

Globalization and China's
Economic and Financial Development

by

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Abstract: This paper surveys China's globalization in terms of in and out flows of goods, capital, information/technology and people from both the Chinese and the Western, especially American, points of view. It includes a discussion of the issue of revaluation of the RMB.

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Globalization and China's Economic and Financial Development¹

To understand China's economic reform and development since 1978 one may conveniently divide the topic into its domestic and international aspects even though the two are closely related. It is the purpose of this essay to examine the international aspects as China has taken part in the process of world economic globalization, a salient feature of world history today. The Chinese leader Deng Xiaoping who initiated and directed economic reform from a planned to a market economy understood the importance of globalization and adopted what he called an "open-door policy" as an essential part of his reform program.

The term globalization refers to the crossing of national boundaries. It means the flow of goods, capital, information/technology and people across national borders. China practiced globalization in the Han dynasty (206BC-220AD) when trade took place between the Han Chinese and neighboring people in the North-west through the Silk Route. During the Tang dynasty (618-901) trade flourished and the Silk Route expanded as Chinese traded with the Romans. However, in the Qing Dynasty and in the period of the PRC up to Deng Xiaoping's open-door policy China tried to close its doors and resisted globalization. I will survey the accomplishments of globalization for China's economic development and clarify some controversial issues concerning globalization.

1. Foreign Trade

First consider foreign trade or the flow of goods across national borders. Since 1978 China has encouraged free trade and abolished trade restrictions step by step. The government has changed its policy from the administration of foreign trade by the Ministry of Foreign Trade, to giving provincial governments much autonomy in foreign trade and to allowing private enterprises to engage in foreign trade. The total volume of foreign trade or the total volume of exports and imports increased from 20.64 billion US dollars in 1978 to 620.8 billion in 2002, accounting for 65 percent of GDP and was growing at the rate of 35 percent per year. In 2004, the trade volume reached 1.1 trillion US dollars, and had a growth rate of 30 percent. China became the third largest trading country in the world, next to the United States and Germany.

Today exports from China can be found all over the world. In terms of US-China economic relations exports from China have benefited many Americans in providing them with high-quality consumer goods at low prices, but have also generated resentment and resistance by some American manufacturers and workers. Chinese exports to the US may hurt some US industries producing similar products. US workers in these industries may suffer temporarily, but in the long-run the labor market is able to adjust as new industries are developed to hire the displaced workers. In the long run, the aggregate unemployment rate (now at 5 percent) has not been visibly affected by the American imports of foreign goods. Note also that exports from China, in fact about 60 percent of them, are produced by foreign invested enterprises in China and some are American companies.

¹ Comments welcomed.

Outsourcing of jobs such as having someone in Asia read X-ray or answer phones has also created resentment in the United States. From the economic point of view, outsourcing of jobs as illustrated above is the same as import of services from China. The effects are the same as for the import of goods produced in China that I just talked about. Such imports are good for China and for US although some workers may be displaced temporarily. Although this point is valid, Professor Greg Mankiw of Harvard and at the time Chairman of the President's Council of Economic Advisers got into trouble when he made this valid point in a Congressional hearing in 2004 because such a viewpoint can be unpopular for American workers and politicians.

As an importer China provides a large market for foreign manufacturers and has gained economic power as a result. Demand for imports to China propels economic growth of other countries in the world. China first took a mercantilist stand in the restriction of imports, but after the rapid expansion of Chinese exports, the table has turned as some developed countries including the US are considering the imposition of restrictions on imports from China. The imposition of quotas on textiles from China is an example.

In 2001 China joined the World Trade Organization. Membership in WTO required China to lower its tariffs for manufacturing as well as agricultural products. The lowering of tariffs helped increase competition for Chinese manufacturers and farmers and provide cheaper products for Chinese consumers.

Foreign trade has helped economic growth in China in three aspects. First international specialization that takes place as each country produces the goods for which it has a comparative advantage in producing will enable the country to obtain more goods than by domestic production alone. Second, exports are a part of aggregate demand and an increase in aggregate demand helps increase the country's national output. Thirdly, trade together with foreign investment has brought in modern technology and method of management that has increased productivity in China.

2. Foreign Investment

A. Flow of physical capital in the form of foreign direct investment has been good in promoting China's economic growth. Since economic reform started in 1978 China's policy concerning foreign investment has made a 180 degree turn, from treating it as a form of exploitation by foreigners to welcoming it for China's economic development. In the years 2001 to 2003, the amounts of direct foreign investment actually utilized were respectively 49.7, 55.0 and 56.1 billion US dollars. Foreign investment has provided physical and financial capital, technology, and management skill and practice to China. However foreign investment is not a fundamental economic factor in China's rapid growth but only a vehicle propelling that growth. There are three fundamental factors, namely (1) abundance of high-quality human capital that includes skillful and hardworking laborers and resourceful entrepreneurs, (2) sufficiently well functioning market institutions and (3) the position of a late comer that can adopt modern technology

from the more developed countries. These three fundamental factors have enabled China to attract foreign capital; otherwise the capital could have been invested elsewhere.

Now China is exporting capital, not only to less developed countries but also to the United States. Chinese investment has helped the economic development of some Asian and African countries. Investment in the United States is illustrated by the attempt in the Spring of 2005 by the Chinese National Offshore Oil Corporation Cnooc to buy Unocal in the United States although the attempt turned out to be unsuccessful. The attempt is a part of the free flow of capital.

From the viewpoint of the United States, export of capital from US to China that takes place when a US factory moves from Cleveland to Shanghai is also considered a case of the outsourcing of jobs as the factory is supposed to go to Shanghai to take advantage of the less expensive and good quality labor in China. This case of outsourcing of jobs is different from simply buying goods or services from China that I talked about earlier since it takes the form of foreign investment. Capital flows to China in this case but not in the previous case that involves only foreign trade. Such an investment is good for the US as it raises US GNP. The reason is that what this piece of capital can produce in China is more than it could be producing in the US; otherwise the factory would not have moved. Therefore the move increases total output of the US which the economists call gross national product or GNP. The move, however, has a harmful effect on the workers in Cleveland who lose their jobs when such a factory moves. As in the case of competition from imports from China, there will be job loss in selected industries in the short run. But aggregate employment in the US in the long run will not be affected.

In the course of globalization there is movement of resources between nations. The movement is good for each nation in the long run but may have harmful effects in the short run for a segment of the population. The same can be said about the movement of economic resources between different regions of one country. In US history, the movement of textile factories from New England to the South to take advantage of the lower labor cost is good for the country's economic development, both in New England and in the South. In New England some workers were displaced during the move but other industries were developed and people were employed again without leading to an increase in the unemployment rate in the region.

On the negative side, there may be environmental problems associated with new factories built in the course of globalization, but this problem exists for domestically financed factories and for economic development in general. The Chinese government has paid serious attention to environment protection. Economists try to balance the harm from possible damage to the environment with the gain in having more output. In general poorer countries in the course of economic development are willing to accept some environmental degradation in exchange for more output but they should be aware of the damage which may be long-lasting.

B. Concerning financial investment, the free flow of financial capital is one objective in the development of financial markets. China welcomes foreigner to invest in its stock

markets in Shenzhen, Shanghai and Hong Kong, and also desires to invest its capital abroad. Movement of financial capital is one aspect of the free flow of resources to where they yield the highest return so that total output of the world would be larger. In this connection I would like to call your attention to the fact that the working of the free market involving the free flow of resources was well understood by the great Chinese historian Sima Qian of the Han dynasty. In chapter 69 entitled “The biographies of the money markets” of his book *Historical Records* he wrote:

“There must be farmers to produce food, men to extract the wealth of mountains and marshes, artisans to produce these things and merchants to circulate them. There is no need to wait for government orders: each man will play his part, doing his best to get what he desires. So cheap goods will go where they will fetch more, while expensive goods will make men search for cheap ones. When all work willingly at their trade, just as water flows ceaselessly downhill day and night, things will appear unsought and people will produce them without being asked. For clearly this accords with the Way and is in keeping with nature.” What he calls nature is what we call the law of economics.

On the negative side of the free flow of financial capital it enables financial crises to take place, including the Asian financial crisis of 1997-8. This crisis did not affect China very much as the Chinese government has had a wise policy of adopting international financial reform at a moderate speed especially in allowing a gradual opening of financial markets and of the capital account in international finance because economic institutions are not ready. But globalization itself is good for the reform of banking and financial institutions in providing foreign competition to push the reform forward. Using foreign competition to speed up economic reform was the main reason for the former Premier Zhu Rongji in leading China to join the WTO in the first place.

The strategy of using foreign competition to speed up economic reform of domestic institutions, however effective, has limitation in promoting the reform of China’s banking system and large state-owned enterprises for two reasons. First, while Chinese government officials have been pragmatic in most aspects of economic reform, they have been conservative and slow in allowing foreign banks to enter the domestic market. Second, Chinese banks and state enterprises are state-owned and controlled and operated by bureaucrats who can take advantage of the economic power conferred upon them to benefit themselves. Corruption is a major hindrance to economic reform at the current juncture of China’s economic development as I have discussed elsewhere. See Chow (2005) for a discussion of the problem of corruption and Allen, Qian and Qian (2005) that contains measures for China’s financial reform that may be hindered by corruption as well.

The Exchange Rate Issue

An important determinant of foreign trade and foreign investment is the exchange rate. A low value of Chinese RMB makes Chinese exports cheaper and investment in China more attractive if the investment is to produce for export. Many countries in the world including those in the European Union, Japan and Taiwan, have adopted the flexible exchange rate system while China adopted a fixed exchange rate up to July 2005 but the government did change the fixed rate several times in the 1980s and early 1990s relative to the US dollar as its government deemed appropriate. Most recently the Chinese government has adopted a managed floating rate with the government deciding the rate around a small band daily relative to the value of a basket of foreign currencies but the basket is not explicitly specified. There are pros and cons of the fixed and the floating exchange rate systems. (See the Appendix for a more detailed discussion.) A fixed exchange provides an anchor for the government in the conduct of its monetary and fiscal policy. It limits the discretionary power of the government in the exercise of its monetary and fiscal policy that may lead to excessive inflation or deflation. An expansionary monetary or fiscal policy would lead to inflation and lower the value of the currency as compared with a more stable US currency. Thus the fixed exchange rate system might be good for a developing country which has difficulty in disciplining itself in the exercise of its monetary and fiscal policies. The flip side is the power that it gives up and its dependence on the monetary policy of the US if the exchange rate is fixed as in terms of the US dollar. I was one of the several economists who proposed a flexible exchange rate for Taiwan three decades ago. After the Taiwan government adopted it the economy seemed to function well.

Let us consider two questions: First, what exchange rate regime should China adopt? Second, given the current regime of a managed float should the RMB be revalued? Since the Chinese government has already declared its position to adopt a more flexible regime in the long run as the situation permits, I should not comment on the first question. Making recommendations on policy which is already decided is fruitless. Let me just point out that in the adoption of a suitable exchange rate system the Chinese government is practicing its tried and proven method of reform of economic institutions, namely, gradualism and experimentation in order to decide on a good system and when to adopt it.

On the second question many foreign governments including the US government have pressured the Chinese government to raise the value of the RMB for their own benefits. Some US economists including Alan Greenspan have said that the effect of the exchange rate of the RMB on the US economy is rather limited. Concerning the effect on the Chinese economy, I believe that the RMB is still undervalued and revaluation is good for the Chinese economy. We have witnessed the undervaluation of the RMB or the overvaluation of the dollar in terms of the RMB by the excess supply of the dollar in the foreign exchange market in China due to its high price and the resulting accumulation of a large amount of foreign exchange reserves in China in the amount of over 700 billion US dollars. The increase was over 200 billion just in 2004 alone. An undervalued RMB has caused the large export surplus and large inflow of foreign investment and the

associated large inflow of foreign exchange reserves. The inflow of foreign exchange has been converted into RMB and has caused a rapid increase in money supply M2 in 2002. The rapid increase in money supply has led to great increases in investment and output in 2003-5 and in prices in 2004-5 (while from 1998 to 2002 China had a very stable or slightly decreasing price level). A more detailed discussion of the effects of money supply on aggregate output and prices can be found in Chow and Shen (2004).

Thus the undervalued RMB was a main cause of an overheated Chinese economy in 2003-4. The Chinese government tried to slow down the overheated economy by the administrative means of controlling the extension of credits by banks and limiting the number of construction projects. If the banks had had no extra money to lend out in the first place, there would have been no need to control the amounts of bank credit and to restrict investment in construction which was financed by such credits. Thus an undervalued RMB is the culprit of the overheated Chinese economy. To solve the potential problem of overheating and inflation in the future the government needs to raise the value of the RMB substantially. Another reason for revaluation of the RMB is that a high valued RMB would enable the Chinese to buy more imports for consumption and economic development rather than accumulating an extremely large amount of foreign reserves that are mostly lying idle or earning a small amount of interest from investing in US Treasury bonds.

3. Transfer of Information and Technology

Together with the flow of goods and capital is the transmission of information and technology. This has benefited China by upgrading its technology. So far China has mainly been an importer of technology but it will soon be an important exporter as it is already an exporter of technology to some less developed countries. In recent years the Chinese government has spent a large amount on higher education and Chinese universities, especially the top ones, improved rapidly. See Chow and Shen (2005). This will help China to become one of the world leaders in technology.

As of today, China has already helped many developing countries in Asia and in Africa by investing in these countries, providing them with technology, labor and assisting them in economic development in general. China seems to have done very well in this regard, in view of the fact that it has its own poor regions to develop also. Chinese diplomacy is based on mutual respect, treating a small country as equal and trying to help solve its problems if it is feasible. The effort of the Chinese government in assisting the developing countries and its diplomatic posture as a friendly country are doing as much in increasing China's influence in the world scene as its rising economic power.

Returning to China as an importer of technology, we know that the import of technology from the US to China is good for China, but is it good for the US? A part of the answer is yes. The main reason for capital and technology to move from US to China is to get a higher return to capital. It raises US GNP as I have explained and that is good for the US. In the very long run, however, one can make a case that this transfer of technology might be bad for the US although it is not necessarily so. To make the case, the transfer may

enable China to improve its technology in the future to a point when it will overtake the US in the industries in which the US now has monopoly power. To illustrate, when the Japanese took over much of the monopoly power of the US automobile industry in the 1950s and 1960s, the US lost its comparative advantage in producing automobiles. One can argue that the transfer of technology in producing automobiles from the US to Japan was bad for the US. See Samuelson (2004) which makes the simple point that when there is technological change that improves the technology of country 1 (China) in the production of good 1 in a two-good economy, the welfare of country 2 (United States) may decrease if it can no longer specialize in producing good 1 and does not engage in trade with China.

This above argument that the US may lose economically by transferring technology to China is different from the fear of military threat from China after it acquires the technology. The fear of military threat can justify restricting the transfer of military technology to China. I personally believe that the Chinese government has no desire for military expansion but many Americans have an opposite view. This is not an issue that can be settled by further discussion in this essay.

4. Migration of People

Fourth, about the movement of people. The Chinese have moved to many parts of the world to find jobs, to settle down or to get educated. They have contributed to the countries where they have settled or are visiting. The out migration of Chinese has been considered a problem for China especially when the emigrants are educated or have skills. The problem is called brain drain. This problem was considered an issue much discussed in Taiwan in the 1970s but is not considered a serious problem in China today. I do not consider it a problem for China. Even when the overseas Chinese live abroad, they are helping China by short-term visits as lecturers, traders and advisers. More overseas Chinese will return as opportunities improve in China as the number returning has continued to increase in recent years. People moving to live and work in China have benefited China also. They show the Chinese how to improve their life style by living in other ways if desired and may help improve the legal system and legal behavior of the Chinese people. Here again the free movement of people has more benefits to the movers, to their home countries and to the host countries than possible harm. Sima Qian's statement "So cheap goods will go where they will fetch more, while expensive goods will make men search for cheap ones" applies not only to the free flow of goods, but of capital and people as well.

In China's economic globalization there is one aspect of the movement of people which is very important and unique and is independent of foreign investment and foreign trade. This is the movement of overseas Chinese all around the world who are educated and experienced in their profession and are willing to return to China to give lectures and advice in the process of reform and development. This is an important component of the human capital contributing to China's economic development. It is unique to China in terms of the number of overseas people involved and their willingness to help, although Israel has had a similar experience as well. The contrast with the case of Russia's

economic reform and development is sticking. Here the open-door policy has worked again.

Conclusion

After examining the facts of globalization for China we can all recognize that the open-door policy first advanced by Deng Xioping when China had a very different ideology has been a great success in helping to modernize China. The dream of the Chinese people for over one hundred sixty years since the Opium War of 1840 to modernize China has been finally realized. A main contribution to the modernization process is the open-door policy which allows globalization to take place.

In this essay we have surveyed the four important aspects of globalization in China's economic reform and development since 1978. Understanding the nature and historical development of China's open-door policy for the purpose of modernization will enable us to appreciate the forces at work that will propel China's economic growth in the future and the role of China in the world economic community.

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Appendix on RMB revaluation

Exchanges between Ron McKinnon and Gregory Chow

Exchanges set 1 Friday July 29, 2005

Dear Ron,

I happen to disagree with much of your WSJ article and provide my comments below. Any reaction from you for my education and enlightenment would be much appreciated.

Best regards,

Gregory

From Wall Street Journal article of July 29 by McKinnon with comments by Chow.

On July 21, 2005, China again gave in to concerted foreign pressure—some of it no doubt well intentioned—to give up the fixed exchange rate it had held and grown into over the course of a decade. Congress had threatened to pass (and may still do so) a bill that would impose an import tariff of 27.5% on Chinese imports unless the renminbi was appreciated, and had pressured the Bush administration to retain China's legal status as a "centrally planned" economy (despite its wide open character) so that other trade sanctions—such as anti-dumping duties—could be more easily imposed.

A decade ago, when negotiations over China's entry into the WTO began, a raft of Wall Street banks, investment banks, insurance companies, and other financial institutions subsequently pressured the U.S. Treasury to require China to loosen its capital controls and gradually permit the entry of foreign firms into China's domestic financial markets—even though these financial conditions were not required of other WTO member countries. China is complying with these terms, as well as eliminating tariffs and quotas on imports beyond what was required by the WTO agreement.

While (uncertain) currency appreciation or the premature dismantling of capital controls on currency inflows and outflows are not as malign as an opium plague, the danger to China's heretofore robust economic growth and great success in lifting large numbers of people out of abject poverty should not be underestimated.

Chow: There is no substantial causal relation between China's growth and a fixed exchange rate. Note that China's exchange rate v. the dollar was changed several times during this growth period. (A)

By holding the exchange rate of 8.28 Yuan to the dollar constant for almost 10 years, and building monetary policy around this anchor, China's rate of inflation in its CPI has converged to that in the U.S., at a low level of about 2% per year.

Chow: Here also, China had low inflation not because of the fixed exchange rate but because of the restrictive monetary policy of Zhu Rongji (low rate of growth of money supply) from 1996 to 2002. (B)

In part because other East Asian countries (except Japan) were also more or less pegged to the dollar in a region where almost all trade is invoiced in dollars, the fixed dollar exchange rate was a very successful anchor for China's monetary policy. This collective dollar pegging within East Asia also ensured exchange stability and price-level alignment, which allowed regional trade and investment to grow rapidly and efficiently. Under the fixed rate, China's own high GDP and productivity growth were particularly impressive.

Chow: No causal effect between the fixed exchange rate and GDP in the Chinese case, although for some developing countries which could not impose monetary discipline a fixed exchange rate is good in forcing them to do so. (C)

However, on July 21, the renminbi was appreciated by 2%—a small amount in and of itself—while a narrow band of 0.3% on either side was maintained. More important was the implicit announcement that the old “parity” rate of 8.28 Yuan per dollar was being abandoned, but there was no clear statement of how the heavily managed float would evolve. Now that the future exchange rate has become uncertain, executing monetary and foreign exchange policy in China will be much more difficult. I have five negative comments on the new policy:

(1) With the fixed exchange rate now unhinged, the People's Bank of China (PBC) will have to come up with a new anchor or rule that governs monetary policy. None was announced when the PBC let the exchange rate go. Will the PBC institute an internal inflation target? What will be the financial instruments it uses to achieve this target?

Chow: If the people's bank watches out for the growth of money supply why would it need a new anchor? (D)

(2) Because China's inflation rate had converged to the American level (or slightly less), any substantial sustained appreciation of the RMB (the Americans want 20% to 25%) will drive China into deflation—preceded by a slowdown in exports, domestic investment, and GDP growth more generally.

Chow: Substantial appreciation of the RMB will have an opposite effect: if we believe that rapid growth in money supply will cause inflation, then appreciation of the RMB will reduce trade surplus and the inflow for foreign reserves which have been turned into RMB to cause inflation in 2004-5. Appreciation of RMB will reduce inflation. (F)

(3) If the PBC allows only small appreciations (as with the 2% appreciation announced on July 21) with the threat of more appreciations to follow, then hot money inflows will accelerate. If China attempts further financial liberalization such as interest rate decontrol, open market interest rates in China will be forced toward zero as arbitrageurs bet on a higher future value of the RMB. China is already very close to falling into a zero-interest liquidity trap much like Japan's—the short-term interbank rate in Shanghai has fallen toward 1%. In a zero-interest liquidity trap, the PBC (like the Bank of Japan before it) would become helpless to combat deflationary pressure.

Chow: I agree with the speculative inflow of hot money due to small increases in the exchange rate, but the solution is to change the exchange rate by one big step, as China did in the 1980s up to the mid-1990s. (G)

(4) Any appreciations, whether large and discrete or small and step-by-step, will have no predictable effect on China's trade surplus. The slowdown in economic growth will reduce China's demand for imports even as exports fall so that the effect on its net trade balance is indeterminate.

Chow: Ron, I must have failed my econ 101 on foreign trade. I thought that increasing the value of RMB will make Chinese goods more expensive abroad and foreign goods cheaper in China, both tending to reduce China's trade surplus. Of course the above depends on elasticities of demand for imports of Chinese goods abroad and of demand for foreign goods in China. Since there are substitutes the elasticities tend to be high. (H)

(5) Because the effect of appreciations on China's trade surplus will be ambiguous, American protectionists will come back again and again to complain that any appreciation is not big enough. So abandoning the "traditional" rate of 8.28 yuan per dollar will, at best, result in only a temporary relaxation of foreign pressure on China.

Chow: This point might be valid!

* * *

Lest you think that my assessment of China's new policy is too negative, compare it to the experience of Japan two decades ago and earlier. From the 1980s into the mid 1990s, Japan-bashing was in vogue in the U.S., much as China-bashing is in vogue today. Back then, Japan had the biggest bilateral trade surplus with the U.S. and was continually threatened (more by the Congress than the president) with trade sanctions unless there were temporary "voluntary" export restraints on particular exports, and the yen be allowed to appreciate. Indeed, the yen appreciated episodically all the way from 360 to the dollar in 1971 to touch 80 to the dollar in April 1995. This unhinged the Japanese financial system (the bubble economy of the late 1980s) and eventually resulted in Japan's unrelenting deflationary slump of the 1990s—its "lost" decade. Japan has yet to recover fully and remains today in a zero-interest liquidity trap, which prevents the Bank of Japan from reigniting economic growth. And Japan's trade surplus as a share of GNP has not been reduced in any obvious way.

Chow: I do not know the case of Japan well enough to comment, but I will not easily accept the interpretation that the slowdown of the Japanese economy since 1991 is due to a flexible exchange rate. Any one making such a statement has to document it carefully rather than just stating it. Perhaps you have written extensively on this but the above statement “this unhinged the Japanese financial system” alone has not convinced me.

Thanks in large part to pressure from our lawmakers in Washington, China is now in a nebulous no man’s land regarding its monetary and exchange rate policies. Instead of clear guidelines with a well-defined monetary anchor, its macro economic decision-making will be ad hoc and anybody’s guess—as was (and still is) true for Japan.

Chow: You may recall that I was one of the several economists who proposed a flexible exchange rate in Taiwan. After the Taiwan government adopted the flexible exchange rate system the Taiwan economy continued to growth for a long period until the growth is now somewhat slower for other reasons.

Mr. McKinnon, a professor of economics at Stanford, is the author, most recently, of “Exchange Rates under the East Asian Dollar Standard: Living with Conflicted Virtue” (MIT Press, 2005).

Exchanges set 2 Monday August 1.

Dear Gregory:

Because you are truly the Dean of economists studying China, I am honored that you took the time to read my *WSJ* and rebut it so carefully. The main difference between us is that I am a monetary economist who believes that, in an open economy, the exchange rate is just the expression of current or intended future monetary policies. But you are more in the mainstream in not taking this view.

I marked your main points in capital letters below, and am replying to each one.

(A), (B), and (C): In China’s growth period of the 1980s, it was not a truly open economy. State trading companies for imports and exports insulated domestic relative prices from foreign—and of course exchange controls on both current and capital account predominated. Thus the Chinese authorities could change (depreciate) the official exchange rate (as they did several times) without having much effect on the domestic price level and monetary policy or growth rates.

However, by 1994, the economy had much more open with the unification of the spot and swap foreign exchange markets and virtually accepting current account convertibility. The exchange rate made a big difference to the domestic price level,

[Chow: a questionable proposition, see below] and the over devaluation of the renminbi in 1994 when the official exchange rate and swap rates were unified at 8.7 Yuan/dollar (the official rate moved from 5.5 to 8.7) greatly aggravated the inflation that had begun in

1993 and continued through 1995.

Chow: This is also questionable- see below. In my view (see “Money, Price Level and Output in the Chinese Macro-economy” in the “document downloads” section of www.princeton.edu/~gchow and section 7.3 of *China’s Economic Transformation*) a major factor affecting the inflation rate in China is the rate of growth in money supply, M0, M1 or M2. In particular the inflation in 1993-5 can be explained the rapid growth of currency in circulation, 317.9, 433.6, 586.5, and 728.8 (billion) at the end of 1991, 1992, 1993 and 1994 respectively (see p. 120 of *China’s Economic Transformation*). This happened essentially before the change in the exchange rate system in 1994. We disagree on the role of the exchange rate, as compared with the rate of growth of money supply, on inflation. I have documented my view about the importance of the rate of growth of money supply in the above two references.

Subsequently, the PBC hung on to 8.28 Yuan per dollar for 10 years through both deflationary and inflationary pressure until Sept 21, 2005. And in China’s CPI price inflation in 2005, when the economy has become very open, has converged to being slightly less than that in the United States. I am not claiming that the exchange rate by itself anchored China’s price level. Rather the government’s use of some direct controls on investment, sterilization operations, and so forth, were effectively guided by the exchange rate target.

Of course monetary cum exchange rate policy by itself affects mainly the rate of price inflation rather than the real rate of growth. However, I might note in passing that economy’s rate of growth was more erratic from 1980 to 1995—with serious inflations in 1988-89 and again in 1993-95. Since then, under the fixed exchange rate regime, growth has been very high, smoother, and without any significant inflationary outbursts.

Chow: There is a short section on “A brief monetary history of China” in “Money, Price Level and Output ...” to explain the historical facts in your last two paragraphs without resort to the exchange rate.

(D) and (F). The rate of growth of the money supply as a target for monetary policy in the sense of Milton Friedman is just a non starter in a high growth developing country such as China.

Chow: No where do I express agreement to the Friedman’s viewpoint of targeting money supply. I do agree with the Friedman’s empirical proposition (pointed out to me by Ben Bernanke who also agrees with Friedman) that an exogenous change in money supply will increase output soon after but the effect will soon vanish and will raise prices with a longer delay but the effect is longer lasting. To the extent that an undervalued RMB leads to more inflow of foreign exchange reserves (now of 700 billion dollars, with an increase of about 200 billion just in 2004 alone) which are converted to RMB, thus raising the rate of increase in money supply, the undervaluation is inflationary.

The rapid rate of financial transformation and very high saving means that all monetary aggregates tend to grow explosively. For example, from 1995 to 2003 narrow money in China grew over 17 percent per year (See Table 2 of attached paper, “Exchange Rate or Wage Changes in International Adjustment?”) and the broader aggregates grew even faster.

Chow: 17 percent is not high for China for price stability from the viewpoint of the demand for money having an income elasticity over unity. Demand for money as the Chinese economy grows increases at a higher rate than GDP. The inflationary periods were those in which the rate of growth of money supply exceeded 25-30 percent—see table on p. 120 of *China’s Economic Transformation*.

The monetary authority cannot simply “watch” the money supply and decide whether money growth is too fast or slow. Rather, it is better to treat growth in monetary aggregates as endogenous (not causal), and look for some other anchor to guide tightening or easing monetary policy. And for China over the past 10 years, the exchange rate has been the most convenient one, but since July 21 it might have to move to domestic inflation targeting.

Chow: In China, much of the growth of money supply (again see the above cited section of “A brief monetary history of China”) was due to government policy, though not intended to control inflation. For example, currency in circulation increased by 50 percent in one year 1984 because of reform of the banking system leading to banks being given freedom to extend credits in ways not allowed before. Rapid increases of money supply in 1993-4 was the result of the banks extending credit in response to Deng’s call in his famous speech in Shenzhen in 1992 for further opening and rapid development. The success of Zhu Rongji in controlling inflation since the mid 1990 was by controlling bank credit and money supply using administrative means—imposing quotas to banks in each province. I am not advocating monetary targeting, but am pointing out that monetary aggregate is one of the variables that we should watch out for, including its rapid rise resulting from people converting dollars to RMB.

G. Because China’s CPI inflation is now less than American at around 2 percent per year, and virtually all goods traded in East Asia are dollar invoiced, a large appreciation of the RMB will drive China into actual deflation.

Chow: A large appreciation will reduce the growth of money as compared with no appreciation. Actual deflation will depend on the growth of money itself which depends on other factors as well, such as those mentioned in the last paragraph.

H. Greg: I am sure you did very well in Econ 101. But you learned the wrong model for assessing what would happen to the trade balance of a creditor country forced into appreciation. See my new book (listed below) with special reference to the problem of “conflicted virtue”. Also I attach another short paper called “Trapped by the International Dollar Standard”.

I. Finally, I have written a book, *Dollar and Yen: Resolving Economic Conflict between the United States and Japan* (with Kenichi Ohno, MIT Press, 1997) showing how the syndrome of the ever high yen from 1971 to 1995 drove Japan into the great deflationary slump and zero interest liquidity trap of the 1990s. Japan's problem is also covered in my new 2005 MIT book in chapters 3 and 4, with China being covered in Chapter 5.

I agree with you that Taiwan is too special to discuss. Exchange flexibility itself is not necessarily bad; the problem is excessive and ongoing appreciations.

RMcK

Ron:

I am following up your email and welcome further exchanges on my comments above. Further comments will have to await my reading of your two books about Japan.

Best,
Gregory

Comments of Professor X on the MacKinnon-Chow exchanges, Aug 2

1. On your comment on Ron's point 4, you seem to talk about a partial derivative of exchange rate on trade balance, while he is thinking of some more aggregate effect. He comes back to this in his point H, where he focuses on the capital loss on US Dollar assets from China appreciation.

2. I did not see any disagreement on his point 2. He says sustained appreciation of RMB will lead to deflation in China; you say reduced inflation.

Dear X,

Thanks for the two points.

1. Concerning partial derivative vs. aggregate effect, what does it mean by capital loss on US dollars assets? The US dollars can still buy the same (or almost the same) amount of US assets in the US or in the world except in China, approximately speaking, even if appreciation is of a higher percentage than 2 percent. Does China's appreciation of the RMB make my holding of US assets less valuable or make me poorer?

2. On the point about deflation being the same as less inflation, there is main difference. My view is that if China does not appreciate there will be inflation and overheating. Hence China should appreciate. MacKinnon's point is that China should not appreciate because doing so will lead to serious deflation which is bad for the Chinese economy.

Am I right?
Gregory

End of appendix on the MacKinnon-Chow exchanges on revaluation of the RMB.