

DOES CHINA SAVE AND INVEST TOO MUCH?

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China's current saving and investment levels are extraordinary—both in terms of its own history, but also by comparison with the current and historical experience of high-saving countries like Japan. The International Monetary Fund's 2005 *World Economic Outlook* places China's gross saving at 50 percent of GDP with gross capital formation, not far behind, at 45 percent of GDP (IMF 2005: 96–97).

High levels of saving and investment are usually seen as a good thing. For a developing economy, such as China, a high level of domestic saving and investment means that residents are forgoing current consumption in order to add to the capital stock, thereby increasing growth and labor productivity. For a developed economy like the United States, while absolute levels of saving and investment may not match those in developing economies, a high level of saving and investment would mean that residents are financing most of the increase in the capital stock and are thereby positioning themselves to benefit from future returns earned by the enlarged capital stock. The reality for the United States over the past half-decade—a sharp rise in imports of foreign savings—means that returns from growth in the capital stock are increasingly earmarked for payment to foreign investors.

Despite the satisfaction with which most commentators view its high levels of saving and investment, particularly since 2002, China has displayed increasing signs of overinvestment. As used here, the term overinvestment refers to a capital stock either too large or too poorly allocated to generate positive returns at the margin. Misallocated capital and excess capacity in the domestic sector implies a rapid increase in nonperforming loans, which are largely held by China's state banks. Excess capacity in the tradable goods sector

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implies a tendency to undervalue the exchange rate in order to maintain the growth of demand for exportables.

The problem with currency undervaluation is that it results in excessive domestic growth of liquidity, which combined with an inability to diversify savings abroad, results in excessive speculation in the nontradable goods sector such as real estate and land. The Chinese government stepped in during 2003 to slow credit creation.

The sharp drop in China's loan growth from a peak of nearly 25 percent year-over-year annually in 2003 to about 13 percent in 2005 and early 2006 has created a cash-flow crisis. The response by enterprises in the tradable goods sector has been to boost sales abroad while curtailing foreign purchases. China's overall trade surplus reached a record \$102 billion in 2005, a 23 percent increase over 2004. This explosion of China's trade surplus has been concentrated on the United States, resulting in trade tensions and calls for China to revalue its currency. However, the real problem lies with China's reluctance to allow its huge saving flows to move abroad and thereby to provide a Chinese population that is rapidly accumulating wealth with adequate choices on where to store that wealth.

China's government has undertaken the wealth storage role for the nation by investing heavily in U.S. government securities, mortgage-backed securities, and European bonds. The half-trillion dollars (an extraordinary one-third of GDP) it has acquired in foreign exchange reserves since 2002, while intervening to prevent the appreciation of its currency, represents a government decision to accumulate wealth in the form of claims on U.S. and European governments and financial intermediaries while subsidizing its tradable goods sector with an undervalued exchange rate. China is suppressing demand growth at home while stimulating it in advanced countries by accommodating borrowing and demand growth abroad. In short, part of the explanation for low real interest rates worldwide is global excess capacity. In China, if savers could earn high real returns on capital investment at home, financial capital would flow from the United States to China, not the other way around.

This path for China, not to mention the world economy, is unsustainable. Not because the numbers are so large, but rather because it is destabilizing. China's chronic excess capacity problem has been suppressed in the domestic sector by a credit crunch wherein companies simply do not pay for the inputs they purchase while increasingly relying on accommodation of the state banking sector. Meanwhile, in the tradable goods sector, Chinese exports are on offer as the low-price supplier in most markets while imports have been sharply curtailed. A combination of deteriorating credit quality inside China

and increasing trade tensions outside China will not continue for much longer. While the lack of developed, open financial markets in China will probably preclude a financial crisis, it is clear that investors in China's stock market sense the stresses that are accumulating since B-share prices have fallen steadily over the past five years to levels last seen during the 1997–98 Asian financial crisis.

Outside China, the critical support for its exportable sector, continued growth of the U.S. economy, is also at risk. A combination of higher oil prices (itself a by-product of rapid demand growth for oil in China) and the United States, a slowing housing sector, and tighter monetary policy will likely lower U.S. growth to 2.5 percent or below during the second half of 2006.

The upshot is that China's much-praised tendency to save and invest over 40 percent of its GDP has become dangerous and destabilizing, both for China and the global economy. China's avid savers expect to increase their wealth by forgoing current consumption. There are good reasons to expect that they will be sorely disappointed if that saving continues to be bottled up inside China. The results—excess capacity in the tradable goods sector, with pressure for currency undervaluation and export promotion along with heavy real estate speculation in the domestic sector—will sound eerily familiar to Japan's disillusioned savers of the 1960s, 1970s, and 1980s. It is to be hoped that Japan's painful lesson will not be lost on the Chinese.

Factor Endowments and Growth

China's current, counterintuitive to some, dangerous predicament with excess savings and investment can be better understood by recalling the fundamental economic principles of increases in factor endowment, growth, and trade. China's rapid growth story, while it carries with it some revealing parallels to Japan, is also unique both in terms of its scale and pace. While some acute transitional adjustment problems to China's extraordinary growth path have emerged, the future remains bright for China to develop into one of the world's great economies and trading nations. That process would be much smoother, however, if China allows for more rapid development of its financial markets and provides its population with more diverse ways to store their rapidly increasing wealth.

Developing economies, especially those like China with its massive reserve army of labor, are anxious to grow their capital stock. We have known for a long time, certainly since 1955, thanks to T. M. Rybczynski, that an increase in a country's labor endowment (the introduction of more labor into the modern market sector of the

economy), will worsen its terms of trade provided that its exportables are labor intensive. Beyond that, for given factor endowments, an expansion of the output of the labor-intensive exportable sector requires contraction of the output of the import competing good.¹

Continued growth of the labor force as millions of Chinese leave the agricultural sector for the cities means pressure for both capital and workers to leave the capital-intensive sector as labor-intensive production expands. Capital-intensive production has to contract unless additional capital is made available to combine with an increased flow of labor from the agricultural sector. The flow of labor from China's massive agricultural sector is huge—on the order of hundreds of millions of workers. The share of China's population employed in agriculture has dropped from about 70 percent in 1980 to close to 40 percent today.²

In view of the pressures on the terms of trade together with the pressure on the nontradable goods to contract as the country's effective labor endowment increases by virtue of the heavy migration from the agricultural sector, the desire to industrialize, to add to the stock of capital is rational. Failing to do so as the labor endowment expands rapidly means that a high rate of growth driven by the labor-intensive output of the exportable sector entails worsening terms of trade whereby some of the fruits of growth are transferred abroad to foreigners who, as history has shown, may or not be grateful. Beyond that, internal tension arises as the expansion of labor-intensive output in the tradable goods sector draws labor disproportionately from the capital-intensive, import-competing sector.

The same reasoning leads to the conclusion that if the accumulating factor is used intensively in the import-competing industry, improving terms of trade will accompany a rise of output and real national income will unambiguously rise. If China, through a higher level of domestic saving and investment, increases its capital endowment and produces more capital-intensive autos, for example, the relative price of import competing goods falls and a terms-of-trade improvement accompanies higher growth. Of course, this conclusion requires a number of assumptions—stable relative factor prices, linear homogenous production functions, and a market-clearing (no excess capacity at existing prices) global auto market. More broadly, the Rybczynski Theorem assumes fully employed global and domestic resources at invariant domestic relative factor and goods prices. China

¹China's growth factor endowments and tradable goods input mix are more fully described in International Monetary Fund (2004: 82–102).

²For a fuller, up-to-date discussion of the Chinese economy, see Barnes (2005: 23–34).

would have to be a price taker in global markets, in other words a small economy, for the analysis to flow without qualifications.

Despite the level of abstraction required for unambiguous results from the Rybczynski Theorem, a germ of truth emerges: rapidly growing, large countries are sensitive to the implications for their terms of trade arising from rapid increases in factor endowments. And since most developing economies start the process with a small endowment of capital, an increasing labor endowment in the market sector as labor moves out of a primitive agricultural sector into manufacturing means that their exports are likely to start off being labor intensive. This indicates that a rising endowment of labor results in growth with deteriorating terms of trade.

Parallels with Japan

The need to work, save, and invest so manifest in Japan after World War II when most of its capital stock had been destroyed, created a nation of savers led by their government to invest almost exclusively at home. The allocation of saving among alternative investments was largely left to the government and, in particular, the once formidable Ministry of International Trade and Industry (MITI), now called the Ministry of Economy, Trade, and Industry (METI).

Japan's growth from the period 1955 to 1980 was spectacular, nearly equaling China's performance from 1979 to 2004, although China's performance during the last five years of its growth spurt to 2004 was even more spectacular than Japan's during the 1975 to 1980 period. China's performance has also exceeded that of the newly industrialized economies during their period of rapid growth since 1967. (The newly industrialized economies consist of Hong Kong, Korea, Singapore, and Taiwan.) The comparison of China with other rapidly developing economies is extensively documented in the IMF's *World Economic Outlook* (2004: 82–102).

Japan's extraordinary growth also witnessed a transition whereby exports moved from labor-intensive goods to capital-intensive goods. The rising capital endowment in Japan was driven by a high level of domestic savings by households and channeled by the government into capital accumulation inside Japan. The desired result as exports became capital intensive was faster growth and improving terms of trade. Wealth grew rapidly.

Japan's saving as a percent of GDP rose from about 20 percent in 1955 to a peak of over 35 percent in 1970. Meanwhile, investment as a percent of GDP rose commensurately from about 20 percent in 1955 to over 35 percent in 1970.

For purposes of comparison, as already noted, China's domestic saving as a percent of GDP over the past quarter century has been between 35 percent and 50 percent—with the highest share occurring over the last decade. Chinese investment has occupied a similar share of GDP over the past quarter century. Both China and Japan experienced extraordinarily high levels of domestic saving during the first 25 years of their growth takeoff. Virtually all of the savings were kept inside the country to drive a rapid increase in the capital stock. The eventual result, in both countries, was to drive heavy investment in land and real estate.

In Japan, the government-driven selection of the investment mix at first was straightforward. There were obvious pressing needs for Japan to rebuild its infrastructure and to invest in basic industries like steel, chemicals, shipbuilding, and automobiles in the booming, capital-rebuilding global economy of the 1950s and 1960s. The absence of the need to rebuild a military infrastructure was also an advantage for Japan. The need for enhancement of the capital stock was obvious in view of Japan's relatively small population release available from its agricultural sector and slow population growth overall. Increased immigration was not viewed as an option.

Japan's concentrated rapid capital accumulation began to reach its limits during the 1980s. By the end of that decade, Japan's private sector proved that a nation can save too much if it insists upon investing only at home. By 1990, with domestic saving still close to 35 percent of GDP, and investment only slightly below that at about 32 percent, Japan's stock market collapsed with the real return on capital having been driven close to zero. Japan's virtuous savers and banks had, unfortunately, turned to land and real estate during the 1980s and had driven prices up until 1991 when the Bank of Japan called a halt to the real estate bubble. The resulting collapse erased Japanese wealth worth about ¥1,200 trillion at the peak of the bubble. That was the equivalent of three years of national income. A comparable figure for the United States today would be \$30 trillion.

It required over 15 years to work off the flow effect of the wealth loss. Real estate has still not recovered, although the 1990s saw Japan's public sector pursue overinvestment in projects with very low returns. The only result was to build up a huge stock of public debt, a large portion of which is owned by the Post Office and banks. This chronicle of Japan's situation brings us to the present whereby Japan's current Prime Minister Koizumi appears to have won a battle to require the Post Office to divest its assets to the private sector and thereby, hopefully, to improve the process of capital allocation inside Japan. The challenge for Japan remains formidable as Japan's

cumulative growth of nominal GDP since the end of 1997 (its peak) is still only about 0 percent versus 46.1 percent for the United States and 60.9 percent for Korea (Sheard 2005: 4). That said, Japan in 2006 has entered a period of sustainable growth and modestly rising prices, a combination that should boost future nominal GDP growth. Still, China will surely want to avoid economic conditions like those suffered by Japan for nearly 15 years after 1990.

China's Need to Develop its Financial Sector

The lethal combination of high levels of domestic saving and investment with allocation managed by the government as experienced in Japan has emerged in China. The problem with leaving capital allocation either to a government or to a state banking system run by the government, as has happened in China, is that no market mechanism emerges wherein bankers learn how to evaluate projects and allocate capital to its most efficient uses. The problem is exacerbated when controls on capital outflows mean that the capital remains at home and the burden of allocating it among competing uses becomes greater and greater—especially as returns at the margin on domestic capital accumulation are driven down. Inevitably, the result is excessive speculation in the nontradable goods sector, specifically real estate and land, such as has appeared in China.

Far more pressing than the proximate need to allow its currency to appreciate is China's need to move more rapidly to develop the skills in its domestic banking sector while allowing its savers to begin to move assets abroad so that they can accumulate a diversified portfolio of holdings. The temporary expedient of having the Chinese government invest heavily in U.S. government securities and mortgage-backed securities is somewhat destabilizing in the sense that large flow imbalances such as the U.S. current account deficit are slower to adjust by virtue of the accommodation provided by capital outflows from China.

The next big adjustment in the global capital markets should include a rapid integration of China's state banks with the well-developed global banking system. The emergence of a modern banking system inside China, one integrated into the international financial system, would be a stabilizing force in the global economy and in the rapidly emerging geopolitical transition occurring in Asia.

China has demonstrated a powerful competitive advantage in many markets for tradable goods. In world financial markets, the market for tradable future goods, China is relatively resource poor. It either needs to import financial services by allowing its savers to invest

abroad or develop a sophisticated financial sector at home, which amounts to the same thing since the resources would have to be imported in order to develop rapidly enough to accommodate the rapid rise of stock in savings in China.

While there are parallels between China's situation and that of Japan, China is clearly a special case. Both the scope and pace of its growth have been unprecedented. Beyond that, China suffers from no shortage of labor and, in fact, is compelled to continue rapid growth in order to absorb a massive supply of underemployed labor from the agricultural sector into its industrial sector. That said, we have seen that the effective and continued rapid increase in China's labor endowment creates a chronic need to accumulate capital in the exportable sector. However, if that capital accumulation proceeds too rapidly and is poorly allocated, too many projects with zero or negative marginal returns will be undertaken. Hence, the rising need in China for human capital with skills focused on profitable allocation of capital.

The need to allow China's savers to invest abroad is especially pressing given both the size of China's rapidly rising pool of saving and the underdevelopment of its financial sector for allocating that saving among profitable uses. Rather than focus on the proximate issue of its exchange rate, international discussions with China might better focus on the possibility of allowing more of China's savings to flow abroad. In that sense, China's move toward a more flexible currency basket is prescient. If China's savers are to store more wealth abroad, there may come a time when market forces will cause China's currency to depreciate, especially given the increased flow of Chinese savings into alternative investments outside China.

Conclusion

The transformation of China's financial sector into a world-class capital allocating mechanism will take time and effort. The Chinese government may be uncomfortable with the notions of more foreign involvement in its domestic financial system and a large-scale flow of Chinese savings abroad. The size and persistence of the desire of China's savers to invest abroad remains to be seen, but given the vigor and entrepreneurial energy displayed by their activities inside China, it seems highly probable that the world economy would benefit from the release of accumulated Chinese savings into global capital markets.

China's government may not be the only one made uneasy by a revolutionary approach to allowing more access for China's savers to

global capital markets. The recent effort by CNOOC, a Chinese oil company, to purchase Unocal, a relatively small U.S. oil company with holdings in Asia, was effectively rejected by the U.S. government. Increased global capital integration will require development of understanding, both by the governments of advanced industrial countries as well as by the Chinese government. The initiation of such discussions with an aim toward integrating China's remarkable economy into the global financial system will be far more productive than continued bickering about China's exchange rate.

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