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Demographics, Savings & Hyper-Growth

Why Asia accumulates reserves, why India and Latin America can emulate China's growth, and why we may be facing a decade-long savings glut.

- The world is experiencing major demographic shifts, but the transition has been most dramatic in Asia. There is growing evidence that demographic changes have played an important role in driving Asia's economic transformation by generating high savings rates.
- In this report, we will argue that high savings rates help sustain high growth rates in two important ways. First, it generates the resources needed to support high investment rates (which in turn drive high employment growth and ever more savings). Second, it allows these countries to accumulate foreign exchange reserves in order to build a bulwark against the stresses caused by hyper-growth – implying that high growth countries export rather than import capital
- In our view, the accumulation of reserves by Asian countries like China should not be seen as cynical mercantilism but as a prudent response to internal stress. Demographic trends lead us to believe that India and perhaps Latin America can be expected to follow this example in the next few decades.
- Our model implies that the excess savings of these countries will find their way to the comparative safety of developed financial systems. The world's demographic configuration suggests that this will result in a savings glut over the next decade. In our view, this should not necessarily be seen as a problem by the developed world but as source of cheap financing.

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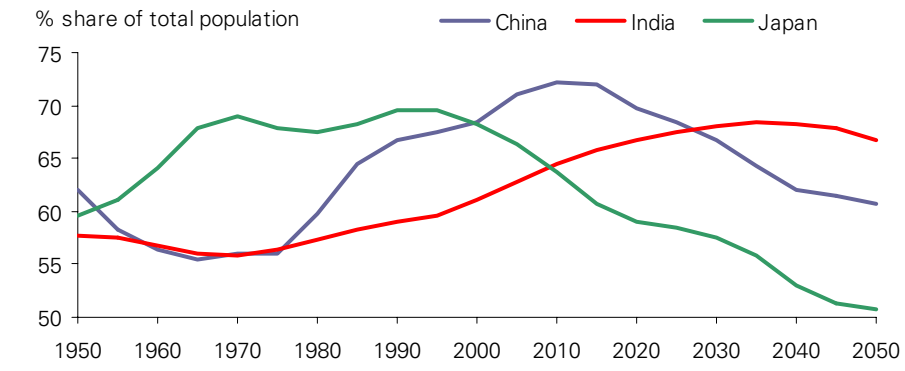
Working Age Population



Source: UN Population Statistics

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Introduction

Asia's economic transformation is now half a century old. It is a phenomenon that began with Japan in the fifties, gradually spread to the smaller "tiger" economies in the seventies and eighties, percolated to China in the nineties and now appears to be infecting India. It has not always been a smooth process as the Asian Crisis in 1997 clearly demonstrated. Nonetheless, there is no doubt that the phenomenon that has dramatically transformed Asian economies, raised standards of living for millions, and changed the global balance of power. It is important to note that the "Asian Miracle" has spread irrespective of the type of political institutions, cultural differences, history, and the availability of natural resources. The ability of the phenomenon to transcend such differences across Asia suggests that the experience can be reproduced in other developing regions such as South Asia and Latin America.

In this paper, we will argue that the so called "Miracle" is the result of specific policies that leverage the one-time gift of demographic transition. Therefore, we explore the role played by demographic change in boosting savings rates in Asia and thereby funding prolonged periods of hyper-growth. We will argue that domestic savings are key to the hyper-growth process in two important ways. At the first instance, the increase in savings rates makes available resources that can be funnelled into capacity building. When economic policies are conducive, this triggers a virtuous cycle whereby investment growth generates employment for the expanding labour force (also made available by the demographic shift) and this, in turn, generates even more savings. This is the process of growth though accumulation that Paul Krugman famously highlighted.

However, rising savings play a second important role that is crucial to sustaining this process over time. We will argue in this paper that rising savings can help generate current account surpluses that should be used by the emerging countries to accumulate foreign exchange reserves. This is often seen as a mercantilist approach to exchange rate management but we feel that this is a rational precautionary response to the internal stresses caused by the hyper-growth phenomenon. Indeed, we feel that the Asian Crisis was partly a result of not following this strategy (of course, we do not excuse other failings such as the poor allocation of resources by the financial system). In other words, we strongly disagree with the conventional view that it is somehow wrong for developing countries to export capital to developed countries.

In the later sections of the paper we will discuss the possibility of the phenomenon spreading to new countries/regions that will enter the demographic sweet-spot in future. In recent years, we have highlighted the possibility of India becoming the next hyper-growth economy. This view is now steadily gaining ground. However, not many people realize that demographics trends in Latin America indicate that this region is also about to see a sharp decline in its dependency ratios. In our view, there is no reason why Latin America cannot replicate the Asian experience by taking advantage of demographic change if it follows the same prescriptions: first, a predictable, enterprise-friendly policy framework that encourages investment and job creation; second, a willingness to accumulate large foreign exchange reserves as a bulwark against the inevitable stresses of hyper-growth.

We will also argue that the configuration of global demographics will cause a world-wide glut of savings over the next decade – probably in evidence already. This is neither surprising nor is it necessarily a problem if ways can be found to accommodate the underlying dynamics. In our view, this process can also provide prolonged period of cheap financing for developed economies, provided that they can they can maintain the credibility of their financial institutions.

Demographic Transition

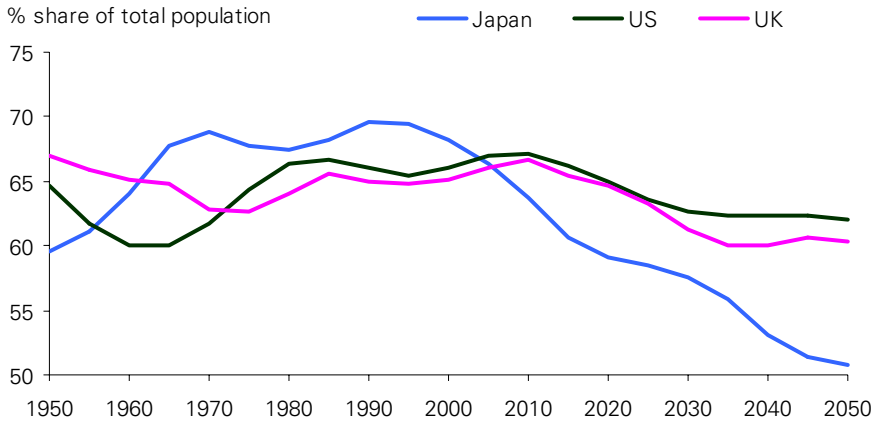
The twentieth century witnessed major demographic shifts. As modern medicine and social attitudes have spread, we have seen death rates and subsequently birth rates decline sharply in country after country. The gap in time between the declines in death and birth rates causes a bulge in the age structure of population that works its way through the age distribution. On a stylized account, the population then witnesses three stages of demographic transition:

- In the first stage, there is an increase in the proportion of the young in the population.
- In the second stage, the proportion of young people declines, that of the old increases modestly but, most importantly, that of working age adults increases sharply.
- In the third stage, the proportion of working-age adults falls while that of old people rises.

Virtually every major country and region has witnessed demographic change in the last half century, but different areas are in different phases of transition. Western Europe has already gone through the first two stages and will soon be entering the last stage. It will be followed a little later by North America which has partly tempered the impact of aging through large-scale immigration. However, it is Asia that presents the most dramatic spectacle of demographic transition both in terms of the speed of change as well as the differences between individual country experiences.

According to UN Population Division statistics[1], Japan was significantly younger than the US and the UK in 1950 but rapid changes in its age structure meant that by the 1980s it had a far higher share of population of working age (see accompanying chart). However, this also meant that it overtook the US and the UK into the third stage. In contrast, the proportion of working age population in the UK has been relatively stable since the 1950s and the country will begin to see significant declines only from 2020. The US is even younger (largely due to immigration) and should see the share of working age population peak only in 2010.

Figure 1. Working Age Population



Source: UN Population Statistics

[1] http://www.un.org/popin/data.html

The rapid aging of Japan is the first of its kind but will not unique in Asia. Indeed, China has experienced an even faster rate of change (probably a reflection of the one-child policy). As we will discuss later, China will hit its demographic peak in 2010-15, and will rapidly age thereafter. In contrast, India and the Philippines are about to enter the second phase and will only hit their peak in circa 2035.

Savings & the Asian Miracle

It is unsurprising that demographic shifts have an impact on economic performance. Clearly, a changing age structure has a direct impact on the supply of labour and perhaps even on its ability to absorb new technology. However, we feel that the effect becomes far more powerful because of the simultaneous impact on national savings rates. It is only recently that there is growing evidence that demographics have a strong impact on Asian savings rates as per the Modigliani "life-cycle hypothesis". According to the "life cycle hypothesis", the working population has a much higher propensity to save than the dependent population (young and old). Consequently, when the demographic bulge raises the share of working-age adults in the population, the overall propensity to save rises sharply[2].

Several empirical studies suggest that the impact of this phenomenon in emerging Asia has been dramatic in the last few decades. Williamson and Bloom (1997)[3] as well as David, Canning and Graham (2002)[4] argue that falling youth dependency explain the savings boom in East Asia during the 1950-90 period, and that demographic shifts were a key ingredient (perhaps even the most important ingredient) that drove the "Asian Miracle".

In our view, the above empirical results reflect a self-reinforcing growth dynamic fed by the deployment of ever more labour and capital – both provided by the demographic transition process. Increased saving raises the investment and growth rates and, in turn, this generates employment and further boosts savings. This is how China's investment rate has jumped from 20% of GDP to almost 45% over the last three decades. Readers will recall that Japan's investment rate had similarly peaked at over 40% of GDP in the early seventies[5]. This is the process of growth through accumulation that was famously highlighted by Krugman[6].

However, note that we disagree with Krugman that such growth is a myth and therefore disreputable just because it is driven more by factor accumulation rather than productivity. First, there can be no doubt that Asia's growth raised per capita incomes and improved welfare levels. Second, the process is self-reinforcing and, with the right policy-framework, can be sustained for very long periods of time (presumably for much of the duration of the second phase of demographic transition). Indeed, it can be argued that the industrialization process in the West was a result of a similar process of accumulation – after all, Max Weber's "Protestant Work Ethic[7]" is all about working harder and saving.

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[2] Conventionally, the life-cycle is supposed to only influence household savings rates rather than national savings rates. However, we feel that this is an artificial distinction as corporate savings eventually accrue to shareholder (i.e. people) just as public savings eventually reflects in tax/subsidies to citizens.

[3] "Demographic Transitions and Economic Miracles in Emerging Asia", by David Bloom and Jeffrey Williamson, NBER WP6268, November 1997.

[4] "Longevity and Life Cycle Savings" by David Bloom, David Canning, and Bryan Graham, NBER WP8808, Mar 2002.

[5] It appears that the investment-savings peak is somewhat before the actual demographic peak. We are not sure why this is the case. Possibly, the activity begins to cool off once economic agents feel more comfortable with the newly acquired savings pool and production capacity.

[6] "The Myth of Asian Miracle" by Paul Krugman, Foreign Affairs, November/December 1994.

[7] "The Protestant Work Ethic and the Spirit of Capitalism", Max Weber, 1905.

Invest at Home or Abroad?

The above model of the Asian Miracle, depends crucially on a sharp increase in domestic savings feeding an investment boom. In our view, this is the result of imperfect capital mobility that bottles up savings inside the country. This is not a new finding and was first established by Feldstein and Horioka in 1980[8]. The strong correlation between savings and investment has been since corroborated by many studies and is often dubbed "home-bias"[9]. The bottled up savings cause a sharp increase in the quantum of resources available to financial system as well as lowers the domestic cost of capital (perhaps this explains the charge of financial repression often leveled against these countries). In turn, this results in a lending boom, job creation and consequently even more savings.

However, note that empirical studies show that impact of demographics on savings is greater than that on investment, and the difference shows up in a current account surplus. According to a study by John Helliwell[10], the impact of changing dependency ratios on investment rates is half as strong as that on savings rates. Thus, he finds that falling dependency ratios have a positive current account impact in both OECD and non-OECD countries. Interestingly, Helliwell's study suggests the impact on current accounts has weakened over time for OECD countries while the reverse is true for non-OECD countries. As we will argue later, this last finding too accords well with our model.

The above findings imply that many countries at peak demographic stage will tend to both invest more as well as export capital. This goes against the conventional view that high growth country should be importing capital but it accords very well with what we observe in the real world. All those who think that China has been over-investing on the back of foreign capital should note that its investment rate of around 44% of GDP is less than the savings rate of around 47% of GDP (hence the current account surplus). Japan too exported large amounts of capital during its boom phase.

Many commentators have argued that the willingness of high-growth developing countries to export savings is somehow anomalous. In a recent Financial Times article, Martin Wolf argued, "It cannot make sense for these relatively poor countries to devolve the task of borrowing and spending on to the vastly richer US. If the people of emerging economies are to lend on a vast scale to any government, it should be to their own governments, which should be able to find better use for the funds now being poured into foreign currency reserves."[11]

So, why do these countries not absorb all their savings, especially when the rest of the world is often willing to give them even more money? As we will discuss in the next section, we feel it is a prudent response to the stresses causes by hyper-growth. In other words, the sharp increase in domestic savings plays a dual role in feeding the investment boom as well as building up the foreign exchange reserves needed as a bulwark against stresses that are inherent to the phenomenon. Those countries that get carried away and run current account deficits – as in the case of some Asian countries in the early-nineties – face the risk of having the virtuous cycle being brought to a sudden halt by a financial crisis.

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[8] "Domestic Savings and International Capital Flows", Martin Felstein & Charles Horioka, Economic Jounal, June 1980.

[9] Recent empirical studies suggest some weakening of "home bias" but it is mainly true for OECD countries. In our view, the data probably reflects the impact of European integration.

[10] "Demographic Changes and International Factor Mobility" by John Helliwell, NBER Working Paper December 2004.

[11] "The paradox of thrift: excess savings are storing up trouble for the world economy", by Martin Wolf, Financial Times, 13th June 2005.

Hypergrowth & Forex Reserves: Mercantilism or Prudence?

In the previous section we described a virtuous cycle of growth through ever increasing deployment of capital and labour. However, it should be recognized that hyper-growth also causes all kinds of stresses and distortions in the economy (as well as in society at large). The financial system is particularly prone to these stresses as it is the mechanism that mobilizes the savings and allocates these resources into investment.

Readers should be mindful of the fact that a country usually has a small and underdeveloped financial system when it enters the second demographic stage. This financial system is then suddenly loaded with the task of productively deploying very large amounts of resources. Not surprisingly, it misallocates some of these resources. The authorities have a choice – either they can impose very stringent prudential norms on the banks or they can keep the process running as long as possible without meeting with a crisis.

In a static world, the best option would be to impose strict regulations and clean up the banking system. However, this risks throwing the baby out with the bath-water by disrupting the virtuous cycle itself (after all, the process could take years and the demographic clock will keep ticking). Therefore, some Asian countries have opted to internalize the problem by absorbing much of the current account surplus (and foreign capital inflows) into foreign exchange reserves. In our view, this is the best interpretation of what China is doing now and what Japan did earlier. The bulwark of foreign reserves may not resolve the problem of poor capital allocation, but it protects the virtuous cycle from pre-mature disruption from an external crisis. This is why Japan and now China were able to maintain hyper-growth over very long periods of time despite worries about their banking system. In contrast, the countries that did not follow this strategy and ran current account deficits suffered from the Asian Crisis.

The need to build foreign exchange reserves means that the central bank must keep intervening in order to stop the exchange rate from rising to the "equilibrium" where inflows and outflows will match. Many studies have noted how high-growth countries have tended to have "undervalued" exchange rates at their point of take-off. Indeed, some economists have argued that such undervaluation may be a necessary condition for take-off[12]. This is usually interpreted as a form of mercantilism but, in our view, this is merely the reflection of a prudent response of internal stresses that accompany take-off. Our view is strengthened by a recent empirical study by Aizenman and Lee[13], which clearly shows that the Asian accumulation of reserves is the result of prudence rather than mercantilism (and is even true for China). Of course, this need for prudence will ease as the country (and its financial system) becomes more developed and this may explain Helliwell's finding that the impact of dependency on current accounts weakens over time for OECD countries.

Of course, not all hyper growth countries have followed the reserves accumulation strategy. A number of Asian countries ran significant current account deficits in the early nineties by following the conventional advice that high growth countries should import capital. At the peak of this phenomenon in 1995, Thailand had a current account deficit of 10% of GDP, Malaysia had an 8% deficit, Indonesia a deficit of 3% and Korea of 2% of GDP. The result was a large scale misallocation of capital that eventually resulted in the Asian Crisis of 1997. However, the misallocation problem was exacerbated by the fact that these countries were not just misallocating their

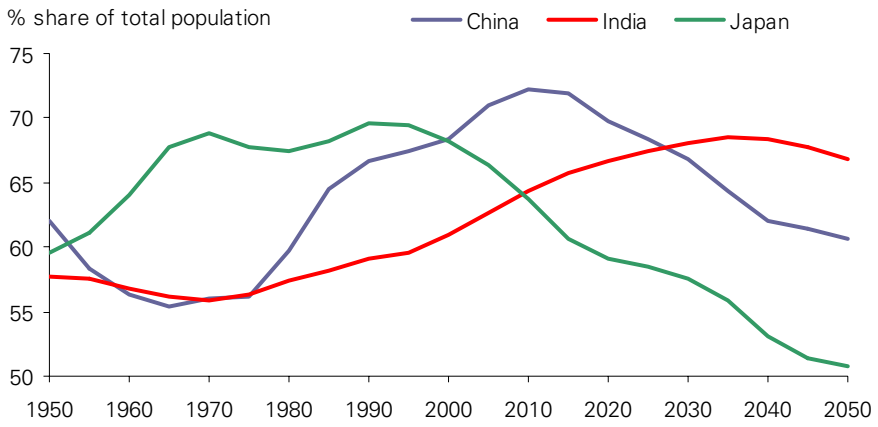
[12] See "Wealth Generation from Mercantilism: How Undervaluation of the Exchange Rate Matters for Growth", by Surjit Bhalla, paper presented at NBER/NCAER conference, 2004.
[13] "International Reserves: Precautionary versus Mercantilist Views, Theory and Evidence", by Joshua Aizenman & Jaewoo Lee, NBER Working Paper, May 2005.

own savings but also imported capital. Furthermore, these countries did not buy adequate insurance in the form of foreign exchange reserves against a sudden stoppage of external capital inflows. Note that we do not advocate the infinite accumulation of reserves – there is such a thing as over-insurance – but we feel that the "optimal" amount of reserves is far larger than what is conventionally believed.

Implications for Asia

Our model of Asian hyper-growth, triggered by demographic change, has many important implications for the future of the region. Here we will concentrate on two issues – the possibility that the Asian Miracle could spread to new countries, and the type of policies that can be expected from countries that are attempting to re-create the experience. As shown in the chart below, Japan is already past its demographic prime. In contrast, China will be at its peak between 2010 and 2015, before aging away rapidly. Perhaps as a result of the country's one-child policy, China will go through the most rapid transition of any major country.

Figure 2. Working Age Population



Source: UN Population Statistics

However, much of Asia remains quite young and some countries – in particular India – are about to enter the stage where the proportion of population of working age will rise rapidly from here. As shown in the chart above, India's share of working population will go past Japan's around 2010. However, India's transition process will be more gradual than that experienced by China, and the peak will be experienced only in 2035. The Philippines is even younger and will reach its peak around 2040. Most of the other Asian nations will fall in between the two extremes of Japan and the Philippines. In general, the more developed countries (Korea, Taiwan, Singapore etc) are now close to their peak while the less developed ones will hit their peaks in a few decades (with the exception of China which will age along with developed Asia)[14].

If each country is able to take advantage of the demographic opportunity, we can expect the Asian Miracle to continue to cascade down and for Asia to remain the growth engine of the world for the first half of the 21st century. More specifically, we can expect China to hand over the growth baton to India by the middle of the next decade. However, it is important to remember that demographic transition is an opportunity that still requires to be translated into growth. This means that the next generation of Asian tigers needs to have policy frameworks that take the best

[14] The city states of Hong Kong and Singapore are aging rapidly but we feel that their future age structures is likely to be a reflection of immigration patterns rather than the demographics of currently resident populations.

advantage of the opportunity because it is not certain that demographic changes will necessarily cause a boom in savings and drive hyper-growth. In Asia too there are countries that have undergoing demographic transition without experiencing the "Miracle" as well as former "tigers" where the virtuous cycle was derailed by the Asian Crisis. Therefore, it is important that the policy framework is conducive to the phenomenon.

We conclude that the first and most basic requirement is that the policy-framework encourages the generation and deployment of savings. This requires many things including basic governance, outward orientation (especially important for small countries with limited internal markets), an education system that imparts useful skills, openness to technology, labour laws that encourage job creation, a taxation structure that encourages private enterprise and so on. The majority of these ingredients will come as no surprise to most economists although it is still astonishing how often they are ignored by policy-makers. Even in India, a well established democracy, many of the institutions of basic governance leave a lot to be desired. Readers are directed to recent books by Bimal Jalan and Arun Shourie for a taste of these shortcomings[15]. In short, these basic requirements should not be dismissed as motherhood statements.

Second, we conclude policy-makers must accept that, even with the best intentions, hyper-growth is likely to cause serious stresses and dislocations in the economy. We had earlier pointed out the possibility of a financial/banking crisis caused by poor allocation of resources, as in the case of China and Japan. However, there can be many other kinds of problems. For instance, in the case of India, the authorities imposed strict prudential norms for banks prior to the lending boom but have been unable to control the fiscal deficit (the combined deficit of state and central governments is over 9% of GDP). This has resulted in a banking system that is cautious when lending to the private sector but is aggressively funding an increasingly indebted government. Thus, it has serious internal risks despite having cleaned up banking sector balance-sheets. In other words, it is prudent for India to hold down the Rupee from the market equilibrium and accumulate large amounts of foreign exchange reserves as long as is continues to have serious internal imbalances[16].

Can Latin America replicate the model?

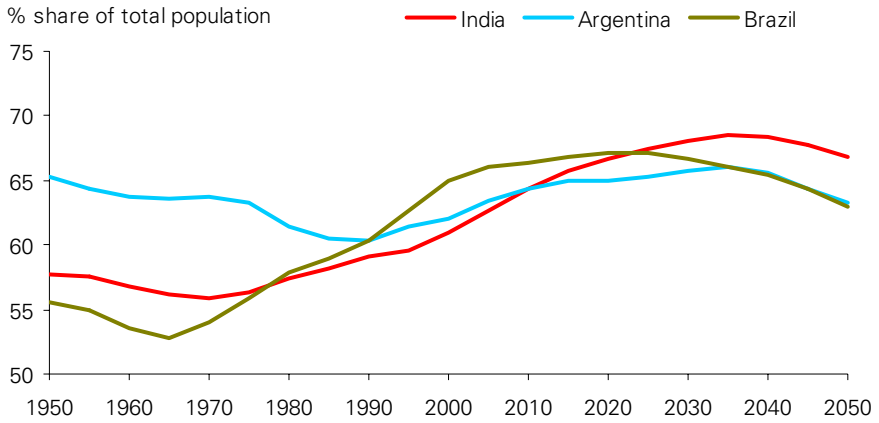
The hyper-growth phenomenon is now associated almost exclusively with Asia. Yet, it is intriguing to consider the possibility that Latin America may one day partake in the virtuous cycle of savings and investment. As shown in the chart below, Brazil has a demographic profile that is very similar to that of India. Argentina presents an event more interesting trajectory. It has one peak in the early 1950s, and then a decline over the next four decades. However, the share of working age population stabilized in the late nineties and will now rise in the next three decades to a peak in around 2030[17]

[15] See "The Future of India: Politics, Economics and Governance", by Bimal Jalan, Penguin 2005.

[16] For a more detailed discussion of India's exchange rate policy see "Foreign Inflows and Macroeconomic Policy" in Vijay Joshi & Sanjeev Sanyal in India Policy Forum 2004, edited by Bosworth, Bery & Panagariya, published by Brooking & NCAER.

[17] In theory, Argentina had a valid reason for smoothening the space between its twin peaks by running up large external debt. However, this assumes the availability of such long term capital and that the capital was used productively.

Figure 3. Working Age Population



Source: UN Population Statistics

However, demographics may not be sufficient to trigger a sustained savings-investment boom, especially in countries that have repeatedly experienced financial crises. After all, the dynamic depends on domestic savings being bottled-up inside the economy and thereby causing a liquidity boom in the local financial system. However, if people do not trust the financial system (or the government), higher household savings could merely feed large-scale capital flight rather than trigger the virtuous cycle[18]. In his study of Latin America's financial liberalization experience, Aizenman argues that Latin America suffers less from a lack of savings and more from that of credibility and good governance.

Fortunately, South America has not yet passed its demographic peak. Even Argentina is likely to get a second chance in the next few decades. Therefore, the region does the opportunity to emulate Asia's hyper-growth provided it is able to re-establish trust in its financial institutions.

Implications for the Developed World

The possibility of a prolonged boom in developing country savings presents interesting implications for the developed world. As Asian countries (and perhaps the Latin Americans too) run current account surpluses and build reserves, the capital will need to find itself some space. However, the funds will not easily trickle through to other developing countries that are still capital-deficit (say those in Africa) because it is being invested for precautionary reasons and is therefore risk-averse. Thus, we will see much of this money shift out to developed country financial markets.

In some recent papers, international capital mobility has been shown as way to smooth economic effects of the aging process. Thus, advanced countries first export capital to fast growing developing countries, and later import capital as aging causes their savings rates to fall. Unfortunately, the global aging process is not neatly coordinated. This problem is a particularly acute in the next decade:

- Most developed countries with the exception of Japan will yet to have drifted into the third stage of demographic transition. Aided by immigration, we expect the US will only hit its peak in 2010-15. Although many of the other Western countries have already hit their peaks, they will only go into sharp decline after 2015.

[18] Capital controls can be used to artificially hold in capital but experience suggests that they should be used sparingly in view of the costly distortions that they cause.

- Amongst Asian emerging markets, China shouldl be at its peak in the next ten years even as others, most notably India, will be entering the sweet-spot.
- Parts of Latin America should also be witnessing sharp increases in the share of working age population. Even if these countries do not fully replicate Asia's miracle, they will probably still end up generating more savings than in the past.

The above configuration suggests a global glut of capital over the next decade, much of it finding its way to the developed financial systems. The situation could be made even worse if accept the proposition put forward by some economists[19] that investment rates in the aging developed economies would initially fall faster than their savings rates. Most of these models assume that the aging economies can export this excess capital. Boersch-Supan et al argue that ideally German capital exports would peak at 7% of GDP in 2020[20]. However, as we have already discussed, this may not be possible if the most attractive investment destinations (i.e. the hyper growth countries) are also trying to export capital.

Recently, a number of commentators have begun drawing attention to the global glut in savings[21]. This is often seen as an imbalance caused by the failure of high savings countries to spend enough. This is unfair to countries like China who may be saving more but also spending aggressively (surely a country with an investment rate of 44% of GDP cannot be considered a slacker). Far better, in our view, is to see this as the natural result of structural demographic factors and recognize the need to find a way to accommodate it over a prolonged period of time.

Indeed, developed countries can see this as an opportunity rather than a problem. As long as developed financial systems are willing to find "safe" investments for their money, savers from hyper-growth developing countries will be willing to accept relatively low returns from these investments – after all, their overall incomes will be rising quickly anyway from the hyper-growth phenomenon itself.

In our view, this process helps all sides. Developed countries can take advantage of all this cheap capital as long as they can maintain the credibility of their financial institutions. Meanwhile, developing countries get the space to pursue hyper-growth without fear of sudden disruption. As Dooley, Garber and Folkerts-Landau[22] have argued in recent years, this re-establishes a Bretton-Woods style international monetary system where the "periphery" countries keep their exchange rates undervalued against the "center" and accumulate foreign exchange reserves. The model presented by Dooley et al explains this process as the result of outsourced financial disintermediation while the model presented here generates a similar result from the risk diversification behavior of high-savings countries in the second demographic stage.

[19] "The Impact of Aging on Financial Markets and the Economy: A Survey", by Barry Bosworth, Ralph Byant and Gary Burtless, Brookings Institution, 2004.
[20] "Aging and International Capital Flows", by Alex Boersche-Supan, Alex Ludwig & Joachim Winter, NBER Working Paper, October 2001.
[21] "The paradox of thrift: excess savings are storing up trouble for the world economy", by Martin Wolf, Financial Times, 13th June 2005.
[22] "An Essay on the Revived Bretton Woods System" by Michael Dooley, David Folkerts-Landau & Peter Garber, NBER Working Paper, September 2003.

Conclusions

There is now growing empirical evidence that demographics have a powerful impact on savings behavior. We have argued that these savings combine with the easy availability of labour to trigger hyper-growth during the second phase of demographic transition. Many Asian countries have already undergone this process and population trends suggest that China is currently approaching its peak. However, our model also suggests that this phenomenon could easily spread to other regions if supportive policies are followed – most notably to India and even parts of Latin America.

Unfortunately, high rates of growth also result in internal stresses that threaten to derail the process itself. In an ideal world, policy-makers may be able to directly mitigate stresses that may emerge, particularly in the resource allocation process. However, policy-makers may sometimes find it difficult to resolve the stresses without disrupting the growth process itself. We feel that a second best solution may be to divert some of these savings to building foreign exchange reserves as a bulwark against a sudden shock. Past experience suggests that Asian countries that fail to build their defenses eventually suffered from severe financial crises. We, therefore, view the Asian penchant for accumulating reserves as a defensive rather than mercantilist strategy, a way of thinking that has been bolstered by the experience of the Asian Crisis.

The idea that high growth developing countries should be willing to export capital goes against most conventional wisdom. In contrast, we have argued that this is not only natural but that we should expect a bunching of this phenomenon in the next decade. This will come at a time that aging developed countries would normally have wanted to export capital. Therefore, we feel that the global demographic configuration could cause a prolonged savings glut (probably already visible).

In our view, it is not meaningful (indeed unfair) to deal with the excess savings problem by disrupting the hyper-growth process. The real challenge is to find ways to accommodate the insurance requirements of developing countries that are using the demographic opportunity to grow and remove poverty. If reserves accumulation is deemed an inefficient way to achieve this end, we should look for other innovative ways to provide the service. We feel that developed financial systems can provide a mechanism for absorbing this capital provided that they can maintain the credibility of their institutions. Indeed, developed countries can take advantage of the cheap capital to substitute for their aging labour force since the savers will ask for safety rather than for high returns.

Appendix 1. Gross Capital Formation

% GDP	1960	1970	1980	1990	2000	Latest
Argentina	23	24	25	14	16	15
Brazil	20	21	23	20	22	18
China	36	29	35	35	36	44
Germany	–	–	26	24	22	18
India	15	16	19	24	23	24
Japan	33	39	33	33	26	24
Korea, Rep.	11	25	31	36	31	29
United Kingdom	19	20	18	20	18	16
United States	19	18	20	18	20	17

Source: World Development Indicators, World Bank

Appendix 2. Gross Domestic Savings

% GDP	1960	1970	1980	1990	2000	Latest
Argentina	23	25	24	20	16	26
Brazil	20	20	21	21	20	22
China	–	29	35	38	39	47
Germany	–	–	21	24	22	22
India	13	15	16	23	22	22
Japan	34	41	32	34	28	26
Korea, Rep.	2	15	23	35	34	32
United Kingdom	18	21	20	18	15	13
United States	19	18	20	16	17	14

Source: World Development Indicators, World Bank

Certifications

The views expressed in this report accurately reflect the personal views of the undersigned lead analyst(s). In addition, the undersigned lead analyst(s) has not and will not receive any compensation for providing a specific recommendation or view in this report.

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