

Discussion

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I firstly want to congratulate Ellis Connolly and David Orsmond on preparing an excellent and thorough summary of the Australian mining boom over the last decade; this paper is comprehensive and comprehending (I'd expect no less from the RBA).

Under the heading of the paper there are many potential topics to discuss but I am a China guy with a mining and resources background, so I'll try to make some observations on China's demand for resources, both to date and going forward, and also with respect to how the Australian mining sector has responded to date.

First, I would suggest that we need to settle with a little more confidence on the idea of China as a reliable denominator of demand, now and for the foreseeable future, and that China's demand is quite likely to be sustainable barring anything except the most extreme scenarios. In recent years there has been an enormous amount of discussion about the sustainability of China's economic growth and developmental model. I feel like I've spent much of my life answering this question. Responding repeatedly on the topic of whether or not China can keep going is really the 'groundhog day' of macroeconomic discussions. A lot of people don't seem to like my usually fairly optimistic answers but can't really tell me why! I won't wallow in the detail here but suffice it to say that over my 30 plus years of living and working in China, if I had listened to the advice of 'China bears' every time, I'd long be back home in rural Queensland.

We in the Western world generally struggle to understand the nature of the transformation in China; the China story does not fit our intellectual models and putting China data in our analytical models keeps giving us the unsatisfactory answers. China has also come upon us quite recently, with startling rapidity and surprising scale and tenacity, and in spite of a general developed world view that the so-called 'China model' was unlikely to produce good outcomes. All of this is a bit disruptive or even dismaying. The Western world bearish case on China these days veers between the wishful and the wistful; the Europeans and Americans in particular seem to be in some form of anxiety-based denial. As Australia is a strategic and philosophical fellow traveller with the Atlantic alliance, many people here tend to parrot or align with the orthodox Western world positions on China. But, since Australia's position with respect to China is almost unique among the developed world nations, this distinctive situation behoves us to examine China's sustainability through a more dispassionate lens. It is in fact critical that, of all Western countries, we should have the clearest view of China, and the most effective framework for thinking about China's development, if we are to maximise the benefits and manage the undeniable challenges of China's emergence.

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For me, China is a relatively simple story – a chunk of the global population of historically unprecedented magnitude is now able to participate in economic activity leading to much-improved standards of living, with all of the unanticipated consequences implied by that. There is an extent to which what is happening gets over-analysed. For example, I have always argued that the orthodoxy around China's deemed dependence on exports for growth has been overestimated and the extent to which the primary drivers of transformation and growth were domestic investment and consumption were given less credit than was their due. Over time, China's net exports have never occupied more than a modest position as a driver of growth. The global financial crisis (GFC) went some way to demonstrating this point but I note that these ideas die really hard. The current orthodoxy that China urgently needs to convert her growth model from being export-dependent to being more domestic consumption-led is an extension of this thinking. Again, I think that the consistently unexpected tenacity of China's energy and raw materials demand over the last seven or eight years (especially in the bulk commodities) underpins the idea that the really big drivers of growth were rapid urbanisation, infrastructure development and consumption relating to rising living standards. The stuff that we sell them isn't getting re-exported.

So, China didn't fall in a heap when exports evaporated during the GFC. China has been able to maintain strong growth since the GFC with demand weakness in all major export markets. If that doesn't demonstrate a notable resilience in the model (and some frailty in the conventional wisdom) I don't know what does.

Just to close off my comments on China, although the continued rapid urbanisation and infrastructure development of a continental economy with 23 per cent of the world's population is plenty for the Australian mining sector to be going on with, there are dimensions to how these things are happening in China which Ellis and David might find interesting to examine further. The extent of rural–urban migration to date (generally stated as being around 46 per cent) is overestimated, simply by virtue of the bureaucratic definitions applied. Somewhere like Chongqing is said to have over 30 million urban residents when in fact the urban component of the municipality's populace may be well less than half of that and the others are still living in rural conditions.

Related to this issue is the fact that arable land, always a premium in China, has become increasingly precious in the last two decades as uncontrolled urban sprawl has eaten into the areas surrounding cities. This is already a notable socio-political issue – policy in the 1990s was ill-conceived and clumsy and local authorities have been both short-termist and heavy-handed in their conduct. But it also creates major imperatives for the future. China's policy-makers and urban planners have to conceive of accommodating 300–400 million more people in the cities in the next 15 years, without further resumption or degradation of farmland. Verticality is the only solution, and this implies a materials-intensity in construction unlike anything we have seen before. I would also comment that while we should definitely refer to the experiences of the United States, Japan and others as they went through their own eras of rapid development, we need to bear in mind that China is a latter-day industrialisation and modernisation story, and although the hypotheses all suggest that mankind becomes more efficient in the use of resources over time, the trend in developmental terms tends to suggest that materials and energy intensity has increased in successive developmental instances. This issue of China's sheer scale (a continental economy with

a massive population) and the rapidity of the transformation also conspire to distort convergence with other developmental reference points.

Other features of China's development worthy of note with respect to future prospects include the fact that household (and business) wealth in China is generally and widely understated (see Wang (2010)), so consumption is far from as fragile as is often portrayed, especially for things like residential real estate.¹ And Chinese consumption growth (measured by proxies such as retail sales growth) has been consistently very robust for over a decade – Chinese consumers are already consuming. The proportionality of consumption in the overall economy is subsumed by the investment-intensive nature of this phase of modernising and industrialising a continent-sized nation. It is also worth noting that at best only about 250 million Chinese have thus far arrived at the 'comparative affluence' level of income, but all the others, some 1.1 billion of them, have seen that happen. Possibly for the first time in history, such a large number of people believe that a similar prospect is now an achievable aspiration. Such an aspiration in such a large population both underpins China's growth and development and creates an irresistible political imperative for the Chinese Communist Party.

Turning to the mining sector and the impact of the boom on Australia, I fully concur with Ellis and David in their conclusions that not only will the boom continue to impact the economy significantly but that this will provide a very challenging policy environment going forward. I think it is worth looking at how we have responded to the challenges to date as a reference point for how we might do in the future.

As I have suggested with respect to the sustainability of China's growth story, I am in the school of thought that believes while there may be the odd point of comparison with past mining industry cycles in Australia, this particular upswing is most definitely not our grandfathers' mining boom. This one is truly much stronger for much longer, simply on the basis of the order of magnitude of population now participating in meaningful economic activity, and the dare-I-say proven tenacity of China's demand alone, even if India and other developing world countries never shift into a China-style take-off mode.

Early in their paper Ellis and David identify that the major impact of the mining boom on Australia has derived mainly from price increases, which implies a shortage of supply. They also highlighted that:

While the potential of China's large domestic market was recognised in the early 2000s, the rapid pace at which it would industrialise through the decade and the implications for commodity prices *were not widely anticipated*. For instance, consensus forecasts consistently under-predicted China's growth from 1999 through to 2007; it was not until the second half of the 2000s that analysts began to forecast that the medium-term rate of growth had increased above the Chinese Government's 7–8 per cent targets in their five-year plans (Figure 5). Similarly, *mining companies took some time to be convinced that the pick-up in commodities demand would be sustained*, with mining investment as a share of GDP not rising to above-average levels until the second half of the 2000s. (emphasis added, p 115)

I cannot tell you how much that paragraph resonates with me!

Just a few years of real price declines and consequent disinvestment in any industry causes some damage, but a couple of decades of real price declines and structural surplus capacity is another

¹ The discussion around housing affordability indices is distorted as a result.

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matter entirely. Any industry's ability to recover rapidly from what happened to the global mining sector from 1981 onwards would be very severely impeded. Sustained disinvestment is not just about not expanding or not building or not starting new projects. During the downswing that preceded the current boom: minerals exploration was cut to near nothing; spending on new technology and innovation evaporated; pressure was applied to costs of all ilks; suppliers (tyre producers, explosives makers, truck manufacturers, specialised equipment producers, etc) all cut capacity, and over time eliminated capacity; contractors (engineering firms, transportation providers, drilling contractors, maintenance providers, etc) laid off people and put their attention on other things; educational institutions like universities stopped training geologists and mining engineers (the smart kids avoid what are perceived to be 'sunset industries' and study business and IT and go to work for Goldman's and Apple); and infrastructure such as railways and ports and adjacent townships were barely maintained, held together with bailing wire and chewing gum.

Further, something else that is not generally understood is that, at both state and federal levels, the government departments overseeing the industry declined, shrank and atrophied (the smart and ambitious bureaucrats moved on to other 'sexier' departments), and the manpower, experience and intellectual policy-making acuity in government was seriously degraded. At a corporate level, in the executive suites and boardrooms of the companies involved in the industry, sustained decline also has consequences. For a start, the bright guys don't want to come to work in such an industry. Let's face it, over time the guys who rise to the top in such an environment are the 'B Team' and by circumstance and necessity they are the determined optimisers, the hard-eyed cost-cutters, the numerically focused seekers of economies of scale, and in the latter stages of an extended cycle, they are those who would abandon involvement in the industry altogether – optimists and innovators are scarce. Other things happen too. In the market, buyers become habituated to the expectation that this year's price will be lower than last year's, and they wield their buying power ruthlessly in the belief that they will hold the strategic whiphand forever; contract terms slide remorselessly in favour of the buyers.

Over a 20 to 25-year period it is amazing how deep the extent and institutionalisation of these changes can be, and the way in which the Australian mining sector responded to the unexpected positive shift in demand patterns in the early part of the last decade shows just how hard these trendlines are to reverse.

As Ellis and David pointed out, in the first part of the decade, from 2000 until 2005, nobody (least of all the mining companies) had any faith at all that China's uptick in demand for raw materials was sustainable. Even now there remain sceptics in the mining companies. Ellis and David say that 'mining companies took some time to be convinced'. In my own experience, I'd say that from when the first rigorous evidence of the potential for market growth was presented (around 2000), to the first big investment in expanding capacity that could be described as material in scale relative to market demand, the industry hesitated for about five years. With hindsight we can now see that the opportunity costs of such hesitation were very substantial. The nature of the preceding decades created conditions in every facet of how the industry functioned which conspired to impede our capacity for any kind of agile response. Of course, one can also argue that the buyers reaped what they sowed – it's an interesting sidebar to this discussion to contemplate that the Japanese did most of the sowing and the Chinese have reaped the price increases.

In this context I would also observe that the revival of all of the capacities required for Australia to build new mining capacity commensurate with both China's demand and our geological endowment is far from complete. The generational change in the executive suites and boardrooms has been relatively limited – shareholders are happy with nice profits so there isn't much pressure for real change. The government departments relevant to the industry have also struggled to adjust, both in policy terms and, at a state level, in terms of coping with the required rate of change being imposed by relentless Chinese demand growth.

Capacity growth is now occurring among suppliers and contractors and educational institutions, but we continue to be constrained by the inescapable succession of time lags that inevitably occurs between the fact of demand, the conviction that it is real and sustainable, the investment decision, the installation of new capacity and the availability of material volumes of new product.

In closing, I thank Ellis and David for a very thorough piece of work, which I enjoyed reading and found informative. I personally think that the China story has a long way to go and that the real challenges for the Australian mining sector are much more on the supply side here with us than they are on the demand side in China. Ultimately, our high-quality geology, our systemic advantages and our geographic proximity to Asia will serve us very well, but I believe that there is additional margin and volume available to Australia if we can manage the development of our industry more effectively in the next decade.

Reference

Wang X (2010), 'Analysing Chinese Grey Income', translated, *Credit Suisse Expert Insights*, 6 August, pp 12–39.

2. General Discussion

Following on from a similar point made during the discussion of the Kearns and Lowe paper, one participant argued that, in addition to the increase in demand from China, at least part of the rapid rise in commodity prices in the latter half of the 2000s was a consequence of global inflationary pressures. A comparison with the 1970s was made, highlighting the increase in real oil and coal prices. Loose fiscal policy in the United States during that period and monetarisation of the fiscal deficit was said to have led to excess demand and inflation. It was suggested that, in the 2000s, relatively low US interest rates, coupled with pegged exchange rates in rapidly growing Asian economies, had also contributed to excess demand and inflation. The participant said that up to one-third of the relative price shock experienced in the second half of the 2000s could be attributed to these monetary factors. Making this distinction was seen to be important for answering questions about how sustainable the run-up in Australia's export prices will be and to what level prices might revert to in the future when expansionary fiscal and monetary policies around the world are unwound.

Participants thought that Figure 6 in the Connolly and Orsmond paper (p 117), showing steel production intensity at different stages of a country's economic development, was very interesting and they suggested that other variables, such as the terms of trade and consumption as a share of output, would also be interesting to look at in a similar way. One participant queried whether

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there were examples of countries that did not follow the same steel-intensive pattern through their development phase as shown in the figure, and whether or not it was inevitable that India would follow the same pattern as China. Related to this, another participant thought that it would be very difficult to predict when China's resource intensity would peak and at what level, with factors such as demographic change and carbon intensity adding to this uncertainty.

There was also robust discussion about the prospects for China and commodity prices over the coming decade. While it was recognised that there is still much more domestic infrastructure investment to be done in China, it was suggested by one participant that it might be difficult for the current pace of urbanisation to continue. Another participant stressed that so far we have only seen the first half of the likely commodity cycle – resource prices have gone up – but questioned what would happen to the domestic economy if the commodity cycle starts to turn (they also noted that it is a rare thing to see a permanent boom in margins).

The supply response in commodity markets was also a focus of the discussion. One participant noted that to date there has not been a boom in volumes and wondered if this was in the pipeline. The corporate consolidation in the mining industry was also raised, which has in effect created an oligopolistic market structure. It was suggested that large mining companies could internalise the effect on prices of increased supply and so moderate the supply response which could make predicting supply-side developments difficult but could also reduce the 'hog cycle'. The failure to forecast the rapid increase in commodity prices was also seen as a key explanation for the (lack of) supply response (commodity price forecasts that reverted to their historical mean would have implied that substantially increasing investment would not have been a good decision). Large companies were also thought to be potentially less agile to respond to changing trends. One participant asked how difficult it was for companies to retreat from large mining investments, but in response it was felt that projects are normally completed once started but that the next line of investment projects would be less likely to proceed.

Referring to structural change indices shown in the Connolly and Orsmond paper (Figure 15, p 135), one participant noted that the mining boom seemed to have relatively little impact, although it was recognised that maybe this was still to come. They also mentioned that it was not obvious how large the adjustment in the economy would need to be to accommodate the rapidly growing mining sector – capital could be borrowed from overseas and since only a small fraction of total employment was in mining the reallocation of labour would also be small as a share of the labour market. A different participant stressed, however, that there were substantial structural effects going on in the economy. Incomes have increased, as has the real exchange rate, and the fixed factor market (e.g. land) was one area where the effects from the mining boom could be seen. It was also suggested that structural change might be taking place within industries, rather than across industries, which could explain the limited movement in the employment structural change index.

During the discussion it was noted that up to one-third of mining receipts are spent on local labour and other inputs used in mining production. Also, a share of mining income was said to flow either directly to households via shares and dividends or through government spending. A question was then raised about whether or not higher incomes in Australia were being spent or largely saved, and there was conjecture that unemployment may increase if households choose to save a larger share of their incomes. Finally, while the mining boom was seen to be the big story of the 2000s, other factors, including good policy, contributed to positive economic outcomes.

