CHANGING FOREIGN EXCHANGE REGIME AND ITS EFFECTS ON FOREIGN TRADE IN CHINA

By

Wenhong TANG

A THESIS

Submitted to
KDI School of International Policy & Management
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Department of International Economic Policy

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Abstract

This study focuses on the changing of China's foreign exchange regime and its effects on foreign trade since 1978 when the country started to reform its economic system.

Deregulation and evolution characterize the economic reform as well as foreign exchange regime in China. This determines the complication of its foreign exchange regime. To understand China's foreign exchange regime, it is necessary to discuss RMB overvaluation under seriously distorted situation, devaluation as a general and correct trend of reform, the cost of earning foreign exchange and foreign exchange retention system. Overvaluation in a long period was a serious problem for trade. It taxed on exports on the one hand, and encouraged imports on the other hand. Obviously, it hindered the country's development and needed to be reformed. RMB (reminbi, China's currency) foreign exchange rate moved in a direction of devaluation.

To generate a reasonable rate, China before 1994 adopted the criterion of the cost of earning foreign exchange, which is the cost of earning one unit foreign exchange in

terms of RMB. In 1981, China introduced internal settlement rate, which was set at 2.8 yuan/US$ based on the national average cost of earning foreign exchange (2.53 yuan/US$) plus 10 percent as profit. The national average cost of earning foreign exchange was unilateral purchasing power parity, because the foreign-currency price was calculated in terms of the real transaction price rather than the price of the same good in foreign market.

One of the most important measures of deregulating foreign exchange control was the foreign exchange retention system, which was introduced in 1979. In the following years, the retention rates became bigger and bigger. This system was the cornerstone of the foreign exchange swap market and was called the beginning of China's gradual transition to currency convertibility.

China's foreign exchange regime went ahead along a way of introducing internal settlement rate—building swap market—establishing inter-bank market—making RMB convertible under current account. This study discusses in detail the positive effects of changing foreign exchange regime on the economy especially foreign trade. It could be understood that there were some limitations in the process of the reform as we analyze in the text, because time is needed to complete the transition from a planned system to marketed one.

About the effects of changing foreign exchange regime on foreign trade, most of China's academics and trade officials believed that devaluation had failed to boost exports and constrain imports, particularly before 1994. This study gets a different result from them through an approach of real effective exchange rate rather than just

using superficial data. In general, changing foreign exchange regime resulted in significant trade liberalization and import bias reduction in China. Lastly, this study emphasizes the importance of competitiveness for China who is now in the taking-off stage of economy. And further then, it suggests that China should adopt a crawling peg rate system rather than a flexible or a fixed rate.

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CHAPTER I INTRODUCTION

China has been one of the most dynamic economies in the world in the past two decades. In the first section of this chapter, we will briefly look back China's opening up of economy, including an overview of the market-oriented reform in subsection 1, macroeconomic cycles in subsection 2 and foreign trade reform in subsection 3. Those are very important to understand China's foreign exchange regime. Then, in the second section, we will introduce the structure of the thesis.

I.1 China: The Opening up of Economy

According to the updated *World Development Report 1998/99* (World Bank, 1998), China has become the seventh largest economy in the world by the end of 1997. Its GNP reached US$1055.4 billion, and GNP per capita was US$ 860 that is slightly higher than US$ 786 which is used to distinguish a middle-income economy from a low-income one. From 1979 to 1997, its average annual growth rate of GNP was 9.8 per cent, which was the highest one in the world.

I.1.1 An Overview of the Market-Oriented Reform

At its historic Third Plenary Session of the Eleventh Central Committee in December 1978, Chinese Communist Party introduced a program of readjustment and reform to achieve balanced and intensive growth. From then, reform (*gaige*) and open door (*kaifang*) became the most buzz words on various documents of the Party and the government, as well as on various news media. Deng Xiaoping, who was the former leader of the country, called the reform the second revolution that is of same

significance as the first one that led to taking power of the Chinese Communist Party in Mainland China in 1949. By 1998, generally speaking, China's economic reform has gone through three phases.

In the first phase (late 1978—October 1984), the government focused on the micro-management institution. Before reform, China's economic system, which characterized a high degree of planning, was copied from former Soviet Union. The whole country liked a huge factory and each economic unit liked a workshop. Each unit just did its work according to the plan regardless of profits and losses. The most conspicuous problem was the lack of incentive of micro agents. Therefore, the improvement of the micro-management institution was taken as the starting point of the reform. In rural areas, the collective farming system was eventually replaced by *the household responsibility system* which brought a rapid agricultural growth. Statistics shows that from 1978 to 1984, the total output growth and the average annual growth rate (calculated on comparable prices) were, respectively, 42.23 and 6.05 percent. In urban areas, to increase enterprises' autonomy, *the industrial economic responsibility system* was introduced by the government. Under this system, the production incentives of state-owned enterprises (SOEs) and their workers were increased demonstrably.

In the second phase of the reform (October 1984 to late 1991), the focus was the resource allocation mechanism. On the one hand, the reform of the micro-management institution granted partial autonomy to enterprises. This autonomy resulted in a demand for and supply of outside-plan resources, goods and services. On

the other hand, the constrains of the highly centralized, planned resource-allocation mechanism on the re-invigorated micro-management institution become more and more apparent. In order to solve the conflict and to increase state enterprises' vitality, reform was carried further. In this phase, an attempt to reform every aspect of resource-allocation mechanism, including material distribution, foreign exchange, foreign trade and finance, met with positive results.

In the third phase (1992 onward), reform focused on the macro-policy environment. When the traditional macro-policy environment—which was characterized by an artificially suppressed interest rate, foreign exchange rate, and prices of scarce materials and products—was still in existence, the relaxation of control of the micro-management institution and resource-allocation mechanism revitalized enterprises but at the same time created enormous chaos in the economy. In order to solve the conflict among the micro-management institution, resource-allocation mechanism and macro-policy environment, the reform was extended to the area of macro-policy environment. At the beginning of this phase, the government not only explicitly announced that the goal of the reform was to establish a 'socialist' market economy, but the slogan 'be bolder and faster' was also proposed as the guideline for creating reforms policies. Thanks to these new goals and guiding principle, the macro-policy environment reform achieved major breakthroughs in the areas of price, taxation, interest rate, and exchange rate.

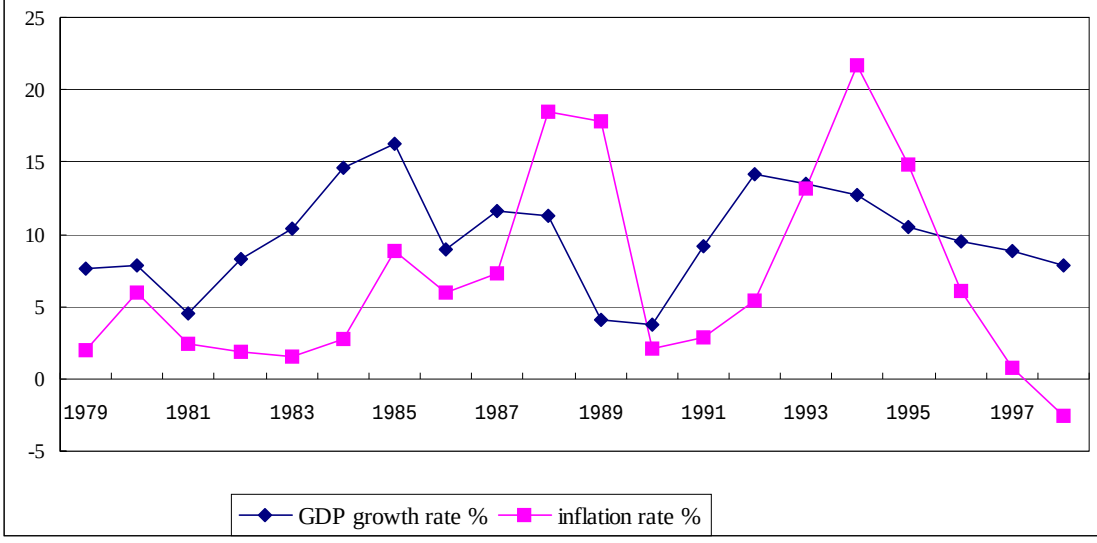
It maybe is premature to say that China's reform has finally achieved a success. But, we can conclude that, China could avoid a serious attack from Asian financial crisis

mainly because the reform, especially macro-policy reform after 1992, extruded a great deal of bubbles from the heated economy (*soft landing of economy*) by the end of 1996.

I.1.2 Macroeconomic Cycles

As mentioned above, China's economy grew rapidly since 1978. However, the upswing experienced four cycles in this period, as suggested by the movements in retail price inflation and GDP growth: 1979-81, 1982-86, 1986-90, and 1991-present (see Figure 1.1).

Figure 1.1 China (1979-98): GDP Growth and Inflation Rates
(percent per year)



Note: Inflation rate is the growth rate of the retail price index.

Sources: *International Financial Statistics Yearbook (1998)*, IMF; State Statistical Bureau, China.

Table 1.1 analyzes briefly the four macroeconomic cycles.

Table 1.1 China: The Four Macroeconomic Cycles

(part 1)

Cycle	Aggregate demand dominated by	Possible cause
1979-81	Retail sales	Increases in rural incomes as a result of agricultural reform
1982-86	Retail sales; fixed investment	Soft budget constraints of SOEs ① leading to excessive investment and wage increases financed by credit creation
1986-90	Retail sales; exports	Early relaxation of financial policies in response to concerns about problems in the SOE sector; panic buying in response to administered price increase
1991 onward	Fixed investment; retail sales; exports	Investment push by central and local authorities

(part 2)

Cycle	Main components of inflation	Policy response	Landing②
1979-81	Adjustments to administered prices	Financial policies tightened; investment curtailed	Hard
1982-86	Price liberalization; increase in free-market prices	Credit policy tightened temporarily; interest rates increased	Soft, but short lived
1986-90	Price liberalization; adjustments to administered prices	Monetary and credit policy tightened; investment reduced sharply; price reform suspended and partially reversed	Hard
1991 onward	Increase in food prices, including administered price increases	Monetary and credit policy tightened; investment growth gradually lowered; structural reform continued	Soft

Notes: ① SOEs means state-owned enterprises.

② The classification of cycles as either *hard* or *soft* is based on whether the downturn involved a sharp slowing of output growth below trend.

Sources: *People's Republic of China—Selected Issues*, IMF Staff Country Report No. 97/72, Sep. 1997, IMF.

I.1.3 Foreign Trade Reform

As a part of China's economic reform, relaxation of control was also the character of foreign trade reform. We can roughly divide the process three phases too.

In phase one (1978-1986), the main points of reform were as follows:

(1) Expanding the trading rights of local governments, sectoral ministries, and enterprises;
(2) Reforming the foreign trade planning system, which included gradually reducing the variety of goods under the instructive trade plans, gradually increasing the number of goods under indicative plans, and greatly reducing the number of exported or imported goods directly administrated by the central government;
(3) Adjusting the foreign trade financial system, and holding the central and local governments responsible for the profits and losses of the export-import trade they arranged, respectively;
(4) Reforming the operational system of foreign trade, which included granting enterprises the right to operate foreign trade independently, and introducing the agency system for several commodities.

The center of phase two (1987-1990) was to promote the foreign trade responsibility system. On the basis of a one-year experiment in 1987, the government started to promote the system in 1988.

(1) Under the system, local governments contracted with the central government regarding the amount of foreign exchange they promised to earn, the amount they would remit to the central government, and the economic benefits they attempted to secure. These contracts remained unchanged from 1988-1990.
(2) Foreign trade corporations (FTCs) were required to be responsible for their own profits and losses.

(3) The foreign trade planning system was further reformed. Except for 21 export commodities still under the unified management and which remained on the dual-track export system, all were changed from the dual-track system to a single-track system.

(4) Most of products were open for competition. A few staple-type resource products, which were more sensitive in the international market, were handled by specific FTCs.

In 1991, the reform entered its third phase. The goal of this phase was to establish a management system and operation mechanism characterized by “uniform policy, fair competition, autonomous management, responsibility of each corporation for its own profits and losses, the combination of manufacturing and trading, the introduction of an agency system, and a united position on dealing with trade issues”. Main measures taken by the reform were as follows:

(1) The central government contracted with local governments, FTCs, and other corporations with the rights of trade. The contracts specified export quotas, foreign exchange earning quotas, and the quota of foreign exchange that the contractor was required to submit (or sell) to the central government. The quotas in each contract were assessed and determined annually.

(2) The coordination and management function of six chambers of commerce for import and export were strengthened because of restructuring government.

(3) It should be noted that forty private enterprises were granted the rights to operate foreign trade in early 1999.

The original aim of reforming the foreign trade system was to encourage exports so as to earn more foreign exchange to support the import of advanced technology and equipment. However, data shows that not only export but also import grew rapidly and the country has become increasingly openner (see Table 1.2).

Table 1.2 **China's Economy: Degree of Openness** Billions of yuan, %

year	GDP	Total volume of trade	Total volume of export	Total volume of import	DOD upon foreign trade ***a***	DOD upon export ***b***	DOD upon import ***c***
1978	362.41	35.50	16.76	18.74	9.8	4.6	5.2
1980	451.78	57.00	27.12	29.88	12.6	6.0	6.6
1985	896.44	206.67	80.89	125.78	23.1	9.0	14.0
1988	1492.83	382.18	176.67	205.51	25.6	11.8	13.8
1990	1854.79	556.01	298.58	257.43	30.0	16.1	13.9
1991	2161.78	772.58	382.71	339.87	33.4	17.7	15.7
1992	2663.81	911.96	467.63	444.33	33.2	17.6	16.7
1993	3463.44	1127.10	528.48	598.62	32.5	15.3	17.3
1994	4675.94	2038.19	1042.18	996.01	43.6	22.3	21.3
1995	5847.81	2349.99	1245.18	1104.81	40.2	21.3	18.9
1996	6859.38	2413.38	1257.64	1155.74	35.2	18.3	16.8
1997	7477.20	2698.00	1516.41	1181.56	36.1	20.3	15.8

Notes***: a*** "DOD upon foreign trade" indicates "degree of dependence upon foreign trade".

b "DOD upon export" indicates "degree of dependence upon export".

c **"**DOD upon import" indicates "degree of dependence upon import".

Sources: State Statistical Yearbook of China; MOFTEC of China

I.2 The Structure of the Thesis

This study focuses on the reform of China's foreign exchange regime since 1978 and its effects on foreign trade of the country. For understanding China's foreign exchange regime, except the basic background provided by this chapter, Chapter II will introduce some features of China's foreign exchange regime. The reform of foreign exchange regime will be discussed more deeply in Chapter III. Chapter IV uses the approach of real effective exchange rate to get the real change of China's foreign exchange rate since 1978. The last chapter gives the concluding remarks based on the previous chapters.

CHAPTER II FEATURES OF CHINA'S FOREIGN EXCHANGE REGIME

For further understanding of China's foreign exchange regime, in this chapter, we will focus on some features of China's foreign exchange regime. Those features were overvaluation of domestic currency for a long period, direction of devaluation in changing exchange rate, importance of the cost of earning foreign exchange and the foreign exchange retention system.

II.1 Overvaluation: Taxing on Exports and Encouraging Imports

Renminbi (China's currency, hereinafter RMB) was overvalued seriously from 1949 to 1992 (World Bank, 1994). Usually, under the situation of overvaluation, a government has to rely on export subsidies and other indirectly administrative measures to expand exports. In fact, exporting losses disturbed exporting sector and a lot of administrative measures derived from this in China for a long time.

In general, devaluation of domestic currency could remove exporting losses because the role of devaluation is similar to one of exporting subsidy under a given price level. However, considering that devaluation might bring the surge of domestic price, China's policy-makers always postponed devaluing RMB when domestic price level rose a little bit sharply. In addition, some persons worried about the increase of importing subsidies due to devaluation.

Overvaluation could offset the rise of domestic price in a certain degree and reduce the increase of importing subsidies, but operation of this policy in reality needs a high cost. Firstly, overvaluation will necessarily cause the supply of less than the demand for foreign exchange. To control demand for foreign exchange, government has to restrict

import and control foreign exchange rigidly. Secondly, to encourage export, government has to resort to direct and indirect subsidies such as a subsidy for exporting price, low-interest-rate loans and duty-free favor for importing materials for export, and so on. Thirdly, these measures not only reduce efficiency of export sector, but also weight the fiscal burden of government. With expansion of exports, fiscal burden would become heavier and heavier until government couldn't afford it. Fourthly, control of foreign exchange led by overvaluation is the main reason for rent seeking for the resource of foreign exchange. Fifthly, huge demand for a low price of foreign exchange and control of foreign exchange stimulate the surge of black market of foreign exchange. The government has to attack against this kind of illegal behavior at huge expenditure.

In fact, China's policy-makers hoped to reach to two conflicting aims each other under a same exchange rate. One aim was to expand export, and the other was to support state-owned enterprises to product through providing lower-price-import materials. It is not possible to success in reality. This policy is a twisted one. Overvaluation of the official exchange rate is equivalent to imposing a tax on exporters in the amount of the difference between the swap market (or black market) rate and the effective exchange rate received by exporters (for an analysis in detail, see World Bank, 1994). According to World Bank, the peak of implied export tax due to the overvaluation of RMB was 33 percent in 1988-1989 in China. On the other hand, overvaluation of the official exchange rate has had the impact of favoring planned versus above-plan imports by making the former relatively cheaper. To remedy the bad effects on export, subsidies or other administrative measures were not avoidable. For resolving one or several unimportant issues, one country

sometimes adopts some twisted policies. Furthermore, the remedy measures derived from these twisted policies always make the country's economic system complicated.

II.2 Devaluation

Devaluation would bring a rise of domestic price level, but the effects are different under different situations. Generally, if one country were in trade balance, devaluation would cause increase of export and then get a trade surplus. However, increase of foreign reserve would lead to rise of domestic price level; then, costs of export sector would rise accordingly and subsequently its trade would tend to a new balance. The other approach of devaluation rising domestic price level is the rise of import costs.

If one country's exchange rate were overvalued and in a trade deficit, we should say that the effect of devaluation on domestic price level would be minor. Under this situation, if the government could maintain the stability of money supply, devaluation should stimulate export, restrain import and make resources allocation reasonable, even import costs would rise. Otherwise, if the overvaluation were maintained, the government had to use policy of deflation so as to reduce trade deficit and subsequently domestic production would be damaged.

From an international survey, the fundamental reason of inflation is the over expansion of money and credit. Maintaining overvaluation of exchange rate, obviously, doesn't catch the core of the issue. Under the situation of ongoing inflation, overvaluation may control the speed of rising price, but the cost is that the domestic products will loss their competitiveness in international market and crisis of payments will rise eventually. Therefore, under the situation of ongoing inflation, one country should not maintain the stability of exchange rate for a long time and should adapt exchange rate to the change of

price level. Exchange rate could not be regarded as a main tool to control inflation. It is at most used as an assistant tool in practice.

From experiences of many developing countries, the policy that governments tried to maintain the stability of exchange rate usually resulted in a huge deficit on current account and rise of unemployment rate under the situation of serious inflation (J. Williamson, 1982). Lastly, export subsidies due to overvaluation would cause fiscal deficit that is inflationary.

So, as we will see in next chapter, China's main direction of exchange rate reform was devaluation since 1978.

II.3 Cost of Earning Foreign Exchange

In China, the cost of earning foreign exchange is the cost of earning one unit foreign exchange in terms of RMB. *Fi* represents the cost of earning foreign exchange for exporting the good *i*, then

$$Fi = TCx\ (RMB) / NRx \text{ (Foreign currency)},$$

where *TCx* is the total cost for exporting good *i* in terms of RMB, *NRx* is the net revenue of exporting good *i* in terms of the foreign currency. Total costs for export includes the commodity price, transacting and circulating expenditure, and taxes. The commodity price, which shared around 90 percent of total cost for export in the late 1970s, covered producing cost of producers, profits and duties related to the commodity. *NRx* is the revenue from the sales in foreign market deducting the direct and indirect costs related to the transaction, such as overseas freight, insurance, commission and reimbursement. To

calculate *Fi*, the domestic and abroad prices for sales are crucial factors, which determine *Fi* basically.

The cost of earning foreign exchange may be categorized the cost of earning foreign exchange for one individual commodity and the comprehensive cost of earning foreign exchange (i.e. the average cost of all exporting commodities). To judge whether certain exporting commodity is profitable, the authorities usually compare the individual-commodity cost of earning foreign exchange to the current exchange rate. To judge whether the export sector is profitable, the comprehensive cost is usually compared to the current exchange rate, and this result will be regard as an important factor of the adjusting exchange rate.

The cost of earning foreign exchange usually exceeded the exchange rate in China (see Table 2.1). Why? Generally, given an exchange rate, an exporter is not willing to export when the cost of earning foreign exchange is higher than the exchange rate. Otherwise, a loss making will occur. However, the government's export plans enforced FTCs to operate even the level of cost exceeding the exchange rate under overvaluation of RMB. The loss couldn't be avoided when the new level of cost was higher than exchange rate, and government had to subsidize FTCs. Similarly, some researches on Hungary's exchange rate system in the 1960s and 1970s show that a great number of export subsidies was necessary if exchange rate was set at the level of the cost of earning foreign exchange (i.g. Kozman, 1981).

The national average cost of earning foreign exchange was ***unilateral*** purchasing power parity, because the foreign-currency price was calculated in terms of the real transaction price rather than the price of the same good in foreign market (Lin 1997). From the view

Table 2.1 China: National Cost of Earning Foreign Exchange (CEFE) for Exports, 1975-94 (RMB yuan/US$)

year	CEFE	Official X-rate
1975	2.96	1.86
1976	3.27	1.94
1977	2.78	1.86
1978	2.53	1.68
1979	2.41	1.56
1980	2.31	1.50
1981	2.48	1.71(2.8)
1982	2.67	1.89(2.8)
1983	3.07	1.98(2.8)
1984	2.80	2.32(2.8)
1985	3.10	2.94
1986	4.03	3.45
1987	4.20	3.72
1988	4.60	3.72
1989	4.70	3.77
1990	4.70	4.78
1991	5.40	5.32
1992	5.80	5.51
1993	7.30	5.76
1994	8.42	8.62

Note: Figures in parentheses for 1981-4 are internal settlement rates.
Sources: MOFTEC, China; International Financial Statistics, IMF.

of PPP theory, to calculate the rate of two currencies, it is necessary to select the prices of a group of commodities as representatives, produced and consumed by the two economies, then get the result using weighted averages method. Such rates may show the differences between the identical commodities from two economies. In terms of domestic prices, the cheaper commodities are potentially exporting ones, whereas the more expensive are potentially importing ones. The approach of real transaction prices couldn't show the comparative advantages of domestic goods. The transaction prices are usually affected by discriminatory trade policies and negotiating skills of FTCs' employees. Moreover, limited commodities are covered when using the cost of earning foreign

exchange unlike using PPP approach. So, accuracy of exchange rate based on the cost of earning foreign exchange was very doubtful.

II.4 The Foreign Exchange Retention System

One aspect of decentralizing economic administrations was relaxation of foreign exchange control, especially the foreign exchange retention system. We discuss this system more because not only it was the cornerstone of the foreign exchange swap market also an important variable of the effective exchange rate (EER) in China. Actually, this system may be called the beginning of China's gradual transition to currency convertibility.

Since the early 1950s China controlled strictly foreign exchange—"all Chinese and foreign institutions and individuals in the People's Republic of China must sell their exchange receipts to the Bank of China (which is the specialized foreign exchange bank), and that any foreign exchange required is to be sold to them by the Bank of China in accordance with the plans approved by the State" (State Council, 1980). But in the beginning of 1979, the central government gave up its monopoly on the control of foreign exchange by introducing a "foreign exchange retention system" (*waihui liucheng zhidu*) allowing both export-producing enterprises and their superordinate level of governmental administration to gain a claim to the use of a share of the foreign exchange earnings from exports of both goods and services. (State Council, 1979). As mentioned by Lardy (1992, 52), in the 1950s, some East European countries adopted variants on this scheme in their early reform efforts, and a foreign exchange retention scheme was introduced in 1987-8 in former Soviet Union.

The regulations on exchange retention in China were very complex. Basically, retention for most commodity exports were allowed only from earnings above and beyond the level of exports achieved in the previous year. However, for certain new types of trade that were being introduced in 1979, such as compensation trade and processing and assembly of foreign-supplied parts and components, the retention was a share of earnings (see Table 2.2). Exchange retention system encouraged FTCs to export more because they could import some profitable goods using their retention, although the retention was actually held by the Bank of China and could be used only under certain conditions, for example, at least that the imported goods must be permitted by government.

The complexity of retention system also reflected in the big differences among different commodities and regions. In general, preferences of retention were given for exports of machinery and electronics, military products and from special economic zones and minority nationality regions (Lardy 1992, Lin 1997).

Table 2.2 Foreign Exchange Retention Rates, 1979

Category of export earnings	Rate
• From commodities produced under ministerial management	20 percent of earnings above level of 1978
• From commodities produced under local governments	40 percent of earnings above level of 1978
• Exports based on imports	15 percent of net earnings
• Fees from processing and assembly of foreign components	30 percent of all earnings
• Medium and small-scale compensation trade	15 percent of net earnings

Source: SAEC, China.

In addition, in 1979 the central government approved the expansion of a similar system for sharing in the foreign exchange earnings derived from non-trade sources of foreign exchange such as overseas Chinese remittances, various port fees paid by foreign vessels, earnings from foreign tourism and friendship stores and so forth. Retention rates ranged from 15 percent of the foreign exchange remitted for the construction and repair of houses of overseas and returned overseas Chinese to as high as 50 percent for some types of tourism earnings.

In the following years, the government adjusted the retention rates that became bigger and bigger. The World Bank estimated that the effective retention rate from 1987 to 1990 was about 44 percent of all foreign exchange earnings (World Bank, 1994). In 1991 the government increased the retention rate further when export subsidies were abolished. For most commodities, 80 percent of total foreign exchange earnings could be retained. These provided the fundamental and sufficient funds for the establishment and development of the foreign exchange swap market.

CHAPTER III CHANGING FOREIGN EXCHANGE REGIME

Since 1978, China has changed a lot in its foreign exchange regime. This chapter will introduce the changing progress of China's foreign exchange regime. In section 1, it will give a brief picture about internal settlement system for trade in 1981-1984. In section 2, the foreign exchange swap market (1985-1993) will be discussed. Section 3 will concentrate on the inter-bank foreign exchange market (1994 onward).

III.1 The RMB Internal Settlement Rate for Trade (1981-1984)

Before opening up of China's economy, like any other economic sectors, all foreign trade in the country was dominated strictly by plans, which contained import and export plans. Under this system, foreign trade corporations (FTCs) which had rights to operate foreign trade authorized by central government exported just for earning foreign exchange and imported according to central plans regardless of loss-making. The foreign exchange rate had very slight influence on the level and the pattern of foreign trade. The exchange rate couldn't play a direct role as price signal in either foreign trade sector or the allocation of resources in China due to the serious distortion of pricing mechanism. It was only an accounting device of settlement between FTCs and banks and for reflecting incomes of FTCs.

The role of the exchange rate started to change in 1979, after China decentralized foreign trade rights to localities and established more new FTCs to break the monopoly position of Top Ten FTCs. Decentralization of foreign trade administration made it urgent to resolve making loss of exports. Overvaluation of RMB resulted in

making profit in imports and suffering loss in exports. In fact, the national average cost of earning foreign exchange was far higher than official exchange rate. For instance, the former was 2.4 yuan/US$ while the latter was 1.5 yuan/US$ in the year 1979 (see Table 2.1). It implied that a considerable amount of exporting commodities could not cover their cost at the official exchange rate. An alternative rate was very necessary under this situation.

To adapt to foreign trade reform, China's government introduced the internal settlement rate for trade. The internal settlement rate was set at 2.8 yuan/US$ based on the national average cost of earning foreign exchange (2.53 yuan/US$) plus 10 percent as profit (see Table 2.1). It was mainly applied to settlement of foreign trade. In the same time, the state maintained a relatively overvalued official rate, which based on a weighted average rate of a basket of currencies. The official rate was mainly applied to settlements of non-trade transaction such as tourism, transportation and insurance. So far, RMB exchange rate has became a dual-rate system, which consisted of the official rate and internal settlement rate at the beginning of exchange rate reform.

However, the internal settlement rate was significant even with some limitations. Relatively, RMB exchange rate was frequently adjusted in the 1970s, but this kind of adjustments based on the changing of a basket of currencies did not reflect the reality of domestic price level, as mentioned above. In fact, internal settlement rate according to the domestic price level, even distorted seriously, was the first adjustment which to some extent reflected the domestic price level since 1953 and represented the

direction of changing exchange rate. Consequently, internal settlement rate alleviated the serious overvaluation of RMB and was logically helpful for exporters.

December 10, 1984 China's government announced to abolish internal settlement rate and replace it by unified rate (2.8 yuan/ US$). The new policy took effect on January 1, 1985.

III.2 Official and Swap Markets (1985-1993)

Based on the foreign exchange retention system, the foreign exchange swap market was established and developed. October 1980, shortly after the foreign exchange retention system was introduced, in order to transfer the retained foreign exchange into the units which needed more foreign exchange, the State Council approved Bank of China to operate the business of adjusting or swapping the retention quota of foreign exchange in some big cities such as Beijing and Shanghai. But, the swap rate must be set based on the internal settlement rate and fluctuating range must not exceed $\pm$ 10 percent of internal settlement rate. In addition, Bank of China was permitted to collect 1-3 percent of the transaction volume as service charges from two parties of every transaction. Overvalued official rate was used for non-trade-related foreign exchange, so swap rate was attractive for the holder of non-trade-related earnings. Comparatively to trade-related retention, however, it was too small. Because the swap rate was closed to the internal settlement rate, the profits from imports were much higher than from selling the retention quotas (Lin, 1997). Then, the total transaction volume of retention quotas was small during the period 1980—1985 (see Table 3.1).

In December 1985, China established the first foreign exchange transaction or swap center in Shenzhen Special Economic Zone, which changed the model that adjustment of foreign exchange was operated only by the Bank of China. The Shanghai and other three special zones (Zhuhai, Shantou and Xiamen) also opened the foreign exchange swap centers in the following year. Initially, the main purpose of the centers was to solve the foreign exchange problems of joint ventures. Indeed in Shanghai and elsewhere the centers initially were named the “foreign exchange adjustment center for foreign invested enterprises”. The State Council sanctioned adjustments of foreign exchange among the foreign invested enterprises in special economic zones and coastal cities and the transaction prices set freely by two transaction parties, but the adjustment between foreign invested and domestic enterprises was forbidden (Lardy, 1992; Lin, 1997).

The volume of transactions in the foreign exchange adjustment centers increased slowly in 1985 and 1986 (see Table 3.1). Lardy (1992, 58) argued that the main reason was the foreign exchange crisis of 1985-6. From the fourth quarter of 1984, the volume of imports, especially consumer durable such as motor vehicles, color televisions, refrigerators, washing machines and motorcycles, accelerated markedly. Exports actually increased slightly by 4.6 percent while imports increased sharply by 54.5 percent compared to the previous year in 1985. The trade deficit reached US$14.9 billion in 1985 that was the peak and US$11.97 billion in 1986 that was the third highest record in the PRC’s history by now. Accordingly, the foreign reserves were US$2.64 billion and US$2.03 billion in 1985 and 1986 those were the two

lowest records since 1981.

Table 3.1 China: Transaction Volume of Foreign Exchange Swap Market, 1981-93 (US$, billion)

year(s)	volume	% of exports	% of imports
1981-5	1.00	n.a.	n.a.
1986	1.89	6.1	4.4
1987	4.20	10.6	9.7
1988	6.26	13.2	11.3
1989	8.57	16.3	14.5
1990	11.99	19.3	22.5
1991	18.10	25.2	28.4
1992	25.10	29.6	31.3
1993	22.71	24.8	21.8

n.a.—not available

Sources: Lin (1997)

If we observe the small volume of transaction from the foreign exchange adjustment system, we can conclude that the operation of swap centers were limited by three factors, namely the limitations of prices of foreign exchange, control of purchasing foreign exchange and lower retention rates. Furthermore, foreign exchange could not be effectively adjusted across regions due to the disintegration of regional swap markets (Lin, 1997). The lower swap rate hurted the incentives to sell foreign exchange earnings. As mentioned above, this led foreign exchange to importing sector because of higher profits rather than exporting sector. So, at least partially, the foreign exchange crisis seemed to be the result of the small volume of transactions.

In 1988, the level and range of foreign exchange retention increased further from a minimum of 25 percent, through 30 percent for Guangdong and Fujian provinces, to 100 percent for foreign-funded enterprises in the Special Economic Zones, enterprises

in Tibet and the military enterprises. To ease control on foreign exchange markets, the "norms to control the use of retained foreign exchange", which was set by the government due to wild increase of imports in 1985, was abolished. More swap centers were opened in the national wide and reached to 90 ones by the end of 1988. Adjustments between foreign–funded and domestic enterprises were permitted. Ceiling prices for foreign exchange transactions were cancelled and could be fluctuated but not freely. These measures accelerated the increase of volume of transactions that were US$ 6.264 billion in 1988 and US$ 8.566 billion in 1989, whereas it was US$4.2 billion.

In 1991, the government abolished the export subsidies after freezing those on the level (US$12 billion) of the year 1987 for three years. This forced the FTCs had to take responsibility for their own profits and losses. Accordingly, the government devalued the official exchange rate against US dollar by 21.2 percent and adjusted the retention system. The number of basic rates was reduced to two: 70 percent for electrical and capital goods and 50 percent for the else general goods. Of the 50 percent submitted to the government, two-fifths was bought in at the official rate and the rest at the swap rate. Foreign-funded enterprises in Special Economic Zones, enterprises in Tibet and the military enterprises still enjoyed a 100 percent retention rate. These enhanced strongly the role of swap rate for settlement of foreign exchange. Before 1991, around half of foreign exchange were settled at swap rate and this proportion reached 80 percent after 1991 (Lardy, 1992a,).

However, swap markets were not entirely free markets. Initially, the government

attempted to control swap rates by imposing ceiling rates. In February a price cap of 4.2 yuan per US dollar was imposed. In 1988-9 there was a price cap of 5.7 yuan per US dollar. Since 1989, swap market prices had been liberalized gradually. To achieve this gradual liberalization, the government had pegged the prices by intervening in swap markets rather than by setting prices directly.

Secondly, the government imposed controls on the sources and the uses of foreign exchange. In the late 1980s sellers had to provide documents to show that foreign exchange had been acquired legally. In most cases, buyers had to obtain import licenses (or other relevant documents) from the Ministry of Foreign Economic Relation and Trade (MOFERT) and administrative approval for their transaction from the State Administration of Exchange Control (SAEC). Beginning in December 1991, when all domestic residents were allow to sell their foreign exchange in the swap markets without being required to show proof of their sources of foreign exchange income, selling foreign exchange at the swap markets was virtually unrestricted. In contrast, buying foreign exchange from the swap markets was still subject to the administrative approval of MOFERT and SAEC. SAEC's authorization was based on priority list that reflected the industrial policy of the state.

Finally, transactions across swap markets were restricted. There were significant differentials in exchange rates across markets in different parts of the country. Swap exchange rates in the eastern and western regions were generally higher than the average rates, and were usually the lowest in the south regions.

Despite these constraint factors, the foreign exchange market in China was freest ever

any period since 1949. The establishment of the swap markets was a major step towards current account convertibility. The dual exchange rates that included official and swap rates gave the exporters a bigger room to reduce their exports cost comparatively to before establishment of this system. That is to say, the pricing mechanism played a more and more important role in allocation of foreign exchange in China. By the end of December 1992 there were over 100 swap markets, and the transaction volume had reached US$25 billion (Table 3.1). These, in fact, had prepared the fundament for introducing the unified inter-bank market in 1994.

III.3 Unified Inter-Bank Market (1994 onward)

On January 1, 1994, China unified the dual exchange rates at the prevailing swap rate of 8.7 yuan per US dollar. Swap markets were replaced by a national inter-bank exchange market with its headquarter in Shanghai, namely Chinese Foreign Exchange Transaction Center which operated formally on April 4, 1994. The foreign exchange plans under current account and the foreign exchange retention system were abolished, and a selling and buying system was introduced.

Foreign exchange market is the biggest market in the world. One standard foreign exchange market generally includes two levels that, one is inter-bank market or wholesales market, the other is retail market. The latter usually refers to the market formed by small transaction volume among banks and their customers. Inter-bank markets refer to the markets formed by large transaction volume among banks. The importance of inter-bank markets is not only for the huge transaction volume, but also for the function of generating market exchange rates due to huge transactions.

Inter-bank rates are the fundamental ones of retail prices of foreign exchange. Besides commercial banks and non-bank financial institutions, participants of inter-bank markets also cover certain amount of foreign exchange brokers and central banks, which are very important participants through their interventions in the markets. The function of brokers, which makes transaction highly efficient and fair, is the result of specialization in foreign exchange markets.

Inter-bank foreign exchange market in China shows some features:

- Participants: 14 authorized banks, and approved domestic non-bank financial institutions and foreign banks.
- Broker: no.
- Strong degree of monopoly: the Bank of China (BOC) shares 70-80 percent of selling and the People's Bank of China (PBC) which is the central bank of China shares 70-80 percent of buying.
- Compulsory settlement of foreign exchange: the foreign exchange earnings from exports, except from specially approved projects or earned by foreign-funded enterprises', must be settled in (i.e. be sold to) an authorized bank.
- Determinants of exchange rate: exchange rate is, in principle, determined by the supply and demand of market, but fluctuating margin must be within $\pm$0.3 percent of RMB exchange rate published by PBC.
- Intervention of central bank: according to the target of foreign reserve, situation of balance of payments, fluctuation of exchange rates in international markets and the average cost of earning foreign exchange for exports, PBC intervenes the exchange rate through buying and selling foreign exchange in the market.
- Transacted foreign currencies: US dollar, Japanese yen and Hong Kong dollar.

We can say there are at least two limitations of inter-bank market in China. First, fluctuating range for the prices of foreign exchange within $\pm$0.3 percent of RMB

exchange rate published by PBC is not helpful for the development of inter-bank market. Second, exist of bilateral monopoly is too strong. Like other markets, relatively free pricing mechanism and competition are very important for inter-bank foreign exchange market. To generate a reasonable exchange rate, more banks and other participants should be allowed to enter into this market.

As part of the 1994 reform, foreign-funded enterprises were allowed to continue to keep their foreign exchange in designated accounts instead of selling it to an authorized bank, as domestic enterprises were required to do. They continued to buy and sell foreign exchange through swap markets, generally under case-by-case review and with the approval of the SAEC. Their access to the inter-bank market was extended nationwide beginning on July 1, 1996. They are allowed to maintain a foreign exchange settlement bank account within pre-approved limits. Also following a trial period, foreign bank branches in China are allowed to provide foreign exchange settlement and exchange business for foreign-funded enterprises.

In China, inter-bank foreign exchange market system is in the starting stage. One of its main functions is to provide a place to generate exchange rate. Even it has some limitations, as we mentioned above, it has really made a progress that exchange rate is determined by the market—at least, partially—rather than fully by administrative organizations, like before. On November 27, 1996, Dai Xianglong, the governor of the PBC, announced that China would meet the IMF requirements on current account convertibility beginning on December 1, 1996.

CHAPTER IV REER AND FOREIGN TRADE IN CHINA

As a result of superficial statistical analysis, most of China's academics and trade officials believed that devaluation had failed to boost exports and constrained imports in China until 1994. Then, what is the suitable way to analyze the effects of changing foreign exchange regime on trade in this country? This chapter focuses on the real effective exchange rate in order to get a reasonable conclusion about effects of changing foreign exchange regime on trade.

IV.1 The Long-Run Effects—the Approach of Real Effective Exchange Rate

Chinese academics usually consider exchange rate of the yuan against US dollar only to observe the relationship between the trade volume and exchange rate. For example, according to their analyses, the yuan was devalued by close to 50 percent at the beginning of 1981 with adoption of internal settlement rate for trade. From 1980 to 1983, however, China's exports grew by only 23 percent and imports continued to rise 7 percent (Wang, 1986; Lin, 1997). In 1985 the yuan was further devalued by 14 percent, but exports grew only 5 percent and imports soared by 54 percent, giving rise to a huge trade deficit. Devaluation thus failed to achieve its objective (Wu and Zhang 1987). In 1987 the yuan was not devalued, but exports soared 28 percent and imports rose by less than 1 percent. This appears to support the contention that administrative measures are more effective than devaluation in promoting exports and restraining imports.

Obviously, nominal exchange rate is an important indicator of an economy and we

should use it to analyze the relationship between exchange rate and trade performance. But China's foreign exchange rate regime is very complicated as introduced in former chapters. It is a statistically simple artifact to get the alleged ineffectiveness of devaluation resulting from only using nominal exchange rate of RMB against US dollar because of the sharp fluctuation of the US dollar against the other major currencies since 1981. Moreover, although the US is the biggest economy in the world, it does not necessarily mean that the trade volume between the US and China covers completely or mainly the trade volume between the world and China. In fact, the US doesn't become the first biggest trade partner for China (see Table 4.1 in Appendix). We need the other approach—the analysis of real effective exchange rate of the yuan against a basket of currencies rather than the US dollar only.

The effective exchange rate (EER) is defined as the number of units of local currency actually received by the exporter, or paid by the importer, per unit of foreign currency of goods traded. The real effective exchange rate (REER) can be calculated from the EER after adjusting for foreign and domestic price levels.

IV.2 Real Effective Exchange Rate (REER) in China

IV.2.1 EER of the yuan per the US dollar

Under China's foreign exchange system, to measure the EER since 1978, we should consider the official, internal settlement and swap rates, and the foreign exchange retention system. Take the example of EER of the yuan against the US dollar to illustrate the procedure.

Table 4.1 China (1978-98): Effective Exchange Rates of yuan per US dollar						
year	official rates	internal rates	swap rate	retention rates	EER rates	EER index
1978	1.68				1.68	100
	1.55				1.55	92.26
	1.50				1.50	89.29
	1.71	2.8	3.08	9%	2.83	168.45
1982	1.89	2.8	3.08	25%	2.87	170.83
	1.98	2.8	3.08	25%	2.87	170.83
	2.33	2.8	3.08	25%	2.87	170.83
	2.94		3.08	25%	2.97	176.79
1986	3.45		4.20	25%	3.64	216.67
	3.72		5.41	44%	4.46	265.48
	3.72		6.31	44%	4.86	289.29
	3.77		6.43	44%	4.94	294.05
1990	4.78		5.81	44%	5.23	311.31
	5.32		5.85	80%	5.74	341.67
	5.51		6.58	80%	6.37	379.17
	5.76		8.65	80%	7.77	462.50
1994	8.62				8.62	513.10
	8.35				8.35	497.02
	8.31				8.31	494.64
	8.29				8.29	493.45
1998	8.28				8.28	492.86

Notes: For 1981, the retention rate is 9 percent (Lardy, 1992). The retention rates for 1982-1986, 1987-1990 and 1991-1993 are from World Bank (1994).

The EERs of the yuan against the US dollar are calculated as a weighted average of the official rates and the swap rates. The formula is

$$EER_t = E_{ot}(1-R_t) + E_{st}R_t \qquad (4.1)$$

where R_t is the foreign exchange retention rate, E_{ot} and E_{st} are the official and swap exchange rates of the yuan against the US dollar in period *t*.

As mentioned in former chapters, internal settlement rate was introduced in the period of 1981-1984; the swap market and foreign exchange retention system were introduced in 1981-1993. And before 1981 and after 1993, China adopted the single

exchange rates. For the period 1981-1984, the internal settlement rate was regarded as the official rate. Table 4.1 shows the result of the EERs of the yuan against the US dollar. In different periods, these variables are very significant for calculating the EER. After adjusting for foreign and domestic price levels, one can calculate the REER of the yuan per US dollar.

IV.2.2 Bilateral and Multilateral REERs

Bilateral REERs provide a measure of the degree of competitiveness of a country relative to a given trade partner. One can calculate it from the following equation:

$$BREER_t = E_t P_{ft}/P_{ht} \quad (4.2)$$

where $BREER_t$ is the REER of the home currency against the foreign currency in period t; E_t is an index of the nominal exchange rate of the two currencies in period t; P_{ft} and P_{ht} are the price levels of foreign country and home country in period t, respectively.

As mentioned above, for a reasonable result of changing exchange rates and a measure of the degree of competitiveness of a country relative to a group of trade partners, we need consider the respective volume between a given country and each of its main trade partners. Then we can get the following equation for multilateral REER (Edwards, 1989):

$$MREER_{jt} = \sum_{i=1}^{k} \alpha_i E_{it} P_{it}/P_{jt} \quad (4.3)$$

where $MREER_{jt}$ is the multilateral REER in period t for country j; E_{it} is an index of the nominal exchange rate between country i and country j in period t; $i = 1,\ldots, k$ refers to

the k partner countries used in the construction of the MREER; α_i is the weight corresponding to partner i in the computation of $MREER_{jt}$; P_{it} is the price level of partner i in period t; and P_{jt} is the price level of the home country j in period t. An increase in the value of MREER reflects real depreciation, whereas a decline implies a real appreciation of the domestic currency.

Two indexes of MREERs were constructed and their behavior compared (Edwards, 1989). The first index—which corresponds to the proxy for the relative price of tradables to nontradables—used the partner countries' WPIs (wholesale price indexes) as the P_{it} values and the home country's CPI (consumer price index) as P_{jt}. The second index—which is related to the more traditional PPP measure of the real exchange rate—used consumer price indexes for both partner countries and the home country. C. H. Helmers had a similar argument (Dornbusch and Helmers, etd., 1988). In this study, I'd like to adopt the first index because the real exchange rate is popularly defined as the relative price of tradables to nontradables.

IV.2.3 The REERs for Exports and Imports

In order to measure the REERs for exports, I select the corresponding figures of top eight export partners of China as the variables that are apply to the equation (4.3). The eight partners are Hong Kong, Japan, the United States, Germany, Singapore, Netherlands, the United Kingdom and the Republic of Korea. The volume of the top eight partners shared 74.3 percent of China's total export in the period 1978-1998. And countries of Comecon mostly accounted for the remaining portions. Since trade with the Comecon bloc and the exchange rate of RMB against the currencies of the

Comecon bloc are not mainly determined by market forces, the Comecon bloc are not included the main partners. The rest volumes of export are correspondingly assigned to the top eight partners according to their annual shares. And, one more variable—average export taxes—is necessary. So, we can get the following equation:

$$Export\ MREER_t = (1-t_{xt}) \sum_{i=1}^{k} \alpha_i E_{it} P_{it}/p_t \quad (4.4)$$

where t_{xt} is the average export tax of China in period *t*.

Similarly, we can get the REERs for imports:

$$Import\ MREER_{jt} = (1+t_{mt}) \sum_{i=1}^{k} \alpha_i E_{it} P_{it}/P_{jt} \quad (4.5)$$

where t_{mt} is the average import tax of China in period *t*. And, we also select top eight import partners of China, namely Japan, the United States, Hong Kong, Germany, Canada, Italy, Singapore and the Republic of Korea. They shared 64.7 percent of China's total import in the period 1978-1998.

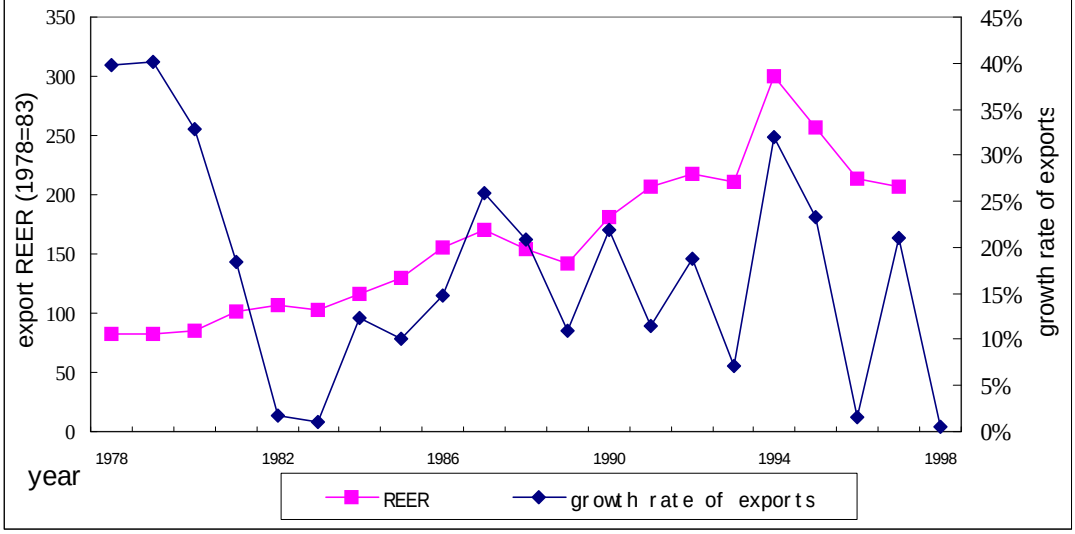
IV.3 REERs and Trade Performance

IV.3.1 Export REERs and Export Performance

The relationship between REERs and export performance is, theoretically, positive in a figure. A rise of export REER means depreciation and a fall represents appreciation. That is to say, the growth rate of exports should rise when domestic currency depreciates; the former should fall when the latter appreciates. Based on equation (4.4), we can get the relationship between export REERs and growth rate of exports from 1978 to 1998 in China (see Figure 4.1, and see Table IV.1 in Appendix).

From 1978 to 1983, the export REERs were stable and relatively lower, but growth

Figure 4.1 China (1978-98): Export REER and Growth Rate of Exports



rates of exports fell so sharply from the highest levels (about 40 percent) to the lowest levels (below 2 percent), which was different from the traditional theory. Since China was still a high-plan economy at the beginning period of its open-door policy and FTCs experienced exporting with a process from an enthusiasm to cooler attitude held by exporters, two curves go in different ways. However, the figure shows that there was almost positive relationship between export REERs and growth rates of exports since 1983. The export REERs from 1983 to 1987 continuously depreciated, and growth rates of exports rose continuously too. Growth rates of exports fell in 1988 and 1989, while the export REERs appreciated due to the emergence of inflation.

In 1994, the export REER depreciated sharply because of three factors. Firstly, the nominal exchange rates of RMB against each currency devalued sharply (see Table 4.1 in Appendix). Secondly, in 1994 China introduced the policy to rebate to exporters by 17 percent. Thirdly, the US dollar was depreciated sharply against main currencies, especially Japanese yen. This situation led to a sharp rise of the growth rate of exports

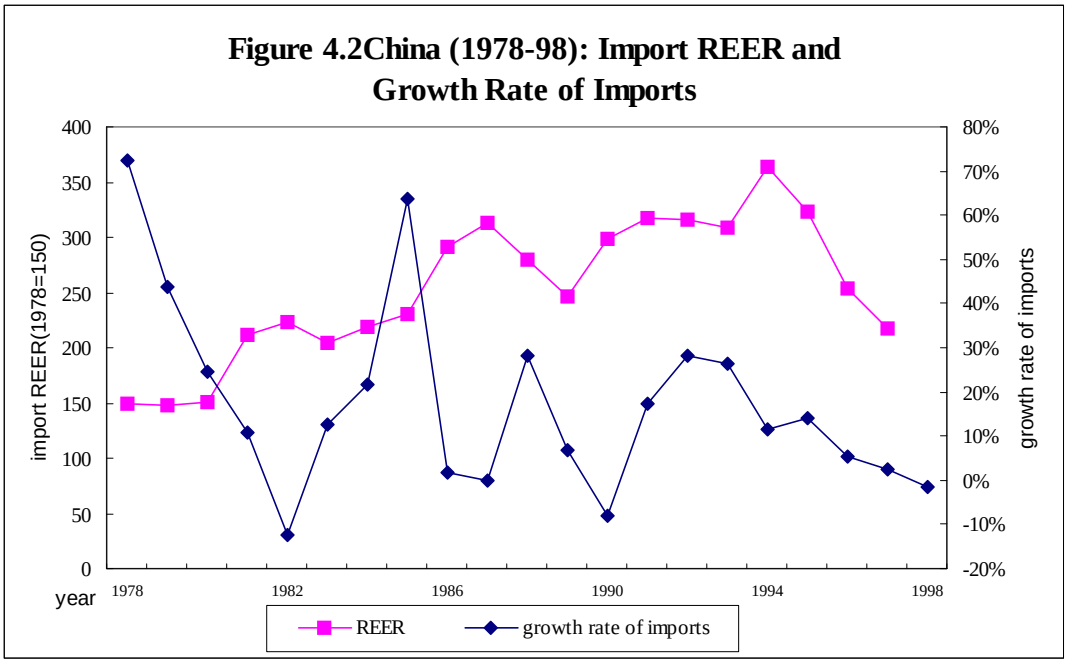
that reached to 31.9 percent in 1994.

Since 1994, however, the export REERs of RMB appreciated sharply and in 1997 it fell to 207.17, which is almost same as the level in 1991 (206.67). The main reason was China's high inflation rates and its trade partners' relatively lower inflation. The growth rates of exports in 1995 and 1996 also fell a lot. But, it should be noted that the growth rate of exports reached an exceptionally high level while the export REER appreciated slightly. This was largely due to relatively weak domestic demand. Manufacturers were being forced to sell abroad. In such an environment the rate of return in the tradable sector would deteriorate and exports growth would decrease in the following years. In addition to the effect of Asian Financial Crisis and a global deflation, actually, in 1998 the growth rate of exports fell to 0.5 percent—the lowest point since 1978.

IV.3.2 Import REERs and Import Performance

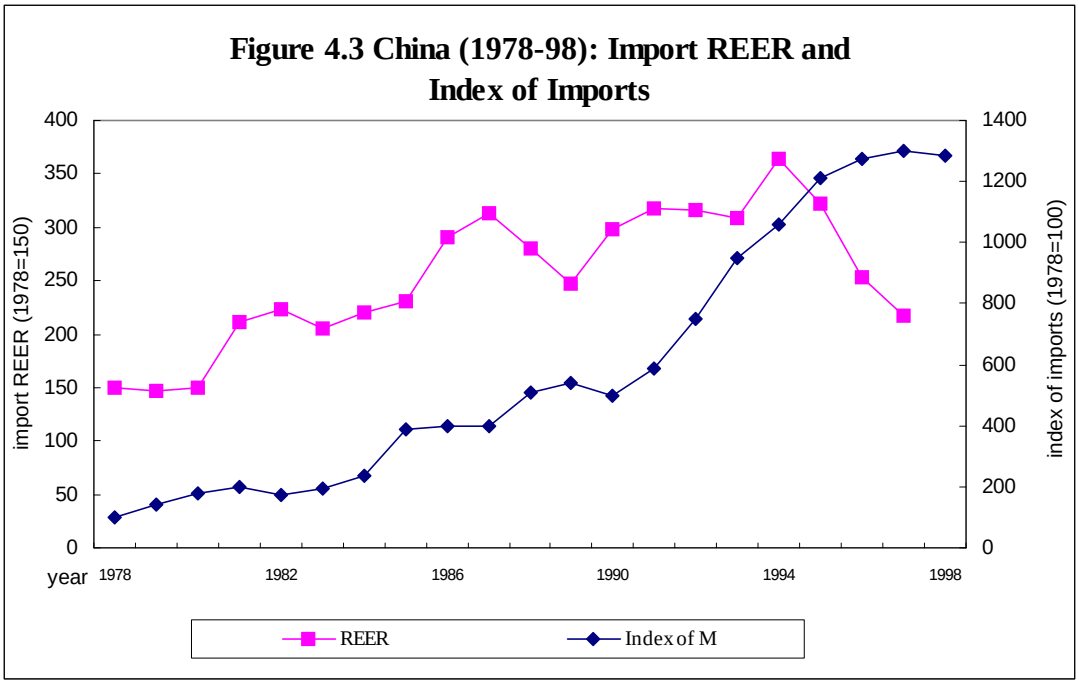
The relationship between REERs and import performance is, theoretically, negative in a figure. A rise of import REER means depreciation and a fall represents appreciation. That is to say, the growth rate of imports should rise when domestic currency appreciates. On the other side, the growth rate of imports should fall when home currency depreciates. Based on equation (4.5), we can get the relationship between import REERs and growth rate of imports from 1978 to 1998 in China (see Figure 4.2, and see Table 4.2 in Appendix).

Unlike exports, the import performance reflects clearly the cycles of China's economy



because the demands of imports in a great of degree are determined by the general domestic demands. Figure 4.2 shows this point. For example, from 1978 to 1980, at the beginning of the economic reform (i.e. the first macroeconomic cycle), the growth rates of imports were 72, 44 and 24 percent, respectively. At the end of the cycle, the rate fell to –13 percent in 1982. The difference between the rate in 1978 and 1982 is so huge to reach to 85 percentage points. In 1985 (the second cycle), because China's leadership hoped to stimulate the economy through encouraging domestic consumes, the luxurious goods were over imported and the rate sharply reached to 64 percent. In 1988 (the third cycle), 28 percent of the growth rate was consistent with the high GDP growth rate. After 1993, the growth rates of imports tended to fall since the country fought against the high inflation due to over heating and caused to a continuously weak domestic demand. Though the import REER depreciated in certain degree, the imports increased over 11 times from 1978 to 1998 (see Figure 4.3). The experiences of many developing countries have evidenced this point too (see Krueger, 1978).

Figure 4.3 China (1978-98): Import REER and Index of Imports



In general, the relationship between the two curves is consistent with the principle but it is not in several years, especially in periods 1984-1985, 1991-1992 and after 1995. Rested on this, some persons argued that a close relationship between import REER and imports volume couldn't be expected since imports in China are determined mainly by administrative means (for instance, see Sung,[1] in Srinivasan, T. N. ed., 1994). However, the differences of the import REERs or growth rates in these periods are not too big. In period 1991-1992, the import REERs didn't sharply depreciate though the imports rose because of the strong demand resulting from high investment. After 1995, though the import REERs appreciated a lot, the growth rate of imports fell slightly under a serious situation of a continuously weak domestic demand. When we compare the import REERs to index of imports in China, these persons should be very surprised because the relationship is so close and totally different with their expectation or results (see Figure 4.3).

[1] Actually, the author didn't consider the factor of import duty when the import REER was calculated in this

paper.

CHAPTER V CONCLUDING REMARKS

Based on the previous chapters, concluding remarks on this study are as follows:

V.1 Evolution of China's Foreign Exchange Regime

Under a seriously distorted situation, China's foreign exchange regime has been changing over to a market-oriented one since 1978. Firstly, under the condition without foreign exchange market, China introduced the internal settlement rate for trade in 1981. After introducing the foreign exchange retention system for promoting exports, the foreign exchange swap market got the room to develop. The swap market—a parallel foreign exchange market to official one—played an important role in reducing and finally abolishing export subsidy, promoting foreign trade and pushing the RMB convertibility under current account. The inter-bank foreign exchange market was established in 1994. With some of its limitations, to generate an accurate exchange rate which can reflect demand and supply in the market and play a more important tool of macroeconomic management, the only way is to reform foreign exchange regime further accompanied with the reform in other economic fields, like monetary, fiscal and foreign trade regimes.

V.2 Effects of Changing Foreign Exchange Regime on Trade

Initially, foreign exchange reform was driven by the decentralization of foreign trade. The general trend of REER in China is depreciated since 1978, though it appreciated after 1994. Changing foreign exchange regime resulted in significant trade liberalization and import bias reduction.

In general, China's foreign exchange is under control, even now. Devaluation under foreign exchange controls usually increases the nominal price and does not affect the scarcity price of imports (see Krueger, 1978). As the international prices of exports are given in the world, devaluation would raise the domestic price of exports. The relative price of import-competing goods to exports, or the bias of trade, would thus decrease. Resources would then flow from import-competing to export industries.

It is clear that there have been significant depreciation in the export REERs since 1978 and that China came close to setting a realistic exchange rate by now through the mechanisms of foreign exchange retention, foreign exchange swap centers and current account convertibility. Its appreciation after 1994 resulting from the domestic high inflation, weak demand and the global deflation just reflects that China's economy connects close to world economy. International studies indicated that setting a realistic exchange rate is a prerequisite to successful trade liberalization (Krueger, 1978). The general depreciation of China's export REER since 1978 is an important factor behind the rapid expansion of china's exports—the volume in 1997 is more than 18 times of that in 1978.

On the other side, the import REER depreciated from 150 points in 1978 to 217 points in 1998, though it is narrower than the depreciation of export REER. Though there are not enough data to detail the change in liberalization and the bias of trade, the depreciation of import REER indicates a considerable rise in the nominal price of imports and import liberalization. The rise in the import REER should curb import demand. But China's import volume in 1998 is more than 12 times of that in 1978.

This implies that import controls and foreign exchange controls had been eased. Actually, we do observe a relaxation of foreign exchange controls with the introduction of foreign exchange retention schemes, foreign exchange swap centers and current account convertibility, and together with reduction of import duties which are consistent with import liberalization.

The jump in imports and the relaxation of foreign exchange controls seems to show a decrease in scarcity price of imports. This, together with the large rise in the export REER, implies a significant reduction in the bias of trade. The ratios of export to and import to GDP continually rose (see Table 1.2), indicating continual trade liberalization. Let's look at Krueger's book again—international empirical studies indicate that bias reduction is a key variable in stimulating exports (Krueger, 1978).

V.3 The Role of Exchange Rate in China—Fighting against Inflation or Maintaining Competitiveness?

Since 1994, China's foreign exchange regime became more focused on macroeconomic rather than trade field due to fighting against inflation.

Competitiveness, rather than financial stability, as the most important function of an exchange rate, more so in a transition economy than in an industrial one, because competitiveness is an essential ingredient of modernization, reform, and an open economy (Dornbusch, in ed. by Barth and Wong, 1992).

What is more suitable—flexible or fixed exchange rate—for China? I don't favor both of them. Flexible rate fluctuates, creating macroeconomic and political problems. And

on the other hand, fixed rate is also a problem, because inflation rate will make it unsustainable. I agree Professor Dornbusch's opinion—the crawling peg. The crawling peg is helpful for maintaining or improving a given country's competitiveness. Competitiveness is most important for China who is in the taking-off stage of its economy.

A crawling peg is a system under which the authorities preannounce that they will adjust the nominal exchange rate at randomly chosen small intervals by an amount reflecting the differential between the domestic rate of inflation and the weighted average of the rate of inflation of a major trade partner, or major trade partners. The idea is that the real exchange rate will be insulated from vagaries of the domestic money supply, and at the same time, that a floating exchange rate regime is not feasible (Krueger, 1997).

International experiences shows that the crawling peg has brought the successive results to some countries. This system was employed by Colombia from the late 1960s to the early 1980s with fairly acceptable results (Krueger, 1997). Korea's real exchange rate during the period from 1962 to 1971 appears to have been fairly constant, which suggests that the authorities may have been intervening to maintain a constant real exchange rate, which is the same thing as a crawling peg. And in this period, Korea achieved great growth rates on exports and imports—average annual growth rate—by 39.3 and 21.3 percent, respectively (Nam, 1993). This kind of growth on trade was very important for the growth of Korea's economy.

Actually, China's experience also shows that its exchange rate system was close to a

crawling peg during 1978-1993. In this period, China implemented a number of exchange rate adjustments, making some moderately large discrete adjustments at some points but also using periods of successive mini-devaluation. However, after 1994, China's REERs appreciated too much—close to the level in 1991 for the export REER and even to the level in 1981 for import REER. Obviously, this will necessarily result in the loss of competitiveness for China.

On the other hand, no evidences show that China's inflation was due to the devaluation of RMB (see Chapter I). It is not necessary to fight against inflation through the approach of maintaining a relatively overvalued exchange rate in China, especially under the situation of a global deflation. On the contrary, certain degree inflation may bring a good reply to the weak domestic demand.

China should adopt a crawling peg and devalue its currency properly to maintain its competitiveness in current situation. The time should be selected properly too.

When I finish this thesis, the updated data shows that, in the first four months of 1999, China's imports increased sharply by 13.6%, exports decreased 7.8 percent respectively and trade surplus declined by nearly US$ 10 billion comparing to the corresponding period of last year (MOFTEC, China)……

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