As Asia’s Quarry: Implications for Australia

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Abstract:

The re-emergence of China and India in the new millennium has increased global demand for mineral resources, causing a return to the Australian vision of national prosperity tied to primary exports – this time minerals. Many analysts have questioned the wisdom of anchoring Australia’s prosperity to being a quarry for Asia. The current mining boom has enabled Australia to postpone, but has not removed, the need to develop new industries to sustain a high standard of living in a future marked by global warming.

Since innovation is prerequisite to development of new industries that contribute to a strong and sustainable economy, cultivating innovation requires serious national commitment for the long term. This requires Australia to seriously reconsider education policy at all levels and abandon what I term ‘rational choice populism’ – a culture of anti-intellectualism and an unequivocal belief in a form of market fundamentalism – that discourages the advanced level of investment in human capital required for innovation and causes Australia to be increasingly dependent on inflows of human capital, especially from Asia.
As Asia’s Quarry: Implications for Australia

Introduction

The energy hunger of emerging Asian economies, especially China and India, for Australia’s natural resources is behind Australia’s recent impressive economic performance. The Australian economy continues to grow, while most of North America and Europe are still struggling to climb out of the global financial crisis (GFC) recession. Australia’s post-WW2 wealth has stemmed largely from Asia’s demand for Australia’s primary products, especially natural resources. In the 1960s and 1970s Australia’s major customer was Japan, now replaced by China and India. Since the mid-1980s, China and India respectively have contributed 24 per cent and 8 per cent to world economic growth (Parkinson 2006). By 2009 China accounted for about 15.6 per cent of Australia’s exports while the rest of Asia accounted for another 48.5 per cent and resources accounted for 44.8 per cent of Australia’s total exports (ABS 2010).

Numerous studies – both theoretical like Caselli and Cunningham (2009), and Robinson et al. (2006), and empirical like Jensen and Wantchekon (2004) and Ross (1999) – explain how a country’s abundant natural resources can end up being a ‘curse’ through extensive rent-seeking under weak governance. It can be argued that democracy has largely spared Australia the resource curse. But the blessings of abundant resources and democracy are fertilisers that have promoted a political discourse that I term ‘rational choice populism’ – a culture of anti-intellectualism and an unequivocal belief in a form of market fundamentalism – to the longer term detriment of the national economy. This paper argues that such a culture weakens Australia’s capacity to generate a better informed and more carefully considered national discourse on human capital formation and consequently national policy with long-term vision for producing and sustaining national well-being through a highly educated society.

The Lucky Country

Australia’s current prosperity rides on the back of natural resources. During the 1980s the Labor government sought to reduce Australia’s dependence on primary exports and reorient the national economy towards elaborately transformed manufacturing in response to low world resource prices at that time. But the re-emergence of China and rise of India in the new millennium have dramatically increased the global demand for mineral resources, reversing the earlier fall in world natural resource prices. With these prices at unprecedented heights (Figure 1), Australian policy makers and many of the nation’s industrial sectors see national – or at least their own – prosperity tied once again to primary exports.

According to the 2009 Henry Tax Report, Australia has the world’s largest known resource reserves of many minerals, with another 65 years of iron ore reserves, 90 years of black coal, 85 years of alumina and 50 years of brown coal (Henry 2009). Demand for Australian resources is now synchronised to the business cycles of China and India, and although the per capita incomes of these countries remain low, their potential for long-term growth remains high. Any downturn in these countries is likely to be only transitory before they return to their long-term growth path. Australia’s terms of trade may inevitably fluctuate, but in 2010 the Australian Treasury forecast future levels well above the average of 1960–2003 (Figure 1).
Democracy: Prophylactic against the Resource Curse

Abundant natural resources have turned out to be a curse in many countries, where the lethal combination of weak governance and abundant resource rents creates ample opportunities for corrupt rent-seeking that impacts negatively on GDP growth. For Australia, the huge natural resource endowment has been largely a blessing. Australia and other resource-rich developed countries like Canada and Norway that have used natural resource endowment for national rather than narrowly elite wellbeing are mature democracies. These democracies have escaped the resource curse but are not totally immune from rent-seeking activities, as explained in various studies that indicate the difficulties even for mature democracies to avoid pork barrel politics. Federal governments in Australia have used discretionary funding and program grants to improve their chances of re-election (Leigh [2008], Worthington and Dollery [1998]). Regions in Sweden with many swinging voters have secured a disproportionate share of intergovernmental grants (Dahlberg and Johansson 2002), and spending of regional grants in Canada has been targeted at marginal electoral districts and districts represented by members of the ruling party (Milligan and Smart 2005).

Australian state and national governments are now hooked on mining. The resource sector in Australia is seen to sustain employment – a key performance indicator for governments. It provides well paid employment to relatively low-skill as well as to high-skill labour and is a major source of government revenue that could expand even further in the long-term (Figure 2). Recent debates over a proposed resource super profit tax (RSPT) have only reinforced official and public perceptions that the resource sector is the Holy Grail of the Australian economy. The mining boom in Australia enabled the previous Howard Liberal government to lower taxes and increase middle-class welfare. Megalogenis (2010) argues that the current Labor government likewise is taking advantage of the mining boom to try to secure short-term political advantage, but not necessarily the nation’s long-term future.
In mature democracies politicians are of course not granted *carte blanche* to pork barrel. Substantial resource rents enlarge the national budget, but do not entitle governments to shape budgets to serve interests other than those of the nation, nor do they enable politicians to violate the budget constraint easily without political cost. Democratic governments are judged on their fiscal performance. Printing money to finance government budget deficits causes inflation, and excessive government borrowing – even if backed by future resource taxes and royalties – results in the downgrade of government bonds and increases domestic interest rates. Democratic governments can come under scrutiny even if they balance the budget when they are perceived to be spending irresponsibly. A free press and formal processes of accountability help to restrain efforts at pork barrelling and to limit damage from it. Pork barrelling may favour one district over another with larger and better equipped sports fields, schools or hospitals, but there are normally checks and balances in a democracy to ensure the district received value for money from the funds spent. The Howard government was criticised before the last election for expanding middle-class welfare, but the criticism was relatively mild compared to the criticisms of the Rudd government over its handling of its home insulation and school-building programs implemented quickly in response to the GFC. The Australian public, like citizens in other mature democracies, appears more tolerant of pork barrelling than poor delivery of goods and services paid for by the taxpayer.

The existing literature conveys a consensus that democratic governance is a prophylactic against the resource curse. But while Australia appears set to retain democratic governance to prevent a ‘resource curse’ outcome, how long can the resource boom in Australia last given limits on both demand for it and supply of it? And while democracy might have saved Australia from the resource curse, will it enhance or diminish Australia’s capacity to adapt to situations in the distant future when the global hunger for Australian resources is no longer there? What philosophy should underpin Australian polices to develop alternative national strengths that can sustain a strong national economy and society after the mineral boom?
Mining as the Holy Grail of the Australian Economy

Treasury’s forecasts might be optimistic; high mineral prices encourage investments in new sources of supply that put downward pressure on mineral prices. Global demand for natural resources is also volatile – a bust invariably follows a boom as history has long proven. Moreover, minerals are non-renewable resources. It is therefore not surprising that many analysts have questioned the desirability of tying Australia’s prosperity to heavy dependence on being a quarry for Asia.

Demand for resources whether renewable or not is also conditional on foreign national economic policies. China’s energy efficiency improved even before environmental pollution and global warming became serious policy issues in that country, largely due to market reform that raised very low plan-prices nearer to free market levels. Between 1980 and 2000 the size of China’s economy quadrupled, but energy consumption only doubled (Rommeney 2008: 8). Continuing high global demand for energy resources also depends on the absence or non-use of alternate, economically viable and innovative non-resource intensive technologies. The challenge of global warming provides impetus for development of both alternative energy and resource-saving technologies. The consequences of global warming for economic wellbeing will not disappear and are likely to worsen, despite the failure of national governments at the climate change negotiations in Copenhagen to reach agreement on cutting the amount of carbon emissions. China, Australia’s major natural-resource customer, is responding in ways likely to reduce the mineral demand of itself and others over time. It is investing heavily in new technologies to reduce the intensity of carbon emission from GDP growth (Lieberthal and Sandalow 2009: 28-31; Rommeney 2008) and some of these investments have borne fruit and created spinoffs in exports. A Chinese company, Yingli Green Energy, has become one of the world’s largest producers of photovoltaic solar panels, exporting half its output to Europe and selling to the US as well (Flax 2010). Other countries are making similar efforts to reduce their carbon emissions and in the process creating new business opportunities that over time will lower demand, and price, for mineral energy resources.

Mokyr (1990) in his impressive historical study provides strong empirical support for the link between technological creativity and economic growth. He recorded how improvements in the stock of human knowledge throughout history were harnessed to create new goods or to produce existing goods with fewer resources. He explained how technological change was instrumental in the creation of substitutes for inputs into production and responsible for extinguishing demand for some final goods. The nature of technological change and the economic impacts of its application are often not anticipated. But even without this knowledge it is clear that the current mining boom has enabled Australia to postpone but not to overcome the need to sustain present industries, develop new industries, and diversify the types of its exports and global markets in ways most likely to yield a high living standard for its population in the future. Australia may have many years of reserves of natural resources, and new technologies that reduce both demand and price for these resources may – or may not – appear only in the distant horizon. But seeds for the innovation Australia needs to pursue now depend on a national culture supportive of deep and broad learning and enquiry, a culture now far from mainstream. The vein of anti-intellectualism that historically has marked parts of Australian culture today runs deeply through popular culture and works against appreciation and pursuit of innovation as a national hallmark. Development of a dominant culture conducive to deep learning and enquiry has a long gestation but incomparable rewards as a national investment. The seeds for innovation and intellectual
capacity position societies to adapt most effectively to national challenges, whether from severe external economic shocks or natural disasters like those consequential to global warming. For Australia, one such challenge may well be a massive drop in foreign demand for its mineral resources.

**Resource Boom is a Veil**

In this light we recognise the energy resources boom as a type of curse as well as a type of blessing for Australia, since it has effectively veiled over Australia’s underperformance in innovation and human capital formation. Innovation is the key that opens the door to the development of new industries that create new markets for Australian exports, the route to continuing high rates of return to capital and comfortable livelihoods for Australian working families. But these outcomes require the nation’s long-term serious commitment to innovate in areas beyond mining. At present, complacency reigns. The resource boom has drawn attention and priority from the need to invest solidly in innovation and human capital formation. Democracy has spared Australia the resource curse of corruption but the good times born of the mining boom have created a national collective myopia. Significant R&D activities and technical innovations certainly feature in the natural resources industry (Barlow 2006: 58-61), but they camouflage Australia’s far from stellar overall performance in R&D and innovation. Two signifiers of Australia’s overall R&D performance are intellectual property outcomes (Table 1) and innovation outputs (Table 2). Both show that strong R&D and innovation in the resource sector do not compensate for weaknesses in other sectors. Australia ranks among the top third of OECD countries in the total value of public R&D expenditure and quantity of scientific publications, but is only in the middle third of OECD countries when value of R&D expenditure is adjusted for size of population and GDP, and quality of publications (DIIR 2010:2). Australia’s performance looks even weaker when one takes into account that the 31 OECD members include countries like Chile, Mexico, Slovak Republic and Turkey.

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<tr>
<th>Indicators</th>
<th>Latest Figure</th>
<th>Reference Year</th>
<th>OECD Rank</th>
<th>Gap from the top 5 OECD performers (%)</th>
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<tr>
<td>Australian patents granted by IP Australia</td>
<td>1,130</td>
<td>2007</td>
<td>NA</td>
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<td>Australian designs certified by IP Australia</td>
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<td>2007</td>
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<td>Share of world triadic patent families</td>
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<td>2007</td>
<td>14</td>
<td>95.8</td>
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<td>2007</td>
<td>18</td>
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<tr>
<td>Share of world patent applications filed under PCT</td>
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<td>Industrial design registrations per million population</td>
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<td>2008</td>
<td>13</td>
<td>77.2</td>
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Source: DIIR (2010: 47)

Most Australians are unaware of significant technical innovations in the resource industry (Barlow 2006: 58-61). The resource industry hires many skilled and tertiary-educated workers, but what media reports on are the industry’s six-figure salary jobs for lowly educated mature adults and even young school leavers. Most Australians remain oblivious to the fact that the core of their economic wellbeing is national productivity growth. Increases in
multifactor productivity explain 65 per cent of Australia’s per capita growth over the last 40 years, but this is below the median of 19 OECD countries (DIIR 2010: 1). Nobel laureate Paul Krugman has observed that ‘[p]roductivity isn’t everything, but in the long run it is almost everything. A country’s ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker’ (Krugman 1994: 11). Quality of its human capital stock determines this ability.

Table 2: Australia’s performance in innovation outputs

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<tr>
<td>Share of high and medium-high technology manufacturing in total gross value added (%)</td>
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<td>Share of knowledge-intensive market services in total gross value added (%)</td>
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<tr>
<td>Share of high and medium-high technology in manufacturing exports (%)</td>
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<th>Reference Year</th>
<th>OECD Rank</th>
<th>Gap from the top 5 OECD performers (%)</th>
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</thead>
<tbody>
<tr>
<td>Share of high and medium-high technology</td>
<td>3</td>
<td>2004</td>
<td>25</td>
<td>76.5</td>
</tr>
<tr>
<td>manufacturing in total gross value added (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of knowledge-intensive market services</td>
<td>23.2</td>
<td>2004</td>
<td>5</td>
<td>13.2</td>
</tr>
<tr>
<td>in total gross value added (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of high and medium-high technology</td>
<td>27.4</td>
<td>2007</td>
<td>28</td>
<td>64.8</td>
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<tr>
<td>manufacturing exports (%)</td>
<td></td>
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Source: DIIR (2010: 48)

Ample evidence points to the low quantity and quality of domestic human capital formation in Australia. Employers/managers responding to a survey by the Australian Industry Group and Deloitte concerning Australian workers’ skills reported shortages in literacy (25.1 per cent), numeracy (22.5 per cent) and IT (34.7 per cent). Of greater concern, these respondents reported that more than three-quarters of their graduate staff have only ‘satisfactory’ generic skills in literacy, numeracy and IT. They reported strong skills in graduate staff at only 14.8 per cent (literacy) 17.9 per cent (numeration) and 22.6 per cent (IT) (ADG and Deloitte 2009).

In a review for the Group of Eight (Go8) universities in Australia, Brown (2009b) reported a serious decline in the mathematical sciences and related disciplines. The Go8 study, which analysed time series data from the TIMSS (Trends in Mathematics and Science Study), found a gradual decline in Australia’s performance, with young Australian students outperformed by students in most Asian countries. In 1995 Australia ranked above the US and England, in 2003 they were at par, but by 2007 Australia was statistically below the US and England (Brown 2009b: 4). Australia’s low formation of domestic human capital forces the Australian economy to rely highly on inflows of foreign human capital. Australia ranks second among OECD countries in its level of dependence on inflows of tertiary educated labour from overseas, while it ranks sixth for its proportion of students in advanced research programs who come from overseas (DIIR 2010: 4). Failure to cultivate sufficient home-grown talent clearly limits Australia’s capacity to generate the type and extent of innovation needed to position the national economy in a form beyond serving as a quarry for Asia.

Asia is Australia’s major resource customer, but it is also an important supplier of human capital to Australia. Australia ranks second among OECD countries for its reliance on inflow of graduate labour and many of them in recent years have come from Asia. Asia’s contribution to Australia’s human capital stock comes not only from their graduates since recent Asian migrants do not place a low value on education as many Australians appear to do. Rothman (2003) in a study of young people with low socioeconomic status (SES) found non-English-speaking background (NESB) low-SES young people were more likely to
participate in tertiary education than those from ESBs. Children of parents born overseas or who were born overseas had a higher participation rate than those who were Australian born. Those speaking an Asian language were more likely to attend university and those who spoke an Asian language at home were more likely to attend university than those who spoke only English at home (Rothman 2003: 5).6

Subcontracting innovation offshore is not an appropriate response to weak innovation efforts and human capital formation at home. Case studies demonstrate the perils of market-leader US multinationals that neglected their knowledge infrastructure at home. One US firm did not have programmers with sufficient expertise to continue core development of its products in the US. Soon its Indian subcontractor was creating the next-generation software, while the firm’s US-based programmers were simply maintaining the existing system and its customers realised quickly that the real expertise was with the Indian subcontractor rather than the US firm (Brown 2009a).

Rational Choice Populism

Nationalism can drive economic growth. Take Germany for example. Germans are purportedly proud of their technical innovation and industry and the German desire to excel in science and technical innovation spurs the nation’s economic growth. In Australia, the causality tends to operate in reverse, flowing from economic growth to nationalism. The average citizen’s wealth and high standard of living, and their country’s sporting successes make many Australians proud. And it is Australia’s abundant endowment of natural resources more than respect for the intellect that made these possible.

After almost 12 years of the John Howard government (1996–2007) that worked vigorously, if not overtly, to embed neo-liberal values, Australian political discourse appears to be heavily influenced by what I term rational choice populism – a culture of anti-intellectualism and an unequivocal belief in a form of market fundamentalism. Rational choice populism orients towards short-term. The resource boom has been an important lubricant of this culture because it lowers the cost of implementing the promises from competitive politics. With high compensation wages for even minimally skilled work, many individuals believe one could acquire the necessary human capital for high paying jobs with minimum cost to the state in terms of teacher pay and to the individual in terms of study time. Here we see how the promise of a free lunch is the equilibrium outcome of a prisoners’ dilemma in political competition over education. This equilibrium in turn leads to a public education policy that discourages the high level of public and private investments in human capital required for long-term sustainable growth. As Donald Horne recognised in his renowned work, The Lucky Country, while ‘cleverness’ is the key to Australia’s future prosperity, in Australia ‘cleverness can be considered un-Australian’ (Horne 1998: 11).

Accusations of populist and wedge politics were frequently made against the Howard government on issues such as asylum seekers, welfare, immigration, race and federal takeover of Aboriginal affairs in the Northern Territory, where he rallied the ‘masses’ against elite opinion (Wear 2008: 618). Even though it is not described as such, education as an issue and education policies are often couched in populism by major political parties. This has produced a short-term win–win outcome for both the general public and governments, despite weak support for education.
Populism and market fundamentalism in education are reflected in public feedback, with frequent complaints about poor teaching performance and the number of holidays teachers enjoy, and demands for teachers to be made more accountable for their work and for parents and students to have greater freedom of choice in schools. These responses create an environment of us (parents and politicians) against them (teachers), deflecting from the far greater concern that the nation is half-hearted in its support of education.

Among the clearest indicators of public commitment to education are teachers’ pay and entry standards into the profession. Leigh and Ryan (2008) found a substantial drop between 1983 and 2003 in the real earnings of teachers and in their relative earnings compared to non-teachers graduates.7 This income drop impacts on teacher quality and hence on human capital formation, since relatively poor pay makes teaching unattractive for talented Australians. Leigh and Ryan (2008) found that the quality of teachers in Australia has deteriorated significantly. The average percentile rank of students entering teacher education fell from 74 in 1983 to 61 in 2003, while the rank of new teachers fell from 70 to 62 over the same period. And as reported in Brown (2009b), many who teach in the mathematical sciences and related disciplines are not qualified to teach in these areas. This shortcoming has serious consequences for innovation, as maths/sciences are core disciplines behind scientific innovations.

The Australian government promotes its My School website as an instrument to lift school performance by providing extensive information on Australian schools to the public to introduce ‘a new level of transparency and accountability to the Australian school system’. Some have expressed doubt about whether the numeracy and literacy scores on the website are reliable indicators of school performance. But even if the indicators are reliable, the shaming and punishing of poor performing schools and teachers that can result from publishing these data can have only a limited positive impact, especially when poor pay inspires talented Australians to avoid teaching as a profession. And no amount of staff development will be able to turn the people with no or weak aptitude for mathematics and science who are currently teaching these subjects at school into competent teachers in these disciplines. Freedom to choose schools is also not a policy solution but a Clayton’s choice, as choice for the average parent is constrained in the aggregate by a fixed available pool of qualified mathematics and science teachers. Nevertheless it provides a feeling of empowerment to the ordinary parent, even though the rich obviously have real choice when compared to the poor. Promises of smaller classes (funded with lower teacher pay in the long run) and My School are populist policies that provide short-term big political bangs to the government at relatively little financial cost. They are not, however, a real remedy for weak human capital formation.

Populism and market fundamentalism have also intruded on tertiary education, where a heightened climate of anti-intellectualism has commodified higher education credentials as university products and transformed the teacher–student relationship to one between seller and customer. These processes have negative consequences for development of human capital. The ‘customer’ demands ‘relevant’ courses, but as Lasch notes, ‘[t]he demand for more “relevant” courses often boiled down to a desire for an intellectually undemanding curriculum’. ‘[T]he slogan of relevance embodied an underlying antagonism to education itself – an inability to take an interest in anything beyond immediate experience’ (Lasch 1979: 148-9). The demand for ‘relevant’ courses also echoes in research. Research staff in universities and publicly funded research institutions are under pressure to conduct more applied research. National policy makers applying such pressure seem oblivious to the fact
that pure theoretical research underlies many practical applications. The supermarket barcode reader is an unanticipated outcome from research in quantum theory; theoretical physicists with backgrounds in string theory and astrobiology research are currently working on cures for cancer.

The knowledge that the market values highly in the future is unlikely to be the knowledge that it values today. Knowledge is largely cumulative and builds on or corrects previous knowledge. The capacity of Australia to respond to the challenges posed by its dependence on the global economy in general and on Asia in particular depends on its basic core knowledge base, which is increasingly threatened by rational choice populism. In this view the customer is always right, but the average customer wants to pay the minimum – in terms of investment in study time (and enrolment fees) – for a university credential (degree). A survey across nine universities in Australia found first-year students on average spent 10.6 hours per week on private study in 2009 compared to 11 hours per week in 2004. In 2009 most first-year students spent less than one hour on private study for every hour of class contact. Domestic students spent only 10.3 hours per week on private study compared to 13.2 hours per week for international students (James, Krause and Jennings 2010: 38). No data earlier than 2004 was presented in the study. But a similar survey in the US on fulltime students in four-year colleges found the average student spent just 14 hours a week in 2003 on private study compared to 24 hours in 1961 (Babcock and Marks 2010). No study has tracked any direct or proxy measure of human capital development of university students in Australia. But the 2003 National Assessment of Adult Literacy (NAAL) report showed a significant decline in literacy among US college graduates between 1992 and 2003 (NECS 2003), suggesting that lower student investment in study time causes falls in graduate human capital accumulation.

Reduction in study time has not, however, lowered the grades received by university students in the US, but instead GPAs rose substantially (Babcock 2009). Murray Sperber (2000) explains how this is due to a non-aggression pact between teacher and student, which is an inevitable outcome of the inherent contradiction between high academic standards and market fundamentalism. In this market for higher education, the monetary price is only a component of the total price of education which also includes investment of student time. Australian tertiary institutions, unlike those in the US, are highly circumscribed by government in their ability to vary the monetary price in undergraduate fees for domestic students. They have more flexibility to adjust the non-monetary component of the total price and the US experience provides a salutary lesson for Australia.

Raising academic standards may not serve to increase the average effort of students. Babcock (2009: 3) argued that in a given class high ability students will increase effort to meet the higher standards, but low ability students at the margin will reduce effort. Cutting-edge innovation depends more on high-ability students and if it is to be achieved without reducing effort of the low ability students, high ability students should be taught separately from low ability students. Although some exceptions are likely, this approach is unlikely to be taken up as a general rule in Australian higher education without a greater commitment to intellectualism and education. All tertiary institutions in Australia are now forced to compete for students, whose number helps determine the institution’s financial resources and effort demanded from student enrolments is an implicit component of the total price that an institution charges for its credential. The new Tertiary Education Quality and Standards Agency (TEQSA) is not a solution as it sets only minimum standards, which by their nature are well below that required to develop the next generation of cutting edge innovators.
Conclusion

Many policymakers believe that Australia’s resource sector and trade with Asia promise continuous prosperity for Australia into the future. However, this paper argues that Australia cannot rely on the resource sector and must hedge for uncertainties associated with the mineral boom. In the short-term, demand for resources is subject to the business cycles of Australia’s trading partners. Yet in the long-term, mineral resources are finite and global demand for them depends on both the uncertainty of technological change and foreign national policies that can significantly shift demand away from natural resources to substitutes. Democracy has spared Australia the resource curse, but the wealth and opportunities that the resource boom has generated, even for low-skill workers, have encouraged and been used to encourage a culture of anti-intellectualism and market fundamentalism. This culture impedes human capital formation and development of knowledge for innovation, which are foundations for Australia’s future prosperity.

Declining domestic student investment in learning and performance in schooling coupled with growing reliance on migrant tertiary-educated labour and the relatively higher value that Asian migrants from low SES place on education suggest that proportionately more and more of the better-paid jobs in Australia could conceivably go to the overseas-born and their first and second generation Australian children, with possible implications for social cohesion. Sound public policy for human capital formation and innovation therefore extends beyond the imperative of laying a solid foundation for Australia to avoid being Asia’s quarry. There is also the imperative of maintaining social cohesion, which is surely particularly important for a nation with a substantial and growing migrant population.

Footnotes

1 I distinguish the resource curse from the Dutch disease, which refers more narrowly to appreciation of the domestic currency through booming foreign exchange earnings from mining exports, which lowers the international competitiveness of non-resource sectors.
2 It is not a free market in the traditional sense where suppliers are free to set monetary prices. See the section in this paper on rational choice populism.
3 Yingli has global ambitions. It markets aggressively worldwide and was the first renewable-energy sponsor of the 2010 World Cup in South Africa (Flax 2010).
4 Matsuyama (1992) demonstrated in his influential model how a permanent commodity boom that crowds out the manufacturing sector, which is characterised by learning through doing, can harm an economy.
5 Dependency as measured by the proportion of the total number of people employed in Australia that have a tertiary qualification who are foreign-born (DIIR 2010: 4).
6 This suggests that Asian-background students have lower education attainment the more they were detached from the culture of their parents’ places of birth.
7 Real earnings declined 4 per cent for women and 13 per cent for men.

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