking advantage of their position as a major economic player, there would have

been no system currently in place that would have been able to stop that from happening, outside of a full blown tariff war with the US.
In a future scenario it is likely that China will stand at the other side of the argument losing manufacturing jobs to poorer nations like Indonesia or India and arguing that these countries in turn are undervaluating their currency. When that time comes, it will hopefully be a little clearer when exactly this kind of policies is actually hurtful to the world economy, and not just an opportunity for poorer countries to get a foot in the door of mass manufacturing.

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