Let me commence by thanking the London School of Economics for inviting me to speak here this evening. While I did not attend this University, I feel very much at home this evening thanks to many stimulating hours listening to the podcasts of the lectures here.

Listening to an LSE talk and discussion while cycling around the lake before work in Canberra is as informative as it is therapeutic – a calm and rational contrast to the furious discord of Australian politics in 2011.

Tonight I want to give an Australian perspective on the biggest economic change in the world today – the rise of China and following it, India. This is a massive realignment of economic and, in due course, political and strategic power at a speed and on a scale the world has not seen before.

I will speak mostly about China because of its size and economic importance and also make reference to India, rising a decade or so behind it.

But let me observe there is a very big world beyond these two. The Asian region is filled with other rising emerging economies, the largest of which is our close neighbour Indonesia, as well as advanced economies such as Japan, South Korea and Singapore. Their stories, and their
futures, are as fascinating and important as those of the two giants which are the focus of this talk.

By any measure China’s growth has been extraordinary – from 1980 to 2010 its economy grew 18-fold, an annual average of 10 per cent. China has been the world’s second largest economy since 2002 in PPP terms, and according to the IMF’s forecasts will overtake the United States in 2016. [1] Others argue it has already done so. [2]

No less impressive is the change in China’s share of the global total for some key indicators of progress between the early 1990s and the late 2000s: [3]

- Population – 22 to 20 per cent
- Poverty (< $US1.25/day) – 38 to 15 per cent
- Manufacturing value added – 5 to 11 per cent
- Steel production – 12 to 39 per cent
- Foreign reserves – 3 to 22 per cent
- Resident-owned patent filings – 1 to 15 per cent
- Telephone lines – 1 to 29 per cent
- Internet users – 0 to 15 per cent
- Carbon emissions – 11 to 20 per cent

India’s reforms started after those in China and its re-emergence as a global economic power has been more gradual. Still, from 1980 to 2010 India’s GDP increased six-fold, an annual average of 6 per cent. Since the mid 2000s average growth has risen to 8 per cent, and this year India will pass Japan to be the third largest economy in PPP terms. [4]

India has industrialised more slowly and trades less than China, in part reflecting the legacy of license Raj distortions such as import restrictions and rules forbidding large-scale manufacture of many goods to preserve smaller producers. [5] Trade has expanded as a share of output since
1991, but growth has also come from domestic demand and a large services sector – including IT-related software, services and outsourcing, which account for 6 per cent of GDP and roughly a quarter of exports. [6]

Between them, China and India added 2.5 billion consumer and 1.3 billion producers to the global market when they opened their economies. That opening, and their rapid growth since, has led to huge shifts in the distribution of global production.

In 1990 Western Europe and North America produced 49 per cent of world GDP, but by 2030 their share will almost halve to 26 per cent according to Willem Buiter at Citigroup (whose figures are in line with half a dozen similar recent projections). [7]

Emerging Asia (i.e. ex Japan) produced 14 per cent of world GDP in 1990, but will more than triple its share to 44 per cent in 2030 according to Buiter. [8]

Those are much bigger shifts in the location of global production than were recorded after the industrial revolution, and they are occurring over much shorter timeframes. [9]

Since the turn of the century, strong growth in emerging Asia has also been matched in the rest of the developing world – although Dani Rodrik has recently questioned the widespread assumption that this will continue. [10]

So reminded of the speed but above all the extraordinary scale of this economic transition, let us first reflect on the view from Beijing.

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More than almost any other country, Chinese leaders draw strength and guidance from the lessons of history. [11]

Deng Xiao Ping reached back to the trade and exploration of Admiral Zheng He in the 15th century when, in 1979, he began to open China to foreign trade. He reminded the hardliners that when China had engaged with the world it had been strong. When in the 16th century it closed off the world, this began a decline that ended with 150 years of humiliating invasion, colonisation and exploitation by stronger nations. [12]
The world may be amazed by China’s dramatic rise, but the Chinese recognise this as very much a return to the natural order of things.

In fact the historical national accounts constructed by the late Angus Maddison tell us that from antiquity until the middle of the 19th century, several decades into the industrial revolution, China and India were the two largest global economies, accounting for between 45 and 50 per cent of the world’s output over most of the 18 centuries. [13]

There are a few nations with a sense of cultural continuity and exceptionalism that rival China’s, but none rival its scale. China sees itself as a 3000-year culture, for almost all of history the world’s largest and strongest country.

While elegantly clad young Chinese businessmen and women may appear to have little in common with Mao’s boiler suited revolutionaries, the economic success of modern China, whether manifested in gleaming new cities, fast trains and freeways, or in tanks and stealth fighter jets, is the fulfillment of Mao’s proud boast in 1949 from the top of Tien An Men.

“Zhong guo ren min zanqilai le.”

“The Chinese people have stood up.”

And so they have – and we are now all taking notice.

But in the midst of this pride are great risks and challenges.

The Communist Party of China presents as a modern political party. Indeed they have sent official delegations to our Liberal Party conferences in Australia – something which would, I suspect, make Sir Robert Menzies and the cold warriors of his day turn in their graves.

But China is no democracy and the dominance of the Party depends on a social contract – you the people let us run the country, and we the Party will deliver rising living standards.

Pragmatically, as the Governor of Liaoning once observed to me, “Just because the majority of the people want to do something, doesn’t mean its right.”

Notwithstanding their NYSE listings the standard bearers for the Chinese economy at home and abroad, the big state owned enterprises or SOEs, are led by men and women appointed by the Central Organisation Department of the Communist Party. [14]
While infallibility is not a virtue claimed by democracies, or any other political system, it offers a most effective way of letting off steam – throwing the rascals out (even if they are replaced by more rascals) is better done with ballots than bullets.

And so integral to every aspect of government policy in China, whether viewed from Zhongnanhai or from a truck stop in Xinjiang, is a concern to preserve political stability. Tens of millions of Chinese died in political disorders only a few generations ago: the Revolution itself, the Great Leap Forward and resulting 1958-1963 famine, and the Cultural Revolution. Chinese don’t need to imagine the consequences of civil disorder – anyone over 40 has lived through it and is lucky to have done so.

Chinese also recognize the blackest period of their history resulted from weakness that was exploited by stronger nations. Leave aside the brutal invasion and occupation of China by the Japanese in the 1930s, just reflect on the Opium Wars which began in 1839.

In its search for something other than silver to exchange for Chinese tea and other goods the British East India Company hit on the great idea of selling opium to China. When the Chinese government of the day cracked down on drug trafficking and destroyed the opium, the British response was to send in the gunboats to insist Chinese ports remain open to free trade in British drugs – and the drug traffickers be compensated for their losses by the now utterly humiliated government of China.

It is as if the Medellin Cartel sent gunboats up the Potomac to shell the Capitol until the Americans disbanded the Drug Enforcement Agency.

China’s leaders are also keenly aware of the need to ensure gains from growth are more evenly spread across society. China has gone from being an egalitarian society, in the sense that almost everyone was poor, to one where a large and prosperous middle class and highly developed industry shares a nation with a lot of poor people. This is changing rapidly – between 2005 and 2010 alone 153 million Chinese were lifted out of poverty – but enormous disparities remain. [15]

At the same time the middle class are starting to wonder if the system is still working in their favour. Industrial disputes are becoming more common. And beyond that middle class lies a class of super wealthy who are generally perceived to have obtained their wealth by illicit means.
Work by Wang Xiaolu indicates only 50 per cent of the income of the top tenth of income earners is reported; the rest is “grey income”. [16]

With not much of a welfare net, Chinese are big savers and household consumption is extraordinarily low at 35 per cent of GDP, down from 49 per cent in 1984. [17]

As Michael Pettis notes, this curious state of affairs is accompanied by three additional implicit taxes on Chinese households: [18]

First, an undervalued exchange rate benefits exporters at the expense of consumers. Second while labor productivity has tripled since 2000, real wages have only doubled. And third, negative real interest rates for depositors lead to an annual transfer of 5 to 7 per cent of GDP from households to the government owned banks which in turn lend most of it to government owned corporations, too much of which is for ill-considered infrastructure projects or property speculation.

Put another way, China’s economic growth is being directed away from households and into investment, much of it funded by subsidised policy lending, with the inevitable consequence of more and more bad loans held by Chinese banks.

The leadership is well aware of this and the need to lift consumption is a focus of the current five year plan – but managing such a change, and dampening real estate speculation is far from straightforward as the recent performance of the Chinese stockmarket indicates.

Paying depositors a positive real interest rate would be a start, but how would state owned beneficiaries of the subsidised policy lending manage if they had to pay commercial interest rates? Another approach may be to distribute shares in the SOEs, but that would run the risk of diminishing the power of the party elites that manage them.

The political reality is that China’s closed capital account enables the Party to maintain an iron grip on the banking system so it can direct capital within the economy. While this phenomenon is by no means unheard of in the East Asian development model, it does seem to have run its course. China now has a massive industrial complex and there is no clear case to further subsidize producers, particularly the SOEs, many of which are hardly models of efficiency and which already seem to produce more steel, aluminium and other intermediate products than the country requires.
To open up the capital account and let the currency float more freely is to let the market decide on the allocation of capital. That is something with which the Party is decidedly uncomfortable, but very popular in China where private businesses are increasingly unhappy about being squeezed out of access to capital by SOEs.

Denied access to the soft policy lending from the state owned banks, private firms all too often must borrow at 20 or 30 per cent so the SOEs can continue to build infrastructure and real estate developments without regard to its economic utility.

Finally, consider the environment. Over millennia floods and famines have seen off many an Emperor – tangible evidence that he had lost the mandate of heaven. China faces some of the most severe environmental challenges in the world. Some are direct consequence of global warming; as the Himalayan glaciers melt more water becomes available when it is not wanted, in winter, and less when it is, in summer.

At the same time, industrial pollution of the air and water is so severe that it’s a political issue – what good is it to have a television or a car if you cannot breathe the air or drink the water?

And China’s ability to feed itself is threatened by diminishing water availability. Agriculture on the northern plain is largely irrigated using groundwater which has been unsustainably extracted to a point where wells are running dry. Water can be desalinated or pumped from the south for cities, but that is too expensive for farming.

So resource security (energy, minerals and food itself) is a growing pre-occupation of Beijing. The Chinese rush to acquire access to natural resources, including in Australia, is therefore entirely understandable. Rapidly growing demand for resources in China and elsewhere in emerging Asia is largely why in 2010 a quarter of all Australia’s exports went to China (and a third to China and India combined). [19]

And the financial crisis which began in 2007, eased after 2009 and now threatens to return offers great opportunities for a cashed-up China to acquire as many premium resource assets around the world as it can, so it emerges with a global portfolio of sufficient scale and diversity to secure long term low cost access to the minerals and energy it needs.

It would be quite reasonable for Australia to deny Chinese enterprises the right to acquire Australian resources until such time as Australian firms had reciprocal rights in China. But it is in
our interest to welcome Chinese capital that develops our resources, while still taking a
discriminating approach to bids for strategic resource assets by Chinese state owned enterprises.

Indignation in some quarters in China when Chinalco’s takeover of Rio Tinto – listed in Sydney as well as London and with 45 per cent of its assets in Australia – appeared likely to be blocked was quite unreasonable – China should respect the right of the Australian people to stand up for our national sovereignty too. [20]

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So having discussed the dreams on the Chinese side of the bed, let me now, through Australian eyes, look at the dreams on the other side.

China represents a challenge to the United States which is utterly unique.

Americans, imbued with a deep sense of their own exceptionalism, have assumed that they will always be the strongest, richest and cleverest nation on earth. Their birthright has been to provide the benchmark in living standards, infrastructure, education and technology.

Tom Friedman’s latest book ‘That Used to Be Us’ is eloquent testimony to the growing sense of inadequacy Americans feel as they compare their country to China. Its title was inspired by President Obama in November 2010: “It makes no sense for China to have better rail systems than us, and Singapore having better airports than us. And we just learned that China now has the fastest supercomputer on Earth – that used to be us.” [21]

It’s not just President Obama having a Sputnik moment – Americans everywhere feel the core of their economy is being hollowed out. Their pessimism has a basis: 42,000 factories closed in the United States between 2001 and 2010 and 5.5 million manufacturing jobs (about a third of the total) disappeared. [22] China, in contrast, now makes more cars than the US and Japan combined, as well as the lion’s share of many other familiar items.

Now this sense of being outclassed by China is not limited to Americans. Nobody who has visited Shanghai could not be impressed by their subway – with 434 kilometres of track it carries more than 6 million passengers a day. And yet the first line opened only in 1995. As a resident of Sydney and passionate believer in mass transit, it grieves me to tell you that over the same period in my city, despite increasingly acute congestion, only 13 kilometres of new track has been constructed.
But advanced economies cannot blame Asia for our own choices. If bridges and roads and
subways in our developed country are not in good repair, that is our problem. If our young people
are leaving school unable to read and write, then there is another problem for us. Too often we
ask ourselves the wrong question (‘why are we declining relative to China?’) when we should be
asking why are we not as good as we can be?

Put another way, we should be less worried about relative decline and more concerned to
address absolute decline. The fault is indeed in ourselves.

It is becoming all too clear that in the developed world the rising tide of convergence and
globalisation will not lift all boats, and certainly not at the same rate.

Michael Spence has pointed out globalisation was until recently seen as having a benign impact
on the distribution of income in advanced economies, but this is changing: “As the developing
countries became larger and richer, their economic structures changed in response to the forces
of comparative advantage: they moved up the value-added chain. Now, developing countries
increasingly produce the kind of high-value-added components that 30 years ago were the
exclusive purview of advanced economies. This climb is a permanent, irreversible change.” [23]

Spence shows that between 1990 and 2008, 97 per cent of the 27 million jobs added in America
were in the non-traded sector (40 per cent of them in government and health care). His work
shows that in the barely-growing traded sectors of the US economy, increasing opportunities at
the top of the value chain for highly-paid highly-skilled workers are offset by much larger
decreases in routine jobs, as these functions are relocating to emerging markets. [24]

While US firms in sectors such as finance or technology generate more value-added than ever,
most is from complex tasks such as management, design and engineering.

Not only is this supported by the data, it rings true. Just read the label of your Apple product of
choice: “Designed by Apple in California, assembled in China.” Apple is worth $US350 billion
despite not making anything itself – assembly of its products is sufficiently commodified as a
process to be entrusted to a contractor. It all makes economic sense – but where are the jobs?

Meanwhile improved communications and technology are opening up previously non-traded
sectors in advanced economies to competition: not just call centres or low-level software
development, but semi-professional and professional services such as financial analysis, accounting, sub-editing, technology consulting, graphic design and video special effects. [25]

Anything where a service can be transferred to customers as a stream of bits is fair game.

Inured to losing low skill low wage jobs to the developing world, now the advanced countries are losing high skill high wage jobs to workers just as smart, just as educated, but prepared to work for lower wages.

The broad trend identified by Spence is evident in Australia too: employment in non-traded sectors has grown faster than in traded industries. But in Australia both expanded between 1990 and 2011, with mining employment (thanks to Chinese demand) tripling over the past decade and more than offsetting job losses in manufacturing. [26]

So what is to be done?

The key, if obvious, insight is that a converged global economy is much larger and much more competitive but with many more opportunities. Within two decades there will be more middle class consumers in Asia than there are in the rest of the world.

The firms and countries that will succeed in this brave new world will be the most efficient, the most innovative, the highest quality. For high wage countries that seek to remain so, the pursuit of excellence was never more important.

Our schools and universities should be turning out the world’s top students – not settling for middle of the pack, which is where one measure, the OECD’s PISA study of comparative performance in secondary schooling, suggests many advanced countries find themselves. [27]

While governments should beware of picking individual companies as winners, creating environments which encourage research & development, innovation and above all the development and commercialisation of new technologies is absolutely critical. [28]

The Germans have shown the success of a strategy focused on advanced technology and manufacturing – their slogan “Germany land of ideas” fairly sums it up.

And we should not imagine that China, India and the rest of emerging Asia are not doing the same thing. Just as Japan and then Korea targeted electronics as a national industrial priority, so
now is China seeking to take the lead in green technology. While politicians in the West argue about whether or not climate change is real, in China, the world’s largest emitter, billions are being invested in wind, solar and electric vehicles.

Like so many difficult political issues – such as climate change and long term fiscal solvency – preparing for a more competitive world in which China and India are two of the three largest economies requires long term thinking and leadership – leadership to persuade voters that rather than spend today we should invest for a more prosperous tomorrow.

Just as research, education and indeed infrastructure are long term investments, so too is there a need in my country to recognise our terms of trade windfall will not last forever. There is a view that it will, especially in Canberra, and that is dangerous complacency.

In 2005 a shipload of iron ore paid for 2200 flat screen televisions – but by 2010 that same shipload bought 22,000 flat screen televisions. [29] While hoping the good times never end, a key focus for us surely must be a return to large fiscal surpluses and establishment of a new sovereign savings fund (or renewed deposits into our existing one) so that, like the Norwegians with their oil and gas revenues, when the current boom ends we have something monetary to show for it. [30]

As worrying as the shift of manufacturing and economic output to Asia, in the eyes of many in the West, are the transfers of political, institutional and military influence that will surely follow.

International institutions are changing to reflect the new order – the G-20 is one example. [31] There’s also been a boost in emerging economy influence at the International Monetary Fund, where China will soon have the third largest quota; within a few decades the IMF’s head office may be in Beijing rather than Washington. [32]

Shifts in economic weight and military potential are a legitimate cause for anxiety, as the world’s grim history from 1914 to the mid-20th century reminds us. A century ago the rising economies were Germany (locked in a costly naval arms race with Britain) and Japan, to be joined in the 1920s by the Soviet Union. The guns of August 1914 turned out to signal the start of more than three decades of military and economic catastrophe.

Previous threats to more than a century of US economic primacy were not credible: the USSR of the late 1950s and the Japan of the late 1980s, the two alleged challengers, had economies only 40 per cent as large. [33]
So the stakes are high, and this time the challenger is real.

Yet most Americans appear utterly flummoxed by the swiftness of China’s rise, which was simply not on their horizon until very recently. As late as the 2004 US presidential race, for instance, China’s economic rise barely rated a substantive remark from either candidate in three hours of debate over America’s future watched by a combined audience of 160 million. [34]

Economic anxiety has been felt before in America and Europe – over the rise of Japan for example. But this time there is also strategic anxiety in the West, particularly the US, over China, reflecting a concern that the Middle Kingdom has a very different understanding of the way in which world affairs should be ordered than the West.

While ever alert, we should not be alarmed says Henry Kissinger, who argues China’s well-developed and historic sense of its central place will make it a less outwardly assertive leading power than the US. He contrasts missionary US exceptionalism based on “an obligation to spread its values to every part of the world” with China’s disinterest in claiming its institutions are relevant outside China. [35]

And indeed it is important to note that China’s growth in power, both economic and military, has not been matched by any expansionist tendencies beyond reuniting Taiwan. Indeed very large territories in the North East of China taken by Russia under duress following the unequal treaties of Aigun (1858) and Beijing (1860) have not been left unresolved as a possible casus belli in years to come, but instead have been legitimised in new treaties signed only a few years ago.

The central role of trade in China’s prosperity also argues for its rise to remain peaceful. China’s trade was 55 per cent of its GDP in 2010 – the same as for Britain in the 1870s, and five times larger than the role of trade in the US economy of the 1950s and 1960s, when US economic dominance was greatest. China has more to lose than most from any conflict that disrupts global economic flows. [36]

The best and most realistic strategic outcome for East Asia must be one in which the powers are in balance with each side effectively able to deny the domination of the other.

With its energy and resource security depending on long global sea lanes, it is hardly surprising that China would seek to enhance its naval capacity. Suggestions that China’s recent launch of
one aircraft carrier and plans to build another are signs of a new belligerence are wide of the mark. [37]

This is no time for another “long telegram” or suggestions of containment. [38] China, unlike the Soviet Union, does not seek to export its ideology or system of government to other countries.

It makes no sense for America, or its allies, to base long-term strategic policy on the contentious proposition that we are on an inevitable collision course with a militarily aggressive China.

In that regard, I disagree with the underlying premise of the 2009 Australian White Paper that we should base our defence planning and procurement on the contingency of a naval war with China in the South China Sea. Prejudice is not a substitute for coolly rational analysis.

This is no counsel for complacency – but our strategic response should be to hedge against adverse and unlikely future contingencies as opposed to seeking to contain (futilely in all likelihood) a rising power.

Of course cool heads are required on all sides. China needs to be more transparent about its goals in the region and on the basis of that build confidence with its neighbours so that misunderstandings can be avoided.

We in Australia have to adopt a clear eyed appraisal of the strategic balance in East Asia. America is our closest ally, its institutions and democracy as close to us, as indeed, they are to those of the United Kingdom. When the mantle of world’s greatest power shifted from Britain to America it shifted, in our perspective, from one family member to another.

However, as China rises to become the world’s largest economy and in time a military rival, if not an equal, of the United States we are presented with a nation whose institutions and culture are very different to ours. Yet China is, as I have noted, our largest trading partner and in large measure responsible for our current and prospective prosperity. [39]

We have every reason, and indeed every prospect, of remaining close and becoming closer friends of both these giants. But in doing so, and as Australia becomes accustomed to a multipolar world, we have much to do to draw closer to the other countries in our region, including India, as we deepen our relations and trust with our neighbours.
These are transforming times, the Lowy Institute’s Michael Wesley reflected on Asia in the 1970s: “Beyond these Asian tigers still lay the vast, sullen Asian land-mass, the realm of subcontinental civilisations and ancient empires. Here lay nations with populations numbering in the hundreds of millions – a surfeit of humanity living in abject poverty, their vast under classes clogging the arteries of sluggish economies, multiplying at a rate that swamped the capacity of anaemic growth to provide jobs or welfare.” [40]

How far from that we are now. Not just the Chinese people, but people right across East and South Asia, have once again stood up. And so, indeed, should we.

Buiter’s measure for emerging Asia is Asia ex Japan: Hong Kong and Singapore (developed by most measures in 1990), plus Taiwan, Korea, the rest of ASEAN, Pakistan, China and India.


In the prologue of his 2011 book ‘On China’, Henry Kissinger describes Mao Zedong basing his military strategy in the 1962 border war with India entirely on the ancient precedents and strategic lessons of a Tang Dynasty incursion into India 1300 years earlier and the sacking of Delhi by the Mongol ruler Tamburlane 700 years after that. Kissinger argues in no other country would a modern leader (with the support of his generals) invoke strategies from events many centuries earlier in a momentous contemporary decision. “Yet China is singular. No other country can claim so long a continuous civilisation, or such an intimate link to its ancient past and classical principles of strategy and statesmanship.” Henry Kissinger (2011) ‘On China,’ Allen Lane, 2011, prologue.

See for example the discussion in Niall Ferguson (2011) ‘Civilisation,’ Allen Lane, 2011, p.48


[19] In 2010 Australia’s merchandise exports to China were $A58 billion (including $A35 billion from iron ore and $A5 billion from coal) or 25 per cent of total exports. Exports to India were $A16 billion (including $A7 billion from coal and $A5 billion from gold) or 7 per cent of the total. ABS 5368, 2010


[22] Andrew Liveris (2011) ‘Make it in America: The Case for Re-inventing the Economy,’ Wiley, 2011. But IHS Global Insight data showing China passed the US in 2010 to become the largest manufacturer by value of output (with $US1.99 trillion or a 20 per cent global share) pointed to a productivity gap of 8X between the US and China: “In other words, the US manufacturing sector is producing roughly the same amount of output in 2010 with 11.5 million workers as opposed to its Chinese counterpart with around 100 million workers.”

As Spence and Hlatshwayo write: “Twenty-five years ago, business services such as information technology (IT) maintenance and support were not traded internationally; now Internet connectivity and innovative software permits many of these services to be performed remotely at lower cost, often in another country.” Spence & Hlatshwayo (2011) p.9.

Spence’s figures for the US can be reproduced for Australia. Tradable value added in industries is assumed to be roughly similar to Spence’s US estimates: 100 per cent in agriculture and in mining, 90 per cent in manufacturing, 67 per cent in finance and in professional, business and technical services, 33 per cent in information, and 10 per cent in retail, in transport and in education. On this basis estimated traded-sector employment in Australia was 2.0 million in 1984, 2.3 million in 1990 and 2.6 million in 2011. Non-traded-sector employment was 4.4 million in 1984, 5.6 million in 1990 and 8.8 million in 2011. Total employment increased 45 per cent from 1990 to 2011 (15 per cent in traded sectors and 58 per cent in non-traded sectors). ABS 6291, Aug Qtr, 2011.

In the OECD’s 4th PISA survey in 2009, covering 65 countries/economies, four East Asian economies were among a group of six top performers. Shanghai-China (tested for the first time) led on most measures, while Korea, Finland, Hong Kong-China, Singapore and Canada were also in the leading group. On reading Australia ranked 9th, the US 17th, Germany 20th and Britain 25th. Australia ranked 10th on science and 15th on mathematics and was “statistically significantly above the OECD average” on all measures, but showed a decline from earlier surveys on some mathematics and reading literacy scores. OECD (2011) ‘PISA 2009 Results: Executive Summary,’ p.8, online here.

One measure of success is public and private expenditure on R&D, a key input into innovation. R&D to GDP is highest in Israel (over 4 per cent in 2009) and higher in Korea and Japan than the US. Australian is near the OECD average of 2.3 per cent. OECD (2011) ‘Science, Technology and Industry Scorecard,’ online here.

See Glenn Stevens, Governor, Reserve Bank of Australia (2010) ‘The Challenge of Prosperity’ published in RBA Bulletin, Dec Qtr, 2010. Since Governor Stevens gave his speech on 29 Nov 2010, the US dollar price of iron ore has increased a further 25 per cent, so the
shipload would now fetch close to 28,000 TVs.

[30] I gave a longer speech on this issue in June:

[31] The G-20 draws 6 of its 19 member nations from the Asia-Pacific (Japan, China, India, Korea, Indonesia and Australia) against only Japan in the G-8. Given the Asia-Pacific accounts for over a third of world GDP in 2011, this seems more representative.

[32] If China becomes and remains the largest economy it may become the IMF’s largest funder and quota holder. Former IMF chief economist Simon Johnson points out this will move IMF HQ from Washington to Beijing: Article XIII of the IMF Articles of Agreement stipulates: “The principal office of the Fund shall be located in the territory of the member having the largest quota, and agencies or branch offices may be established in the territories of other members.”

IMF Articles of Agreement: http://www.imf.org/external/pubs/ft/aa/index.htm#a13s1

http://www.lowyinstitute.org/Publication.asp?pid=1481

[34] Transcripts for the three 2004 US Presidential Debates between George W. Bush and John Kerry reveal 14 mentions of ‘China’. Ten involved security issues in North Korea; one referred to a proposed tax break for importing ceiling fans made in China; one referred to China and India jointly educating more scientists than the US; one was a Kerry attack on Bush for not ‘taking on’ China over currency manipulation; and one involved a debate anchor’s estimate of hourly costs in China for software developers . Transcripts: http://www.debates.org/index.php?page=2004-debates


[36] The ratio of exports and imports of goods and services to GDP measures economic openness and integration. At the peak of Britain’s economic dominance in 1870 this figure was 54 per cent. British trade to GDP reached 63 per cent in 1913, but fell to half that level by the
1930s. In the US, trade to GDP was 8 per cent in 1950 and 11 per cent in 1970. In China trade to GDP was 45 per cent in 2000 and 55 per cent in 2010.


[38] The US diplomat George Kennan served as deputy head of the US mission in Moscow 1944-1946. On 22 Feb 1946 Kennan responded to US Treasury questions about the erratic behaviour of the Soviet Union with a ‘long telegram’ of 5,500 words where he described the Soviet world view as ‘insecure’ and ‘neurotic’ and proposed the strategy of ‘containment’ which the Western nations subsequently adopted.

[39] Australia is China’s seventh largest trading partner and sixth largest source of imports. In addition to Australia, China is also the largest trading partner for Japan, Korea, Taiwan, Thailand, India, Iran, Brazil, Chile, Peru, South Africa, Ethiopia and Angola, among others, and the largest source of US imports.


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