

## Structural shenanigans in the Australian economy

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The recent stock market plunge should remind Australians that they live in a [vulnerable country](#) as well as a lucky country. While there may be severe problems ahead, over the past two years Australians have been fortunate enough to be debating what to do about a second mining boom rather than dealing with excessive public debt or high unemployment – or both. Dealing with the problems of prosperity is an easier job than dealing with dilemmas of austerity.

Booms aren't without their problems, of course. They increase inflationary pressures and lift the value of the dollar, which can hurt important sectors of the economy that employ many people. Booms also make us *more* vulnerable to events in the global economy because they intensify our susceptibility to a decline in international demand for our resources and the continuing supply of foreign money. They can also contribute to rising inequality if governments do not effectively distribute the proceeds of the boom across society and between generations. These oscillations have tested Australians throughout their economic history, and the end result has generally been reasonable. Resources have not been a curse for Australians.

### **Boom to doom to boom to gloom**

In the lead up to the global financial crisis in 2007, Australia had one of the biggest booms in its history. But optimism quickly turned to pessimism over late 2007 and 2008, with many pundits believing that Australia was about to repeat the cycle of boom and bust that has long punctuated our economic history. Yet by late 2009, it was clear that Australia had avoided the worst. And by 2010 the mining boom was clearly back on and Australia had emerged as the star economy of the developed world.

Despite this stellar performance, an increasing gloom has recently over-ridden the boom for many Australians. Treasurer Wayne Swan and others have explained this bipolar mood as a product of a “patchwork” or “two-speed” economy. Others are worried that Australia is suffering from something called “Dutch disease.”

While there are plenty of possible reasons for the pessimistic mood, including the political and economic debacles in Europe and the United States and the current carbon tax debate, a more important long-term issue is structural change in the Australian economy.

What is the rise of China and the mining boom doing to the Australian economy and what, if anything, should the Australian government be doing? Analysing the structure of the economy helps to explain why boom and gloom can occur at the same time.

## **Are you being served?**

Structural change has been a constant in Australian economic history. Despite a continuing focus on the travails of agriculture, mining and manufacturing, the most important change over the longer term has been the growth of the services sector and the decline of agriculture and manufacturing. The recent structural impacts of the mining boom are simply pushing pre-existing trends a little harder.

The relatively small contribution of agriculture and mining to GDP would probably surprise most Australians. The popular perception of the dominance of agricultural, mining and manufacturing undoubtedly has its origins in their more substantial contributions to GDP for much of Australia’s history. Mining and agriculture also play a big part in the image Australians have of themselves.

In 1901, agriculture (including forestry and fishing) was the largest sector, contributing nearly 20 per cent to GDP. In 1950–51, boosted by demand associated with the Korean War, agriculture contributed a massive 30 per cent to GDP. But since this postwar high, agriculture’s contribution has been in continuous decline, falling to a little over 2 per cent in 2010.

Manufacturing’s contribution doubled over the first fifty years of Federation from a little over 10 per cent, peaking in the late 1950s and early 1960s at just under 30 per cent of GDP, before falling to just under 10 per cent of GDP in 2010.

Mining's contribution to GDP – reaching a high of 35 per cent of GDP during the gold rush of the 1850s – fluctuated over the course of the twentieth century. In 1901, it accounted for a little over 10 per cent; by 1950–51 it had fallen to 2.6 per cent. It took off again in the 1960s, mainly as a result of increased Japanese demand for resources. Its rise up the GDP league table in the 1970s came at the expense of manufacturing, which by the middle of that decade was clearly in relative decline. By the 1980s, however, policy-makers were viewing mining as a marker of the past as resource prices fell and the price of manufactured goods rose.

While we continue to focus on agriculture, mining and manufacturing, the services sector of the economy has long been the most important sector. In 2010, services combined accounted for 80 per cent of GDP, with the financial and insurance services the most important sector, contributing 10.6 per cent of GDP.

### **The structure of the Australian economy (Industry sector contribution to GDP)**

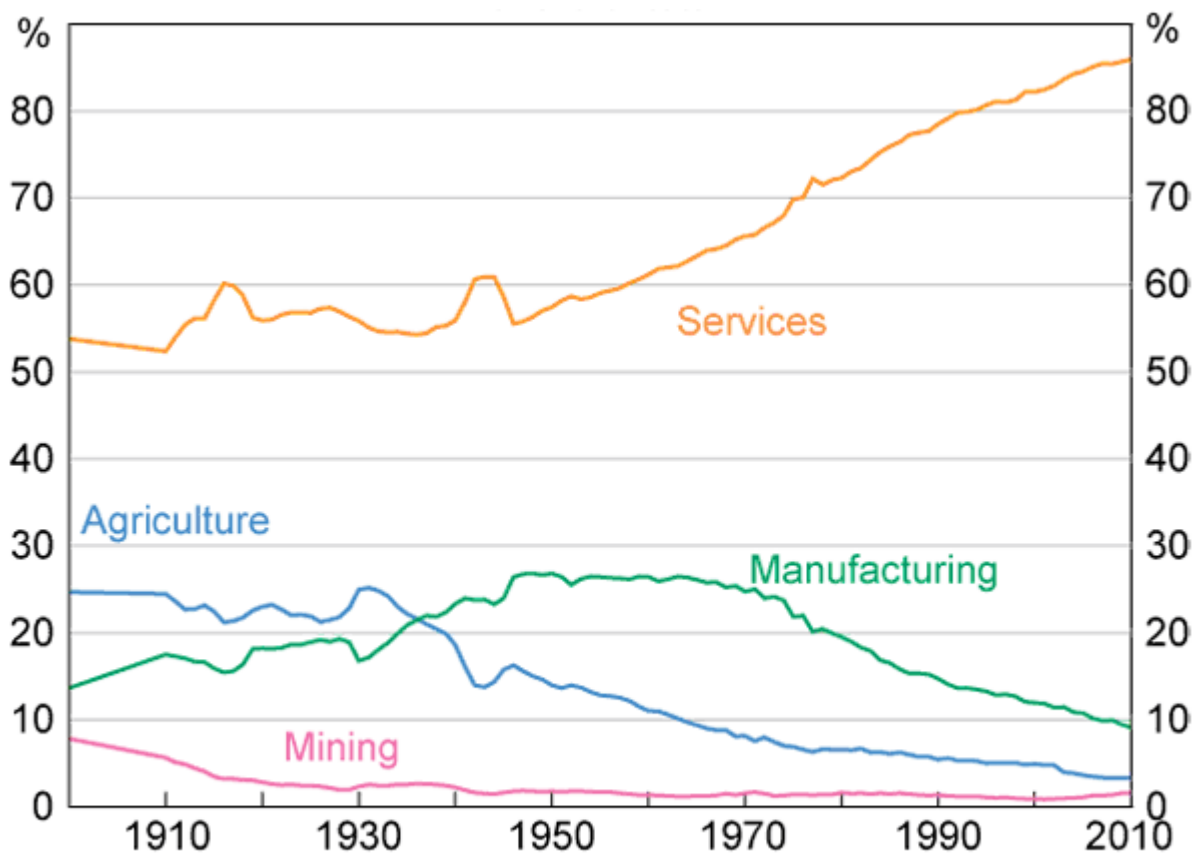
	1990	1995	2000	2005	2008	2009	2010
Agriculture, forestry and fishing	4.6	3.2	3.4	3.1	2.4	2.4	2.3
Mining	4.8	4.6	4.5	5.5	7.6	9.8	8.4
Manufacturing	15.3	14.7	12.7	11.4	10.1	9.3	9.3
<b>Total</b>	<b>24.7</b>	<b>22.5</b>	<b>20.6</b>	<b>20.0</b>	<b>20.1</b>	<b>21.5</b>	<b>20.0</b>
Electricity, gas, water and waste services	3.8	3.1	2.5	2.6	2.3	2.2	2.1
Construction	7.4	6.5	6.9	7.3	7.7	7.7	7.9
Wholesale trade	5.2	5.3	5.1	5.1	4.8	4.7	4.8
Retail trade	5.1	5.2	5.2	4.9	4.7	4.6	4.4
Accommodation and food services	2.2	2.7	2.8	2.6	2.4	2.3	2.3
Transport, postal and warehousing	5.6	5.7	5.2	5.3	5.4	5.1	5.2
Information media and telecommunications	3.4	3.8	4.0	3.8	3.3	3.3	3.3
Financial and insurance services	7.2	7.3	8.6	9.7	11.7	10.9	10.6
Rental, hiring and real estate services	3.1	3.2	3.1	3.1	3.1	2.8	2.7
Professional, scientific and technical services	4.2	4.7	5.5	6.0	6.3	6.4	7.3
Administrative and support services	1.9	2.2	2.6	2.7	2.7	2.5	2.5
Public administration and safety	5.5	5.7	5.5	5.6	5.2	5.2	5.2
Education and training	4.5	4.9	4.7	4.7	4.3	4.3	4.4
Health care and social assistance	5.2	5.7	5.7	6.0	6.1	6.0	6.2
Arts and recreation services	0.8	0.9	1.1	1.0	0.9	0.8	0.8
Other services	2.1	2.2	2.2	2.2	1.8	1.8	1.8
Ownership of dwellings	8.2	8.4	8.5	7.6	7.3	7.8	8.4
<b>All industries</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

The role of agriculture, manufacturing and mining are undoubtedly more important than these direct figures suggest because many of the service industries – finance, construction, transport, and electricity, gas and water supply – rely on them. Mining has also contributed to rising consumption, boosted construction and spurred growth in mineral processing. The boom has also

significantly increased government revenue and allowed reductions in taxation, which in turn has further supported consumption.

The services sector has also long been the major source of employment in the economy. Even in early 1900, services employed over 50 per cent of the working population and it has been on a trend increase ever since.

**Employment by industry  
Share of total**



\* Data are interpolated between 1900 and 1910  
Sources: ABS; RBA; Withers, Endres and Perry (1985)

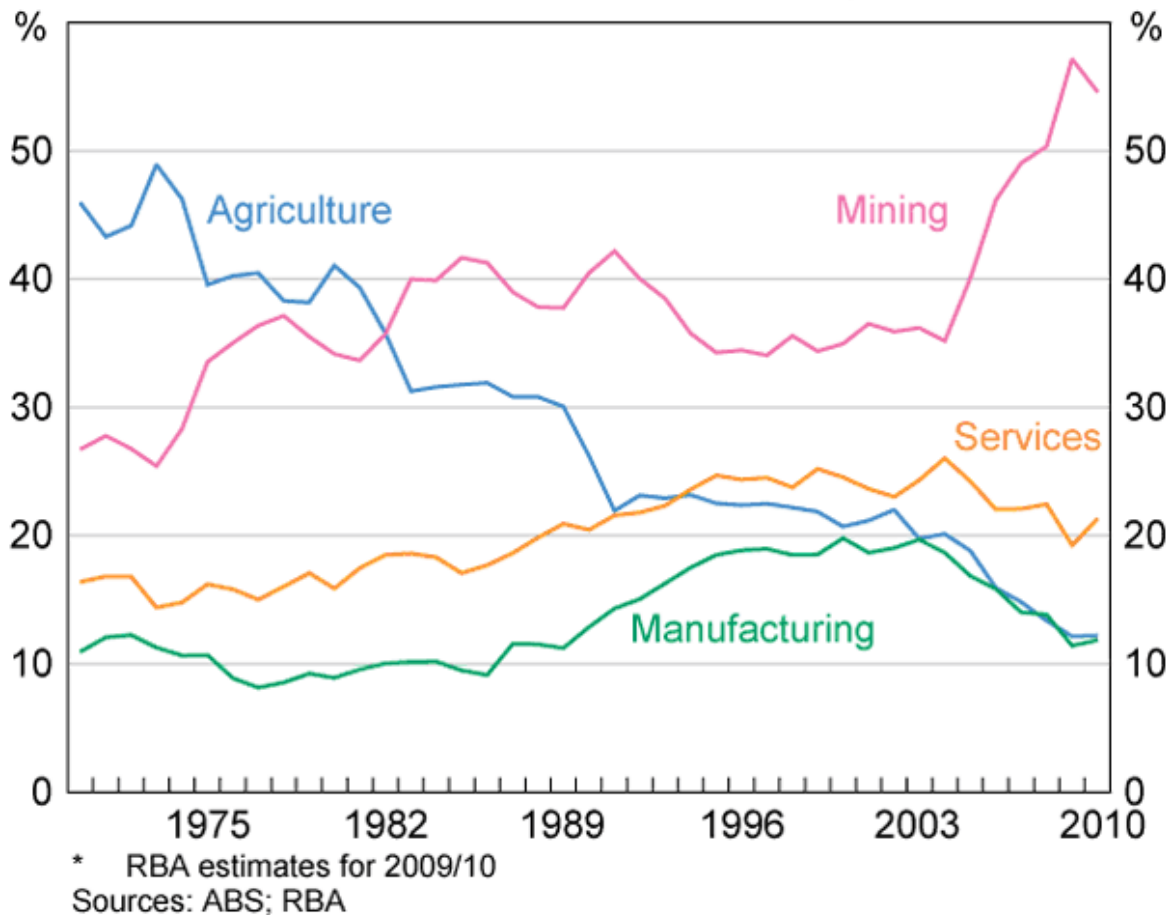
The employment figures for industry sectors show how few people mining directly employs, even if there are a wide range of indirect jobs associated with the sector. Mining directly contributed just 1.77 per cent to Australian employment in 2010, with agriculture contributing 3.36 per cent and manufacturing 8.92 per cent (down from 20 per cent in 1980). The two biggest employment sectors are “health care and social assistance” and “retail trade.” These figures show that a slump in the retail sector will probably have a greater impact on employment than a boom in the mining sector.

### Employment by industry sector

	Total	Percentage of Total
<b>Agriculture, Forestry and Fishing</b>	376.4	3.36
<b>Mining</b>	198.1	1.77
<b>Manufacturing</b>	999.4	8.92
<b>Electricity, Gas, Water and Waste Services</b>	148.7	1.33
<b>Construction</b>	1000.8	8.93
<b>Wholesale Trade</b>	418.5	3.73
<b>Retail Trade</b>	1203.9	10.74
<b>Accommodation and Food Services</b>	737.6	6.58
<b>Transport, Postal and Warehousing</b>	570.8	5.09
<b>Information Media and Telecommunications</b>	211.0	1.88
<b>Financial and Insurance Services</b>	397.5	3.55
<b>Rental, Hiring and Real Estate Services</b>	204.9	1.83
<b>Professional, Scientific and Technical Services</b>	855.8	7.64
<b>Administrative and Support Services</b>	384.1	3.43
<b>Public Administration and Safety</b>	700.7	6.25
<b>Education and Training</b>	887.9	7.92
<b>Health Care and Social Assistance</b>	1276.1	11.39
<b>Arts and Recreation Services</b>	184.9	1.65
<b>Other Services</b>	451.2	4.03
	11208.3	100.00

While the contribution of mining and agriculture to GDP may be smaller than commonly imagined, both sectors are vastly more important when it comes to exports. Australia has always been reliant on exports of primary commodities, but part of the success story of the 1990s was the significant increase in exports of elaborately transformed manufactures, such as cars, machinery and clothing. This improvement has ceased in recent years and dependence on mining exports has again increased over the past ten years. The decline of agricultural exports as a percentage of total exports has been virtually continuous since the mid 1970s.

### Exports by Industry Share of Nominal Exports



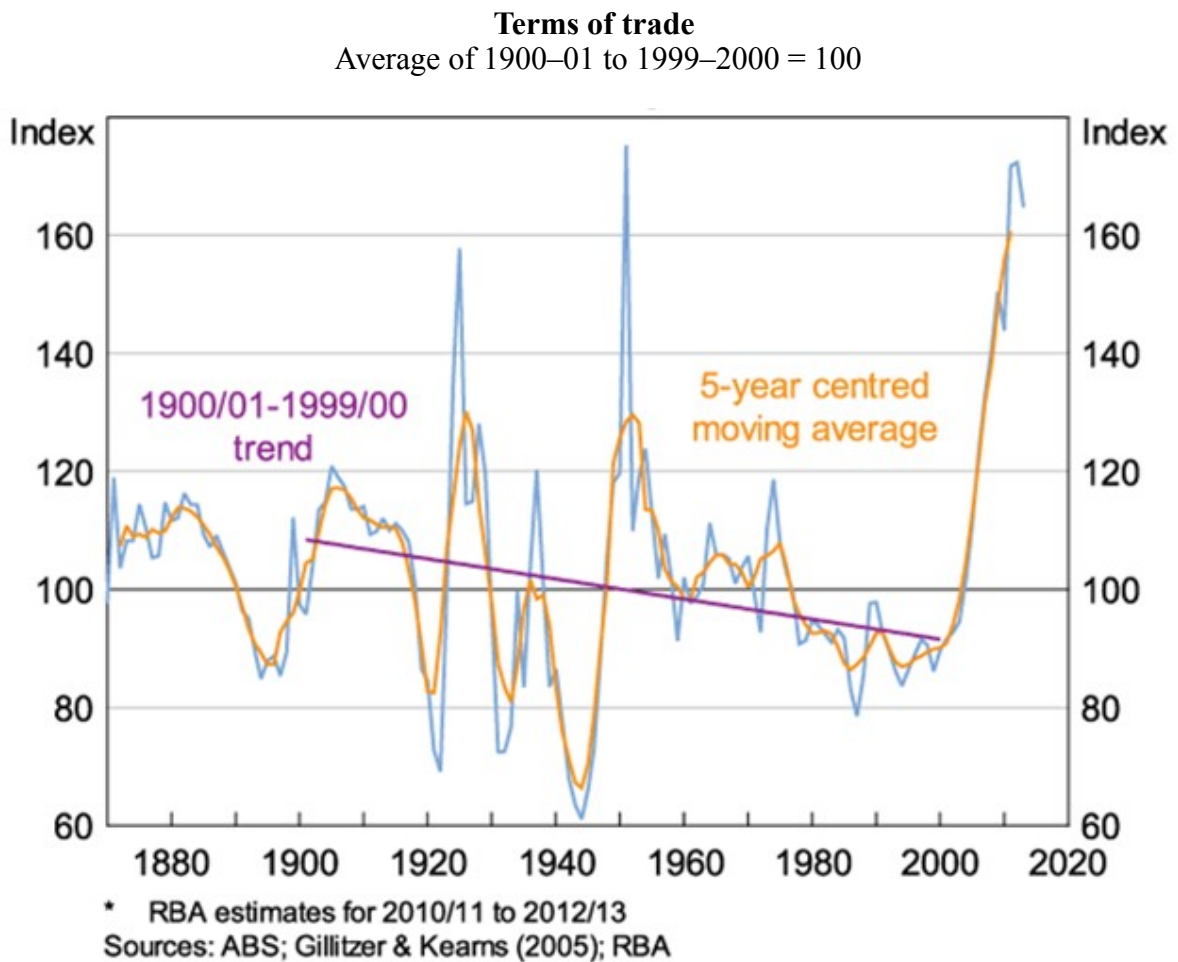
So now that we have a picture of the structure of the economy, we need to assess why the issue of economic structure is so important for Australia's future. The debate centres on whether the mining boom will be long lasting or, like past booms, turn into a bust. Already this boom is the longest sustained boom since the gold rushes of the 1850s.

### The terms of trade

The terms of trade is an index-measure ratio of the average price level of exports to the average price level of imports. It reflects the capacity of a given quantity of exports to pay for a given quantity of imports, and over the longer term provides an important indication of the strengths and weaknesses of economic structure. A rising or falling terms of trade indicates the possibility of improving or declining living standards, because if what we sell earns relatively more than

what we buy, we will be wealthier. As the governor of the Reserve Bank, Glenn Stevens, [points out](#), “Australia is in the midst of a once-in-a-century event in our terms of trade... the biggest gift the global economy has handed Australia since the gold rush of the 1850s.”

A rising terms of trade doesn't stop us from buying *more* things than we sell; indeed, Australians have made a habit of doing this.



## Revisiting the banana republic

To get some perspective on our current situation, it's helpful to go back twenty-five years to when policy-makers believed the bonanza from resources was well and truly over. The promise of boom in the early 1980s fizzled into the worst recession since the Great Depression and a growing pessimism punctuated the economic policy debate. The most famous statement about

the supposed end of the lucky country was Labor Treasurer Paul Keating's "banana republic" interview. It is worth quoting at length to show how much the rise of China has changed the economic debate.

We took the view in the 1970s – it's the old cargo cult mentality of Australia that she'll be right. This is the lucky country, we can dig up another mound of rock and someone will buy it from us, or we can sell a bit of wheat and bit of wool and we will just sort of muddle through... In the 1970s... we became a third world economy selling raw materials and food and we let the sophisticated industrial side fall apart... We must let Australians know truthfully, honestly, earnestly, just what sort of international hole Australia is in. It's the price of our commodities – they are as bad in real terms since the Depression... If this government cannot get the adjustment, get manufacturing going again and keep moderate wage outcomes and a sensible economic policy, then Australia is basically done for... If in the final analysis Australia is so undisciplined, so disinterested in its salvation and its economic well being, that it doesn't deal with these fundamental problems... Then you are gone. You are a banana republic.

Keating used the sense of crisis to further the case for economic reform. The financial, trade, competition and labour reforms of the 1980s and 1990s have undoubtedly helped Australia deal with the current boom, providing a flexibility to adjust to price shocks that was sadly lacking for most of the twentieth century. But Keating was wrong that the era of resource wealth was over.

He wasn't alone. In 1992, banker and globalisation enthusiast Walter Wriston argued:

Underlying and driving the information revolution are two powerful tides that are rocking the power structures of the world: The first is the vast increase and swift and widespread dissemination of knowledge and information of all sorts. The second is the increasing importance of knowledge in the production of wealth and *the relative decline in the value of material resources*.

Clearly, things changed. And they will change again. Wriston was simply pointing out a long-term trend in the world economy – the relative decline in the price of mineral and agricultural products and the relative increase in the price of manufactured goods and services. The rise of Japan, followed by South Korea and Taiwan, Singapore, Malaysia, Thailand and other non-communist countries of Southeast Asia had provided significant export markets for Australian commodities, though not a sustained structural increase in the value of commodities.

Then along came China, changing everything by reversing the long-term structural decline in commodity prices and Australia's terms of trade. Not only did Chinese demand increase the price

of Australian exports, but Chinese production helped to decrease the price of Australian imports. Manufactured goods made (or assembled) in China became significantly cheaper.

In 2000, Australia was pilloried as an “old economy,” too reliant on resources and unable to take advantage of the coming technology boom. Wrong. The tech boom soon turned into a tech wreck and Australia benefited from two other booms – a resources boom and a credit boom that went largely into increasing the price of houses and making homeowners feel substantially richer.

But before we make the mistake of going too far back in the other direction, the internet is now sparking another structural change that will profoundly affect the retail sector and who knows what else. While the technology boom got ahead of itself at the turn of the millennium, the impact of technological change will accelerate over coming years.

## **Betting on China**

It's possible that China and India will continue to grow rapidly for the next decade and at a slowing rate over the medium term, but it's unlikely that this growth path will be smooth. Capitalism, even under Communist regimes, means booms and busts. To think that growth will be smooth and long-lasting shows an enormous faith in the ability of the Chinese Communist Party to manage China's rapidly growing economy and huge population.

What is most unlikely is the [twenty-year boom](#) that some key economic bureaucrats seem to think is inevitable. For this to occur would mean that Australian history holds no lessons for Australia's future whatsoever. That's a big call.

Given the likelihood of continuing booms and busts, what should Australian policy-makers do? One solution would be simply to accept variability and deal with the fallout. But a better solution would be trying to save some of the income, using the proceeds of the boom to fireproof the Australian economy into the future. This would be a good solution regardless of whether the boom is temporary, long-lasting, or a series of boom–busts.

One of the ways of doing this would be to create [a sovereign wealth fund like Norway has](#), which would mean some of the proceeds of the boom would be invested offshore. The foreign investment out of Australia would also help to slow the rise in the Australian dollar that results from a booming economy and would provide a store of savings for when the terms of trade

eventually go lower. Failing this, quickly paying off all public debt and building a surplus would provide a cushion for the inevitable downturn.

The question policy-makers need to ask now is whether Keating's earlier anxieties are worth revisiting. Australia will indeed be in big trouble if Chinese growth falters.

According to former Treasury Secretary [Ken Henry](#), "there has been a structural change in our terms of trade" that means that there will have to be a "change in the structure of the Australian economy." He argues that governments should not resist these structural changes by assisting the manufacturing sector. Instead, governments should support the transition of workers to those "businesses in the Australian economy which do have a long term future with the sorts of terms of trade that we are confronting."

The sustained boom argument downplays the fact that price increases encourage supply increases, which then lead to oversupply and falling prices. It's called capitalism. China is actively seeking to diversify its sources of supply of the key resources it imports from Australia. This is the nature of the commodity cycle (even if the current one is already a particularly long one).

While Australia's economic bureaucrats have been remarkably sanguine about the future, others worry that the boom will create a resource-dependent economy. In the mid 1970s the Canberra-based economist Bob Gregory developed the "Gregory Thesis," an Australian pre-cursor to the so-called "Dutch Disease." That term had been used by the *Economist* to explain the impact of Dutch oil exports, a rising guilder and a struggling manufacturing sector. Both terms designate the negative impact resource booms can have on other sectors of the economy, particularly manufacturing, through the effects of a temporary rise in the exchange rate.

Part of the problem with "Dutch Disease" as a concept is the fact that the Dutch themselves didn't really suffer from it, although the Dutch manufacturing sector did take a temporary hit in the 1970s as oil exports increased and the guilder increased in value.

The major concern is with a *temporary rise* in the exchange rate. This can be a problem because the rise in the exchange rate may be long enough to force businesses in other sectors of the economy to the wall; in the wash-up, if resource demand is not sustained, important sectors of the economy are diminished. In contrast, a sustained rise in the terms of trade will lead inevitably to a change in the structure of the economy as investment and people shift into mining and associated industries and stay there.

This may still cause problems in the future as the economy becomes less diverse and unable to deal with an eventual collapse in the terms of trade. Glenn Stevens notes in relation to structural change:

It is easy, of course, to speak in the abstract of “reallocation of productive resources,” but this means that some businesses and incomes become relatively smaller; jobs growth in some areas slows even as in others it picks up. Some regions struggle more than others. Some sources of government revenue are adversely affected even as other sources see an improvement. This process will be seen, not unreasonably, as costly by those adversely affected, even though the overall outcome is that the country as a whole is considerably better off.

In other words, interpreting the sustainability of the current boom matters a lot. If the terms of trade remain high, we would be silly to try to keep the structure of the economy the same. We wouldn't want an economy dominated by agriculture as it was in the immediate postwar period and for a most of the time before that (gold booms notwithstanding). Remember the fate of wool, which was for so long our most important export and is now not even in the top 25.

We need to accept that structural change will be ongoing, but there is still a role for policy. As Stevens puts it, “the policy challenge for governments will be whether to help these sectors resist change, or to help them adapt to it.”

Currently there are several narratives about Australia's economic future. The first is an acceptance of Australia's role as a resource exporter built on the back of long-term Asian demand and a high exchange rate. Alongside this story is one about a growing Asian middle class, which will be increasing likely to use Australian services. This view means that there will be an alternative market for Australian exports after the Asian giants become less resource-intensive economies as they progress up the income ladder.

Another narrative posits Australia as a potential leader in clean energy technologies, with a carbon price helping to push things along. Effective action to reduce carbon emissions would eventually have a substantial impact on Australia's export structure as we and other countries attempt to reduce the amount of carbon released into the atmosphere. Coal exports in this narrative would eventually go the way of wool exports. (But coal companies aren't facing ruin anytime soon. Coal accounts for around 50 per cent of electricity output in the United States and Germany, 70 per cent in India and 80 per cent in China and Australia.)

Dealing with climate change will require a judicious balance between intervention and market forces. A fundamental shift to a low-carbon economy would require a dramatic regulatory

transformation that attempts to reshape the Australian economy's carbon-polluting fundamentals. It's unlikely to happen. Australia is still reliant on resource exports to earn foreign exchange and any changes will continue to come up against powerful business and labour interests. It will also continue to come up against popular concerns that Australia is sacrificing its living standards for little real gain. Many of Australia's manufacturing processes are dependent on coal-fired power stations and many Australians, even if they are compensated, are not prepared to pay higher prices for electricity and petrol.

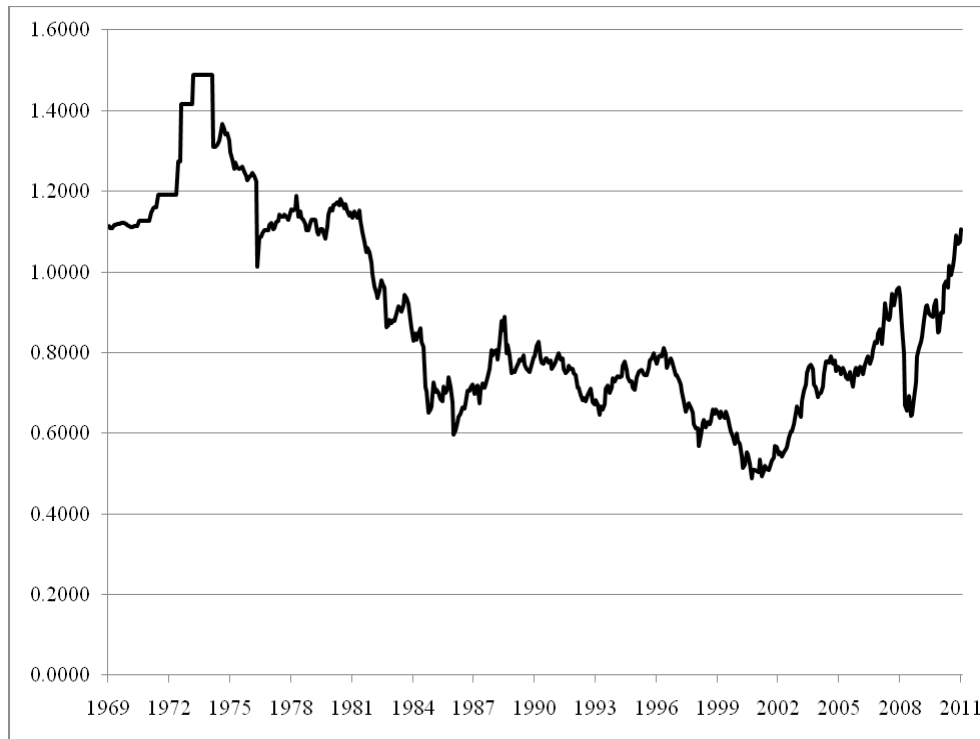
One of the most persuasive arguments used in the regulatory transformation of the 1980s and 1990s was that Australia would benefit from liberalisation regardless of what other countries did. For an advanced economy like Australia, it was clear that market signals would lead to a more efficient allocation of resources away from protected industries. While a similar argument can be made that Australia will reap benefits by finding alternatives to high polluting industries regardless of what other countries do, few voters and business people appear to support this view.

In both stories about structural change, the economically pure argue that the role of government should be limited to providing efficient infrastructure. Even here there are different definitions of infrastructure, from the provision of physical infrastructure to the development of human capital through extensive public spending on education and health (and research).

These are longer-term worries. Right now many sectors of the Australian economy are suffering because of the high Australian dollar. Newspapers are full of stories of tourism operators and manufacturers struggling to compete in export markets or against imports. If the Australian dollar remains well above parity with the US dollar for an extended length of time many businesses will fail.

It's significant to note that this is the first time since the effective end of tariff protection in Australia between 1988 and 1991 that the Australian dollar has been above parity. Undoubtedly, the significant devaluation of the Aussie dollar after the float in 1983 aided government efforts to lower tariff protection.

**Australian dollar–US dollar exchange rate 1969–2011  
(End of month)**

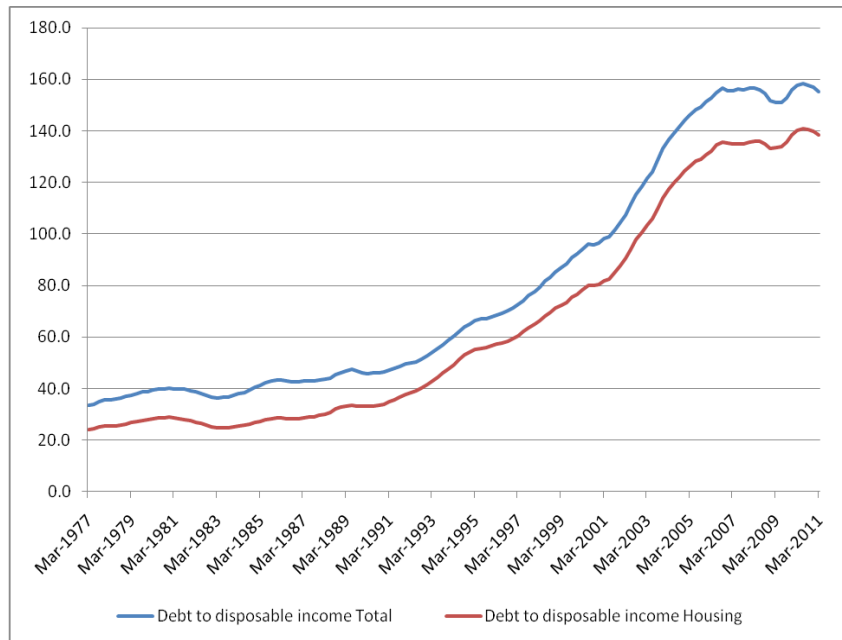


## **The decline of debt**

Another structural change occurring in the Australian economy is the shift away from debt-financed consumption. As Glenn Stevens [recently pointed out](#), the shift towards higher debt that occurred in the 1990s after financial liberalisation has run its course, which means that consumption is likely to remain subdued for some time, putting further pressure on a retail sector affected by the rising dollar and internet commerce.

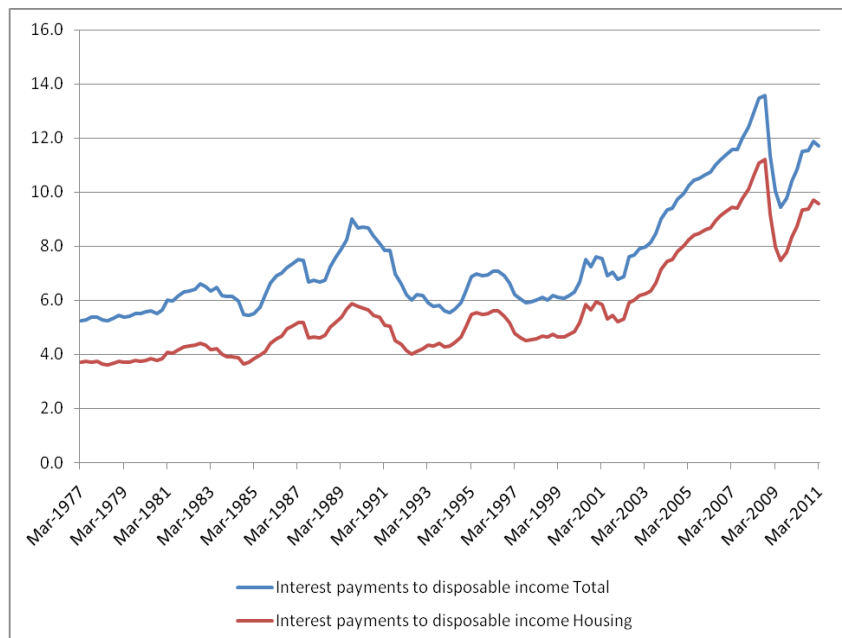
Given Australians' proclivity for profligacy before the crisis, the newfound enthusiasm of Australians for saving is not surprising. As the following graphics make clear, Australia's debt as a percentage of income grew rapidly from the early 1990s. The question that has intrigued me over recent years was how high household debt could go. While it might be too early to say definitively, it looks like 160 per cent of disposable income might have been the ceiling.

### Household debt to disposable income



The next graph also helps to explain the growing gloom of households faced with rising interest payments as the economy recovered from the global recession. While a renewed crisis might mean the Reserve Bank lowers interest rates again, this is likely to be a pyrrhic victory as unemployment increases and national income declines.

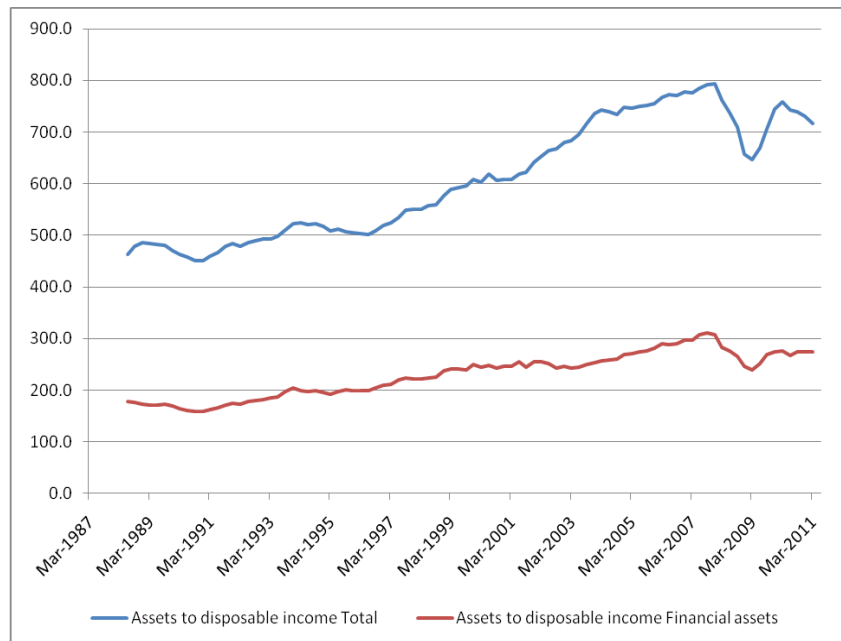
### Household Interest Payments to Disposable Income



Another reason why people are feeling pessimistic is that the value of assets has fallen as well. The graph below shows that the ratio of assets to disposable income has fallen since early 2008.

Uncertainties about the share and property markets and the growing conclusion that both are unlikely to rise rapidly anytime soon helps to make those holding these assets feel poorer and less willing to spend.

### Household Assets to Disposable Income



Source: RBA

### The Lucky Country revisited

Making sure that the benefits of a booming economy are widely distributed is the key to long-term prosperity. Glenn Stevens [recently argued](#) that *eventually* nearly all of us benefit from the mining boom:

The first is that the impact of the resources sector expansion does get spread around, in more ways than might immediately be apparent. Obviously mining employs only a small share of the workforce directly – less than 2 per cent. But to produce a dollar of revenue, companies spend about 40 cents on acquiring non-labour intermediate inputs, primarily from the domestic sector. Apart from the direct physical inputs, there are effects on utilities, transport, business services such as engineering, accounting, legal, exploration and other industries. It is noteworthy that a number of these areas are growing quickly at present.

This optimistic view implies that governments don't need to do much to ensure that the benefits of the boom will eventually flow to all Australians. I'm not so sure.

The major reason why resource wealth hasn't been a curse in Australian history is politics. It's an unfashionable thing to say given the Gillard government is on the nose in the electorate, but political interventions throughout Australian history to redistribute the proceeds of resource wealth across the economy helped to create a rich, relatively equal country.

For the first seventy years of Federation, Australia used protectionism to spread the wealth. But past insular solutions will no longer work. The true test for government in Australia over the next ten years is to continue redistributing the benefits of the boom without impeding the most important long-term issue – continuing improvements in productivity. We need to continue to do more with less.

The risks of increased global engagement and encouraging structural change are worth it, but more Australians need to share the benefits of these risks, as well as the costs.

## **Decoupling versus globalisation**

The world economy provides both opportunities and risks for an open economy like Australia. It makes us vulnerable, but it also brings rewards to those who can adapt. Former Reserve Bank Governor Ian McFarlane once argued that “if you only had one economic variable to predict the future direction of the Australian economy, the one you would choose would be the path of the world economy.” Recently this variable has luckily been skewed towards Asia. Traditionally Australia suffered if the United States went into recession, but this didn't happen in 2000, nor did it happen during the recent crisis.

Some argue that Asia has “decoupled” from Europe and the United States. This theory will be tested once again if the United States and Europe go back into recession. If Asia continues to grow – the decoupled scenario – then Australia will continue to be in a position to take advantage of China's remarkable transformation. However, if the globalisation scenario of rising interdependence means that Asia follows the West into recession, then Australia too will suffer.

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### For further reading see

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