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Asia's fading economic miracle

By George Magnus

CENTRE FOR EUROPEAN REFORM

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★ Many things will have to go right if Asia's economy is to maintain its rapid rate of expansion. The economic models that worked over the last 30 years have either developed flaws or will not work as well in the future. And changing a model always throws up greater challenges and uncertainties than incremental changes in policy.

★ What has sometimes seemed like an economic miracle in Asia can be explained by conventional economic theory, aided and abetted by rapid globalisation. Asia's ability to weather the global financial crisis is not down to a superior economic model, but the fact that its own financial crisis occurred a decade earlier, and private sectors had repaired their balance sheets by 2007.

★ Increased dependence on credit, and economic weakness in the West, threaten financial stability and economic growth across Asia, especially in China. Manufacturing competitiveness may also start to tilt back to advanced economies as the latter benefit from new production technologies, and in the US case, cheap energy. Without vigorous reforms, many Asian countries could get caught in a 'middle income' trap.

According to conventional wisdom, Asia, with a rising China at its heart, is the future. The popular proliferation of estimates about when China's economy will overtake the US, or when other Asian economies will rival or overtake those in Europe, adds a certain frisson to this perspective.

The economic significance of Asia is fact. It is home to the world's busiest trade routes and manufacturing hubs, and some 3.5 billion people, over half the world's population. It has 2 billion people of working age, and will add around 770 million in the next 40 years, mostly in India and Indonesia. The 'next billion consumers' in the global economy will be based largely in Asia, and the spending of Asia's middle class is expected to rise in the next 20 years from about \$4 trillion to over \$30 trillion, or roughly 42 per cent of worldwide consumer spending.[1]

Global companies headquartered in Asia are on the march. There were only 26 represented in the global Fortune 500, ranked by revenues, in 2005. Today there are 91, two thirds of which are based in China.[2] Lenovo, the Chinese computer company, is a sponsor of the American National Football league. Huawei, now the world's largest telecommunications equipment maker, was the subject of a lead story in *The Economist* in August 2012.[3] Commercial Aircraft Corporation, China's state-owned passenger aircraft manufacturer, is facing up to Boeing and Airbus. India's Tata Corporation has bought iconic brands, such as Jaguar and Land Rover, while China's Geely Holdings owns Volvo. Samsung, Hyundai and Taiwan's HTC are long established global brands.

Indeed, Asian countries would seem to have more cause for concern about the slump in European demand, than European countries would about what is happening in the East. The OECD now predicts a second consecutive year of contraction for the eurozone in 2013, and who knows when and under what circumstances economic growth and employment will recover to levels last seen in 2008.

It is inevitable, therefore, that European countries are looking to high-growth Asia to bolster their exports, and to establish manufacturing and other commercial operations. EU exports to the region, for example, amounted to €330 billion, or 22 per cent of the EU's total in 2011. Imports from Asia were roughly €530 billion, or 30 per cent of the total. China accounts, for around half of European trade with Asia, with EU exports to that country doubling since 2005.

1: Measured in 2005 dollars (at purchasing power parities).
2: While this level of penetration is impressive, most of these Asian companies are concentrated in energy and utilities, except for those in Korea, Taiwan and Singapore. For example, Sinopec and State Grid of China rank 7th and 8th in the global revenue rankings, while Samsung Electronics ranks a relatively low 32nd.
3: 'Who's afraid of Huawei?', *The Economist*, August 4th 2012.

The benefits, though, are unevenly distributed in Europe. In Germany and other North European countries, exports represent a significantly higher proportion of GDP than in France, Italy and Spain. And the relative importance of the Asian markets is also substantially higher for the Northern Europeans. Nevertheless, a Europe-wide economic agenda to restructure, boost competitiveness and shift resources into exports, and the expectation that the region's cohort of middle class consumers will rise exponentially, means that Asia is a magnet for European companies. Indeed, many of them already derive a large proportion of their revenues from the region; in Europe's luxury goods sector this proportion is as high as 30-40 per cent.

The problem is that Asia may now be at a point that we can call 'the end of extrapolation'. The export-dependent models of ASEAN countries and, to a degree, China, have been shown up by the financial crisis.[4] Roughly three quarters of Asian exports end up outside the region, predominantly in Europe and the US, and the short- to medium-term prospects for Western demand are very weak. China's investment-heavy growth model has to succumb to significant economic rebalancing and lower economic growth, if the country is to avoid a damaging bust. In China, India and several other countries, political and structural economic reforms are the key to steering clear of the so-called middle income trap, where growth in income per head is prone to stall. In short, Europe and the US are looking to Asia to carry the baton of global economic expansion at a time when Asia's economic development has arrived at an important crossroad.

Asia's global significance

Back in 1944, as the tide in the Pacific War turned in favour of the United States, 'The geography of peace', a book by a recently deceased geographer and strategist, Nicholas John Spykman, was published. Spykman emphasised the strategic and maritime significance to the US of what he called the "rimland", or the countries and islands on the rim of the continental powers of the US, Europe, and the then USSR. The geography of the rim ran from Southern Europe and the Maghreb, east through the Persian Gulf, into the Indian Ocean, across to the South China Sea and up to Japan and the north-west of China. Spykman asserted the importance of the population characteristics, resource endowments and industrial development potential of the Asia-Pacific rim, in particular. He argued that whoever controlled this rimland would rule Eurasia, and the destiny of the world. This judgement has been firmly embedded in US military, foreign and international economic policies to this day.

In 2011, 67 years after Spykman's book appeared, President Barack Obama toured Asia to assure allies of America's total commitment to the region, and its determination to promote deeper trade links (Congress had just approved a trade deal with South Korea). In passing, he announced the deployment of 2,500 marines plus naval ships and aircraft to a base in Darwin, northern Australia. As his chairman of the Joint Chiefs of Staff, General Martin Dempsey, noted at the time, "all of the trends, demographic trends, geopolitical trends, economic trends, and military trends are shifting toward the Pacific. So our strategic challenges will largely emanate out of the Pacific region, but also the littorals of the Indian Ocean."

A key part of current US strategy – or the 'pivot to Asia' – is the embryonic Trans-Pacific Partnership (TPP), a free trade bloc comprising Australia, Brunei Darussalam, Chile, Malaysia, New Zealand, Peru, Singapore, Vietnam and the United States. The TPP is designed to solidify America's economic, political and military influence in Asia. The agreement, which covers services, intellectual property, the internet and data movement, 'regulatory coherence', and investment (including by state owned enterprises), aims to eliminate most import tariffs by 2021.[5] Japan is negotiating to join, while Canada and Mexico have been invited to do so. With all of these countries included, the TPP would cover over 40 per cent of US exports.

> *"There is more to the competition between China and the US than the pursuit of economic advantage."*

China is not part of the TPP. Its transformation from a poor, high growth consumer of Western products to a sophisticated middle income competitor and geopolitical power has changed the economic and political balance of power between itself and the US, and within Asia. In China, where nationalism has been rising in recent years, America's pivot to Asia is viewed as a further iteration of a strategy designed to restrain China's development. The Chinese fear that the US wants to thwart their claim to be Asia's dominant economic and political power, and to stir up fears of its growing regional role.

Some Chinese leaders also see the US strategy as an attempt to frustrate the internationalisation of the renminbi, by limiting the extent to which China might promote its currency as a means of payment for trade and financial transactions. They fear that trade alliances with the US may extend US financial influence, and perpetuate the use of the US dollar. China argues strongly for ending

4: ASEAN includes Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

5: This is a fancy term for making regulatory systems generally compatible with those of the US.

the dollar's dominant role in, and what it regards as America's abuse of, the global monetary system. These sometimes parochial-seeming arguments over the role of the US dollar and the internationalisation of the renminbi are not just esoteric debates among financial practitioners. As Joseph Schumpeter pointed out: "The monetary system of a people reflects everything that the nation wants, does, suffers, is."[6]

The theme underlying all these developments is the huge significance of Sino-US economic competition in Asia and its implications for the structure of the global economy, and for economic relations between Asia and Europe. Competition in principle can be good for all parties, but there is something more to this competition than the pursuit of economic advantage. The financial crisis in the West has emboldened those who think that a Sino-centric Asia is blessed with a superior economic model to the now broken and debt-ridden free market, liberal capitalist variety. West and East may no longer argue about ideology as such, but there are strong differences in the models that span economic and social arrangements. The role of the state in the economy differs considerably. Many Asian governments are actively involved in foreign trade strategies, while state-owned or state-sponsored institutions are major investors abroad and play a big role in securing access to resources in the Middle East and Africa.

But the miracle may be over

The Asian miracle, heralded by the World Bank in a major report in 1993, has been the subject of heated debate. Paul Krugman's infamous article, 'The myth of Asia's miracle',[7] published in *Foreign Affairs* in 1994, suggested that the miracle was more perspiration than inspiration. In other words, impressive Asian economic development could be fully explained by demographics, high savings, rising investment, improving education, labour transfer to the modern sector and other measurable inputs. Sooner or later, growth would weaken in the absence of strong innovation-led productivity growth.

In the event, even as the growth rates of the 'Tiger economies' (Hong Kong, Singapore, South Korea and Taiwan) slowed, developing Asia's GDP growth rose from an average of 7 per cent per year in 1994-2003 to 9 per cent in 2004-2011. This was largely driven by a sharp acceleration in China and India in the years preceding the 2007 financial crisis. A decade earlier, during the Asian crisis of 1997-98, many people wondered whether the Asian miracle had already ended. But while the financial excesses that preceded the bust did depress growth for a while, they did not have a permanent effect. And by the time the Western financial crisis erupted, Asian balance sheets were in good shape, and the capacity to implement strong stimulus measures was high.

One of Asia's most prolific cheerleaders, Kishore Mahbubani, Dean and Professor at the Lee Kuan Yew School of Public Policy at the National University of Singapore, published a book in 2008 called 'The new Asian hemisphere: The irresistible shift of global power to the East'. On cue, Asia weathered the financial crisis and ensuing global recession successfully, and economic growth rebounded strongly in 2011, rising to almost 10 per cent.

Since then, however, Asian economic growth has been sliding and now stands at around 7 per cent or so. This is a reasonable enough rate of expansion, but not rapid enough to satisfy investors: developed world stock-markets consistently outperformed Asian ones in 2011-12. At first glance, slightly slower growth and relatively disappointing equity returns over the last 18 months should be of fleeting concern. But there is a catch. Although some of the slowdown in growth is the result of cyclical factors (weaker exports to the West and a tightening of monetary policies), some of the explanation is structural.

> *"Some of the slowdown in Asian growth is cyclical, but there are structural causes too."*

This underscores Krugman's conclusions: "The newly industrialising countries of the Pacific Rim have received a reward for their extraordinary mobilisation of resources that is no more than what the most boringly conventional economic theory would lead us to expect. If there is a secret to Asian growth, it is simply deferred gratification, the willingness to sacrifice current satisfaction for future gain." His thesis that Asian output growth was fully explained by input growth, and that as the latter became exhausted, the former would slow down, was rejected out of hand in Asia, and still is.

The main arguments today are first, about the extent to which the healthy balance sheets that insulated the region from the Western financial crisis are now deteriorating, and second, about what happens after the initial economic 'catch-up' of the last 30 years.

6: 'Staring into the abyss', *The Economist*, November 12th 2011.
7: Paul Krugman, 'The Myth of Asia's Miracle', *Foreign Affairs*, November/December 1994.

Credit alone cannot deliver sustainable growth

Asian economies do not face an immediate threat from rampant credit expansion, but the trends are worrisome. Governments have substituted credit expansion for more difficult and politically complex structural reforms.

In the eight years before the Asian crisis in 1998, the ratio of bank credit to GDP surged from 65 per cent to a peak of 96 per cent. After the bust, Asian countries succumbed to several years of deleveraging. Particular areas of vulnerability proved to be short-term banking sector liabilities in South Korea and Thailand, large maturity mismatches in the borrowings, for example, of Indonesian companies, and low levels of foreign exchange reserves. There are few major concerns today. Asia's banking systems in general still have relatively low leverage ratios, contained by high rates of economic growth and conservative regulators, and bank capital adequacy ratios in the low-to-mid teens that exceed most international regulatory norms.

Since 2002, however, the ratio of bank credit to GDP in Asia has grown sharply (it now stands at 106 per cent), with much of the rise occurring since 2008, following China's credit surge. Loan to deposit ratios in Asian banking systems are rising again, as banks take on more leverage. While balance sheet risks in the private sector look contained for the time being, the increased dependence on credit is a warning sign of weakening investment returns, misallocation of capital and eventually an abrupt slow-down.

China's credit trends are being watched closely as the boom following the 2008 stimulus programme unwinds, aided and abetted by quite hawkish responses from the government and the central bank. Growth in the volume of outstanding Chinese bank loans was unremarkable in 2012, at around 15 per cent. Set against this, the aggregate known as 'total social financing', a broad measure of credit of which bank loans represent about a half, was very buoyant, rising by over 20 per cent and pushing the total share of credit as proportion of GDP to around 200 per cent. This is an extraordinarily high level for an emerging economy with China's still low income per head.

In Asia, fiscal deficits are relatively low as a share of GDP (except in India and Malaysia), as are public sector debt ratios (except in India) and gross external debt (other than in Vietnam). China boasts a seemingly virtuous position with public debt officially recorded at 20 per cent of GDP, but the real figure is almost certainly already in excess of 60 per cent.[8] Something around this level would give China the second highest (after India) ratio of public debt to revenues in the region at 263 per cent – not a million miles from the OECD average.[9] Indeed, the generally comfortable fiscal positions of Asian governments are not carved in stone, neither from a cyclical nor structural perspective. They face rising pressure to address income inequalities, build social safety nets, and in the cases of China and the original Tiger economies, support ageing populations.

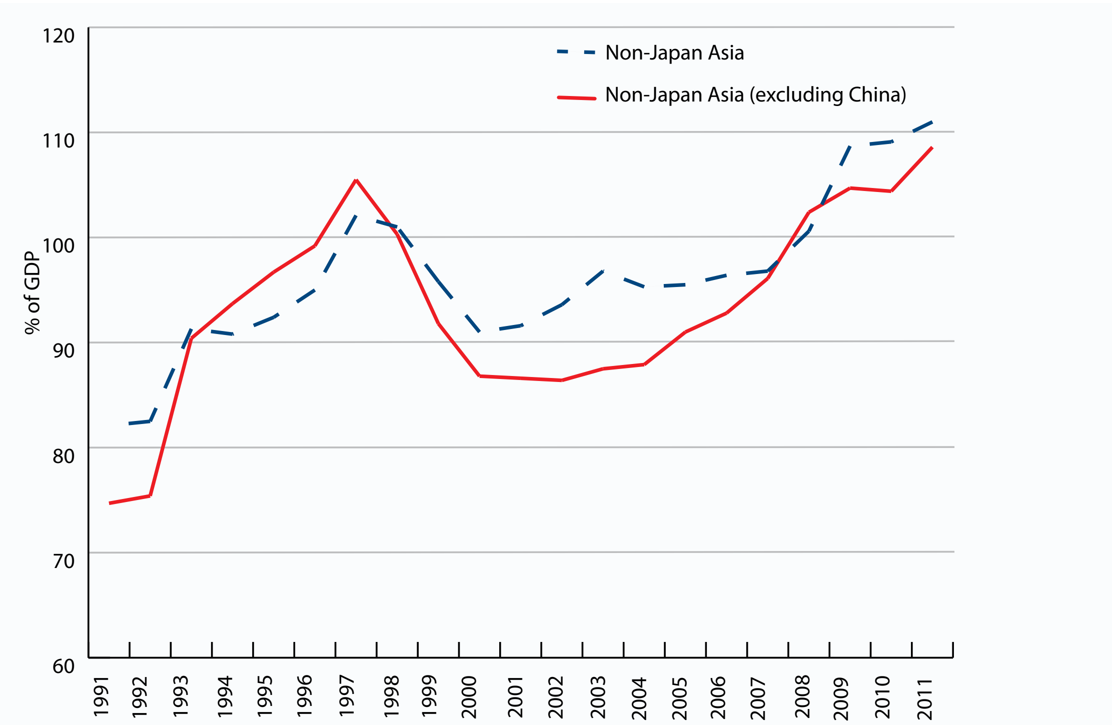

Chart 1:
Ratio of bank credit to GDP
Source: CEIC/UBS

8: Including local government debt of around 30 per cent of GDP and government guaranteed debt, for example for the national railways, of about 10 per cent of GDP.

9: The IMF estimates acknowledge that outstanding levels of public debt are significantly larger than has been reported.

In the face of rising credit intensity and fiscal balances that are less robust than commonly assumed, Asian countries will have their work cut out to sustain the very high growth rates of the recent past. To do so, they will have to promote stronger household consumption of goods and services, a reorientation of trade to other Asian and emerging countries, and the adoption of political and institutional reforms to sustain a vibrant and entrepreneurial private sector. A critical factor, especially for countries such as China and India, is a re-think of the role of the state in fostering economic development.

What follows catch-up?

China – and Asia more generally – need a new economic model if they are to sustain the strong performance of the last 20 years. After all, China cannot join the World Trade Organisation twice. In China, as in some other Asian countries, labour migration to urban areas is either ending or is running into constraints that are pushing up wage costs, and eroding competitiveness. High savings and investment rates have reached a plateau and – India aside – basic educational attainment levels and school enrolment have already risen. In many of the region's economies, essential public investment has been completed, or, in the case of India, stymied by politicians' neglect and corruption.

As Asian countries, particularly China, reach the limits of physical resource mobilisation and the constraints imposed by the exploitation of existing technologies, their growth prospects will depend more and more on being smarter rather than working harder. In short, it will require rapid growth in total factor productivity growth (TFP), which in turn depends on technological capacity and robust institutional arrangements.[10]

Historically, TFP in Asia has been consistently higher than in other emerging markets. For example, it accounted for half of the 4 per cent economic growth premium over Latin America since 1980. Nevertheless, there was nothing remarkable about Asian TFP growth until about 2000, when it accelerated across the region. Improving educational levels, rising electricity consumption, the growth of air transport, telecommunications and internet usage, as well as the shift to higher value-added exports, have all contributed to Asia's faster TFP growth. And this growth has been underpinned by efficiency gains arising from technological achievement on the one hand, and high savings and the absence of balance sheet problems and financial instability on the other. The trouble is that some of the surge in the 2000s may reflect the one-off impact of globalisation and the recovery from the Asian crisis, and the rate of growth in TFP is almost certainly now slowing down again, in large measure for structural reasons.

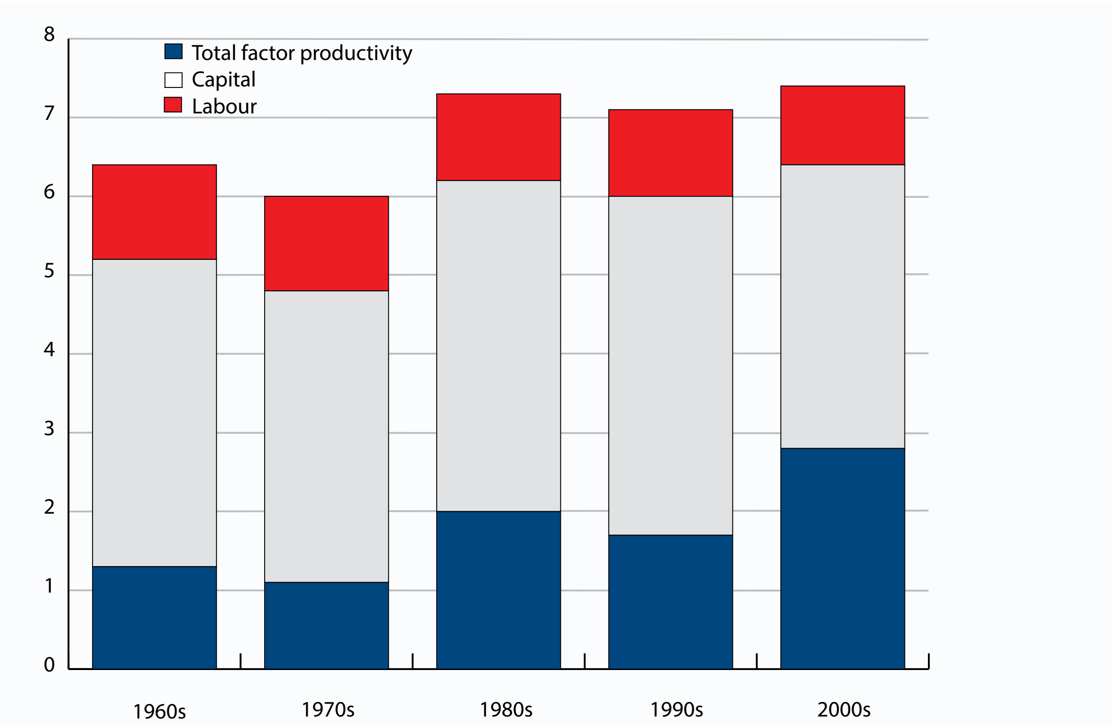

Chart 2: The components of Asian economic growth

Source: CEIC/UBS

10: Total factor productivity refers to the proportion of economic growth not explained by inputs of labour and capital.

11: Jungsoo Park, 'Projections of long term productivity growth for 12 Asian economies', Asian Development Bank, Economic Working Paper No. 227, October 2010.

The Asian Development Bank (ADB) argues that if Asian economies are to boost the rate of growth in TFP, they will need to dismantle barriers that restrict or stifle growth, investment and innovation. According to the ADB, these include: the absence or limited application of the rule of law; over-dependence on the state as an owner and producer of goods and services (rather than as a provider of non-tangible financial and commercial services to support entrepreneurship and innovation); weaknesses in the quality of and access to post-school education and training; underdeveloped financial markets; discriminatory public procurement policies; distortionary taxes and subsidies; and weak information security and intellectual property protection.

The chart below shows the sequential changes in the contributions to Chinese economic growth since the onset of reforms in 1979. The contribution of labour to growth is falling, while those from investment and TFP are sliding too. The slowdown in TFP growth, along with the contribution of investment to GDP growth, testifies to the need for reforms to raise the efficiency with which resources are employed. As explained later, one of the biggest challenges facing the Chinese authorities is to change the role of the state vis-a-vis the private sector.

The trend rate of economic growth in China is already coming down as a result of changes in the labour market and the demographic consequences of three decades of the one-child policy. These factors, combined with the complex task of rebalancing the economy, and the uncertainties generated by the recently announced change in leadership, may have pushed the trend rate of growth to just half of the 10 per cent per annum registered over the last decade.[12]

> *"Growth will increasingly depend on technological capacity and institutional arrangements."*

Does this matter? People care about income growth, jobs and opportunities, not the rate of GDP growth, so 5 per cent per annum need not be disastrous if the rebalancing of the economy is managed well. But there is no doubting the scale of change involved: it implies a shift towards a less commodity-hungry economy, which in turn will have negative implications for those who have profited from the workings of China's economic model to date. They can certainly be expected to resist political reforms if the new leadership has the unity of purpose to pursue such reforms.

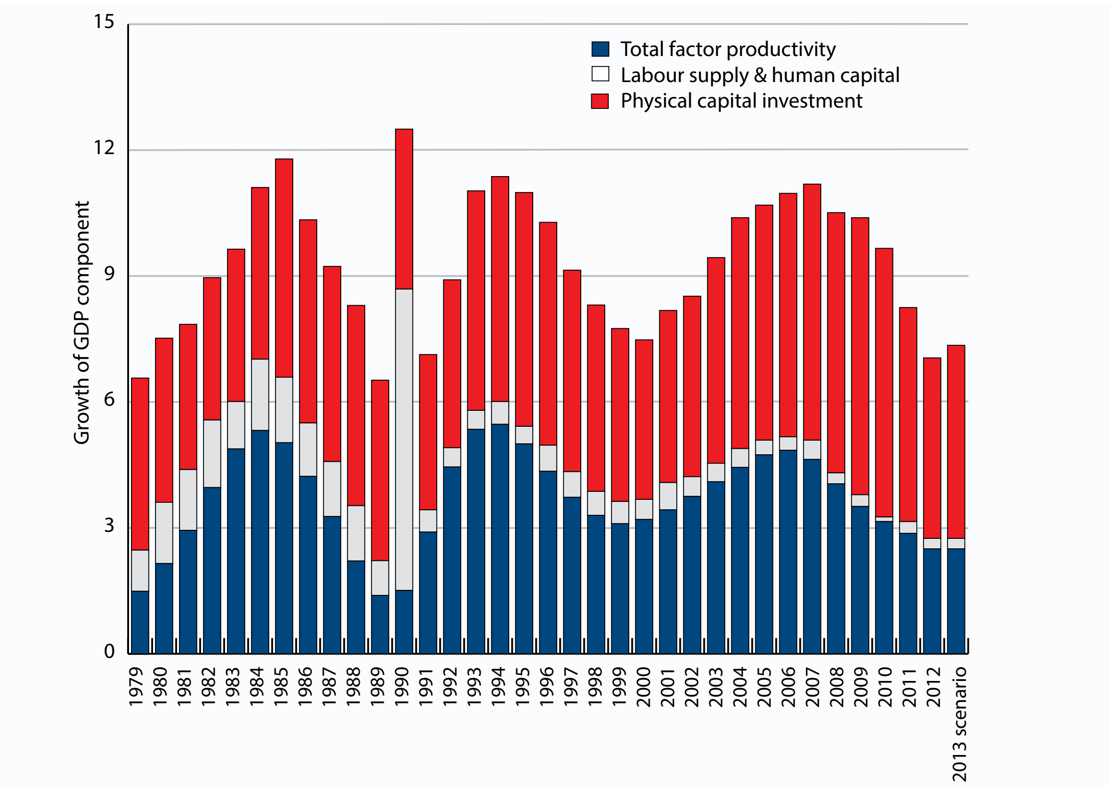

Chart 3: The components of Chinese economic growth

Source: Amiya Capital

12: There is plenty of disagreement about the accuracy of Chinese macroeconomic statistics, and about reported GDP growth in particular. See, for example, Janet Koech and Jian Wang, 'China's slowdown may be worse than official data suggest', Federal Reserve Bank of Dallas, August 2012.

India's trend rate of growth is also almost certainly lower than commonly assumed. The degradation of state institutions lies behind the fragility of the country's growth story.[13] Pervasive institutional weaknesses will make it hard to address the country's low levels of investment, poor infrastructure, energy bottlenecks, and fiscal and trade deficits. Only a few years ago, popular thinking was that India would be the next 10 per cent per year growth story, but, as things stand, it may be more realistic to think of India's underlying growth potential as closer to 5-6 per cent. This is important because many forecasters believe that India will be the third largest economy by 2030, after China and the US. But if India's sustainable growth rate is nearer to 5-6 per cent rather than 10 per cent, it will converge with the West much more slowly than assumed – to say nothing of India's income per head and levels of social and economic well-being in the country.

Kishore Mahbubani claims that Asians have understood, absorbed and implemented Western best practices from free market economics to modern policies towards science and technology, and from meritocracy to the rule of law. Even if this assertion were at least partially true for some countries, it is surely a profound over-statement. He is right that many Asian policy-makers understand what kinds of institutions and governance structures are needed to underpin rapid and sustainable economic development. However, the problem is not about understanding, but about implementation in the face of opposition from vested interests, who profit from the existing customs and power relationships. The outcome of this stand-off could have an important impact on the region's longer-term economic performance.

"Reformers face vested interests, who profit from the existing power relationships."

Trapped in the middle?

In many Asian countries, modernity and backwardness make for strange bedfellows. In developing Asia, excluding China and the original Tiger economies, almost 30 per cent of people are aged under 15, and low old-age dependency ratios will persist for another 20-25 years. This could provide a powerful demographic dividend if people can be educated, trained and employed productively. Employment participation rates, however, are low, especially for young people. Only 60 per cent of young men and 40 per cent of young women are classified as employed. Unemployment (including underemployment) averages about 25 per cent. About 700 million people in Asia have restricted access to drinking water, 1.9 billion people experience poor sanitation, 100 million children are not enrolled in primary schools, and over 100 million children under the age of five are underweight.[14]

These blots on Asia's landscape will become more pronounced in the absence of economic and institutional reforms. Some countries, like Malaysia and Thailand, are already solid middle income nations, but the quality of their institutions lags far behind, for example, Hong Kong and Singapore.[15] Indonesia scores pretty well overall, but has weak legal and regulatory institutions. India is of course still a low income country, with a satisfactory legal system, but weak governmental, labour market and regulatory institutions. And China, which could on present trends almost triple its income per head by 2020 to around $13,000 to become borderline high income, has effective government, but poor legal, entrepreneurial and commercial institutions.

The links between strong institutions and rapid (and sustainable) development, which become tighter as income per head rises, have been understood for a long time.[16] As countries become middle income, many of the factors that propel catch-up diminish. The rural labour surplus wanes, pushing up wages and eroding competitiveness. The productivity surge arising from the reallocation of labour from agriculture to manufacturing, and the associated technological catch-up and exploitation of existing technologies, runs out of steam. The key to the next phase of development lies in innovation and efficiency-led productivity enhancement, which is essentially about robust institutions, as well as smart people.

With China as its focus, the World Bank examined these issues in great detail in a recent report, written in conjunction with Beijing's Development Research Centre, a government think-tank.[17] In the report, the authors show how hard it is for middle income countries to break into the high income bracket. They show that only 13 of the 101 countries deemed middle income in 1960 had succeeded in becoming high income by 2011.[18] This sober observation illustrates that past economic performance

13: Ramachandra Guha, 'Fantasies of power in my land of muddle along', *Financial Times*, August 2nd 2012.
14: Rajat M. Nag, 'Leadership in a New Asia', Asia Leadership Dialogue, Manila, Philippines, 2009.
15: See 'Economic freedom of the world annual report 2011', Fraser Institute.
16: George Magnus, 'Is China tearing the rule-book apart?' Economic Insights, UBS Investment Research, March 16th 2011, Darren Acemoglu and James Robinson, 'Why nations fail', Crown Publishing, 2012.
17: 'China 2030 – Building a modern, harmonious and creative high income society', The World Bank and Development Research Centre of the State Council, PRC, 2012.
18: Equatorial Guinea, Greece, Hong Kong, Ireland, Israel, Japan, Mauritius, Puerto Rico, South Korea, Singapore, Spain and Taiwan.

is not a good guide to the future, and that for most Asian countries, a middle income trap beckons.

To question the Asian economic miracle is not to doubt China's and Asia's economic potential and significance. But it does throw down the gauntlet to the conventional thinking that extrapolates Asia's past economic performance into the indefinite future, and assumes that the competitive challenge from the US and other Western countries and companies is now a spent force. While no-one thinks Asian economic growth will come to a grinding halt, absent another financial crisis, the region's underlying rate of expansion could easily become much more pedestrian, and be accompanied by rising political tensions.

The consensus view may also be under-estimating the speed with which the US, for example, is rebuilding its competitive edge. Cheap energy, courtesy of shale gas, and the country's lead in additive manufacturing and other advanced production and materials technologies, hold out huge promise for the US over the next decade. One of the biggest losers could be China, because of its hub position in long, complex global supply chains.

Technology: Who will eat whose lunch?

If Asia's economic model is to evolve away from its excessive dependence on the deployment of labour and capital, technology and innovation are going to have to become more important. China's attraction as a global manufacturing base has not worn off yet, but several developments are chipping away at it. At home, these include rising labour costs and shortages of skilled labour, and other more complex issues, such as the 'indigenous innovation' directive aimed at supporting local high-tech firms. Other factors include insecure intellectual property rights, the absence of the rule of law, and the stifling impact of commercial state entities on private enterprise and initiative.

In the meantime, neither the US nor Europe should be expected to stand still when it comes to technological competition. The US lead in the exploitation of cheap energy from shale gas and oil deposits is already starting to shift the pendulum back in its direction. US companies should enjoy lower energy costs, with chemicals and energy infrastructure suppliers in particular prospering. The US also stands to benefit in other ways from greater energy independence, and from becoming an energy exporter. The Energy Information Agency estimates that US exports of gas could double by 2020, with the country running a surplus in the trade in gas by 2025. The US may not achieve energy independence for a long time, but the International Energy Agency has predicted that US oil production could exceed that of Saudi Arabia by 2020. More abundant domestic energy and cheap gas will lower America's trade deficit and attract a lot of foreign direct investment in the country's energy sector.

The US also has a strong lead in advanced, top-end manufacturing, smartphones and smartpads, and a capacity to create innovative companies, with high research and development (R&D) intensity. They may well be the cutting edge of the coming global manufacturing revolution provided by additive manufacturing technology. These advanced manufacturing technologies are expected to revolutionise manufacturing, outsourcing and supply chains as the focus shifts sharply to the development of local and customised production.

> *"The linkages between strong institutions are rapid development tighten as income per head rises."*

Additive manufacturing builds products from layers of material according to sophisticated design software, which allows companies to manufacture locally, respond quickly to changes in customer demand and to dispense with the need for large inventories. Localised and customised manufacturing will not employ much labour, though in ageing societies labour supply will fall or stagnate anyway. It will, however, increase the importance of being close to markets, resources and centres of technological excellence, and diminish the significance of long global manufacturing supply chains and large-scale manufacturing, both of which characterise Asia's and – in particular – China's function in the global economy.

Even if China matches the US (and others such as Japan, Germany and Taiwan) in the field of additive manufacturing, there will no longer be compelling reasons for foreign companies to assemble products in China, or to incur the cost of shipping raw materials and components to and from the country over long distances. This sets the scene for a battle between rival business models. Figuratively, Shenzhen's assembly lines, supply chains and economies of large-scale will be 'out'. Silicon Valley's design and information software know-how, integration of R&D with manufacturing, and its emphasis on marketing, sales, and good customer service, will be 'in'.

Adapting to this change will not be easy. China's R&D spending has been growing rapidly, and it is now the second biggest spender in the world. But it still only spends half as much as the EU as a whole, and little more than a third of the US total. More importantly, whereas Chinese firms are good at incremental innovation, patent registrations and so on, they lag behind firms in advanced economies when it comes to actual product innovation, the fusion of new information and materials technologies, and organisational change.

China already files more patents than any other country, and is second only to the US in published scientific papers (and it could overtake the US in 2013). According to the US Patent and Trademark Office, China registered 1,655 patents in the US in 2009, compared with just 90 in 1999. But well-publicised patent filings and scientific publications, hailed by many as proof of China's growing prowess in scientific and technological innovation, are perhaps misleading. It is a bit like saying that the loudest growls on the Formula One starting grid belong to the fastest racing cars.

In reality, China lags a long way behind the US and many European countries and Japan. Less than 6 per cent of Chinese patents are protected by global patents, compared to 49 per cent of US patents, and nearly 40 per cent of Japanese ones. China also scores far less well than the US or Europe in terms of the number of publications per head published in top scientific journals.[19] China produces 0.54 papers per head, compared to 10 or more in the US and much of Western Europe. Chinese scientific papers receive less than 6 citations per paper, compared with 10-15 in the US, Europe and Japan. Chinese scientists and engineers are reportedly given lucrative incentives to publish, but this results in a surfeit of quantity over quality, and alleged widespread plagiarism, as well as data duplication and possible falsification.[20]

According to Professor Peng Gong of Tsinghua University and Berkeley, China's problem is not the amount of R&D it produces, but its quality, and this is related to two cultural genes that have passed through generations of Chinese intellectuals.[21] The first is the Confucian idea that intellectuals should be loyal administrators, and the second comes from the writings of Zhuang Zhou who proclaimed that a harmonious society would arise if families avoided conflict, and shunned the greed associated with technological advances. The modern consequence, he says, is a society that discourages curiosity, critique, challenge, commercialisation and collaborative technology.

"Neither the US nor Europe will stand still when it comes to technological competition."

China's celebrated high speed rail network may be a case in point. Until 2003, the ministry of railways sought to develop high speed railways without foreign assistance, in an official attempt to take on world bullet train manufacturers. But this indigenous technology initiative failed for many of the reasons suggested above, and was abandoned abruptly in favour of a 'market access for technology transfer policy', which resulted in approaches to major high-speed rail companies in Japan, France, the UK and Germany. The programme accelerated rapidly, with China buying the patents, but its suppliers retaining the intellectual property rights.

China's innovation and technology shortcomings are rooted in a socio-cultural system, and an incentive structure that emphasises incremental over radical change, and quantity over quality and uniqueness. No one can say that these problems will retard Chinese innovation and technological competitiveness forever. But in the absence of political reform, and the creation of robust institutions, China's technological cutting edge may persistently lag behind that of its western competitors and rivals.

China's challenges

The World Bank argues that for China to realise its potential over the next 20 years, it will have to rethink the role of the state and the private sector. It will have to encourage greater competition; stimulate innovation through openness and links to global R&D networks; accelerate green economic development; prioritise greater equality of opportunity, strengthen income and social protection, especially in view of the consequences of rapid ageing; and make the fiscal system more sustainable. These are all laudable and necessary goals, some of which have been written into China's twelfth five-year plan. But the World Bank also says that these strategies will require China to reform its framework of institutions. And that, of course, is where it all gets tricky.

This is not to say that China's leaders lack understanding of what is needed. The previous premier, Wen Jiabao, acknowledged this shortly after the removal of the Communist Party boss in Chongqing, Bo Xilai: "Without successful political reform, it is impossible for us to fully institute economic structural reform and the gains we have made in this area may be lost. The new problems that have cropped up in China's society will not be

19: 'Essential science indicators', Thomson Reuters, 2012.
20: Chris Wickham, 'China rises in science, but equation may have flaws', Reuters, May 28th 2012.
21: Peng Gong, 'Cultural history holds back Chinese research', Nature, January 25th 2012.

fundamentally resolved, and such historical tragedies as the Cultural Revolution may happen again."[22]

The references to the Cultural Revolution were specifically aimed at Bo (who had flirted with Maoist rhetoric of that period), but it is not clear what Wen meant, or what some of China's new leaders mean by 'political reform'. However, it is going to become very important from 2013, as they must decide to implement a political agenda for the coming decade, and to design a strategy to deal with an economy that is slowing down.

Most likely Wen and other leaders believe that the Communist Party has to become more responsive to citizens, and act against the corruption associated with Bo and his ilk. They probably do not mean more liberal, market-oriented reforms and the development of an independent legal system – changes urged by the World Bank report to rectify the major imbalances in the economy, and to lessen the chances of economic and financial instability.

China's economic miracle was built on the reforms inspired three decades ago by Deng Xiaoping, who forged a consensus for a radical change in economic policy. This remained in keeping with Chinese history and custom: it provides for the primacy of a strong bureaucracy – the Communist Party of China (CPC) – and the deference of citizens to a benign government in exchange for rising living standards. The CPC's legitimacy rests on this simple social contract. It has succeeded so far because it has shown the virtues of autocracy and no-nonsense decision-making. The party has been able to manage social stresses, and the Chinese economy boasts large international reserves and generally healthy private sector balance sheets.

> *"Stronger consumption requires reforms to the financial sector and improved social benefits."*

But China's needs today are different from those that Deng sought to address 30 years ago, and which his successors have successfully met. Economic rebalancing requires a rise in consumption and personal income as a share of GDP, and a decline of the investment sector's weight in and contribution to economic growth.

As – or if – this happens, China's external surplus (which is the difference between domestic savings and investment), and the rate of increase in the country's holdings of international currency reserves, should decline permanently. China's current account surplus fell from 10 per cent of GDP before the crisis to 2.8 per cent of GDP in 2011, indicating that the imbalance between savings and investment has already narrowed considerably, see chart 4. But it is by no means clear that this trend will persist over the next few years. And if it does, it might only happen in the context of much weaker GDP growth than is generally expected.

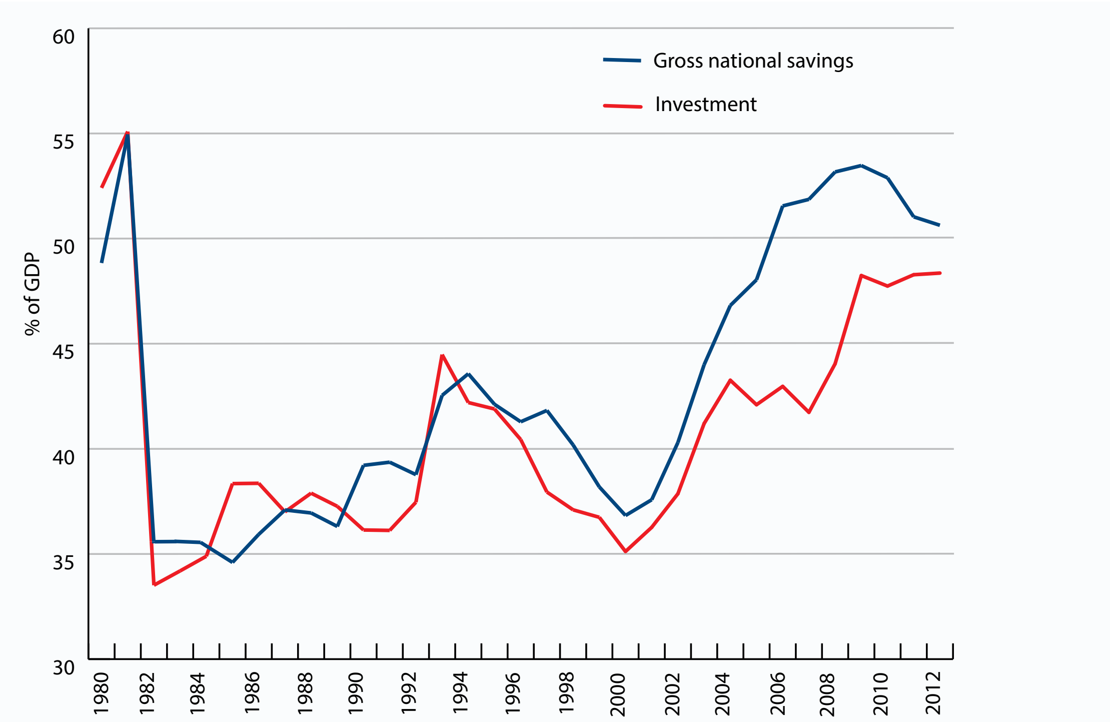

Chart 4: Chinese national savings and investment as a share of GDP, 1980-2012

Source: IMF, World Economic Outlook

22 Reported in *The Guardian*, March 14th 2012.

In theory, the aggregate savings rate should continue to decline (that is, the consumption share of GDP rise), as a result of urbanisation, higher real wages, and government policies to bolster income security. In the last three years alone, access to primary healthcare has improved significantly, especially in rural areas, and the authorities have introduced universal health insurance. Government pension schemes have been expanded and made more flexible for those changing jobs, and a major social housing programme is underway.

But cementing the rise in consumption also requires difficult political reforms to the financial sector (to bring to an end artificially low borrowing costs for firms), and to the *hukou* system that restricts urban migrants' access to social benefits. Furthermore, the system of corporate governance will have to be reformed, bearing in mind that most of the rise in China's savings rate in the last ten years has been due to increased savings by state-owned enterprises (SOEs) and other state entities. These organisations could be required to pay dividends to the government, which in turn could use the funds to boost household incomes. Alternatively, the government could resurrect its stalled privatisation programme.

If China's economy is to rebalance while continuing to grow by between 7.5 and 8.5 per cent, consumer spending will have to expand by more than its recent annual growth rate of 8 per cent. If investment accounts for 50 per cent of GDP and the rate of growth of investment falls from 15 per cent per annum to 5 per cent, consumption growth will have to accelerate from about 8 per cent to an unprecedented 12 per cent per annum. The bottom line is that economic rebalancing requires investment to grow more slowly than GDP growth, and consumption significantly faster over an extended period of time. It is far from clear that this will happen.

The mechanisms that would allow consumer spending to strengthen further do not yet exist, and would, in any event, compromise the legacy sources of economic growth which have generated the structural imbalances in the first place. For example, higher wages dent corporate profits and investment; and higher interest rates and a stronger exchange rate benefits consumers, but to the disadvantage of companies, whose debt-servicing capacity would be compromised.

The rate of growth of capital investment did slow from 19 per cent in 2009 in the wake of the 2008 stimulus programme, to about 9 per cent in 2011. But with the leadership change in the background, this slowdown may already be reversing. The rundown in inventory levels appears to have ended and there is a new initiative to boost investment in the country's rail and power networks. The rotation of party officials in local governments following the recent 18th Party Congress, will, if history is a guide, lead to a flurry of new investment projects. This cannot persist without further aggravating the misallocation of resources that now mars the Chinese economy. Roughly two-thirds of China's stock of capital has been built in the last decade, and half of infrastructure investment since 2000 has been in transport projects. Many of these are redundant or not viable commercially. Easy financial policies and high infrastructure spending succeed in sustaining uneconomic levels of production and investment. Many industries are facing declining profits, even as nominal revenues continue to grow, and producing at levels that can only be sustained through state largesse of some form or another.[23]

> *"Many industries are producing at levels that can only be sustained by state largesse."*

In China, the prices of land, water, energy, labour, money and capital are not sufficiently high to drive resources out of investment-heavy activities into consumer-heavy ones.[24] Part of the problem is politics: to have a real effect on factor prices, and therefore on resource allocation and overall economic efficiency, there have to be sweeping changes to the tax system, and to the structure of subsidies. This requires China to oversee a shift in power, away from the vested interests that have benefitted during the last 20 years, including SOEs, banks, prominent families, local and provincial governments and, of course the military and the Communist Party.

While the government has maintained, for the most part, a policy of tough love with regard to floundering property developers, it has not embraced the idea of 'model change'. However, one way or another, China's economy is going to rebalance. The question is whether this occurs in an orderly fashion with stronger consumption compensating for weaker investment, or whether it happens in a more uncontrolled fashion with investment declining, leading to a period of economic stagnation. The latter scenario would have more alarming economic and political consequences, not only for China but for the region and the global system as a whole.

China now needs a reform programme on a scale similar to that adopted 30 years ago. Without it, a heavily investment-centric and credit-intensive economic model could soon become unstable, condemning the country to the middle income trap.

23: China's ministry of finance data show that SOE profits stood at 1.2 trillion renminbi in the first half of 2012, a 13.2 per cent fall year-on-year; meanwhile, revenues were up 10.4 per cent over the same period.

24: There is no market-based cost of capital, land is provided free to enterprises, and water prices are a third of the global average. The total value of factor market distortions may amount to around 10 per cent of GDP: see Ashvin Ahuja et al, 'An end to China's imbalances?' IMF, April 2012.

There are only so many workers who can transfer from rural areas to urban factories. There' is a limit to how high the investment share of GDP can rise without bringing about a collapse in investment returns. Rapid population ageing is chipping away at Chinese growth potential. And the role of the government, state banks and SOEs is no longer appropriate for an economy that is becoming richer, more complex and in need of greater competition and innovation.

The Communist Party needs to do three fundamental things. First, it should encourage the development of a fully-fledged market economy, which would involve redefining the role of the state. Second, it should encourage a shift in power from itself, regional governments, state entities and the military in favour of the private sector and households. And third, it should promote better governance by strengthening the rule of law (as opposed to rule by law) and improving transparency.

Outsiders can be optimistic or pessimistic about the speed at which Asian countries can rebalance their economies and strengthen their institutions. But it no longer makes sense to speak of a Chinese or, by implication Asian, miracle. The period of catch-up is behind them and Asian economies face daunting challenges in sustaining rapid economic expansion. The biggest unknown, perhaps, is not so much what the world might look like if China were successful, but what the consequences might be if, for existential reasons, the Communist Party were to find that reforms on the scale required were a political bridge too far.

"Without vigorous reforms, many Asian countries could get caught in a 'middle income' trap."

Conclusion

Prediction is not destiny. For Asia's economy to maintain its rapid rate of expansion, a lot of things will have to go right. Many Asian countries face risks from an increasingly fractious global economy and from economic imbalances and mounting political contradictions at home. The economic models that worked over the last 30 years have either developed flaws or will not work as well in the future. And changing a model always throws up greater challenges and uncertainties than incremental changes in policy.

What has sometimes seemed like an economic miracle in Asia can be explained by conventional economic theory, aided and abetted by rapid globalisation and trade growth, at least in the run-up to the financial crisis. Asia's ability to weather the crisis can be attributed not so much to a superior economic model, as to the fact that its own financial crisis had occurred a decade earlier, and the private sector had repaired balance sheets by the time of the 2007 crisis.

Outsiders need to be cognisant of the growing risks in Asia. Strong expansion of credit, especially in China, poses threats to financial stability and economic growth. The meagre growth outlook for advanced economies will sap economic momentum in the more export-oriented Asian nations. China's investment-heavy economic model is gradually changing, but it will doubtless result in significantly slower economic growth, perhaps just half the 10 per cent annual rate of the recent past.

In China, much will depend on the appetite of the country's new leaders for comprehensive political and economic reforms that may well pose threats to the primacy of the Communist Party. The need for vigorous reforms and stronger institutions is not confined to China. Competitiveness, over which Asia has had a virtual monopoly for many years, may start to tilt back to Western rivals. Without vigorous reforms and stronger institutions, many, if not most, Asian economies could get caught in the middle income trap.

The re-orientation of business and commerce from the Atlantic to the Pacific will continue. But we should not fall for the economic hyperbole that sometimes passes as prediction. That would have been the right thing to do 30 years ago, but the global economy is now different: domestic economic and political challenges have changed. Past economic performance is no guide to the future.

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