Australian Mining

TRADING NATION

New frontiers South and East Asia

India

A guide for Australian trade negotiators and mining and METS businesses to leverage trade and investment opportunities in emerging markets across Asia

03

TRADE AGENDA

Minerals Council of Australia

ABOUT NEW FRONTIERS

New frontiers: South and East Asia is a research study by Mike Adams, Nicolas Brown and Ron Wickes, the partners of Trading Nation Consulting, for the Minerals Council of Australia.

The New Frontiers study will produce a series of reports identifying opportunities and setting out an agenda for Australian trade negotiators and mining and METS businesses to expand trade and investment links with emerging Asian economies.

The Trading Nation Consulting partners are former senior officials of the Department of Foreign Affairs and Trade and the authors of *Trading Nation: Advancing Australia's interests in world markets*, UNSW Press, 2013.

November 2018

TRADING NATION

India

NEW FRONTIERS: SOUTH AND EAST ASIA

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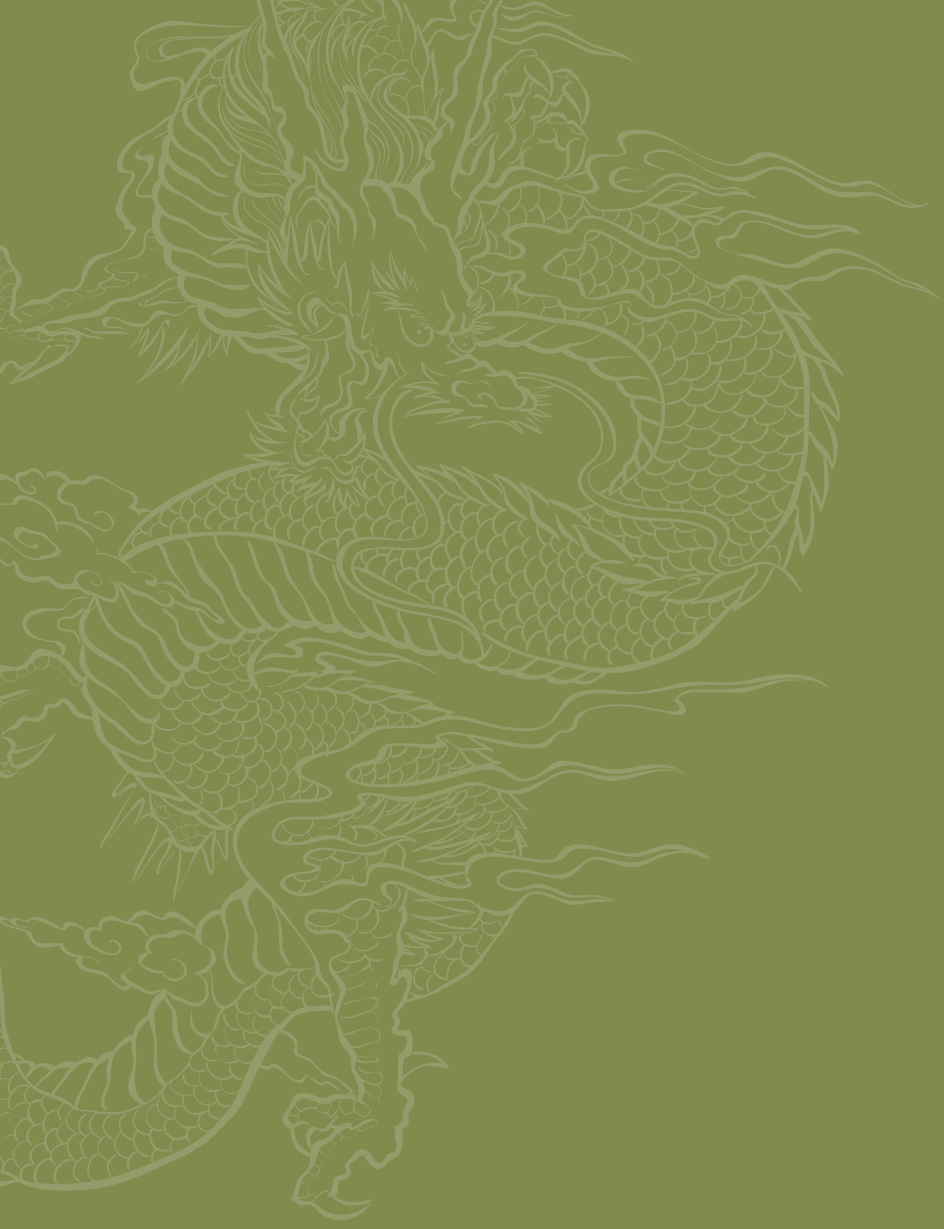


Executive summary

Continued economic and social reform is key to fast Indian economic growth

India started to open up its economy in the early 1990s and has made significant progress. Reform is continuing. Implementing the goods and services tax in 2017 was a major achievement. India stands a good chance of experiencing strong economic growth over the next one to two decades. Continued effective economic and social reform is key to this, but this will not occur in a linear way. India is a vibrant democracy and momentum for reform will ebb and flow depending on changing political, economic and social circumstances.

Strong economic growth should generate significant trade and investment opportunities in mining and METS. There are good prospects for resources trade. Over the next 3-5 years and maybe for much longer, METS will probably dominate Australia's engagement with India on mining related investment, though rising from a low base. It is highly unlikely that Australian mining companies would consider investing in Indian mining. There are too many risks.

Rapid growth should generate real opportunities for Australian mining and METS

India represents a major opportunity but also presents big challenges for doing business. In India's tough business environment, prices rather than value for money prevail, bureaucracy is heavy handed and the application of taxes is inconsistent. These challenges will not disappear quickly. Free trade agreements and trade policy more broadly will help, especially by reducing border and some behind-the-border impediments to trade and investment, but they will not be enough.

Developing the Australia-India economic relationship will be a bumpy ride. To work it must be mutually beneficial and based on realistic assessments of what India can achieve over the next 1-2 decades and where each partner can add value in the relationship.

Australia's exports to India are narrowly based, dominated by resources

Australia's trading relationship with India

Australia's merchandise exports to India are dominated by resources, and education services dominate services exports.

Australia's merchandise exports to India grew more slowly than total exports over the past decade, and our share of India's import market declined. However, Australia's share of India's metallurgical coal market fell only slightly. Australia's dominance reflects the quality of our coal for steel making purposes. Our share of the thermal coal market is small. The price of Indonesian and South African coal is a big factor.

Australia's share of India's **gold and copper** import markets fell dramatically over 2007-17. Our share of **alumina** imports trended upward, quantity and value increasing substantially.

Sales of Australian **mining equipment** and our share of India's import market are very small. **Business services** exports (other than travel) are modest ($176 million in 2017) and include services associated with software, mine management and education and training (for example, relating to mining productivity and mine safety).

Australia's imports from India are narrowly based, though they have been growing rapidly and include little in the way of mining-related goods and services (as defined here). India's market share of total imports more than doubled over 2007-17.

The Australia-India investment relationship is underdeveloped

Australia's direct investment relationship with India

The Australia-India direct investment relationship is under-developed. Australian foreign direct investment (FDI) in India has been around 0.3 per cent of all outward FDI since 2012, well below levels commensurate with India's share of world inward FDI. Foreign investment in Indian mining is meagre. Australian investment is no exception.

India's stock of direct investment in Australia is very modest. There is no indication that Indian investment is growing significantly. Indian companies are interested in

investing in Australian resources and land, but struggle with Australia's regulatory system as well as with political campaigns targeting foreign investment. Recent concerns over Chinese and Indian investment in Australia echo earlier concerns over investment from Japan in the 1980s.

A stronger trade and investment relationship will depend on meeting India's expectations for an upgraded relationship

Shaping the future of the Australia-India trade and investment relationship

India is the fastest growing large economy in the world. With much of the world beating a path to India's door, the Australia-India trade and investment relationship will depend on two fundamentals: delivering on India's expectations for an upgraded and broadened relationship that benefits both partners and, linked to this, demonstrating our relevance to India as it re-defines its place in the world strategically and economically.

- The currents shaping power and influence in the Indo-Pacific region are producing an environment in which Australia and India have strong common interests in working together. This may involve working to improve Indo-Pacific security. It could involve Australia in some way supporting India's longer-term ambitions to become a permanent member of the United Nations Security Council and shorter-term ambition to join the Asia-Pacific Economic Cooperation forum.

Australia has much to contribute to the *Make in India* agenda

- The single most important underpinning of the economic relationship with India is that neither party should see it as a one-way opportunity. Prime Minister Modi's signature *Make in India* agenda targets relationships that deliver improved access to resources, technology, skills and investments that help to build India's domestic economy and expand its international reach. Australia has much to contribute to this agenda.

India's supply/ demand balance for thermal coal remains tight over the medium term

Opportunities for trade in mining and METS

India's resources consumption could triple within a couple of decades. The great bulk of consumption is currently sourced domestically. Concerns about dependence on imported resources run deep in India.

Over the medium term, India's **thermal coal** consumption will rise faster than in any other major economy as the government pushes ahead with providing electricity to all citizens; coal will remain the mainstay of electricity generation. Less certain is whether thermal coal production can increase quickly enough to partially replace imports or retard their growth. Coal sector reform has hardly started. Beyond auctioning mines, the coal sector is untouched by liberalising reform. Without a sudden and unexpected burst of effective reform, the domestic supply and demand will remain tight.

India's thermal coal imports should increase significantly to 2040

In the period to 2040, India could add the equivalent of the European Union's current power system, and become the largest growth markets for global energy and coal. It will struggle to restrain growth in thermal coal imports with outcomes highly dependent on the pace of economic growth, the impact of coal sector reforms on domestic production and the scale of improvements in energy efficiency. Even under policies promoting diversity in sources of power generation, thermal coal imports could increase significantly.

Demand for **natural gas**, predominantly in the form of liquefied natural gas, seems set to rise, as does demand for **nuclear energy**. With limited, low grade and geographically remote domestic sources of uranium, India will need to import.

Metallurgical coal imports are also set to rise

Indian **crude steel production** could just about triple in the period to the early 2030s according to the official steel plan. If achieved, per capita consumption would rise from around 60 kg to 160 kg by 2030-31 – still below current world average per capita consumption of around 200kg:

- India has no viable deposits of **metallurgical coal** and most known reserves are unsuitable for blast-furnace ironmaking. India's Steel Plan provides for acquisition of overseas metallurgical coal assets.

- India could notionally supply all the **iron ore** needed to support rising steel production. But without extensive reform, iron ore consumption should outpace domestic production.
- India has limited domestic supplies of other essential steel-making inputs like high grade **manganese ore**, **chromite**, **nickel** and **ferrous scrap**. Nickel is practically unavailable in India and almost all unwrought and other forms of nickel are imported.

Imports of copper ores and concentrates and cobalt are set to increase substantially, as are lithium and rare earths

India is dependent on imported **copper ores and concentrates** and **cobalt**. Imports of these minerals should increase substantially as India develops, along with intensified exploration and concerted efforts to acquire overseas assets. Demand for lithium and various rare earth minerals should also grow rapidly as the use of electric vehicles expands and other 21st century technologies become more dominant.

Whether growth in demand for **aluminium** leads to rapid growth in alumina imports in the medium and longer term is difficult to assess. India is an importer and exporter of alumina: some alumina producers have backward links to bauxite mines; others have forward links to the aluminium industry, and some have both.

India accounts for approximately one fifth of global demand for **gold**. Over the longer term, demand should increase as incomes rise, but it is unclear whether this will lead to increased Australian exports given recent trends.

Opportunities should arise for METS as India modernises its mining sector

As India's mining sector grows and modernises, opportunities should arise for Australian METS firms to supply a wide range of **technologies and services** but it is not a one way street and is unlikely to be straightforward, despite obvious synergies:

- There are comparatively few Australian METS companies supplying the market and their success to date is mixed.
- There are big commercial challenges. Profits do not come quickly or easily. Indian businesses often look for the cheapest prices rather than 'value for money'.

The easiest option for international miners is to trade with India and stay away from the complexities of operating businesses there

Opportunities for investment in mining and METS

India has one of the most open regimes among emerging economies to FDI in mining and metals and machinery, but attracts little international investment in mining. This is because the sector stifles competition: it is dominated by state owned enterprises (SOEs) and by SOEs that control transport infrastructure essential to mining. It also is because of general unpredictability in the sector: security of minerals leases is not guaranteed. Agreed contracts are often re-interpreted, leading to delays in payment or in granting licenses. And the writ of bureaucratic involvement runs deep.

Without more clarity, the easiest option for the majority of foreign resources companies is to trade with India and stay away from the bureaucratic and regulatory complexities of operating businesses there. Some stay there, albeit often on a small scale, simply because if India transforms into a manufacturing powerhouse, it must start to modernise its state-dominated resources sector. International companies do not want to miss out.

METS is Australia's best near to medium-term opportunity for mining-related investment

Developing METS opportunities in India, particularly for equipment suppliers, will probably require direct investment in India at some stage. METS provides Australia with its best near- and medium-term opportunity for mining-related investment in India.

Challenges to doing business in India

India's business environment is improving in response to reforms begun in the early 1990s and continued under the Modi Government. They are reflected in India's headline rankings in several global measures of business and government performance.

India has aspirations to improve its rankings. Effective reform is key at both national and state levels. Reform at the state level is just as important as at the national level in determining business friendliness on key issues such as opening markets, competition policy and timely processing of environment-related approvals.

India relies on tariffs more than many other emerging countries

Challenges to accessing India's goods market

India continues to rely on **tariffs** more than many other emerging countries. In line with other economies, average applied tariffs on India's resources trade tend to be lower than for many other trades, but in general there are considerable gaps between average bound and applied rates of duty; average applied rates are a little above those in other emerging economies; and duty free access is more restricted. Tariffs are also adjusted regularly: frequent tariff adjustments are a central part of India's trade and industry policies. And, as in many other countries, **non-tariff barriers** (for example in relation to standards, import licencing and government procurement) add to the costs and difficulties of trading with India.

The Indian Government and more business-minded states will intensify efforts to reduce border barriers like inefficient customs processing and poorly performing logistics systems that add greatly to trade costs and frustrate development.

Restrictions on services are on average much higher than for goods

Challenges to accessing India's services and investment markets

Services restrictions, including on services delivered through a commercial presence, are on average much higher than for goods. Barriers to services trade that are relevant to mining and METS include imposing additional professional standards, effectively limiting the practice of certain occupations to local residents, placing restrictions on services provided by a commercial presence, and limiting the movement of executives and specialists into India. In schedules of services commitments, commitments for many sectors are often absent or left unbound, meaning that any measures can be introduced to limit market access or national treatment.

Protectionist and liberalising views jostle … but bit by bit a more liberalising approach is likely to take hold

India's approach to trade negotiations

Protectionist and liberalising views on India's future economic direction jostle for prominence in policy formulation. The domestic and international dimensions of India's trade policy framework have not been brought together in ways that support a more open and competitive economy. The benefits of trade liberalisation also are not widely accepted.

It is conceivable that, bit by bit and with occasional backsliding, a more liberalising approach to international trade and investment will take hold. This assessment is based on the pragmatic need to address two inter-related dilemmas at the heart of India's economic development: the possibility of de-industrialisation while India still has a low per capita income and the prospect that India could be marginalised from emerging regional economic and trade architecture.

Trade policy considerations for Australia

AICECA is a high priority for Australian business

Australia has a vital interest in keeping regional and global markets open and growing. Our approach to India cannot be divorced from the bigger regional and global picture. Australia's current negotiations with India for the **Australia-India Comprehensive Economic Cooperation Agreement (AICECA)** and the **Regional Comprehensive Economic Partnership (RCEP)** fit into, at least from an Australian perspective, a dynamic long-term process of regional integration and institution-building.

… and is too important to be allowed to remain in limbo

AICECA is a high priority for Australian business. From a resources and METS perspective, a credible agreement would deliver more certainty for Australian traders and investors in the Indian market. From an Indian perspective, a credible agreement must presumably include temporary access for Indian services workers to the Australian labour market. Negotiations have bogged down on this issue, and on the quality of India's goods offer.

RCEP can do some of the heavy lifting on market access and institutional arrangements given it has a higher profile than AICECA

If the economic relationship is to move to a higher level it must deliver benefits both ways

AICECA is too important for advancing the economic relationship to be allowed to remain in limbo. A more proactive approach is needed that accepts the very difficult issues facing negotiators but continues the conversation. It should focus less on specific negotiating outcomes and much more on building trust to address both parties' sensitivities and reform prospects. Such an approach could be a useful platform for substantive negotiations to conclude a mutually beneficial agreement.

Alternatively or in addition, holding back AICECA negotiations is not necessarily a bad thing if it provides time for RCEP negotiations to do the heavy lifting on market access issues and institutional arrangements that are directly important to Australian mining, METS and other companies doing business in India. RCEP has a strong profile in India unlike AICECA. India is serious about RCEP: it wants to be part of regional economic architecture. And reformers in India see RCEP providing the opportunity and means to re-think India's role in regional trade, especially in manufacturing.

The way forward could involve RCEP outcomes forming a baseline for progress in AICECA negotiations with no RCEP minus commitments and some RCEP plus commitments, just as breakthroughs in the ASEAN-Australia-New Zealand Free Trade Agreement underpinned progress in the Malaysia-Australia Free Trade Agreement.

Australia will need to do much of the heavy lifting and build a better understanding of India domestically

All the policy levers will need to be harnessed, including levers focused on India's states and cities

Policy priorities for mining and METS

If the Australia-India relationship is to move to a higher level, three priorities stand out:

- The relationship must deliver benefits both ways and they must be seen as significant.
- The Australian Government has built up expectations on the relationship and needs to do much of the heavy lifting to meet them. Australia is not the only country courting India.
- Over the medium-to-long term, a key priority for Australia must be to build a much better understanding of India and its enormous variety and complexity within Australia.

Australian Governments should use all of the policy instruments at their disposal in a mining and METS strategy for India. Besides RCEP and AICECA:

- **Multilateral trade policies** have taken a back seat to negotiations on FTAs over the past decade, but remain extremely important as the WTO Trade Facilitation Agreement shows.
- **Trade promotion** is particularly important for METS firms that are typically small and medium enterprises and have high fixed costs in entering difficult markets.
- **Policies on foreign investment** should include raising awareness of investment opportunities in India, including for METS firms, and advocacy programs that demonstrate to the Australian public the benefits of inward FDI from countries such as India and convey the message that Australia welcomes foreign investment.

… because they control many of the things that make doing business in India easy or difficult

- **Cooperation**, including facilitating training programs in areas like mine safety and the environmental aspects of mining, would assist India and showcase Australia's excellence. Using an existing Indian mine, in partnership with Indian companies, to demonstrate Australian and Indian techniques and skills is an idea that warrants further examination. Capacity building via RCEP and AICECA would be valuable. In an AICECA context, staff exchanges between Australian and Indian regulatory agencies could be useful.
- **'Soft power'** can be used to great effect. Elements of the Indian Government possibly perceive Australia as a mining super power. There is scope to engage with India on what regulatory approaches have worked in Australia and what have not. At the moment Australia arguably underplays our soft power when in fact we could be a partner of choice.
- **Domestic reform** is key to Australian firms' continuing international competitiveness.

Some of these policy instruments involve working not only with the Indian Government, but with India's state governments that control 'many of the things which make the day to day life of a foreign business in India easy or difficult.'[1]

TRADING NATION

India

Australian goods trade with India, 2017
(A$ billion)

ABOUT INDIA

Capital	New Delhi
Language	Hindi/English
Population	1.32 billion
Currency	Rupee
Land area	3.287 million km^2
Internet users	26%

ECONOMIC INDICATORS 2018

$2.8t
India's GDP
(US$ at market exchange rates)

$2100
GDP per capita
(US$ at market exchange rates)

7.3%
Real GDP growth
(percentage change)

-2.3%
Current account balance
(percentage of GDP)

5.0%
Inflation
(percentage change)

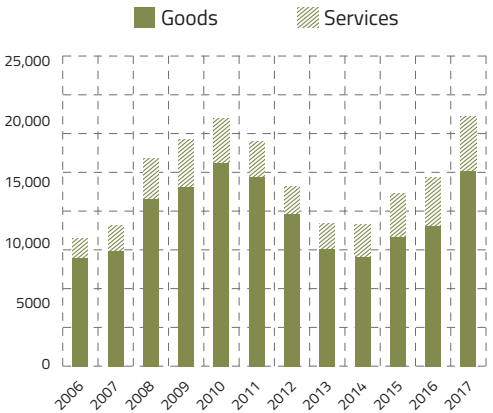
8.8%
Unemployment
(per cent of labour force)

18%
Total imports
(share of GDP)

19%
Total exports
(share of GDP)

India: Gross Domestic Product
(US$ billion at market exchange rates)

Australia: Exports to India
(A$ million)



Sources: Department of Foreign Affairs and Trade; World Bank; IMF.

Major Australian exports to India
(A$, 2017)

- **Coal** $9.18 billion
- **Vegetables** $1.37 billion
- **Gold** $689 million
- **Copper ores & concentrates** $688 million

Major Australian imports from India
(A$, 2017)

- **Refined petroleum** $1.55 billion
- **Medicaments** *(inc. veterinary)* $335 million
- **Pearls & gems** $274 million
- **Railway vehicles** $199 million

Australia's trade in services with India
(A$, 2017)

$4.41b
Exports of services

$2.17b
Import of services

Key Australian services traded with India
(A$, 2017)

Imports
- **Personal travel** *(excl. education)* $934 million

Exports
- **Education related travel** $3.43 billion

Australia's investment relationship with India
(A$, 2017)

$29.4b
Total investment between Australia & India

AUSTRALIA
$13.96b
Total investment in India

INDIA
$15.49b
Total investment in Australia

India's goods imports: Top 5 source countries
(US$, 2016)

1. China	2. United States	3. UAE	4. Saudi Arabia	5. Switzerland	11. Australia
$60.5b	$20.4b	$19.2b	$18.5b	$14.92b	$8.7b

Australia provides 2.4% of India's annual goods imports

Sources: Department of Foreign Affairs and Trade; UN Comtrade Database.

India

ABOUT INDIA

The Republic of India is a constitutional democracy made up of 29 states, each with a substantial degree of control over its own affairs; six less fully empowered union territories and the Delhi national capital territory, which includes New Delhi, India's capital. With roughly one-sixth of the world's total population, India is the second most populous country, after China.

INDIAN TERRITORIES

1. Andaman and Nicobar Islands
2. Chandigarh
3. Dadra and Nagar Haveli
4. Daman and Diu
5. Delhi
6. Lakshadweep
7. Puducherry

Introduction

Within a decade, India will be the world's most populous country. It has substantial potential for catch-up growth and for policy and institutional improvement. It seems capable of sustaining rapid rates of economic growth for many years to come. By mid-century, it could be the world's second or third largest economy and have achieved middle income status as now defined. And it could well emerge as one of the world's largest and fastest growing markets, including for mineral resources and energy and mining equipment, technology and services (METS).

But it will not be plain sailing. Making the structural changes needed to support broader economic and social change will be challenging: transformation is unlikely to proceed smoothly with a made-to-order script taken from the pages of an economic textbook. And India is likely to remain a difficult market in which to do business. Some of the challenges are deeply embedded in Indian culture like elevating price over quality. Others like the heavily blurred lines between government and the market, ingrained protectionist instincts and heavy-handed bureaucracy are ingrained features of a tough and often unpredictable business environment and are beyond the reach of the most ambitious trade agreements. Doing successful business with India will require a great deal of patience and will not be for the faint hearted.

The present study has been prepared at a time of heighted interest in the Australia-India relationship by the two governments. Former Prime Minister Malcolm Turnbull announced in Mumbai on 11 April 2017 that the Government was commissioning an India Economic Strategy that would 'provide a plan to unlock the opportunities that will help us grow together, with a map that will guide our partnership though to 2035'.[2]

The Government subsequently appointed Mr Peter Varghese AO, Chancellor of the University of Queensland and a former High Commissioner to India, to prepare the strategy. Launched on 12 July 2018, it has a simple and direct message:

> The transformation of the Indian economy is underway. Its progress will be uneven but the direction is clear and irreversible. To realise the opportunities this opens up, we need as a country to make a strategic investment in India which is backed up with an ambitious, long term and multidimensional Australian strategy driven at the highest levels of the Australian Government.
>
> Australia should set itself the goal by 2035 to lift India into its top three export markets, to make it the third largest destination in Asia for Australian outward investment, and to bring it into the inner circle of Australia's strategic partnerships and with people to people ties as close as any in Asia.[3]

The message on minerals and METS also is simple and direct:

> Australian resource exports to India, particularly metallurgical coal, but also copper and gold, will continue to make up the bulk of our merchandise trade.
>
> India will be largely self-reliant in thermal coal in the longer term, but will need to import thermal coal well into the medium term
>
> Our mineral resources relationship will continue to be dominated by exports, rather than outbound Australian investment. The Government of India is very active in this sector and the weight of state-owned enterprises, layering of central and state regulations, and poor contract enforcement issues, complicate foreign participation on the ground.
>
> India is one of the most important future markets for Australian METS companies. As India grows and seeks to modernise its mining sector, METS will increase across the board. Australian METS companies have a competitive edge, particularly in the coal value chain and beneficiation.[4]

If Australia and India are to maximise the gains from India's economic development, it will be important for governments in both countries to cooperate and for government and business to work closely together. The Australian Government obviously has the central role in negotiating with India on the basic framework that will govern the commercial relationship. Governments – both Commonwealth and State – also have a role in developing awareness of the excellence of Australia's mining and METS sector and informing business about broad opportunities and approaches that will help firms to succeed. In these roles, governments need to be closely informed by business perspectives. And business, for its part, needs to be aware of government approaches to developing the relationship and of the insights that governments can offer, for example, through Austrade and state agencies dealing with the resources sector and international trade.

The present report is developed as follows. The first three sections examine Australia's trade and investment relationship with India. Among other things they consider the factors influencing Australia's performance in the Indian goods and services market – focusing on mining and mining-related markets – over the past decade and the extent to which this performance has been influenced by growth in the Indian import market as a whole, shifts in the composition of Indian imports and changes in Australia's import market share for specific commodities. A similar analysis is carried out on factors influencing Indian exports to Australia over the same period. In the case of investment flows, the emergence of Indian prominence in global foreign direct investment (FDI) – inward and outward – and Australia's very under-developed investment relationship with India are considered.

The middle section of the report considers the factors that are likely to shape future developments in the Australia-India trade and investment relationship. This focuses initially on India's medium-to-long-term growth prospects and Australia's visibility and relevance to India's development at strategic, economic and institutional levels. It is followed by a detailed review of opportunities

for trade and investment in mining and METS (with case studies on thermal coal, other energy, metallurgical coal and metal ores). This part of the report also includes a discussion on the prospects for collaborating on policy and regulatory issues linked to mining and development.

The final part of the report deals with the many challenges to doing business in India. It covers generic challenges affecting firms arising from India's difficult business environment; specific challenges arising from tariff and non-tariff barriers to goods; and measures affecting access for services and investment. It also looks at the trade policy options that may be available to deal with these barriers, including negotiations for a Regional Comprehensive Economic Partnership (RCEP) and for a bilateral Australia-India Comprehensive Economic Cooperation Agreement (AICECA). This is followed by a review of priorities for Australia's minerals and METS sectors in India.

If Australia and India are to maximise the gains from India's economic development, it will be important for governments in both countries to cooperate and for government and business to work closely together.

CHAPTER 1

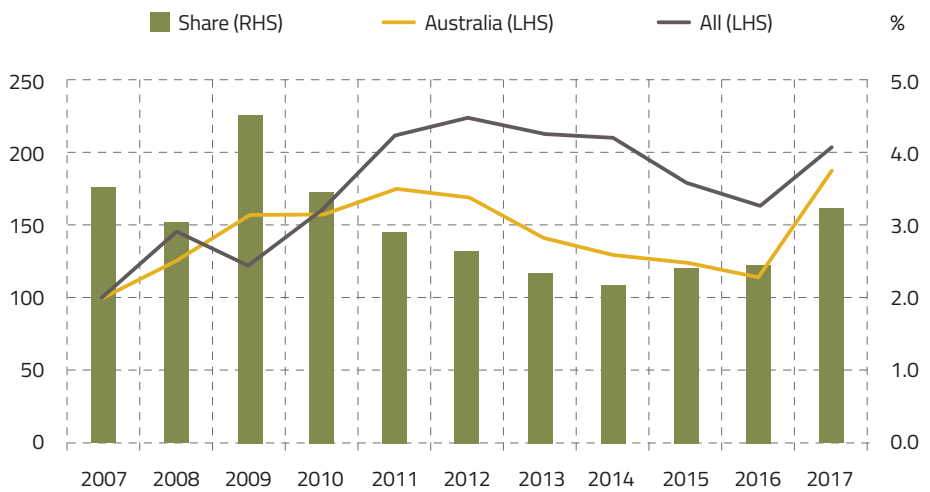
Australia's exports to India

India is an important market for Australia. Exports of goods to India were around $15.7 billion in 2017, while services exports were valued at $4.4 billion when measured on a balance of payments basis. India was Australia's fifth largest market for goods and services in that year, accounting for 5.2 per cent of Australia's total exports. Prominent exports of goods include coal, leguminous vegetables, liquefied natural gas, gold, copper ores and concentrates and alumina, while services exports are dominated by education services. Exports of goods and services to India in 2016 were nearly double the level that would be expected given India's share of world imports. However, the intensity of the export relationship is below that with Australia's major trading partners in North-East Asia.[5] Together with the relatively narrow focus of trade and the positive economic outlook for India, this suggests that there is considerable scope to develop the export relationship further.

Chart 1

India's merchandise imports from Australia and the world

Source: UN Comtrade Database



Note: The data for imports from Australia and for all imports are expressed as an index of the US dollar value with 2007 = 100. 'Share' is Australia's share of India's import market for goods in value terms. LHS and RHS refer to left and right hand sides.

Despite its promise and importance, Australia's merchandise exports to India have grown a little more slowly than exports to all destinations over the past decade, at around 4.1 per cent annually in Australian dollar terms, or 3.6 per cent in US dollar terms.

Indian data show merchandise imports from Australia growing at an annual rate of five per cent over the decade in US dollar terms. Both series show significant fluctuations from year to year. Overall growth for India's imports from Australia was slower than for India's imports from all countries.[6] Reflecting this, Australia's share of the import market for goods fell marginally from over 3.5 per cent in 2007 to 3.2 per cent in 2017 (Chart 1).[7]

The technique of constant market share analysis (see Annex A) suggests that the mixed performance of growth in Australia's merchandise exports to India may have resulted from one or more of three main factors:

- Limited growth in the overall import market, resulting in modest opportunities for Australian exporters.
- An unfavourable shift in the composition of India's imports from products in which Australia specialises: this is termed a 'composition effect'. When data is analysed using values, it may reflect changes in global prices for commodities that affect the composition of India's imports, as well as underlying changes due to India's development.
- A decline in Australia's market share for specific exports to India such as gold and copper ores: this is normally called a 'competitiveness' effect, although loss of market share in a specific commodity can occur for many other reasons. For example, exporters may find more attractive markets or importers may wish to diversify their sources of supply. There may also be changes in the grade or degree of refinement of the commodity supplied or required.

Table 1 shows the relative impact of these three factors over the period 2007-2017:

- Between 2007 and 2011, India's merchandise imports grew rapidly, both in US dollar value and volume terms. Global prices rose for commodities of interest to Australia. For example, gold prices soared from a trading range of around US$625 to US$825 per ounce in 2007 to US$1370 to US$1810 in 2011.[8] But these effects were partly offset by a strong negative competitiveness contribution. This was mainly due to the apparent collapse in Australia's market share for gold, which was India's biggest merchandise import from Australia in 2007. A slight decline in Australia's share of metallurgical coal imports was another factor.
- Over 2011-14, merchandise imports into India from all sources contracted slightly in terms of their US dollar value and grew very slowly in volume terms. There was a negative composition effect. The price of high rank metallurgical coal of a kind Australia supplies to India, at US$112 per tonne in 2014, was well under half its 2011 value of US$269 per tonne. There was again a negative competitiveness effect, with Australia's share of India's market for copper ores falling sharply.

- Over 2014-17, India's imports contracted in terms of their US dollar value and grew only slowly in volume terms. There was a strong positive composition effect partly reflecting the increase in hard metallurgical coal prices, which rose to US$179 per tonne in 2017 after bottoming in 2015. The competitiveness effect was only marginally negative, although there was a slight decline in Australia's share of the import market for metallurgical coal and a further decline in our market share for gold and copper ores.

Overall, the contraction in the US dollar value of India's imports after 2011 was a factor in the mixed performance in Australia's merchandise exports. The competitiveness effect was very important in the first period. Composition effects were significant in each of the three periods and were responsible for the strongly positive growth in India's imports from Australia over 2014-17 and thus for the rise in Australia's market share over this period. Market shares for specific commodities are examined in more detail below (pp. 26-31).

Table 1

India's merchandise imports: constant market share analysis

Source: TNC calculations based on UN Comtrade, International Trade Centre and International Monetary Fund data

	2007-11	2011-14	2014-17
Growth in the US dollar value of India's merchandise imports from Australia, per cent	74.7	-26.0	44.5
attributable to:			
... Overall growth in India's imports, per cent	111.5	-0.7	-3.3
... Composition effect, percentage points	38.3	-12.0	50.0
... Competitiveness effect, percentage points	-75.2	-13.3	-2.2
Growth in the **volume** of India's merchandise imports from all sources, per cent	53.9	4.1	13.1

Note: See Annex A for the methodology used and its limitations.

Exports of minerals and basic metal manufactures

Australia's merchandise exports to India are dominated by minerals and basic metal manufactures. Table 2 provides a snapshot of Australia's exports of these commodities in 2017. The table indicates that exports are significantly larger than shown in official statistics because many items are confidential in Australian Bureau of Statistics data. Total merchandise exports of minerals and basic metal manufactures, including confidential items estimated from India's import data, were around $12 billion in 2017.

Table 2

Australian exports of minerals and basic metal manufactures to India, 2017

Source: UN Comtrade Database

Product description	Exports ($m)
Coal: briquettes, ovoids, similar solid fuels manufactured from coal	9046.2
Iron ore and concentrates	34.7
Non-ferrous metal ores, of which	752.5
... copper ores and concentrates	(686.6)
... nickel ores and concentrates	(39.1)
Non-metallic and other minerals	8.6
Basic iron and steel manufacturing, of which:	113.6
... ferrous waste and scrap; remelting scrap ingots	(112.9)
Basic non-ferrous metal manufacturing, of which:	1109.6
... silver, unwrought, semi-manufactured, powder	(50.0)
... gold, unwrought, semi-manufactured, powder	(688.4)
... unwrought aluminium	(72.6)
... aluminium waste and scrap	(141.5)
... unwrought lead	(110.8)
... unwrought zinc	(30.3)
Total Australian Data for Minerals and Basic Metal Manufactures	**11,065.3**
Confidential items estimated from Indian 2017 import data:	
... manganese ores and concentrates	(181.2)
... coke, semi-coke of coal	(171.0)
... diamonds, non-industrial, unworked, simply sawn, etc	(173.4)
... aluminium oxide (excluding artificial corundum)	(694.8)
... unwrought nickel, not alloyed	(116.0)
... other confidential items	(12.9)
Approximate Total including Estimated Confidential Items	**12,400**

Note: Australian export data for confidential items are estimated at 95% of c.i.f. imports for India. The UN Comtrade data are reported in US dollars: the exchange rate for 2017 used to convert them back to Australian dollars was 0.766792, the same currency conversion rate used by UN Comtrade.

India's market for coal

Coal is the most important commodity among Australia's merchandise exports to India: coal exports were valued at around $9 billion in 2017 (Table 2). Trends in India's coal import market and in Australia's market share for coal can therefore have important implications for the growth in Australia's total merchandise exports.

The statistics for coal as an aggregate are misleading, however. Metallurgical coal and thermal coal are distinctly different commodities and show quite different trends. So it is best to look at these commodities separately. Over 2007-17, India's thermal coal imports expanded much more rapidly than metallurgical coal imports (Table 3). Australia exported mostly metallurgical coal over this period, holding a dominant market share, although the United States, Canada and Mozambique also supplied the market (Table 4). Australia, the United States and Canada held only modest shares of India's thermal coal market. Indonesia and South Africa were the main suppliers and benefited from increasing thermal coal imports over the decade: neither country was a significant exporter of metallurgical coal.

Table 3

India's imports of coal by type ('000 tonnes)

Source: International Energy Agency (IEA) database

	2007	2011	2014	2017
Thermal coal	27,765	101,098	190,727	161,269
Metallurgical coal	22,029	34,652	53,698	47,003

Note: Data are for Indian fiscal years (for example 2017 is for 1 April 2017 to 31 March 2018). 2017 data are provisional.

Coal is the most important commodity among Australia's merchandise exports to India

Table 4

India's imports of coal from major suppliers, by type (per cent unless otherwise indicated)

Source: International Trade Centre (ITC) database

	2007	2011	2014	2017
Metallurgical coal				
Australia	88.1	82.2	84.3	77.1
Canada	0.0	0.5	4.2	6.4
Indonesia	0.4	1.5	0.0	1.7
Mozambique	0.0	0.0	2.8	5.2
South Africa	2.2	1.7	0.6	0.0
USA	4.2	8.0	5.3	6.9
World (US$ million)	2778	7592	5420	8895
Thermal coal				
Australia	0.5	1.2	4.1	2.0
Canada	0.0	0.0	0.0	0.0
Indonesia	66.4	72.1	70.3	60.6
Mozambique	0.0	0.0	0.9	3.0
South Africa	30.3	23.0	21.9	27.1
USA	0.0	1.0	1.0	5.8
World (US$ million)	1421	5154	9452	9093
Other HS 2701.19				
Australia	15.1	13.2	76.7	78.9
Canada	0.0	0.0	0.0	2.6
Indonesia	55.7	79.9	0.7	0.0
Mozambique	0.0	0.0	.0	0.0
South Africa	25.1	3.6	2.7	0.1
USA	0.0	0.0	15.3	0.0
World	431	1576	412	1074

Note: In this table, coal is defined as HS 270119 as interpreted in the ITC and UN Comtrade data on India. India's import data for coal on both UN Comtrade and the ITC databases are classified in a different way to Australian export data in the HS nomenclature.

Growth in demand for metallurgical coal has been driven primarily by increasing crude steel production in India, which rose by 90 per cent between 2007 and 2017 – well ahead of the 60 per cent increase in metallurgical coal production (Table 5).

Australia, as the world's largest exporter of metallurgical coal, is a highly competitive supplier. Table 4 shows Australia losing some market share over 2007-17, perhaps because of India's policy to diversify sources of supply and Mozambique's increased importance as an exporter: Brazil's Vale and Indian investors, including Coal India, have begun to play a role in developing its coal industry.[9]

Australia nevertheless still supplied nearly 80 per cent of India's metallurgical coal imports in 2017. Australia's dominance of this market reflects the quality of its coal – Australian metallurgical coals typically produce strong 'Coke Strength after Reaction' cokes with low reactivity and low sulphur and phosphorous content. This makes them highly sought after, as they are among the best coals for steel making in the world.

Rising demand for energy has similarly outstripped India's production of thermal coal, but here Indonesia and South Africa are more price competitive than Australia, particularly given that they have a freight advantage.

Table 5

India's production of thermal and metallurgical coal and crude steel ('000 tonnes)

Source: IEA database and World Steel Association, *World Statistical Yearbook 2017*, Table 1 and World Steel in Figures 2018, p. 9

	2007	2011	2014	2017
Steaming coal	422,627	488,290	551,733	635,558
Coking coal	25,581	44,328	50,451	40,920
Crude steel	53,468	73,471	87,292	101,400

Note: Data for coal are for Indian fiscal years and 2017 data are provisional.

The market for other mineral exports

Table 6 shows the quantity and value of India's total imports of some other key minerals that are important in Australia's export mix, together with the value imported from Australia. Charts 2 and 3 show Australia's market share for the same four commodities – alumina, coke, copper ores and gold. There is no general pattern for these commodities.

For gold and copper ores, the overall story is one of decline. The volume of India's gold imports from all sources is estimated to have been appreciably higher in 2017 than in 2007, and the US dollar value rose even more strongly (though with big changes in the intervening period partly because of price movements). Australia's share fell dramatically

over 2007 to 2017, after a brief peak in 2009. The decline had important implications for Australia's trade with India. Indeed, to a significant extent, the weakness in Australia's 'competitiveness' – as indicated earlier – results from our collapsing share of India's import market for gold. In 2007, gold imports from Australia totalled US$2.9 billion, bigger than India's imports of Australian metallurgical coal. By 2017, they were only US$547 million.

Part of this change may reflect problems with the data. It is possible that some gold from Australia reaches India though third markets and is not recorded as Australian-Indian trade. Smuggling has also been extensive in some years such as 2013 and 2014, with the majority of smuggled gold believed to come from the Middle East.[10] But between 2007 and 2011, Indian Government statistics, as reported to UN Comtrade, show other big

Table 6

India's imports of other key minerals, 2007-17

Source: UN Comtrade Database

	2007	2011	2014	2017
Quantity, '000 tonnes except for gold				
Alumina	374.3	570.6	817.5	2056.0 (e)
Coke, semi-coke	4732.6	2103.6	3644.2	3976.8 (e)
Copper ores	2102.2	1939.8	1980.9	1468.1
Gold, '000 kg	770.4 (e)	1081.5 (e)	n.a.	1029.0 (e)
Value, US$ millions				
Alumina	164.6	289.4	347.9	821.8
Coke, semi-coke	1204.3	983.4	851.8	1170.4
Copper ores	4369.4	5283.7	5320.2	3902.7
Gold	17,209.7	53,685.5	31,039.7	36,154.6
Value from Australia, US$ millions				
Alumina	76.2	194.3	252.9	560.8
Coke, semi-coke	34.3	36.6	39.3	138.0
Copper ores	831.2	1358.7	678.1	322.7
Gold	2865.0	2974.8	1453.1	546.8

Note: 'e' denotes estimate and 'n.a.' not available. Alumina is aluminium oxide excluding artificial corundum. The full description for 'coke, etc.' is coke and semi-coke of coal, of lignite or of peat, whether or not agglomerated; retort carbon. Copper ores are more properly 'copper ores and concentrates'. Gold includes monetary gold.

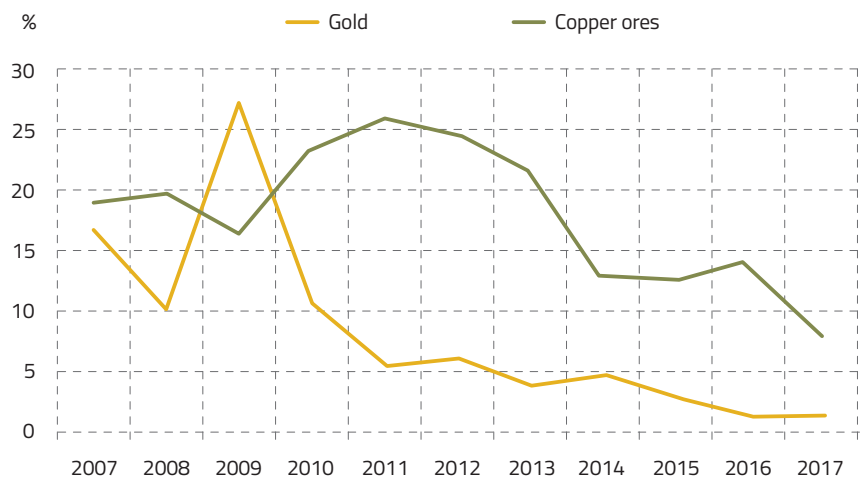
suppliers like the United Arab Emirates and South Africa gaining market share. Between 2011 and 2014, Switzerland – the biggest supplier to India and something of a conduit for trade in gold worldwide – increased its market share from 52.9 to 61.4 per cent. By 2017, the increased importance of new suppliers was another factor. Ghana, for instance, held a seven per cent share of the import market in 2017, but is not recorded as a supplier in 2007 and held only a 1.9 per cent share in 2014. Peru's 2017 share was four per cent, although it too was not recorded in 2007. The underlying reason for Australia losing market share requires further research, however.

For copper, the US dollar value and volume of India's copper ores imports were lower in 2017 than in 2007. Australia's market share fell, albeit later than for gold. By 2017, UN Comtrade data show India's imports from Australia as only US$323 million, less than 40 per cent of their 2007 value.[11] Between those two years, Australia went from being the second largest source of copper for India (after Chile) to the fifth largest (after Chile, Indonesia, Peru and Brazil). Peru, Canada and Brazil increased their share – Peru's share, for example, went from 2.3 per cent in 2007 to 13.6 per cent in 2017. In each case, these three countries strengthened their role as global exporters. Peru shipped three times its 2007 tonnage to all destinations in 2017, while Canada's global shipments increased by 84 per cent and Brazil's by 118 per cent.

Chart 2

Australia's import market share in India by value: gold and copper ores

Source: UN Comtrade Database



Alumina, by contrast was a case where Australia's market share trended upward. The quantity and value of India's total imports increased substantially. India's imports from Australia increased from US$76 million in 2007 to US$561 million in 2017, or at a compound annual growth rate of around 22 per cent.

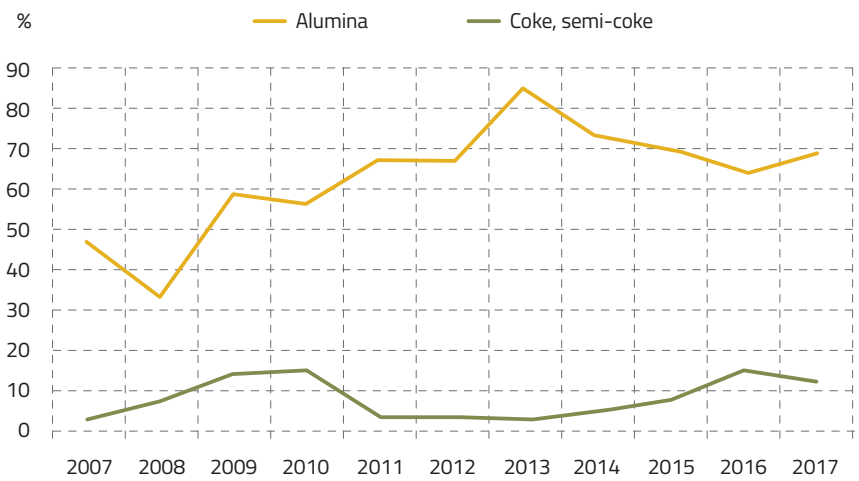
With **coke and semi-coke**, India's imports were lower in 2017 than they had been in 2007, both in terms of tonnage and US dollar value. Imports fluctuated a good deal over the period however. Australia's market share, although also fluctuating, was a good deal higher in 2017 than in 2007. The US dollar value of India's imports from Australia also increased.

Between 2007 and 2017, Australia went from being the second largest source of copper to India to the fifth largest.

Chart 3

Australia's import market share in India by value: coke and alumina

Source: UN Comtrade Database



Difficulties affecting exports of mining equipment include high tariffs, other government imposts, lack of transparency in procurement and logistical delays.

Exports of mining equipment

Past surveys of the METS sector have suggested that India is not a key market for Australia, but that it is viewed as highly important as a future source of revenue. For example, the 2016 Australian International Business Survey did not list India in the top ten countries nominated by respondents as among those where they had earned revenue. But in the same survey, India headed the list of countries that respondents expected to be the most important source of additional revenue in the coming two years.[12] Austmine's 2015 national survey listed India as 13th among the most important current export markets, but 8th among markets seen as of key importance in export plans for the next year.[13] Although some firms become discouraged by the difficult business environment, most remain (though the numbers are not large) because they see medium and long-term opportunities in the market.

Industry advice is that mining equipment sales to India include explosives (Orica has a significant presence in India), fuels and technical equipment, pumps and electrical equipment for mines. However, trade data for both Australia and India suggest that sales of mining equipment remained small in 2017. Total exports to India for all possible METS products listed in the first volume of this series amounted to around $48 million.[14] The figures need to be viewed with caution as trade statistics typically do not identify products on the basis of the sector in which they are used. Most of the products on the list have multiple uses. Moreover, the list may not capture all types of mining equipment. The figures nevertheless are revealing. Australia's market share for most of these products is small. For all products listed as possible mining equipment, Australia's share was in the region of 0.2 per cent.

Table 7 lists those products on the possible METS list where exports in 2017 exceeded $1 million. Some of them are quite likely to be mining equipment (as already noted, pumps are a significant METS item), but others could have varying uses. In any event, the amounts involved are small as is, mostly, Australia's share of India's import market reported in column four of the table. The apparent failure to achieve bigger export revenue is likely to reflect partly the difficulties of doing business in India. Difficulties affecting exports of mining equipment include high tariffs, other government imposts, lack of transparency in procurement and logistical delays. These issues are examined in detail later in this report.

Table 7

2017 exports of equipment used in mining to India: selected examples

Source: UN Comtrade Database

HS Code	Commodity	Export value $ million	Market share per cent
4010	Conveyor or transmission belts or belting, of vulcanised rubber	9.39	5.64
8530	Signaling, safety or traffic control equipment; for railways, tramways, roads, inland waterways, parking facilities, port installations, airfields, excluding those of heading no. 8608	1.49	0.92
8471	Automatic data processing machines and units thereof, magnetic or optical readers, machines for transcribing data onto data media in coded form and machines for processing such data, not elsewhere specified or included	2.10	0.01
9015	Surveying (including photogrammetrical surveying), hydrographic, oceanographic, hydrological, meteorological or geophysical instruments and appliances, excluding compasses, rangefinders	1.57	0.56
9027	Instruments and apparatus; for physical or chemical analysis (e.g. polarimeters, spectrometers), for measuring or checking viscosity, porosity, etc, for measuring quantities of heat, sound or light	3.88	0.37
841391	Pumps; parts thereof	8.78	0.15
8426	Derricks, cranes, including cable cranes, mobile lifting frames, straddle carriers and works trucks fitted with a crane	1.18	0.01
843041	Boring or sinking machinery; self-propelled, n.e.c. in heading no. 8430	1.91	0.15
843050	Machinery; for handling earth, minerals or ores, self-propelled, n.e.c. in heading no. 8430	1.36	0.61
843143	Boring or sinking machinery; parts of the machinery of item no. 8430.41 or 8430.41	1.26	1.14
843149	Machinery; parts of machines handling earth, minerals or ores and n.e.c. in heading no. 8431	1.94	0.32
8474	Machinery for sorting, screening, separating, washing, crushing, grinding, mixing or kneading earth, stone, ores in solid form, shaping, moulding machinery for solid mineral fuels	4.49	0.77

Note: Commodities in the table are those on the METS list in Volume 1 of this series and where 2017 exports were valued at more than $1 million. Data on India's imports, used in column 4, can differ substantially from that for Australian exports, used in column 3.

Australian companies are making inroads in the market, reflecting their strengths in mining services, as well as opportunities being opened up in mining by India's rapid development.

Exports of services related to mining[15]

As noted already, exports recorded in the services section of Australia's balance of payments are dominated by education-related travel services. But various business services (other than travel) provided to India are quite substantial, totaling $176 million in 2017 (Table 8). A detailed breakdown of business services that separates out mining is not available, but it is clear from industry advice that a substantial proportion involves sales to that sector.[16] Prominent items include services associated with software and mine management services. Education and training services (for example, relating to mining productivity and mine safety) are other prominent items. In addition, exports of business travel services, which include business travel to Australia related to cooperation and sales to the Indian mining sector, are substantial.

The amounts set out in Table 8 are very small compared to India's imports. For example, India's total imports of 'other business services' were around US$32.8 billion in 2016. Anecdotal evidence suggests that Australian companies are making inroads in the market, reflecting their strengths in mining services, as well as opportunities being opened up in mining by India's rapid development. For example, Western Australian-based hard-rock mining contractor Barminco has been involved in work at the Rampura Agucha Zinc Mine – the largest zinc mine in the world – in Rajasthan. And mining technology company GroundProbe, which specialises in using radar to detect unstable slopes in open-pit mines, gained a foothold in India through the Rampura Agucha Mine, leading to work with state-controlled Coal India Limited.[17] The Varghese Report states that there are now some 35 Australian METS firms that are active in India.[18]

Table 8

Australia: exports of business services to India ($ million)

Source: Australian Bureau of Statistics, *International Trade: Supplementary Information, Calendar Year 2017*

	2007	2011	2014	2017
Construction	-	1	-	-
Insurance and pension services	5	8	5	7
Financial services	4	4	32	40
Charges for the use of intellectual property, n.i.e.	2	19	13	15
Telecommunications, computer and information services	23	41	37	76
Other business services	67	32	38	38
Total of above business services	101	105	125	176
Business travel services	113	148	122	197

Note: n.i.e. means not included elsewhere.

CHAPTER 2

Australia's imports from India

India is a significant supplier of goods and services to Australia, ranking 13th in 2017. Total goods and services imports from India in that year were around $7.3 billion. This is well below the value of trade in the other direction. In 2016, the value imported from India was a little below (about 86 per cent of) the value that would be expected given India's share of world exports of goods and services. For goods, various petroleum oils, medicaments, non-industrial diamonds, railway passenger and other coaches, and jewellery were the biggest imports in 2017. For services, the top imports were travel services (mostly related to tourism, rather than business or education-related services). Reflecting India's somewhat unusual comparative advantage among developing economies, business services were among the important imports into Australia.

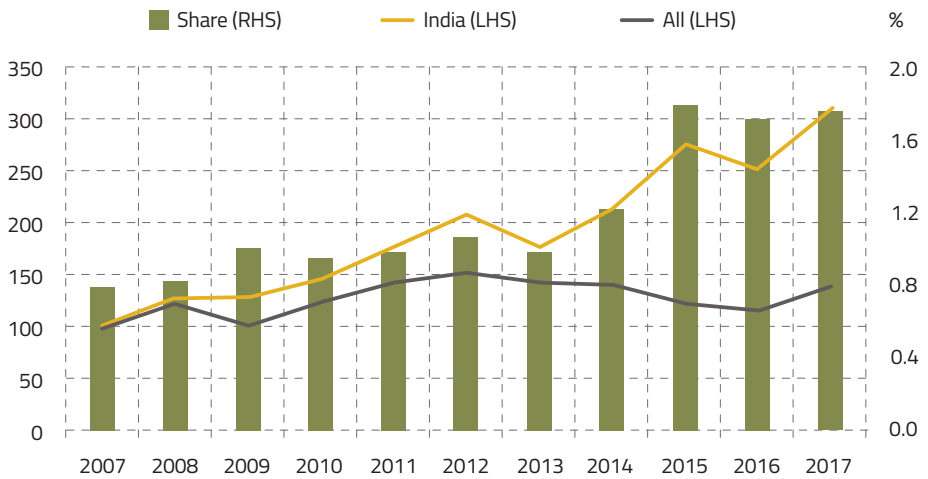
Viewed from India's perspective, Australia is a medium-sized export market, accounting for around 1.4 per cent of its merchandise exports and ranking 22nd behind South Africa and just ahead of Spain. Exports of goods to Australia have been growing rapidly, however. Among India's top 25 markets for goods, Australia was the fourth most rapidly growing over 2007-17 after Mexico, Vietnam and Nepal. As with Australia's exports to India, India's merchandise exports are narrowly based, with the top five exports in 2017 making up almost half of the total and various petroleum oils more than a third. This and the trade imbalance with Australia suggests that India could be receptive to proposals to broaden the trading relationship, including in areas of interest to the mining and METS sectors.

Rapid growth in India's exports to Australia means that its share of the Australian import market has been trending upward (Chart 4). For goods, India's market share more than doubled over 2007-17, with imports growing in US dollar terms at a compound annual rate of about 12 per cent. For services, India's share of the import market rose to approximately 2.5 per cent in 2017, up from 1.2 per cent in 2007. Table 9 looks at the reasons for rapid growth in Australia's merchandise imports from India following the approach used earlier in this report. It shows that composition effects explain very little of the growth in Australia's imports over 2007-17. The main driver, which has been strongly positive for each of the three sub-periods chosen, was India's increased 'competitiveness'. As one example, India's share of Australian imports of petroleum oils – the single biggest item imported from India – rose from negligible values in 2007 to more than eight per cent of a US$15 billion import market in 2017.

Chart 4

Australia's merchandise imports from India and the world

Source: UN Comtrade Database



Note: The data for Australian imports from India and the world are expressed as an index of the US dollar value with 2007 = 100. 'Share' is India's share of Australia's import market for goods in value terms.

Australia is not a large importer of minerals or basic metal manufactures from India. The total for published items was approximately US$225 million in 2017. The biggest item, with imports valued at US$210 million in 2017, was non-industrial diamonds.[19] India also supplies some products which could be used as mining equipment. The biggest – parts for a broad range of machinery used, among other things, for sorting and washing mineral ores – was valued at US$15 million in 2017. Total imports of possible mining equipment based on the list set out in the first volume of these reports were valued at approximately US$139 million.

As noted above, India supplies Australia with business services. In 2017, these were valued at well over $1 billion. The two biggest components, at $612 million and $398 million, were 'other business services' and 'telecommunications, computer and information services'. 'Other business services can include a wide range of services, including legal, accounting, management consulting and technical services. It is quite likely that some of them went to the mining sector.

Table 9

Australia's merchandise imports from India: constant market share analysis

Source: TNC calculations based on UN Comtrade, International Trade Centre and International Monetary Fund data

	2007-11	2011-14	2014-17
Growth in the US dollar value of Australia's merchandise imports from India, per cent	77.2	20.5	44.9
attributable to:			
... Growth in all Australia's imports, per cent	41.5	-2.8	0.4
... Composition effect, percentage points	-6.0	1.7	0.9
... Competitiveness effect, percentage points	41.6	21.7	43.6
Growth in the **volume** of Australia's merchandise imports from all sources, per cent	27.1	1.9	11.7

Note: See Annex A for the methodology used and its limitations.

CHAPTER 3

Australia's direct investment relationship with India

After being a minor player up to the mid-2000s, India has become a significant source of, and destination for, global FDI flows, though relative to GDP, India still lags global benchmarks and is ranked behind Australia for both inward and outward FDI stocks (Table 10).[20] It ranked 12th for aggregate net inflows from 2007 to 2017 and 26th for net outflows. India's main FDI partners include the financial hubs of Mauritius and Singapore, the United Kingdom, the Netherlands, the United States, Japan (inward FDI only) and the United Arab Emirates.[21]

Most FDI into India goes to manufacturing, information and communication services and financial services, and the great bulk (over 70 per cent) goes to four states – Maharashtra, Karnataka, Tamil Nadu and Gujarat – and to New Delhi. Investment in resources-related industries is concentrated in metals manufacturing and in oil (petroleum) and gas. From 2000 to 2017, metals manufacturing attracted US$10.6 billion or 2.9 per cent of all FDI inflows, and oil and gas US$6.9 billion or 1.9 per cent of inflows. FDI into mining, however, is not significant – US$2.3 billion or 0.6 per cent of FDI inflows.[22] Processes for approving FDI are summarised in Box 1.

Outward FDI is mostly spread among services and manufacturing industries and, more recently resources, especially energy.[23] Since the mid-2000s the share of services industries in outward FDI has increased, offsetting the decline in manufacturing. Outward FDI, using data that adjusts for the effects of channeling investment through financial hubs, indicates there has also been an increase in outward FDI investment in energy and mining activities.[24]

The Australia-India direct investment relationship remains very under-developed, as it is for portfolio investment,[25] notwithstanding India's impressive capital market reforms, re-integration with the global economy, activity on international capital markets and proactive policies in both countries to encourage inward FDI. It is, however, consistent with the familiar pattern of Australia's investment relationships with Asian countries lagging behind the development of trading relationships in relative importance and with Australia's smaller direct investment footprint in Asia compared to traditional markets such as the United States.[26]

Australian official statistics show the level of Australian FDI in India has been around 0.3 per cent of all outward FDI since 2012 and was $1.8 billion in 2017.[27] This is well below levels commensurate with India's share of world inward FDI. Indian statistics show Australia was ranked 24th as a source

BOX 1

FDI to India

India's liberalising reforms to its FDI regime have underwritten its transformation into a prominent destination for foreign investment. The Modi government has continued and accelerated these reforms since coming to office in 2014, including as part of the *Make in India* campaign to attract FDI in manufacturing.

More recent reforms have widened criteria for automatic approval of FDI proposals, increased sectoral caps and liberalised sectoral conditions. States have also made complementary policy changes to attract investment, including by relaxing many labour laws, with Gujarat, Andhra Pradesh, Maharashtra and Karnataka among the leaders. Foreign investors now have unrestricted access to many sectors of India's economy, though significant transactions costs remain, as discussed later in this report.

FDI into India takes one of two routes:

- Automatic: no prior approval required.
- Government: prior approval required and by application to relevant government agencies through the Foreign Investment Facilitation Portal. Proposals for FDI above Rs. 5000 crore (US$0.7 billion) are considered by the Cabinet Committee on Economic Affairs.

The automatic route has become the norm, accounting for over 90 per cent of India's FDI. Via this route, areas relevant to mining and METS (with foreign ownership capped at 100 per cent), include:

- Mining and processing of mineral ores (including coal and lignite and all minerals, except those bearing titanium)[31]
- Construction: city and regional infrastructure projects.
- Railways infrastructure, including dedicated freight lines and freight terminals.
- Electricity (except nuclear power): generation, transmission and distribution.

The government route is required for the more sensitive sectors, including banking and telecommunication services (above 49 per cent foreign ownership) and the media, although reforms to speed up processing by reducing red tape have been implemented. Mining and processing of titanium bearing minerals and ores (up to 100 per cent foreign ownership is allowed) are also included.

The Indian Government continues to prohibit FDI in some sectors. Prohibited sectors relevant to mining and METS include railways operations and nuclear energy. Legal and accounting services are also prohibited.

Source: Government of India, Ministry of Commerce and Industry Department, *Consolidated FDI Policy Circular of 2017*, August 2017; Government of India, Press Information Bureau, *Government approves amendments in FDI policy*, 10 January 2018; R Rossow, 'India's FDI Reforms Under Modi: Once a Fountain, Now a Drip', *U.S.-India Insight*, 15 August 2017; C Shroff, India- Galloping Towards an Open FDI Regime, WWL, May 2017.

country, accounting for just 0.2 per cent of all inflows (US$0.9 billion) from 2000 to 2017, and also was well below Australia's share of global outflows (Table 10).[28] Industries with investment from Australia include financial services, coal, oil and gas, and metals.[29] India appears to be an emerging destination for Australian investment in METS, albeit from a very small base.[30]

India's stock of direct investment in Australia also is very modest at just $0.9 billion or 0.1 per cent of all Australian inward FDI in 2017. This is down from $1.3 billion in 2012 but above negligible (and not published) levels a decade ago. There is no indication that investment from India is growing. India has not been among the top countries identified by the Foreign Investment Review Board (FIRB) ranked by the value of foreign investment approvals since 2011-12.[32] Nonetheless, some Indian businesses are interested in investing in Australia with significant current and proposed investments, especially in renewable energy, coal mining, information technology services and metals. They include the Adani Group and GVK Hancock's coal mining projects in Queensland's Galilee basin,[33] Suzlon Energy (wind farms), Infosys Technologies, and Tata Steel.

The low level of outward FDI from Australia to India is puzzling in some respects. There are significant complementarities and institutional similarities between the two economies. Australian businesses, with their strengths in resources, infrastructure development and technical and professional services, have much to contribute to India's development. India has made great strides in liberalising inward foreign investment and in financial markets deregulation. Many (but not all) policy barriers have been removed. And there are prospects for sustained high growth with attendant big increases in demand for energy and infrastructure developments. In theory, this combination should be attractive to Australian investors in mining and METS.

At another level, however, these positives are countered by India's still very difficult business environment (see pp. 80-90). The mining industry, for example, is nominally open to foreign investment, but regulatory and taxation-related complexities and unpredictability and difficulties in competing effectively with the state-owned enterprises have kept foreign investors away. And, India's 2015 Mining Law poses formidable obstacles for foreign mining companies (see pp. 85-86). India's move to terminate its bilateral investment treaties (BITs) and to negotiate new treaties based on its draft model BIT has added to investor uncertainty. And some sectors of interest to mining and METS, including legal, accounting and real estate, remain closed to FDI.[34] These circumstances are not likely to change quickly (as discussed later in the report), which suggests that Australian investment may stay underweight in India for a considerable time.

That said there are Australian investors in India for the long haul, who are prepared to be patient and are committed to building business networks in India founded on mutual trust, reliability and quality products. They want to be well positioned to reap the benefits of well-nurtured markets if India's potential is realised to transform into a global economic powerhouse. And, if this potential is realised, India must inevitably become a major source and destination for Australian FDI as flagged in the Varghese report.[35]

Table 10

India and Australia: total FDI stock, inward and outward

Source: UNCTAD, *World Investment Report 2018*, www.unctad.org, accessed 20 June 2018

	2004	2007	2011	2014	2017
Inward FDI stocks					
India					
$US billion	38.060	105,790	206,354	253,120	377,683
global rank	40	34	23	21	20
percentage of world	0.4	0.6	1.0	1.0	1.2
Australia					
$US billion	291,010	391,761	555,575	562,981	662,296
global rank	9	12	14	13	13
percentage of world	2.8	2.2	2.6	2.2	2.1
Outward FDI stocks					
India					
$US billion	7734	44,080	109,509	131,524	155,341
global rank	41	36	31	32	32
percentage of world	0.1	0.2	0.5	0.5	0.5
Australia					
$US billion	224,998	341,070	418,797	446,439	460,641
global rank	12	16	16	18	18
percentage of world	2.1	1.8	2.0	1.8	1.5

CHAPTER 4

Shaping the future of Australia-India trade and investment

India's growth potential is massive. Like China's emergence over the past few decades, rapid sustained growth is potentially transformative for India and has major political and economic implications for the wider region and world. India also should overtake China as the most populous country by the mid-2020s.

There are nevertheless obvious dangers in drawing too close a comparison with China. The two countries are different in many ways: in their histories, their political systems, the quality of mass education at the start of their transformations, their approaches to industrialisation, their potential to develop labour-intensive manufacturing industries, their different capacities to direct resources to where they might be needed, and perhaps in the capacities of governments at various levels to plan for and manage social and economic change. India will harness its great potential in its own unique ways and set its own pace. And the political and economic impact of its transformation on the region and the rest of the world will not be a carbon copy of China's.

It is easy to see why building a new and much stronger relationship with a resurgent India is a trade and foreign policy imperative for Australia. Australia wants to be one of India's inner circle of allies. It wants to develop close links with India in developing shared interests across the Indian Ocean region and more generally within Asia and in global institutions. And it wants India to become one of our largest export markets and a major investment partner (though without necessarily coming to grips with how Australian business might thrive in India's challenging business environment).[36]

It is less easy to see what India wants from Australia. Australia is less visible to India's political and business leaders than India is to counterparts in Australia beyond traditional links to cricket and the Commonwealth and more recent growth in education services.

For the relationship to take off, strong complementarities, positive government-to-government relations and reasonable geographical proximity will all help. But they will not be enough. Exchanging minerals and agricultural commodities for manufactures worked in the case of Australia's economic relationship with East Asia because there was a natural fit between Australia as a reliable and efficient provider of resources and food and the needs of the fast-growing, resource deficient, heavy-industry led industrialising nations to our near north. India, however, has abundant resources and potential to increase agricultural production substantially and its economy is services-led.

For the Australia-India relationship to move to a new and heightened level of importance, Australia will have to take the running in demonstrating its relevance to India at the strategic level – contributing to wider regional and global processes that build a stable, prosperous Indo-Pacific region – and at economic and institutional levels – contributing to trusted partnerships that advance India's domestic development.

India's medium to long-term growth and development

India is currently the fastest growing large economy in the world. Incremental economic reforms over the past quarter of a century have been significant in strengthening governance and increasing openness to foreign trade and investment (Box 2). The ratio of trade to gross domestic product (GDP) is now higher than China's.[37] Net inflows of foreign capital are in line with those of other emerging economies and have been very strong over recent years – India was the fourth-ranked recipient of FDI in East and South Asia from 2010 to 2017 behind China, Hong Kong and Singapore.[38] And the latest crop of reforms must be rated as historically significant, notwithstanding that labour market and land reform were not addressed and experiences with other initiatives like demonetisation of 500 and 1000-rupee notes were mixed. The corporate bankruptcy law should allow assets to flow more readily to companies that can use them productively; making low, stable inflation one of the principal objectives of India's Central Bank should greatly improve macroeconomic management; and implementing the goods and services tax – the biggest tax reform since Independence – creates a single national market for the first time in India's history.[39]

India is currently the fastest growing large economy in the world ... the ratio of trade to GDP is now higher than China's.

BOX 2

Shifting from a closed to a more open economy

From Independence in 1947 to the 1980s, India became one of the most inward looking and autarchic countries in the world. Inward and outward direct investment was negligible. Goods and services exports as a share of GDP was lower in 1990 (7.7 per cent) than it had been in 1950 (8.4 per cent). And India's share of world merchandise trade fell sharply as import-substitution development occurred behind very high tariffs: the unweighted applied tariff on manufactured products in 1990 was 145 per cent and the bound tariff much higher.

From the early 1990s, India started to re-integrate with the global economy and was rewarded with a sustained period of rapid economic growth as barriers to trade and investment started to fall. Applied average tariffs on manufactured goods fell to 14 per cent by 2006 and stand at around 10 per cent currently. Quantitative import restrictions on manufactures were almost entirely swept away.

Foreign value added as a percentage of India's gross exports more than doubled between 1995 and 2011, and the percentage of India's domestic value added embodied in the exports of its trading partners also increased over this period, though more modestly.[40] Inflows of direct investment went from a trickle in response to heavily restrictive policies and mistrust of multinational corporations to a torrent as policy barriers were lowered and more industries were opened to foreign investment – India was ranked 10th in the world as a host economy for FDI inflows in 2017.[41] And outflows of direct investment increased strongly as India started its long campaign for resources and food security.

Since the reform program started in 1991, India's trade policy has basically been liberalising, and its economy is now as open as many other emerging economies, though it still has a long way to go. The government is still very focused on achieving self-sufficiency across as many sectors as possible. And this is accompanied by a mercantilist mindset in large parts of government that resists the logic that exposure to global competition is a key part of sustaining rapid economic growth and creating well-paying jobs. The primary focus of India's Foreign Trade Policy 2015-2020 announced on 1 April 2015 is on increasing India's exports of goods and services as a share of world exports from two per cent to 3.5 percent.[42]

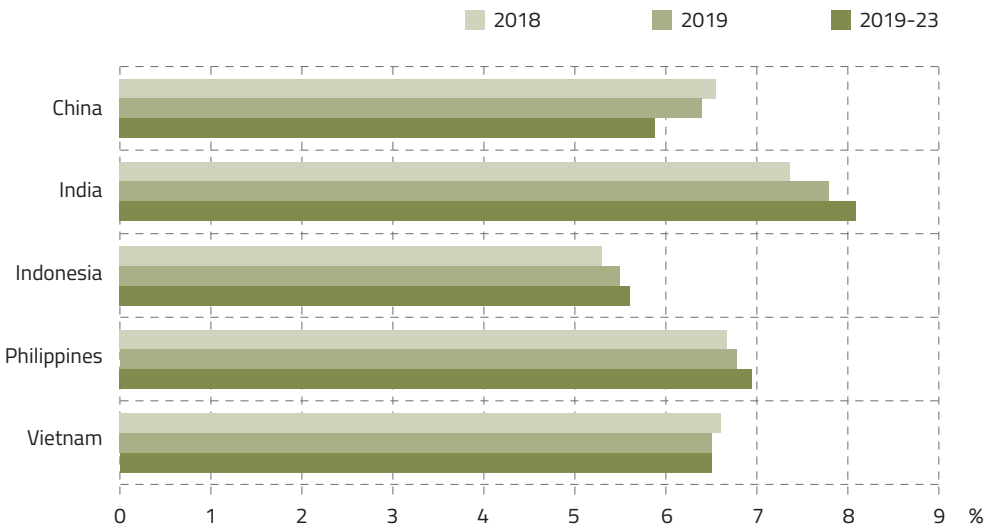
Beyond trade and economic policy, India in common with other prominent emerging economies, including Brazil, the Russian Federation, Indonesia, China, and South Africa, has strong and broad connections to the rest of the world. It is highly integrated in terms of cultural, political and infrastructure linkages.

Source: V Joshi, *India's Long Road: The Search for Prosperity*, Oxford University Press, Kindle Edition, 2017, Chapter 12; P Ghemawat and S Altman, *DHL Global Connectedness Index 2016: The State of Globalization in an Age of Ambiguity*, DHL, 2017; UNCTAD, *World Investment Report 2018*, Geneva, 2018.

Chart 5

Growth rates: India and selected East Asian economies

Source: IMF, World Economic Outlook Database, APril 2018



There is a growing sense that India's time has come and is the next big opportunity in a world where developed country growth rates are expected to remain modest.[43] On current estimates, India is expected to be the fastest growing major economy both in the short and medium-to-long terms. Out to the early 2020s, India's economic growth could be around 8 per cent per year – a rate that would be faster than key emerging East Asian economies (Chart 5).

Long-term economic forecasts are based on a mixture of modelling and judgement and place India after China on global economic rankings in purchasing power parity terms by around 2050 or 2060 (Box 3). A third ranking after China and the United States seems more likely at market exchange rates (which are probably more relevant to business).

The Indian Government takes an optimistic view that India can sustain rapid average growth of over 8 per cent per year into the 2030s and 2040s. This would be remarkable: only a handful of East Asian economies have managed to sustain growth rates of 5-6 per cent per year over a decade or two. But achieving, say, 6-7 per cent average growth per year may be feasible over the next few decades – assuming progress in areas like reducing extreme income inequality and corruption and improving outcomes at all levels in government

administration and policy development[44] - with the best performing states and cities growing faster and the worst growing much more slowly.[45] And this would be quite consistent with creating a middle class consumer market numbering in the hundreds of millions, building the equivalent of cities the size of Sydney and Melbourne every couple of years to accommodate the urban boom, and building the massive hard and soft infrastructure that will be needed to support the daunting goals of economic transformation and social inclusion. Indeed, even more modest growth of 5-6 per cent per year would still place India among upper middle income countries (as currently defined by the World Bank) within the next 25 years.[46]

In the normal course of development, aggregate growth rates can be expected to slow as easy opportunities for catch-up growth – such as shifting resources from low productivity sectors like agriculture into manufacturing and services – become exhausted. There also are new problems that India, along with other lower middle income countries, may face that countries like Korea and China did not during their periods of rapid growth. They include the backlash against globalisation in some developed countries; the widening education and skills gaps between developed, middle and low middle income countries as advancing technology continues to favour skilled human capital; and the possibility of climate change-induced agricultural stress.[47] To these might be added the considerable edge in labour-intensive manufacturing that several East and South Asian countries have over India as China moves into higher value added activities.

On current estimates, India is expected to be the fastest growing major economy both in the short and medium to long terms.

BOX 3

India's economic outlook in the long run: some projections

PwC has prepared reports on the global outlook to 2050 going back as far as 2006. The most recent (2017) report includes 32 major economies that constitute about 85 per cent of world GDP.[48] It forecasts India's growth rate (based on GDP at purchasing power parity) at slightly under six per cent over 2016-30 and at a little over four per cent for 2030-50. India is projected to become the second largest economy in the world by 2050 (again in terms of purchasing power parity), when it is expected to make up around 15 per cent of the global economy. At market exchange rates (where forecasting is more difficult), India is projected to move from seventh in 2016 to third by 2030 and to retain that rank in 2050.

The modelling used to derive these estimates takes account of the growth of the labour force (positive in India's case); improvements in human capital (proxied by educational levels); growth in the stock of physical capital (India is expected to invest about 25 per cent of GDP from 2025, compared with 27 per cent in 2016); and technological progress (where countries at lower per capita incomes like India are expected to gradually catch up to the technological leader – assumed to be the United States). In projections of GDP at market exchange rates, market rates are assumed to converge to purchasing power parity rates at a pace that varies according to the type of economy.

OECD projections to 2060 for India and many other economies can be found on its website.[49] The projections suggest that India will then be the second largest economy in the world, based on GDP at purchasing power parity. India's share of global output is projected to be around 18 per cent, just ahead of the United States. The projections are based on the May 2014 Economic Outlook and use a 2013 model developed by the OECD. Like the PwC model, this takes into account labour, human and physical capital and technological progress in a Cobb Douglas production function with constant returns to scale. Projections of the key variables provide a picture of growth in potential output and this then feeds into a Baseline Long-Term Model which brings in such variables as savings, interest rates, current account balances, inflation and exchange rates.[50]

In a 2013 paper, **Australian Department of the Treasury** officials estimate long-run growth for more than 150 countries. Their analysis suggests that India will grow at more than six per cent annually over 2020-30 and at 4.5 per cent and 3.3 per cent in the following two decades. India and China together are projected to have a GDP bigger than the total for advanced economies by the mid-2030s. The estimates draw on the existing growth literature and use a conditional convergence model, in which a country's productivity growth exceeds that of the reference economy (here the United States) when the country's actual productivity is below its 'steady-state' value. An innovative feature is the use of the World Competitiveness Index released by the World Economic Forum to estimate relative steady-state productivity levels for different countries.[51]

Another long-run estimate appears in Peter Varghese's *An India Economic Strategy to 2035*. The working assumption is that economic growth could average around 6-8 per cent per year over the next two decades based on productivity improvements linked to government reforms that are both incremental and politically opportunist.[52]

Varghese does note potential structural challenges (like progress in tackling poverty and achieving gender equality) as well as possible 'non-linear' effects that might affect the growth outlook: the latter include water scarcity (where India is likely to face a crisis before 2030), technological change (which may lead to more rapid growth) and climate change (where risks will deepen in the long term, including by compounding water scarcity).[53]

And in an important new book, **Vijay Joshi** acknowledges India's potential to achieve average growth rates of 6-7 per cent over the long term, but cautions that this depends on the Government's capacity, drive, will, and stamina to deliver a reform package that 'involve[s] re-imagining the state-market-private sector relationship so that the state on the one hand, and the market and the private sector on the other, perform the tasks that they are best suited for, and perform them well.' If this does not happen, he suggests that more modest average growth of 5-6 per year is more likely, but even this 'would require substantial economic reform to combat the ever-present threat of a slowdown in the rise of productivity.'[54]

India and China together are projected to have a GDP bigger than the total for advanced economies by the mid-2030s.

Without being tied to specific forecasts, moderate-to-rapid growth in the Indian economy over the medium-to-long term should be subject to five key drivers:

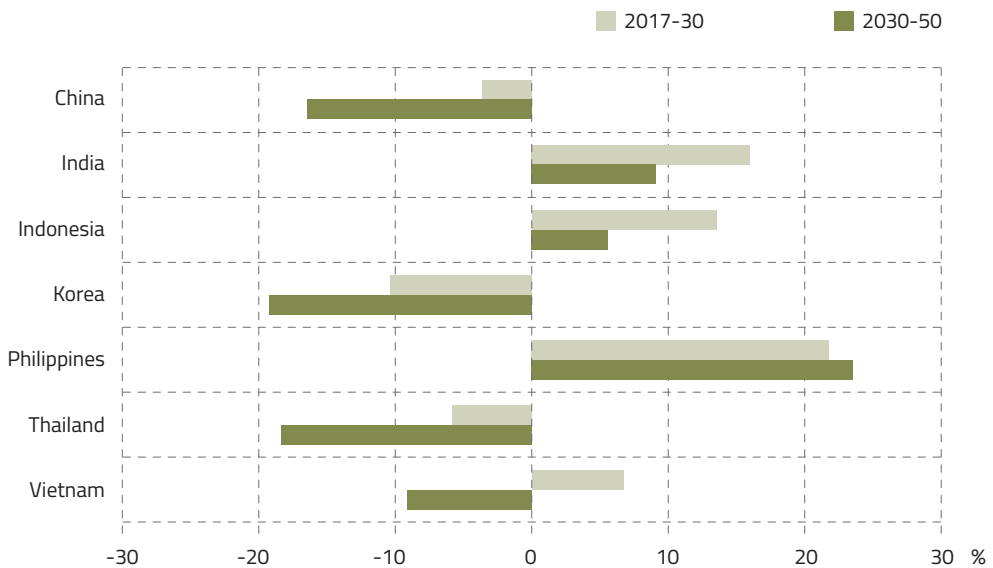
- Significant *population* increases will keep the workforce relatively young while upskilling will increase its quality.[55] Equipping one of the world's largest workforces with relevant skills will be challenging – around 10-12 million young people enter the workforce each year and many have barely primary level education and a significant minority has none – but if this can be managed effectively the dividends should be massive. India is projected to have the world's largest working age population within the next 10 years.[56] Unlike some other countries, India's working age population (15-64 years) is expected to expand in the medium and longer term, rising by 16 per cent between 2017 and 2030 and by a further nine per cent between 2030 and 2050 (Chart 6).

The share of this group in India's total population is also expected to increase to 68 per cent in 2030 (compared to 65.7 per cent in 2015) before falling very slightly (to 67.7 per cent) by 2050.[57]

Chart 6

Projected increase of the 15-64 age population

Source: UN Department of Economic Affairs, Population Division



- **Urbanisation** is occurring quickly from a relatively low base compared with other developing regions like Latin America. India's urban population is estimated to increase by around 400 million in the period to 2050.[58] In the normal course of events, these transformations are linked to the growth of the middle class, defined in broad terms as those with significant disposable income. Urbanisation therefore should be linked to growth of services, which are important in their own right and central to facilitating global and regional value chains and enhancing participation of micro-, small- and medium-sized enterprises in those chains.
- Government spending on **infrastructure** is increasing rapidly to address major historical deficiencies and support urbanisation and industrialisation: India has goals like building one hundred 'smart cities' and 'housing for all'. Large sums also are being spent to create the energy, transport and communications capabilities required by a growing economy that is more integrated with regional and global markets.
- Inflows of **foreign direct investment** into manufacturing, finance, infrastructure and other services are substantial and have not been dented by slowing global economic growth.
- And **productivity growth** will be key and will depend to a large degree on steps taken by national and state governments to promote competitive markets and openness to trade and investment.

Many of India's most onerous impediments to growth have existed since Independence or, in some cases, since the nationalisation of key industries from the 1950s. The impediments range across regulatory and taxation-related complexities; corruption; stifling bureaucracy; under-funded public services; low education standards for the vast majority of Indian children; land holding arrangements that constrain greenfield sites for factories, mines, modern forms of agriculture and associated infrastructure; and inefficiencies and bottlenecks linked to state owned enterprises that control key sectors.[59] These weaknesses cannot be dealt with quickly but the starting point, first and foremost, is India's understanding that the system needs to change if its development agenda is to have any real prospect of being achieved.[60]

Given its vibrant democracy and the significant cleavages in Indian society, economic and social reform cannot be expected to proceed in a linear way. Reform will be characterised by periods of protectionism and openness driven by political, economic and social pressures and opportunities: the last thing any Indian government wants is social instability linked to joblessness or the dampening of social aspirations.

Economic transformation more broadly will continue to involve the state playing a central role in industrial development, just like in Germany and Japan in the nineteenth and early twentieth centuries, and countries like China, Korea and Indonesia more recently. And, just like in those countries, India is likely to continue to protect its own markets

while seeking access to others. But given the magnitude of India's possible economic and social transformation – by India's estimates it could be on the path to a US$10 trillion economy by 2032 at market exchange rates – it offers glittering prizes both as a market and location for production to those countries and companies that can establish world-best partnerships.[61]

Australia's relevance to India

Australian businesses have to be prepared for (a) serious challenges in the Indian market, especially in sectors like mining and energy where land and rail transport are some of the most sensitive and protected parts of India's economy, (b) the politicisation of India's trade relations with persisting developed-developing country mindsets and sensitivities across society, and (c) periods of uncertainty as India moves forward cautiously and unevenly on economic reform and as policies and approaches to international engagement shift with changing political imperatives.

Australia will, in all probability, continue to play a significant enabling role in India's industrialisation by providing energy, other mineral resources, food, manufactures and high quality services.

There are good reasons for expecting that the relationship will deepen. Australia will, in all probability, continue to play a significant enabling role in India's industrialisation by providing energy, other mineral resources, food, manufactures and high quality services (including services embodied in resources and manufactures).

But, equally, while both countries have a big potential stake in broadening and deepening flows of trade, investment and skills, and in expanding the relationship beyond economic and trade issues, there are good reasons why the relationship might not take-off quickly.

Not least of these are Australia's 'visibility' (or lack of it); India's significant border and behind-the-border barriers to Australia's trade and investment; barriers including cultural differences; and unfamiliarity with local business practices and the regulatory environment.

Visibility has two parts: visibility from the perspective of the Indian Government and visibility from the perspective of Indian business. Improving both will require Australia doing much of the heavy lifting diplomatically and on trade.

Over the last few years, the Indian Government has probably developed a warmer view of Australia. The first conversations on a closer economic partnership between Australia and India began during the Gillard Government: negotiations for a bilateral FTA started in May 2011. The partnership was taken further by the Abbott Government. In 2014 Australia's long-standing ban on selling uranium to India was lifted. The ban had been 'a bone in the throat of the relationship not because India was unable to obtain uranium for its civilian nuclear power program from other sources (for example, Kazakhstan), but because the Indian Government perceived it as a mark of political disrespect by the Australian Government.'[62] Prime Minister-led visits have occurred in both directions. Prime Minister Modi addressed the Australian Parliament during his visit in 2014. And Australia's narrative on the relationship – that the relationship needs to be upgraded and broadened to reflect India's growing economic and strategic importance – resonates with India's elites. But the relationship is still somewhat tenuous.

From a business perspective, India's major companies are impressive judging by their size (revenues, employment), scope (often integrated vertically) and sophistication (most domestically focused but many with a global outreach). Indian businesses are curious about Australia, but are probably as ignorant about Australia as their counterparts are about India. It would probably be true that Australia's top 100 ASX listed companies are not especially visible to the large majority of India's medium-to-large companies. There are exceptions where specific Australian businesses have built 'one-on-one' long-term relationships. But in general Australian and Indian business engagement tends to be sporadic.

With much of the world beating a path to India's door, Australia's visibility in India will depend on two fundamentals: delivering on India's expectations for an upgraded and broadened relationship that benefits both partners in a tangible way and, linked to this, demonstrating our relevance to India as it re-defines its place in the world strategically and economically.

Strategic issues[63]

The Indo-Pacific region is increasingly complex with various countries vying for influence and contesting the principles and values underlying the regional order.[64] Economic rivalry between the United States and Japan on the one hand and China on the other is intensifying. Disputes range across issues such as trade imbalances, currency manipulation, the role of the state in the economy, regional institutions (e.g. the Asian Infrastructure and Investment Bank), intellectual property rights, technology

transfer, industrial espionage, labour conditions, and approaches to regional economic integration (e.g. Trans Pacific Partnership, Regional Comprehensive Economic Partnership and the Free Trade Area of the Asia Pacific). A trade war involving the United States, China and others looms as the United States attempts to integrate trade, economic, foreign policy, and strategic considerations more closely than in the past 20-30 years.[65]

Greater integration of these policy elements could well be a response to a world where the nature of power and influence is often economic, and where modern states can harness more economic resources than in the past to influence strategic outcomes regionally and globally.[66] But it also produces an environment in which both Australia and India have strong common interests in working together, as well as with China and other regional economies. One example might involve working together to improve Indo–Pacific security:

> … India will always march to its own strategic tune and cherish its strategic autonomy, [but] the scope for us to work together on the broader challenges of the Indo-Pacific is growing as is India's willingness to work with the United States, Japan and Australia in ways which capture the growing strategic convergence of these four democracies.[67]

Another example, created by India's ambitions to play a bigger role globally and regionally in line with its growing economic power, might involve Australia in some way supporting India's longer term ambitions to become a permanent member of the United Nations Security Council (UNSC) and shorter term ambitions to join the Asia-Pacific Economic Cooperation (APEC) forum. Neither would be easy, and the task of revising the post-Second World War global institutional order would be especially difficult. The effectiveness of Australia's potential support for Indian permanent membership of the UNSC would obviously be limited by our economic and political weight, but it would signal the depth of our engagement with India and our support for recognising its status as one of the poles of a multipolar world. This would be warmly welcomed by India.

Similarly, supporting Indian membership of APEC would be strongly appreciated by India. Its previous attempts at gaining membership failed often for good reasons. India comes with baggage: memories are still fresh of its frustrating role in Doha Round multilateral trade negotiations and difficulties in making progress on old and new trade and investment issues in negotiations. There also are well-founded concerns that India's complex bureaucratic processes would make APEC even more unwieldy. But there is an upside to Indian membership of APEC that deserves to be explored:

- India is a core part of Asia and has a natural claim to membership.
- Its economic and social reforms over the past 25 years, its economic heft and its potential for further growth all reinforce that claim.
- APEC is not treaty-based and is important precisely because it does not require committing to liberalisation in any legally binding way as required in an FTA or WTO trade agreement. APEC complements

and supports policies that promote trade liberalisation and facilitation through cooperation (for example on regulatory reform) and the sharing of experience. By nurturing reform rather than requiring it, several APEC members have taken on APEC's non-binding liberalising principles only to implement them in a legally binding way some years later in FTAs. From a long-term perspective, this process could be valuable for India as it could be for India's trading partners.

- RCEP provides a springboard for bringing India into regional economic arrangements. It would be difficult for India to join APEC if it were not part of RCEP.[68]

The Australia-India relationship is a work in progress. Garnering relatively low hanging fruit, such as cooperating on Indian membership of APEC, would seem to be compelling from both Australian and Indian perspectives.

The Australia-India relationship is a work in progress. Garnering relatively low hanging fruit, such as cooperating on Indian membership of APEC, would seem to be compelling from both Australian and Indian perspectives.

Some economic issues

The single-most important underpinning of the economic relationship and, indeed of the relationship more broadly, is that neither party should see the relationship as a one-way opportunity. It must deliver benefits to both.

In general terms, Prime Minister Modi's signature *Make in India* agenda makes clear that India wants relationships that deliver improved access to natural resources, technology, skills and investment that help to build India's domestic economy and expand its international reach.[69] Australia has much to contribute to this agenda. For example:

- Australia has been a key enabler of East Asian industrialisation as a reliable, high

quality and value for money source of energy and other mineral resources. It could play a similar role in the case of India well into the future.

- Australia is a proven exporter of educational services. India has substantial human capacity but much of it is underdeveloped. It needs education and upskilling that flows through the broad community, and looks to countries like Australia as a source of high quality vocational and tertiary education. In a nutshell, it wants to learn what we know and recreate it back in India.
- Australia also is a proven exporter of financial and professional services in areas like engineering and mining technology that are relevant to India's massive plans for soft and hard infrastructure development over the next generation and ambitions to modernise its mining sector.

As discussed previously, underweight investment in both directions is the key weakness in the economic relationship. India is a major destination for foreign direct investment but investment from Australia is almost non-existent, at least compared with investment from other advanced economies.

The smallness of Australian outward investment largely reflects impenetrable barriers to investing in Indian mining, despite apparent openness (see pp. 39-42, 80-88), where potentially Australian investors could be expected to have a big interest. This applies especially in areas related to infrastructure, including in steel and other metals production and processing. The smallness of outward investment, at least in non-mining areas, also may reflect that Australia lacks an outward investment strategy that is as important and well-resourced as the inward strategy. In a global trading system where trade, investment, technology, ideas, skills and people movement are all bundled together in various ways in different markets and where imports are as important as exports in developing products and services, this is a systemic weakness that should be addressed in building the scope and depth of the Australia-India economic relationship. With this in mind, the Varghese Report proposed that the Australian Government should facilitate trade and competitiveness enhancing investment to India with the target of India becoming Australia's third largest destination for outward investment by 2035. 'Were this achieved it would represent a transformational increase of economic integration.'[70]

Australian businesses also could be expected to invest more in India if, at some point, Australia and India negotiated a free trade agreement that includes national treatment principles on investment, and also provisions for dispute resolution that strike a workable balance between protecting investors' rights and enabling states to pursue legitimate regulatory and public policy goals. This, however, will be a formidable challenge given India's current insistence that local remedies be exhausted in its slow moving legal system before resorting to international arbitration.

More needs to be done to attract direct investment from India. India is interested in investing in Australian resources and land, but these are sensitive issues in Australia (as they are around the world) that can provoke kneejerk reactions to community anxieties.

This is reflected vividly in Adani's proposal to invest in coal mining in Queensland's Galilee Basin: Indian companies struggle with Australia's regulatory system and political campaigns just as Australian companies (and foreign companies more broadly) struggle with India's unpredictable business environment. All this can discourage investment. Recent concerns over Chinese and Indian investment in Australia echo earlier concerns over investment from Japan in the 1980s and from the United States in the 1960s and 1970s.

The Australian Government needs to firmly address perceived hostility to foreign investment from countries like India so that it does not fester and weaken an international relationship that may be vital for Australia's future, while continuing with a balanced approached to addressing legitimate domestic concerns. This must involve close liaison and cooperation with Indian governments at national and state levels targeted at delivering quality outcomes as major investments get underway. And it must also involve the Australian Government making a better job of explaining to domestic constituencies that Australia welcomes foreign investment from India, as much as anywhere in the rest of the world, because:

- International markets for capital are highly competitive and capital moves quickly between countries in response to changing opportunities and relative costs of production.
- FDI comes with transfers of technology, skills and capabilities and access to global supply chains and export markets.
- Australia must supplement domestic savings with foreign investment if we are to continue to update and develop our infrastructure.
- And less FDI would mean Australia either having to take on additional debt or forgo economically-beneficial investment opportunities.

Some institutional links

The Government of India recently argued that, despite the long journey from a closed economy to a fairly open one, 'precocious, cleavaged India' does not fit neatly into any particular development model. It has only superficially joined the 'Washington Consensus'.[71] It has been the perennially turbulent yet enduring democracy since Independence. Cleavages based on language, region, caste, class, and gender run much deeper than in many other emerging economies. Meanwhile, India is looking for 'an underlying economic vision across the political spectrum' and may be open to ideas.[72] To achieve this vision, India needs to pursue international dialogues, including with its trading and investment partners, to develop innovative approaches that address and harness its astonishing diversity to deliver continuing and broad-based growth.

While India alone can define and apply that unique economic vision, there is certainly scope for Australia to cultivate engagement with India on public sector reform that is so central to its development, especially in resources and related areas. This might involve initiatives on several fronts over a long period of time – for example on access issues, regulatory cooperation, sector

specific cooperation, and cooperation at different levels of government. A menu of processes might be available that draw attention to the contributions to Australian economic development by agencies such as the Productivity Commission, the Australian Competition and Consumer Commission and Australian financial regulators.

Australia has a good story to tell on our own transition from protectionism to liberalism and on the shifting markers that define activities that properly belong to government and the many more that do not. Parts of it might be relevant to the very different economic and social circumstances of India. In telling this story, and in encouraging the partnering of institutions in the bilateral architecture, key points of interest for India might include: how Australia managed the political economy of reform (in particular how investments in social safety nets, adjustment packages and education/skilling played a vital role in managing structural pressures from trade and technological change); how state and territory governments engage in national reform processes; the institutional changes that underpinned the Australian Government's transition from deliverer of goods and services (including through public enterprises) to regulator and facilitator; how business participates in reform; and opportunities for strengthening institutional engagement on reform in sectors where Australia has genuine world-leading capabilities.

Australia has a good story to tell on our own transition from protectionism to liberalism.

CHAPTER 5

Opportunities for mining and METS

India potentially presents a big opportunity for Australian resources and METS companies, but it will not be a carbon copy of Australia's trade with resources-deficient Northeast Asia for two fundamental reasons.

First, opportunities in India come face to face with the tyranny of price. Price rules almost everything: relationships take a backseat. The cheapest price determines where it sources its metallurgical and thermal coal, liquefied natural gas and iron ore, and is highly influential in where it sources mining equipment and services. One day India may well move to sourcing resources, technologies and services on a value for money basis in which quality is compared to price, including in a lifetime consideration of a particular input. But that approach does not apply now.

Second, India's consumption of mineral resources could triple within a couple of decades, but the great bulk of consumption is currently sourced domestically (Box 4).[73] Could future consumption still be satisfied largely in this way? There are no definitive answers given the Indian Government's determined pursuit of an import replacement strategy for many mineral resources but, on balance, there is a high likelihood that imports will grow over the medium to long term if only to address bottlenecks in production and distribution.

Concerns about dependence on imported resources run deep in India both for strategic reasons – fear that India's economic and social transformation could be held hostage to the vagaries of international resources markets – and for a variety of political and economic reasons focused on the implications of rising resources imports for the trade deficit. Indian politicians and many in business and the broader community also continue to look emotively at resources imports like coal and iron ore, asking questions like: why should India import when it has its own resources. The appeal to resources nationalism is particularly strong among local mining companies. The essence of the import replacement policy is well captured in India's draft energy policy.

> Improved energy security, normally associated with reduced import dependence, is … an important goal of the [energy] policy…Today, India is heavily dependent on oil and gas imports while also importing coal. In so far as imports may be disrupted, they undermine energy security of the country. Energy security may be enhanced through both diversification of the sources of imports and increased domestic production and reduced requirement of energy. Given the availability of domestic reserves of oil, coal and gas and the prospects of their exploitation at competitive prices, there is a strong case for reduced dependence on imports.[74]

BOX 4

Minerals production in India

During 2017-18, mineral production was reported from 32 States/Union Territories with nearly 94 per cent of the value of production (excluding fuel and atomic minerals) coming from 10 States.

- **Rajasthan:** 20.3 per cent of national output: lead and zinc ore, selenite, wollastonite, phosphorite, silver, copper, petroleum, limestone, lignite, natural gas.
- **Odisha:** 17.8 per cent: coal, iron ore, chromite, bauxite, manganese ore, limestone.
- **Andhra Pradesh:** 9.5 per cent: coal, limestone, manganese ore, copper concentrate, iron ore.
- **Chhattisgarh:** 8.8 per cent: coal, iron ore, bauxite, limestone.
- **Karnataka:** 7.8 per cent: iron ore, manganese ore, limestone, magnesite, gold.
- **Telangana:** 6.1 per cent: coal, limestone, manganese ore.
- **Gujarat:** 5.7 per cent: lignite, natural gas, bauxite, limestone.
- **Uttar Pradesh:** 5.0 per cent.
- **Maharashtra:** 4.7 per cent.
- **Bihar:** 3.8 per cent.

The state sector plays a dominant role in minerals production, accounting for around three quarters of the total value of production. In 2015-16, it was responsible for 93 per cent of coal production, 68 per cent of tin concentrate production, 69 per cent of petroleum (crude), 99 per cent of gold, 96 per cent of phosphorite, 67 per cent of graphite, and 56 per cent of magnesite.

India is wholly or largely self-sufficient in minerals that are the basic feedstocks for industries such as thermal power generation, iron and steel, ferro-alloys, aluminium, and cement. India is mostly self-sufficient in coal (with the exception of metallugical coal required by steel plants) and lignite among mineral fuels; bauxite, chromite, iron ore, rutile etc. among metallic minerals; and almost all industrial minerals with the exception of chrysotile asbestos, borax, fluorite, potash, rock phosphate and elemental sulphur.

Various minerals continue to be imported to supplement domestic production and/or meet required grades for blending with locally produced mineral raw materials and for manufacturing special qualities of mineral-based products.

Source: Government of India (Ministry of Mines), annual reports for 2016-17 and 2017-18, New Delhi.

Whether or not import replacement is an optimal policy is beside the point: what matters from an international trade perspective is the effectiveness of import replacement strategies and the speed and effectiveness of reforms more generally in addressing challenges faced by the minerals sector. In other words, can domestic production ramp up quickly enough to meet growth in demand and can India's infrastructure, especially its creaking railway system, be developed quickly and effectively enough to cope with the pressure of moving bulky commodities from where they are mined to where they are needed?

There are no clear cut answers to these questions, but in addressing them it is important to go back to basics in understanding the practical limitations of import replacement. India has strong economic growth potential. Growth will generate demand for resources. India will attempt to meet this demand from domestic production, but there are constraints on domestic supply resulting from problems with mining efficiency and bottlenecks in the transport system. The resulting imbalance between demand and supply is one reason why India imports thermal coal for example, even though it has abundant domestic reserves and the Indian Government has a policy to eliminate imports in the short term. Furthermore, even if supply of mineral resources more broadly were to be unlocked, strong growth in demand linked to industrialisation, modernisation and the political imperative to generate jobs will continue to put pressure on supply. And tightness in the domestic supply/demand balance will tend to favour imports, and would favour them more should supply not be sufficiently unlocked.[75]

India will attempt to meet demand for resources from domestic production, but there are constraints on domestic supply resulting from problems with mining efficiency and bottlenecks in the transport system.

BOX 5

Prices do not reflect economic principles
The case of electricity

The power sector is symbolic of the difficulties India faces. Prime Minister Modi came to power in 2014 promising reliable electricity supplies by 2019 and ending persistent blackouts that have retarded economic growth over decades. But many state utilities that distribute electricity cannot afford to pay the companies – predominantly central- and state-level SOEs – that generate it, which in turn has implications for investment in new generating capacity, where private sector investment is close to zero.

The price of electricity is often capped below the cost of production. Regulators come under political pressure to keep prices low and state governments are often late in paying the utilities, if they pay them at all. This leaves some utilities with heavy losses.

Bad loans at many state-owned banks now stand well above 17 per cent of their total lending. The figure might be close to 25 per cent for power sector debt.

Source: K Stacey, 'Generator woes threaten Modi's plans to power India', *Financial Times*, 19 February 2017; H Sender, 'India's power sector carries a nasty sting in the tail', *Financial Times*, 13 March 2017.

Thermal coal

Overview: Growth in demand for electricity has been constrained recently by relatively weak industrial growth and capacity problems in the power sector. With power prices often set by government agencies below the cost of production (Box 5), power companies prefer to shut down power supply rather than sell at a loss, causing widespread and frequent blackouts.

Notwithstanding the fact that several hundred million Indians do not have access to electricity and that the Government is committed to ending energy poverty in the next few years, demand for power remains sluggish, at least compared to countries like China during their transformative periods.

On the supply side, the capacity of the Government to unlock coal production quickly in a sustained way is limited. There are difficulties from acquiring land and convoluted approvals processes to challenges posed by fragmented decision making – India's states all have significant powers to determine their own policies – and reforming monolithic state owned enterprises like Coal India. There also are problems in transporting

coal by rail from mines to power stations because of infrastructure constraints. It may be possible for thermal coal production to grow by 5-6 per cent per year through the 2020s but, if achieved, it would be a major accomplishment.

India must import thermal coal despite the Indian Government announcing a policy in 2016 to eliminate thermal coal imports by the end of 2018.[76] And, as the analyses reported below suggest, persistence with a strategy to achieve full import replacement for thermal coal is unrealistic if India is to meet its growth objectives The future supply/demand equation for thermal coal will be shaped by answers to questions like: will government reform of manufacturing and the power sectors be fast enough to unlock demand growth for electricity, which in turn will boost demand for thermal coal? Will the government focus more on removing impediments to supply? This would involve the progressive removal of transport and regulatory bottlenecks over a lengthy period of time. And will the government try to do both at the same time, even though this would be very difficult?

Reform is complex and inevitably will take time. So there is a high likelihood that there will be a tight balance between supply and demand for thermal coal over the next few years. Further, if the Indian Government pushes harder on infrastructure investment and on encouraging investment in labour-intensive manufacturing because of the political imperative to generate jobs, this might increase the premium on thermal coal imports. The difficulty of assessing these and related possibilities helps to explain significant differences in projected imports.[77]

Medium-term outlook: What seems reasonably certain is that coal consumption in India will rise faster than in any other major economy in the next few years as the government pushes ahead with its key policy of providing electricity to all its citizens: 300 million Indians are still not connected to the electricity grid, many more have to cope with intermittent supplies and nearly 500 million people depend on biomass for cooking.[78] Coal also will continue to be the mainstay of India's electricity generation, although renewables will increase in importance owing to policy support and competitive tariffs.[79]

What seems less certain is whether Indian thermal coal production can increase quickly enough in the next few years to partially replace imports or retard their growth. Production has in fact been growing quite quickly – the result of state support for ambitious production targets, the easing of environmental regulations, improved administrative processes, and reduced transport delays – and imports slipped in 2016 and 2017, though they have since bounced back strongly.

The International Energy Agency expects that domestic thermal coal production will replace imports to some degree in the period to 2022 if, fundamentally, Coal India meets, or mostly meets, its ambitious coal production targets. On this reckoning, India would remain as the world's third-largest thermal coal importer, though imports would decline from 111 mtce in 2016 to below 90 mtce in 2022.[80] Imports cannot be eliminated because most of India's thermal coal has a high-ash content and most of its coal-fired power plants, especially on the coast, are designed to burn low-ash coal.[81] If this reckoning is overly optimistic, there is

potential for growth in imports, though not necessarily from Australia.[82] Nearly 50,000 MW of new coal-fired capacity is under different stages of construction and will come on stream in the period between 2017 and 2022.[83] Slightly faster growth in demand for power and slightly slower growth in supply of domestic thermal coal could plausibly see modest growth in thermal coal imports. Either way, the balance between domestic coal supply and demand will remain tight.

Long-term outlook: India should add the equivalent of the European Union's current power system to meet expected energy demand in the period to 2040.[84] Over this period, India is expected to emerge as the largest growth market for global energy, accounting for more than one-third of global growth in energy demand by the mid-to-late 2030s. India also is expected to emerge as the largest growth market for coal, with its share of global coal demand more than doubling from a little over 10 per cent in 2016 to around a quarter by 2040.[85] Under the IEA's most recent central projection for long-term energy requirements, solar and wind power generation, along with nuclear power, will increase their shares of the country's energy mix, but coal-fired generation will still provide just under one half of power requirements by 2040.[86]

Further, India will probably struggle to restrain growth in thermal coal imports over the next two or three decades with outcomes highly dependent on the pace of economic growth, the impact of coal sector reforms on domestic production and the scale of improvements in overall energy efficiency. The magnitude of the challenge is suggested by a theoretical exercise conducted recently by the National Institution for Transforming India (NITI Aayog) and the Institute of Energy Economics Japan (IEEJ). The exercise assumes that:

- Indian Government economic and energy policies work effectively over the period from 2012 to 2047
- The economy grows at an average annual rate of 8.5 per cent over this period
- India's population grows from 1.2 billion in 2012 to 1.7 billion in 2047, and its urban population from just under one-third of the total to just over one-half
- The share of manufacturing in GDP rises from 16 per cent in 2012 to 34 per cent in 2047
- India achieves its specified development goals both under business-as-usual (BAU) conditions and under more ambitious scenarios set for the energy sector. BAU additionally assumes that emissions intensity per unit of GDP falls by 70 per cent between 2012 and 2047. The ambitious scenario also takes into account initiatives to increase gas-based power generating capacity and the potential for using carbon capture and storage (CCS) in coal- and gas-based power generation.

In line with IEA projections, the NITI/IEEJ analysis suggests that India will continue to rely heavily on coal-fired power generation in 2047, with coal accounting for 42-50 per cent of the primary energy mix. The analysis suggests that India will use its abundant coal reserves to provide cheap energy, achieving peak coal production around 2037.

As production declines in following years, dependence on imports should increase. Import dependence, however, could be reduced from 65 per cent of requirements under BAU in 2047 to 34 per cent under the ambitious scenario, but this would require simultaneously effective initiatives both on the demand side (e.g. various energy efficiency measures) and on the supply side (e.g. low emissions coal technologies, coal bed methane, underground coal gasification, and shale oil/gas).[87]

This analysis should not be interpreted as providing projections of likely outcomes. The assumption, for example, that India's economy could grow at an average annual rate of 8.5 per cent over 2012-47 is implausible – it is based only on what might be needed to achieve defined government development objectives – which raises obvious questions like how would energy demand and import dependence be impacted by slower average rates of economic growth or faster or slower changes in assumed energy and emissions intensity? Nonetheless, this theoretical analysis is a timely reminder of the difficulties India will face over the medium-to-long term in restraining coal imports even under highly favourable policy circumstances. India has substantial potential as a major expanding import market for thermal coal and, more specifically, as a market for Australian coal given the prospect of Indonesia diverting more of its coal production to domestic consumption as its demand for electricity rises (relative to thermal coal production), and as India continues to shift towards high energy, low emissions power plants.[88]

India is expected to emerge as the largest growth market for global energy, accounting for more than one-third of global growth in energy demand by the mid-to-late 2030s.

Other energy

Demand for natural gas, predominantly in the form of liquefied natural gas, seems set to rise – a prospect that has attracted strong interest from the Middle East and producers in East Africa – as does demand for nuclear energy. India has a strong commitment to increase nuclear energy over coming decades. Its goal is to expand nuclear power capacity to 63 gigawatts by 2032 (compared with around six gigawatts currently). Although the Varghese Report considered that this objective was unlikely to be met, demand is likely to increase significantly, with projects under construction likely to add another ten gigawatts of capacity by 2027.[89] The IEA believes that India's installed nuclear power generation is likely to increase at the second fastest rate in the world behind China in the decades to 2040.[90] With limited, low grade and geographically remote domestic sources of uranium – Jharkhand is currently the only state where production is occurring – India will need to rely more on imports. This would appear to be its lowest cost option and presents Australia with potential opportunities.

India's installed nuclear power generation is likely to increase at the second fastest rate in the world behind China in the decades to 2040.

Australia has the largest known reserves of uranium in the world. After several years of discussions and negotiations, former Prime Minister Tony Abbott signed a bilateral safeguards agreement – the Agreement on Cooperation in the Peaceful Uses of Nuclear Energy – with India in September 2014 that entered into force in November 2015.[91] This was a significant diplomatic and policy development, clearing the way for the commencement of shipments of uranium to India notwithstanding its failure to join the Nuclear Non-Proliferation Treaty. Although statistics on this trade are hard to come by,

an initial trial shipment was reportedly made in 2017, following implementation of the necessary administrative procedures under the bilateral agreement.

The scope of Australia's trade with India will depend on factors such as the number of Indian reactors subject to International Atomic Energy safeguards, the pace at which India develops its reactor fleet and the responses of other exporting countries like Russia, Kazakhstan and Canada.[92] Competition in the market is likely to be strong. According to the Varghese report, Canada and Kazakhstan each sold to India more than 900 tonnes of uranium in 2017 and both have worked actively to develop the market.[93] Uzbekistan is also seeking to export to India.[94] The overall assessment of the Varghese Report – that opportunities 'will not be more than moderate' – appears sound.[95]

Metallurgical coal (coking coal)

Indian demand for metallurgical coal is set to rise strongly over the medium-to-long term. According to the IEA, demand will be driven by burgeoning Indian steel production (see below) and planned structural changes in India's iron and steel industry that will boost the share of iron and steel produced in blast furnaces using metallurgical coal.[96] India's potential to increase metallurgical coal production is lower than for thermal coal: it has no viable deposits and most known reserves are below the quality needed for blast-furnace ironmaking. In the medium term:

> Even assuming a strong increase in coking coal production based on the government's policies, additional amounts required will be obtained through overseas imports, which will increase by 7.7 per cent per year, from 44 mtce in 2016 to 69 mtce in 2022.[97]

Over the longer term, the Indian Government wants to reduce import dependence from around 70 per cent of requirements currently to around 50 per cent by 2030 by, for example, funding more exploration and development of deep metallurgical coal reserves and investing more in modern coal washeries.[98] But increasing domestic production will continue to be challenging while industrialisation and modernisation will lead to strong growth in demand. This should result in large increases in metallurgical coal imports: the issue is the pace of increase rather than the direction of change. For its part, the Varghese Report estimates that domestic production will in reality decline out to 2030, with imports then providing over 90 per cent of requirements.[99] India's Steel Plan recognises the importance of imports by including acquisition of overseas metallurgical coal assets as a key policy objective to increase domestic availability and security.

Metals

Metals utilisation in India is low by international standards but there is massive potential to change this in the next decade or two. The relationship between rising per capita incomes and per capita consumption of metals is well known: demand increases dramatically as economies reach per capita incomes of US$5,000-10,000 at market prices: this is commonly linked to rapid urbanisation and the take-off of heavy industrial development.[100] India should move into this income category over the next decade or two.

Increasing per capita metals consumption should be reinforced by the willingness of Indian governments to support higher metals production as a key development objective. Initiatives to upgrade and expand physical infrastructure like roads, metro systems, railways, and air and sea ports; build millions of houses for the poor and homeless; and modernise and develop domestic industries like shipbuilding, defence support and autos – as set out in various Indian Government programmes – will only be possible with massive increases in metals production.[101] In supporting production, successive governments, no doubt, will continue to emphasise self-sufficiency in many of the metals that are primary raw materials for India's industries: protectionist sentiments are never far below the surface. But imports of metals and inputs for metals production must continue to rise if the demands for infrastructure are to be met effectively and bottlenecks in supply and distribution addressed effectively.

Steel and iron ore

Indian crude steel production is projected to increase rapidly over the medium-to-long term. Production could just about triple in the period to the early 2030s according to the official steel plan, rising from around 100 mt per year currently to 150mt in the early to mid-2020s to over 250 mt by 2030-31. If this is achieved, per capita consumption would rise from a little over 60 kg – a figure that includes 10 kg per person in rural India and that is still low by the standards of comparable countries (Chart 7) – to 160 kg by 2030-31.[102] The precise pace of increase in crude steel production will be influenced by India's capacity to overcome ongoing regulatory challenges and difficulties in accessing raw materials, land and finance, but the potential for strong underlying medium-to-long term growth is real enough given India's comparatively low steel use per capita, strong expected economic growth and significant policy support.

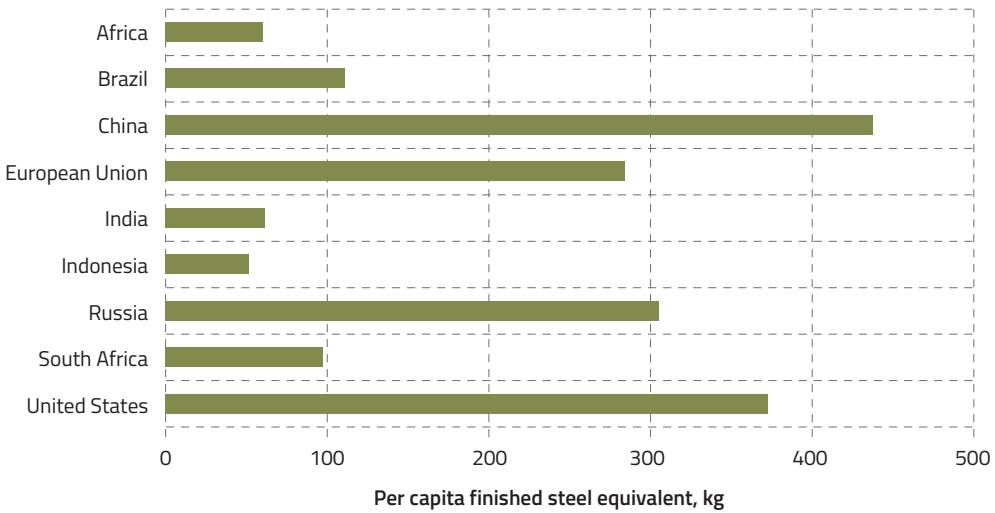
India could notionally supply the iron ore needed for this massive expansion in steel production from domestic sources – India was a net exporter until 2012. The Indian Government certainly is intending to restrict imports to the extent possible. Some initiatives were outlined in the Steel Plan such as improving regulatory efficiency (e.g. by strengthening mine allocation processes and procedures for renewing mining leases), stepping up the focus on intensive and deeper mineral exploration and improving mining operations.[103] Other import replacement strategies might include raising tariffs and increasing export duties on iron ore – initiatives that have prominent support in sections of government and business.[104] But however it is done, four things seems reasonably clear: government policy will continue to promote self-sufficiency; access to land, rail transport and finance will continue to be challenging in developing new iron ore mines; India's consumption of iron ore should continue to outpace domestic production and result in pressure to increase imports; and, in accordance with the Steel Plan, India will continue to augment its domestic resource base by acquiring iron ore assets overseas.[105]

In the past five years, Australia has sold small amounts of iron ore to India, with the biggest exports occurring in 2014, when exports were just below US$100 million. The total size of

Chart 7

True steel use per capita: India and selected countries and regions, 2015

Source: World Steel Association, *Steel Statistical Year Book 2017*, Table 59



Note: True steel use is obtained by adjusting apparent steel use for net exports. Note also Africa includes South Africa.

the import market is much bigger: over the past five years, imports have averaged around US$460 million (they were almost US$775 million in 2015). South Africa and Brazil have typically been much bigger suppliers than Australia, while Bahrain (which has two large iron ore pelletising plants) is also recorded as a significant supplier in some years. In 2017, South Africa, Brazil and Bahrain held around 85 per cent of India's US$460 million import market, compared with around six cent for Australia. The potential for further growth exists. Depending on the policy environment, India could become a significant market for Australia.

Depending on the policy environment, India could become a significant iron ore market for Australia.

Other metals

India has limited domestic supplies of some essential raw materials needed for steel-making such as high grade manganese ore, chromite, nickel and ferrous scrap. Nickel is practically unavailable in India and almost all unwrought and other forms of nickel must be imported. Similarly, India is almost completely dependent on imports for minerals like copper ores and concentrates and cobalt. Imports of all these minerals should increase substantially in the normal course of India's development, along with intensified exploration and concerted efforts to ensure supply by acquiring overseas assets.

Copper ores, alumina and gold are particularly important for Australia's trade with India and are reviewed here in some detail. Lithium and rare earths are also reviewed for their potential importance.

Copper ores and concentrates: India provides significant opportunities for exporters of copper ores and concentrates. Its own reserves of copper ore are very small, at about two per cent of the world total. Mining has been a sensitive issue however, and further exploration that would prove or disprove whether a revision of reserve estimates is called for is unlikely in the medium term. Mining output is minuscule. In 2015-16, it was about 31,500 tonnes or approximately 0.2 per cent of global output (the state-owned Hindustan Copper Limited is the only copper miner). However, India is a significant producer of copper metal. In 2016, it ranked fifth for smelter production in the world and sixth as a producer of refined copper with production at over 795,000 tonnes in fiscal 2016-17.[106] There are two big private sector firms, Hindalco Limited and Vedanta Industries Limited. These firms have large copper smelters with a capacity of 500,000 tonnes (the second biggest in the world) and 400,000 tonnes respectively and they dominate Indian refined copper production.[107]

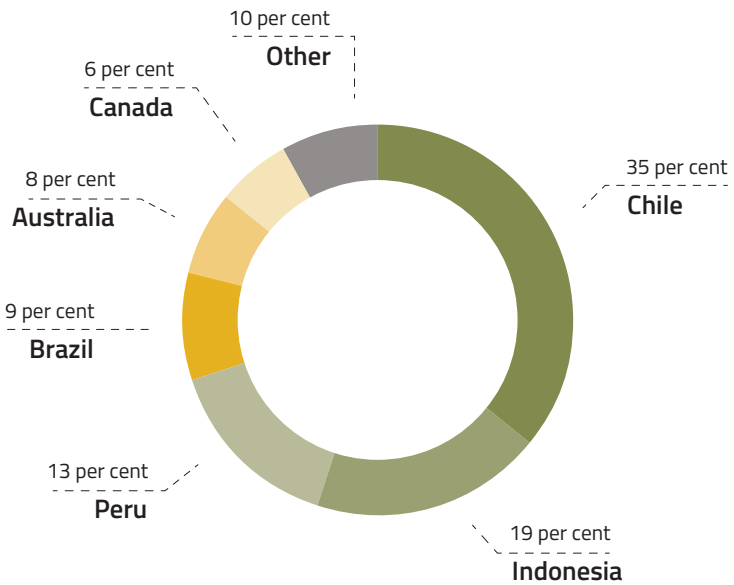
Domestic use of copper is expected to expand significantly in the medium to long term. Copper has a wide range of uses in both developing and developed economies, including in electrical wiring and cables, communications equipment, construction, transportation, industrial machinery and equipment, and consumer appliances. There are substitutes for copper (for example, aluminium can also be used in certain applications that require a good electrical conductor). But substitution is a high risk for the industry in only some areas.[108] Growing demand for copper products is likely to translate into greater demand for refined production in India, although India can be expected to continue to import many copper manufactures.[109] The Indian Government's clean energy targets are expected to boost domestic demand in the medium and longer term.

India is a net exporter of some copper products. In 2017, it exported an estimated 400,000 tonnes of unwrought copper, while importing about 38,000 tonnes. Indian firms therefore need to import substantial quantities of copper ores and concentrates to obtain refined output both for domestic use and to service export markets. India was the fourth biggest importer of copper ores and concentrates in the world in 2016. Total imports were nearly US$3.9 billion in 2017. India is also a big importer of unrefined

Chart 8

Sources of India's imports of copper ores and concentrates, 2017

Source: UN Comtrade Database



copper and copper anodes. There is significant competition in the import market. Chart 8 shows import sources for copper ores and concentrates. Australia now has a modest share of the market: low-cost suppliers like Chile and Peru have much bigger shares.

Alumina: India's current per capita usage of aluminium is low at around 1.3 kilograms, but this is expected to rise rapidly as India develops. Aluminium has a wide range of uses ranging from transport and packaging to power and construction: in India's case, nearly half of supply is used in the power sector and around 15 per cent goes to each of the transport and construction sectors.[110] The Indian Bureau of Mines notes industry expectations that per capita apparent consumption will rise to 4.1 kilograms by 2025.

The Office of the Chief Economist in the Australian Department of Industry, Innovation and Science projects aluminium consumption to grow at a more modest (but still rapid) rate of around seven per cent per annum to 2023. It projects alumina usage rising from 5.2 mt to 6.9 mt in 2023, though it notes downside risks to this outlook.[111]

Whether growth in demand for aluminium will lead to rapid growth in imports of alumina in the medium and longer term is a difficult question to answer. India has a well-developed aluminium industry, with extensive reserves of bauxite (including large deposits of gibbsite) and a substantial refining capacity for both alumina and aluminium. In 2017, it was the fifth largest producer of bauxite and the fourth biggest producer of alumina. India's aluminium production in that year is estimated at 3.2 mt, more than double Australia's output.[112] India is also an exporter of aluminium, with exports of unwrought aluminium and other aluminium products of around US$3.3 billion in 2017.

India is currently both an importer and exporter of alumina. Estimates for 2017 show imports at 2.1 mt and exports at 1.4 mt. Intra-industry trade appears to be an outcome of the structure of the industry, with major alumina producers having both backward links to bauxite mines and forward links to the aluminium industry. Firms without access to bauxite may need to import either bauxite or alumina, while those with access may export product that is surplus to their requirements (the state-owned National Aluminium Company, or NALCO, is the biggest exporter).[113] Exports of bauxite and alumina have been a source of concern to parts of Indian industry, and the Government of India has imposed an export tax on bauxite.[114] NALCO reportedly anticipates that its exports of alumina will fall sharply in the next three to four years.[115] This may have some implications for Australia's exports of alumina to India in the short term, but opportunities in the medium and longer term will depend mainly on how rapidly demand for aluminium grows and on India's supply response.

Gold: There may be opportunities for increased sales of gold. India accounts for approximately one fifth of global demand.[116] It has been the world's largest or second largest consumer of gold for jewellery in recent years and is also an important market for gold for investment purposes. (These two uses overlap in practice since jewellery is often seen as an investment in India). But India is not a significant gold miner – mine output in 2015 was under two tonnes. Reserves are limited. Apart from recycling, which has accounted for about 15 per cent of jewellery fabrication demand since 1990, India relies on gold imports to meet demand. India is a significant gold refiner, however, with a capacity of more than 1450 tonnes.[117]

In the short term, demand for gold is influenced by a number of factors, among them the number of auspicious days for weddings and other festivals on the Hindu calendar; the level of prosperity in rural areas (in turn, affected by monsoonal conditions); prices; the rate of inflation; the extent of demand for gold for safe-haven purposes; and government policies. Policies such as the introduction of higher gold import duties from 2012, the introduction of the GST and the demonetisation of large currency notes had a negative impact on gold sales.[118]

Over the longer term, demand for gold should increase as incomes rise in India. Econometric modelling by the World Gold Council suggests that income has the most decisive impact on long-term demand growth. In the case of gold jewellery, the Council estimates that a

one per cent rise in per capita income leads to a one per cent increase in demand. For investment gold in the form of bars and coins, the impact is a little larger at 1.1 per cent.[119] Other factors that could boost gold demand in the long term include the growth of the Indian middle class; the development of phone and tablet applications that make it easier to buy, sell and gift gold; the increased use of electric vehicles; greater internet connectivity; and the growth of medical and dental applications (for example, those involving nanotechnology). On the other hand, greater penetration of the formal banking sector in India might work to weaken demand.[120]

While there should be increased opportunities, it is unclear whether they will lead to increased Australian exports. As already noted, Australia's share of the Indian gold import market has declined markedly over the past decade, although there has been some recent modest growth.

Lithium and rare earths: Indian mining SOEs have been mandated to invest in lithium and rare earths mining operations around the world or to negotiate offtake contracts. Private sector companies are also interested. This is a strategic response to concerns that China is cornering the market in commodities that are important for India's future development.

Australia is on India's radar as a source of lithium and rare earths, and there may be significant opportunities to develop cooperation in the mining and processing of minerals associated with emerging technologies. Lithium, for example, is used in the production of batteries, for which demand is expanding rapidly as the number of electric

Australia is on India's radar as a source of lithium and rare earths, and there may be significant opportunities to develop cooperation in the mining and processing of minerals associated with emerging technologies.

vehicles (EVs) increases and mobile electronics and robotics continue to grow in importance. Australia has very substantial reserves of lithium in the form of hard rock and is the biggest global miner of the metal. India, for its part, is seeking to develop production of lithium batteries, partly because it has ambitious goals relating to the production of EVs.[121] But it does not have significant known lithium reserves. Three Indian state-owned companies – the National Aluminium Company, Hindustan Copper and Mineral Exploration Corporation – agreed in 2017 to form a joint venture to develop overseas resources and acquire foreign assets of lithium and other strategic minerals.

Rare earth elements: the collective name for seventeen distinct elements – are also of considerable importance in emerging technologies.[122] Their applications include polishing powders, magnets, catalysts, metal alloy production and superconductors, as well as batteries. Notwithstanding their name, reserves are distributed widely, but they are not usually found in deposits where extraction is economically efficient. China, which does have such reserves, is the predominant supplier to the world market, but Western Australia has important deposits of some metals. There have been considerable concerns in the past about China's actions to limit supply. In 2012, the United States, the European Union and Japan launched WTO challenges to restrictions imposed by China on the export of rare earths. The cases were consolidated before an appellate body, which found against China. China advised the WTO in 2015 that it has removed the restrictions.

Cooperation between Australia and India might be attractive on a number of grounds. Further investment in mine production would create a more competitive international market for rare earths. It would increase India's security by providing more secure access to lithium, rare earths and related minerals. It could potentially make it possible to add further value in either or both of Australia and India, contributing in the latter case to the *Make in India* initiative. Government and industry in Western Australia have been moving to position the state to play an expanded role in producing and processing lithium and other energy materials. The WA Government announced in May 2018 that it would establish a taskforce for this purpose, chaired by the Minister for Mines and Petroleum. A report prepared for the Association of Mining and Exploration Companies in February 2018 highlighted exponential growth in the world battery market and opportunities for Australia.[123] Australia will, of course, face competition. In the case of lithium, for example, Bolivia has proposed cooperation with India to develop Bolivia's extensive resources.[124]

Mining technology and services

India has both rich mineral resources (Box 4; Table 11) and a reputation for missed production targets that exacerbate problems in the power sector and industries such as steel. Elements within the Indian Government realise that the mining sector must be modernised to produce the resources and energy required to sustain economic growth, reduce poverty and create jobs, as well as to lift safety standards and improve environmental outcomes (Box 6). And this in turn should put pressure on local mining companies over time to lift their standards, providing reform impulses are not stymied by vested interests – perceived losses of mining jobs would be a potent issue – and providing any tighter regulations are enforced.

As India's mining sector grows and modernises, there should be opportunities over time for Australian METS firms to supply a wide range of technologies and services to this difficult and opaque market like:

- Exploration services – large parts of the Indian sub-continent have no, or only scanty, data on resources potential.[125]

Table 11

Mining Contribution Index (MCI): India and other BRIICS, 2016

Source: International Council on Mining and Metals, *The Role of Mining in National Economies: mining contribution index*, third edition

Country	2016 MCI rank (out of 183)	Metallic mineral, metals & coal export contribution 2014 (% of exports)	Metallic mineral, metals & coal production value 2014 (% of GDP)	Mineral rent 2014 (% of GDP)
India	68	11.7	2.2	0.65
Brazil	27	16.3	1.5	1.38
Russia	38	8.7	4.3	1.08
Indonesia	58	17.5	3.1	0.83
China	80	1.5	1.5	1.21
South Africa	30	38.3	14.0	3.16

Note: the MCI provides an indication of the relative importance of mining in the economic life of a given country. Ranking is out of 183 economies. Metallic mineral and coal production value is based on a dataset that includes metals, coal, feldspar, phosphate rock, salt, and sulphur. Mineral rent as percentage of GDP represents loosely aggregated potential tax and profit flows from mining.

BOX 6

Improving resource efficiency

India has lagged behind comparable countries in resource productivity. A recent policy paper prepared by NITI Aayog and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) for the Indian Government highlighted some of the big benefits from improving resource efficiency.

Economic benefits included improving competitiveness and profitability, creating new industries (like in the recycling sector), becoming an innovation hub for resources efficiency in Asia, and reducing import dependence for some minerals. The paper also noted this would improve India's trade balance and promote economic stability.

Social benefits included reducing social conflicts that threaten internal security. India's mineral resources are often under forests or river systems or oceans that are important to tribal and other local communities. In the past, mining sometimes led to displacement, loss of livelihood and social instability.

Environmental benefits included reducing encroachment on heavily forested regions – around 60 per cent of India's coal resources are located there; reducing pollution of water bodies; and accelerating opportunities for landscape restoration and regeneration of degraded areas.

Source: NITI and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Strategy Paper on Resource Efficiency, June 2017

- Technologies to facilitate on-going mining operations (e.g. explosives, mine lighting, specialist mine vehicles and their parts).
- Technologies and services to improve processes for mining deeper and accessing complex deposits and for using more digital technologies and data analysis to improve mining productivity, health, safety, and environmental outcomes.
- Services to manage structural change in the mining sector through technical upskilling and increasing awareness of environmental externalities.
- Environmental services over the life cycle of mines (e.g. monitoring and reducing greenhouse gas emissions, sustainable management of water resources and biodiversity, and mine site rehabilitation.

But in considering these opportunities, two things need to be kept in mind. The first is that there are comparatively few Australian METS companies supplying the Indian market – though numbers appear to be increasing – and their success to date is mixed.[126] For many Australian companies, the timeframes for making profits in India are just too long

and there are better options elsewhere. On the whole, mining equipment suppliers have been less successful than services supplies and some have withdrawn from the market. High tariffs on standard mining equipment make it difficult to compete with Indian suppliers – difficulties that are compounded by regulatory unpredictability, corruption, lack of transparency in the procurement arrangements of state owned enterprises and private Indian companies, and logistical delays at and behind the border.

METS services providers have generally fared better supplying, for example, training in mining software and safety equipment and bespoke ways to manage mining supply chains. Their success presumably reflects fewer problems with tariffs and logistical delays in moving goods across and behind borders. It also reflects the strong reputation of Australian engineers and other professionals.

Second, near-term enthusiasm for India's METS market is mixed: a large contingent of Australian METS companies are interested in monitoring developments there but neither trade nor invest. On the other hand, medium-to-long term enthusiasm of the METS market seems to be as strong as ever with India seen as a market with large untapped potential in resources, related processing, services, and power generation. Opportunities could exist through partnerships with big SOEs like Coal India, private companies and potentially with international resources companies. But none of this would be for the faint-hearted. The risks would be high.

The success of Australian METS services providers reflects the strong reputation of Australian engineers and professionals.

Mining regulation and governance

As India integrates more fully into the global economy, it will be very much in its interests to bring rules governing economic activity more into line with global best practice. This applies at a general level, for example on issues ranging from the entry and exit of businesses and protecting intellectual property rights to commercial arbitration and access to credit, but it also applies specifically to mining and energy.

The Indian Government understands this, but the gap between understanding and practical action is particularly wide in these two sectors. The task of creating a modern mining sector that plays a full part in achieving India's development goals should make India open to cooperate on mining-related regulatory and policy issues with world class partners like Australia.

Energy policy is a good example because it is linked so closely to national economic transformation and growth and because India is keen to cooperate with world class partners on regulatory and policy change. Like many other countries, India struggles with reconciling national goals on providing cheap affordable power, sustainable energy, emissions abatement, and energy security. Improving energy efficiency has been identified by Indian policymakers as a key way to advance on all of these fronts: examples are policy interventions to raise efficiency in business and household energy consumption; producing and distributing coal; and generating, transmitting and distributing electricity.[127]

Coal sector reform has hardly started (Box 7, p. 84). Beyond auctioning mines, the coal sector has remained untouched by liberalising reform – it limps on as an historic relic.[128] Necessary reforms include enhancing exploration and production practices; developing regulatory frameworks that make the sector more accessible to international investors; and improving India's struggling railway system for hauling domestically produced coal from coal mines to power stations. But such reforms alone are not enough to transform the sector: reform at some point must include exposing the sector to more competition. In the view of NITI Aayog:

> This requires two key steps. First… corporatise the seven subsidiaries of CIL [Coal India Limited] into independent companies and allow them to compete against one another in an open coal market. Second, progressively fresh production from new mines ought to come from the private sector. This will call for comprehensive reforms.[129]

Beyond the energy sector, there is growing awareness that many of India's existing policies covering the various stages of mining development from designing mining operations to end of life management need to be overhauled. There also is growing awareness that India needs to bolster its institutional capacity in mining development in areas from institutional set-up and national resources inventories to transitioning from controlling to regulating resources and developing partnership models between tribal groups and miners.[130] These areas too could be useful areas for government-to-government and wider cooperation both at the national level and in discussions with more reform-minded state governments.

Elements of the Indian Government possibly perceive Australia as a mining super power.

There is scope to engage with India on what regulatory approaches have worked in Australia and what have not. At the moment Australia arguably underplays our soft power when in fact we could be a partner of choice.

Competitiveness issues

India is now in a phase of development and growth that, in some respects at least, is comparable to that achieved by Japan in the third quarter of the last century and China over the past two to three decades. In the normal course of events, India will continue to generate new opportunities for itself and for others that have products, services, investment, policies, and ideas that can be leveraged into partnerships that are relevant to India's development. The world has noticed India and has coming knocking at its door. With so much international interest, relevance must be combined with competitiveness.

These two factors are critical even in an industry like mining where Australia is a world leader. Australia is essentially a price-taker on world resources markets because there are other economies that are well-placed to supply energy and minerals markets. Many economies across South America, Asia and Africa attracted substantial investment during the mining investment boom and have used it to develop new mines or expand existing production of iron ore, base and precious metals, and energy commodities such as coal. Many of these new mines have low operating costs that make them highly competitive with Australian mining companies. India beckons for them just as it does for Australia.

In order to make the most of opportunities in India, Australian minerals companies not only have to focus on managing their own costs, but also depend on Australian governments at national and state levels delivering policies and outcomes that promote international competitiveness:

> Open markets, inward and outward investment, flexible labour markets, efficient services industries, high standards of education and training and innovative cultures across industries are core elements of Australia's future success as a trading nation.[131]

To this list could be added competitive taxation and energy market policies. But the simple point, both for mining and METS and Australia's wider trading interests, is that seizing opportunities in the Indian market depends as much on being competitive – doing things essentially over which Australians have full control – as on international initiatives over which Australian governments and companies have much less control.

CHAPTER 6

Business and investment environment

India's business environment

India's overall business environment is improving in response to the substantial reform program that began in the early 1990s and that has continued with the Modi Government's path-breaking reforms in areas like taxation and insolvency and bankruptcy and the macroeconomic environment: inflation for example has been brought down from 9-11 per cent around 2008-13 to 4-5 per cent now. This improvement is reflected in India's headline rankings in several global measures of business and government performance. For example:

- India ranked in the top half of economies around the world on the World Bank's *Ease of Doing Business* index for 2017, breaking into the top 100 economies for the first time (Table 12). India was among the 10 economies showing the most notable improvement in performance on *Doing Business* indicators in 2016-17, jumping 30 places in the global ranking.[132]
- India ranked in the top third of economies on the World Economic Forum's *Global Competitiveness* index in 2017-18.[133]
- India ranked in the top fifth of economies on the World Bank's *Logistics Performance Index* (LPI) in 2016 measuring performance at key international gateways (Table 13). India was the top performing lower middle-income economy on this index between 2014 and 2016.[134]
- India was in the top half of economies in terms of government effectiveness in 2016 as measured by the World Bank's *Worldwide Governance Indicators* (Table 14). The capacity of governments to formulate, implement and review sound policy is important in itself, but is especially important because it is linked to growth and development potential.

The picture beyond these headline rankings is inevitably more complex. Among other emerging economies, India trails behind China, Indonesia and South Africa on the *Ease of Doing Business index*; compares well on logistical performance, though still lags behind China on every measure making up the LPI; and ranks about the same as Indonesia on governance effectiveness measures and about the same as Russia and China on regulatory effectiveness. It also needs to be pointed out that India's good ranking on the LPI index does not take into account India's underperformance in domestic logistics chains and processes, and therefore the challenges being faced by domestic logistics operators, transport companies, customs agents and freight forwarders.

Table 12

Ease of doing business, selected measures, 2017

Source: World Bank, *Doing Business 2018: Reforming to Create Jobs*, Washington D.C., 2018

Economy	EDB rank (1-190)	Starting business (1-190)	Dealing with construction permits (1-190)	Getting electricity (1-190)	Registering property (1-190)	Getting credit (1-190)	Paying taxes (1-190)	Trading across borders (1-190)	Enforcing contracts (1-190)
India	100	156	181	29	154	29	119	146	164
Brazil	125	176	170	45	131	105	184	139	47
China	78	93	172	98	41	68	130	97	5
Indonesia	72	144	108	38	106	55	114	112	145
Russian Fed.	35	28	115	10	12	55	52	100	18
South Africa	82	136	94	112	107	68	46	147	115

Table 13

Logistics Performance Index (LPI): 2016 (rank out of 163 countries)[135]

World Bank, Logistics Performance Index 2016, International Bank for Reconstruction and Development/World Bank, Washington D.C., 2016.

Economy	LPI rank	Customs	Infrastructure	International shipping	Logistics competence	Tracking tracing	Timelines
India	35	38	38	39	32	33	42
Brazil	55	62	47	72	50	45	66
Russia	99	141	94	115	72	90	87
Indonesia	63	69	73	71	55	51	62
China	27	31	23	12	27	28	31
South Africa	20	18	21	23	22	17	24

Table 14

Governance indicators: India and selected countries, 2016 (percentile rank)

Source: World Bank, Worldwide Governance Indicators database (viewed 16 May 2018)

Country	Government effectivenesss (rank)	Regulatory effectiveness (rank)
India	7	41
Brazil	48	47
Russia	44	37
Indonesia	53	50
China	68	44
South Africa	65	62
Malaysia	76	75
Singapore	100	100
Thailand	66	60
Vietnam	53	35

Note: Percentile rank indicates the percentage of countries worldwide that rate below the selected country. Higher values indicate better governance ratings.

There also is much unevenness in India's performance within particular efficiency measures. For example on the World Bank's *Ease of Doing Business* index, India now ranks among some of the better performing economies in the world for ease of getting credit and, oddly enough, for electricity despite supplies being intermittent, but ranks as one of the worst for starting a business, dealing with construction permits and enforcing contracts. On the WEF's competitiveness index, India's high ranking is achieved mainly on the basis of market size and capacity to innovate, but it continues to lag in areas like infrastructure, health and education, labour market efficiency, the macroeconomic environment, and technological readiness. And even on logistical measures where the performance of key international gateways has improved substantially, moving goods into India's hinterland can be challenging.

India has aspirations to improve on its international business and governance rankings. It wants to be in the top 50 economies in the world on the *Ease of Doing Business* index in the next few years,[136] and has credit in the bank to move towards this goal as its current ranking does not cover the introduction of GST.[137] But if moving up the rankings is to have real substance for

business, it requires sustained reform that deals with tangible business problems like:

- Difficulties in obtaining licenses and permits to operate businesses.
- Uncertainty with high and inconsistent taxes. This is often linked to perceptions of judicial and administrative bias and unnecessary delays in settling tax disputes.
- Lack of transparency, accountability, competition, and efficiency in public procurement.[138]
- Weak legal frameworks for protecting and enforcing intellectual property rights.[139]
- Widespread corruption.[140]
- Access to land. Indian farmers baulk at land reform. It is seen as a throw-back to dispossession under the Raj and highlights tensions between wealthy, educated elites wanting land for housing, factories, mines, infrastructure and modern farming systems; poor and less well educated farmers wanting more secure tenure; and landless labourers mired in poverty seeking social justice. It is probably India's most explosive political minefield.
- A legal system that is best avoided. In some jurisdictions there is a backlog of civil cases going back 20 years. This means that many cases will never be resolved because litigants die and files are lost and, if damages are eventually awarded, they are in current rupees (whose real value has been much reduced by a decade or more of inflation).
- A heavy-handed and still largely paper-based bureaucracy.
- And, overlaying all this, India's mercantilist mindset.

Effective reform is key at both the national and state levels. Reform at the state level is just as important as at the national level in determining business friendliness on issues from opening markets to competition and improving access to finance to accelerating the processing of environment-related approvals and reforming labour markets. There are marked differences in the performance of the states that can dramatically impact on the costs of doing business.[141]

There also is another key as reform works through the system, which goes back to the basics of doing business: foreign companies and organisations can navigate the complexities providing senior Indian officials and business representatives take their foreign counterparts seriously. There are different ways of being taken seriously in different countries and cities around the world. In Washington, early morning is seen as the most productive time of the business day for meetings so engaging counterparts early earns respect; in Paris speaking immaculate French earns respect, and in cities across India demonstrating a long-term commitment and interest in the country earns high respect, which in turn helps to build networks and the personal relationships that facilitate business. India works on the basis of personal networks, trust and 'working around'. This is not corruption. It is how the system works. Foreign companies need to understand and appreciate these local approaches if they wish to engage effectively in business in India.

BOX 7

Reform in India's coal and energy sectors

Reforms that would make a decisive difference to India's coal sector are still largely a matter for academic discussion, for example: breaking up Coal India; even allowing India's 15 largest coal mines (that account for half the national output) to compete against each other and sell into an open market; introducing uniform national pricing for the energy content of coal; allowing exploration to lead to the development of coal blocks to encourage FDI; and promoting private railways for coal on a build-own-operate model.

But some useful reform is happening in and around coal, including:

- Pursuing initiatives to improve the efficiency of coal-based power plants and reduce their carbon footprint
- Mandating all new, large coal-based generating stations to use supercritical technology
- Renovating, modernising and extending the life of existing old power stations
- Setting mandatory targets for 144+ old power stations to improve their energy efficiency
- Appointing Minister Goyal both as coal minister and minister for rail and elevating him to Cabinet rank
- Mandating coal beneficiation (washeries) in most circumstances
- Allowing some private sector coal development probably after 2022.

Source: Government of India, *India's Intended Nationally Determined Contribution: working towards climate justice*; Central Electricity Authority, *National Electricity Plan for Generation*, January 2018, Section 10.2.1; The Times of India, 'Piyush Goyal – Power Minister – elevated to cabinet rank and given the railway ministry', 3 September 2017; N Sharma, Rail Analysis India, 8 September 2017.

Investment in mining

India's economic reforms over the last few years have hardly touched the business environment for mining and METS. (Box 7 reviews reform in the coal and energy sectors.) India is a difficult market for mining and is likely to remain one for a long time to come. This is partly because the sector stifles competition: it is dominated by state owned enterprises (SOEs) and Indian companies favoured by government entities, and by SOEs that control transport infrastructure essential to mining. It also is because of general unpredictability in the sector. Security of minerals leases is not guaranteed. Agreed contracts are often re-interpreted, leading to delays in payment or in granting licenses.[142] And the writ of bureaucratic involvement runs deep, particularly in relation to land-use and approval processes for most aspects of mining.

At present it is unlikely that Australian mining companies would consider investing

in Indian mining in a significant way. There are too many risks – a story that would not be unfamiliar to Indian mining companies attempting to invest in Australia.[143] According to a recent survey of 2700 mining executives and managers from around the world involved in mining exploration, development and other related activities, India rated among the 10 least attractive jurisdictions in the world for investment. According to this survey, India was in the company of countries like Venezuela, Afghanistan, Zimbabwe, and Mozambique.[144] China was rated as the most attractive jurisdiction in Asia for mining investment followed by Kazakhstan. India ranked behind Myanmar and above Afghanistan. This outcome was based on perceptions of India's minerals potential (which seems odd given India's low levels of exploration using modern technologies); policy settings covering issues like uncertainty over the administration, interpretation and enforcement of existing regulations and contracts; regulatory duplication and inconsistency; fairness of the legal system; and broad political-economy issues.

A good illustration of problems in the sector is the fact that mining has been steadily opened up to international investment over the last 20 years and has been open to 100 per cent foreign direct investment (FDI) for around a decade, but there is still very little FDI in mining. In fact, foreign investment in Indian mining is meagre. This was true prior to the 2015 Mining and Minerals Law and it is still true. The legislation was a response to bans on mining ordered by India's Supreme Court in 2014-15 to combat widespread corruption.[145] The purpose was to make the sector more attractive for investment by domestic private companies and international companies.

At present it is unlikely that Australian mining companies would consider investing in Indian mining in a significant way. There are too many risks – a story that would not be unfamiliar to Indian mining companies attempting to invest in Australia.

Encouraging exploration for deep minerals deposits was a particular priority.[146] The key initiative was implementing a transparent auction system for allocating mining leases.

This strategy has not gone to plan because, it was soon discovered, there was a very thin market for exploration licences because of the costs involved, risks of not discovering resources and not having flexibility to transfer licences to explore other sites. Exploration licences have subsequently been eliminated, hitting the business model of companies wanting to explore, locate and develop greenfield sites.

The outlook for exploration is clouded by uncertainty.[147] International mining companies need to be confident that their long-term investments – often over periods of 15-20 years or more – will not be upended by unpredictable changes in the policy and regulatory environment. They do not have this confidence and overwhelmingly look elsewhere to develop their major projects.

To a minor degree, this lack of confidence may reflect the fact that only a minority of India's states with strong mining interests have good governance and good prospects – Rajasthan and Chhattisgarh are examples.[148] The majority have governance issues, high levels of poverty and reputations for exploitative mining (that puts local communities in opposition to mining companies). These differences lead to differences in business costs across jurisdictions, but this would be unlikely to determine whether a mining investment proceeded or not. Resources are where they are, and are commercial or not depending on geology, access to infrastructure, expected trends in commodity prices, and the overall pace and quality of reform of the mining sector. Reform is happening, but tackling the big competitiveness issues that stifle India's mining sector will probably come later rather than sooner in the reform sequence because they are so dependent on land and labour reforms – the two most contentious areas of reform. It could be argued that infrastructure reform, which is proceeding rapidly, involves some land reform. But this is not necessarily the same as the reform needed for mining because mining often involves encroaching on remote tribal lands and fishing grounds. In the past this has sometimes led to social instability in sensitive regions: Indian governments naturally place a high priority on avoiding or minimising these risks.

Without more clarity, the easiest option for perhaps the majority of foreign resources companies is to trade with India and stay away from the bureaucratic and regulatory complexities of operating businesses there. The fact that some choose to operate modest businesses there – usually involving to varying degrees networking, making the case for reform, trading in resources, selling mining equipment to Indian mining companies, and tapping into India's educated workforce to support back office functions – is principally for one reason: if India transforms into a manufacturing powerhouse, it must at some point start to modernise its state-dominated resources sector. The door seems to be opening slowly and should open wider if, and as, India looks for new technologies, capital and international partnerships to modernise the sector. The prize is great. International companies do not want to miss out.

Investment in METS

Over the next 3-5 years and maybe for much longer, METS will probably dominate Australia's engagement with India on mining related investment. This nevertheless should be interpreted cautiously because growth is coming off a low base and because, while mining is directly relevant to India's development and the health of its current account, the sector has consistently lagged behind in India's economic transformation.

Developing METS opportunities in India, particularly for equipment suppliers, will probably require direct investment in India at some stage. This is typically how Australian METS companies move into overseas markets, especially if they need to get behind high tariff walls: as already mentioned, METS companies face substantial tariff escalation. A few companies are already investing – something that India warmly welcomes because it fits into the *Make in India* initiative. Given the unpredictable regulatory environment and the fact that, with a few exceptions, Australia does not have large METS companies, it would seem reasonable to expect that Australian companies would be more inclined to make small direct investments to support bespoke METS products and services rather than to take on the elevated risks associated with large investments. Of course, if significant opportunities do emerge in the sector over time, a large number of small investments could become a substantial investment in aggregate. On balance, METS provides Australia with its best near and medium-term opportunity for mining-related investment in India, but it will be challenging (Box 8).

On balance, METS provides Australia with its best near and medium-term opportunity for mining-related investment in India, but it will be challenging.

BOX 8

Could India emerge as a major export market for METS?
Some commercial considerations

International METS companies working in India face several commercial challenges. Three stand out. First, it takes a great deal of time and effort to find the right business partners: this requires both patience and deep pockets because profits do not usually come quickly or easily. A measured approach is needed to address commercial risk, but this often involves long lead times, making it particularly hard for small and medium sized international companies to remain in the market. Close collaboration with Indian companies also is not without risks for larger international companies. Joint ventures, for example, carry the risk that intellectual property may be appropriated and compromise the development of business arrangements that support mutually beneficial long-term collaboration.

Second, Indian businesses tend to look for the cheapest prices for their inputs rather than undertake 'value for money' assessments that balance price and quality. Government procurement processes are similar. Processes are bureaucratic and ultimately come back to price. Senior officials may understand the importance of good design and other quality factors in successful tendering, but at an operational level they are not widely understood. Most officials may not have sufficient skills, or perhaps the incentives, to distinguish quality differences between proposals, and so default to price. They also operate within rigid bureaucratic rules that provide limited scope for judgement calls, especially in environments where 'irregularities' may give rise to corruption allegations. But elevating price over quality comes at a cost: not only does it limit business opportunities for international METS companies to show their excellence but it also limits technology transfer and opportunities for local companies to achieve better economic and social outcomes.

Third, concepts of risk in India's mining sector are different from those in more developed market economies. Across large swathes of Indian mining, an ingrained culture conflates technical feasibility and commercial feasibility. Despite abundant evidence of large losses by state owned mining companies (and by state owned banks that support their projects), there is an expectation that big coal blocks or other mining leases will be profitable simply because they are sanctioned by the state.

In India's public sector dominated mining environment, it is almost impossible for an international company to perceive the real levels of risk in an investment. Information on potential commercial feasibility is limited. A large domestic mining or METS company can take on these risks because it may be politically well-connected and may have informal ways to assess risks that are unknowable for international companies.

On balance, India is likely to reward a careful step-by-step approach to market development by international METS companies if each step is carefully targeted at niches where they excel.

Could India emerge as a significant market for Australian METS companies and for other international companies both as traders and investors? The answer is yes, notwithstanding the formidable commercial challenges and uncertainties about how they may be addressed or attenuate over time.

At the very least, India will continue to provide niche opportunities for international METS companies that carefully choose their projects and joint venture partners. But beyond this, the picture is less clear. India's emergence as a major international market for METS could occur reasonably rapidly if the politics of mining sector reform – and economic reform more broadly – suddenly and unexpectedly becomes easier. But a more likely scenario is that strong growth in the METS market, and the emergence of a mass market, will depend on generational change in the management and regulatory oversight of the mining sector.

There are very early but encouraging signs of change in the sector. For example:

- In procuring technologies and services, some internationally focused Indian companies are starting to look at quality issues rather than just price at least in areas that are strategically important to their businesses. This contrasts with domestically focused companies that focus on price. Over time, there is a hope that approaches to doing business by more innovative companies will be rolled out to other companies in India, including the big state owned enterprises.
- More progressive state governments are starting to update procurement processes to give some weight to quality as distinct from price, and are hiring staff with the skills to manage these processes.
- India needs a strongly performing mining sector to achieve many of its development goals. This should create opportunities for international companies to trade and invest in mining software and mine-related equipment and advisory services.

Developing opportunities for METS, just like in mining, is not a one way street. India has interests in Australia's METS sector. Kolkata is a major transport hub and a hub for India's METS sector: software, safety and dust suppression are prominent examples of specialties among Indian METS companies. Kolkata is close to the heart of India's eastern coal mining region – West Bengal, Jharkhand, Bihar, and Odisha – and to Eastern India's large reserves of high grade iron ore. It has impressive companies. A challenge for Australian METS companies is to build relationships with some of them. The potential of this market has not been tapped.

On the face of it, there are some powerful synergies that should benefit Indian and Australian companies:

- India has a strong manufacturing base that Australia lacks. Opportunities already exist to combine Australian intellectual property and Indian manufacturing capability to drive down costs either to provide products in India or to third markets, especially in Southeast Asia and Africa.

- India has capacity to manufacture equipment that is relevant to companies in Australia's mining and METS sector. This type of potential needs to be assessed.
- Australia has sophisticated technologies and services that are relevant to India's mining and METS sectors. Indian companies, for instance, are interested in the high level of digital information that guides decision making on almost all aspects of modern mining in Australia. Indian direct investment in Australia in this area could be a big opportunity for both Indian and Australian companies.
- Australia and India have research capabilities across the mining value chain. There is no reason why these capabilities cannot be harnessed in areas of strong mutual interest such as carbon capture and storage and reducing fugitive emissions from mining.

These opportunities, however, come with a caveat. To be visible, Australian companies have to be present to build business relationships and establish networks that might in the course of time lead to contracts. This cannot be done on the basis of a couple of meetings six months apart. It requires persistence: progress, if any, can be slow. But once a firm is 'in the family', developments can occur quickly. The challenge, especially for most Australian METS companies that are not large by world standards, is having enough resilience in their balance sheets to tolerate these long lead-times.

Australia's decision to establish a consulate in Kolkata in the first half of 2019 should be of particular value to Australian small and medium METS companies. It should assist them to build the Australian METS brand, improve access to Indian decision makers in business and government, and generally improve information flows on trade and investment opportunities.

Establishing dedicated METS representation there (or elsewhere in India) at some point might reinforce these benefits. Should Australia's METS industry decide on such a course, it would raise obvious questions relating to setting up and operating costs, prospects for funding from the Australian Government and the balance in representation between deep knowledge of Australia's METS capabilities and access to India's government and business networks. These are hard issues but the core proposition deserves serious consideration, particularly as trade and investment grow and the focus switches to taking the relationship to a higher level. The immediate challenge is arguably increasing awareness in Australia of the opportunities and risks of developing METS trade and investment links with India. One element of this could involve developing closer links between business chambers in Australia and India – the Bengal Chamber of Commerce and Industry for example – to exchange information on trade and investment opportunities, possible joint research projects on Australia-India METS trade and prospects for developing trade with other regional countries.

CHAPTER 7

Goods market access challenges

Tariffs have fallen dramatically in India since the early 1990s. This fall is part of a general trend in developing and emerging countries over recent decades, but it still leaves average tariff levels high in comparison with developed countries. In the case of India, tariffs remain a significant barrier to trade, particularly in agriculture, and in recent years have provided most – perhaps two-thirds – of the border protection to domestic industry more broadly.[149] For the minerals and METS sector, tariffs have been a bigger market access problem in India than in some other emerging economies such as ASEAN.[150] This chapter looks in some detail at recent developments in India's tariff that are particularly relevant to mining and METS. It also looks at non-tariff barriers (NTBs), starting with impediments addressed by the trade facilitation agenda, before examining India's record on issues like anti-dumping, technical barriers to trade and export taxes.

Tariffs

India continues to rely on tariffs to a greater extent than many other emerging countries. Non-agricultural tariffs tend to have fewer bindings, higher bound rates and higher applied most favoured nation (MFN) rates than other emerging economies (Table 15). Tariff lines on minerals and metals follow this pattern. In line with other economies, average applied tariffs on India's resources trade tend to be lower than for many other trades, but in general there are considerable gaps between average bound and applied rates of duty; average applied rates are a little above those in other emerging economies; and duty free access is more restricted (Table 16). Also in line with other economies, the Indian Government can:

> …exempt generally or absolutely or subject to any stated conditions, imports from the whole or part of the customs duty leviable…. The concessions can be either product- and tariff-line-specific but many are also based on end-or industrial-use' such as capital goods intended for use in manufacturing industry or agriculture or product lines that have been liberalised as an outcome of FTA or other trade negotiations. In 2015, the WTO estimated that around one-quarter of India's total customs revenue was forgone through tariff concessions.[151]

India is cautious about taking on binding tariff commitments in trade negotiations, agreeing to substantially fewer duty free lines in agreements entering into force and at the end of liberalisation than countries like China, Indonesia and South Africa (Table 17). This caution may well reflect India's continuing perception of itself as a developing country in the case of trade negotiations with developed economies, and risk minimisation in the case of negotiations with competitors or potential competitors among emerging economies.[152] It certainly reflects ingrained protectionist instincts and highly conflicted attitudes towards opening its own markets and then legally binding this openness (see pp. 113-115). And it reflects too the importance India attaches to being able both to advance and backtrack on economic reform: the absence of bindings, or the wide gaps between bound and applied tariff rates, provide substantial

flexibility for India to pursue import substitution policies as it demonstrated in the 2018 Budget when applied tariffs doubled on some labour intensive goods and consumer electronics and, most recently, in the foreshadowed 70 per cent tariff on solar panels and parts.[153]

For all of these reasons, the tariff is likely to long remain as one of the mainstays of India's trade and industry policies. But that does not mean that it will not change. The biggest change in recent years to the tariff and associated fees and charges occurred with the introduction of the Goods and Services Tax (GST) in 2017. The new tax simplifies movement of goods within India by removing state-based fees and charges at the border: but it also applies to imports, subsuming changes like additional duties, special additional duties and various state charges.[154] These charges had applied cumulatively to the landed price of a good, typically adding (along with the basic customs duty) over 25 per cent to the cost of imported minerals and well over 30 per cent to some METS products (Annex B).

Table 15

Tariffs: non-agricultural products, India and selected countries, 2016

Source: WTO, ITC & UNCTAD, *World Tariff Profiles 2017*, Geneva

Country	Binding Coverage %	Simple bound rate %	Simple average MFN applied rate %
India	70.5	34.5	10.2
Brazil	100	30.8	14.1
Russia	00	7.1	6.5
Indonesia	95.8	35.6	7.8
China	100	9.1	9.0
South Africa	95.5	15.7	7.5
Malaysia	81.9	14.9	5.4
Philippines	61.9	23.4	5.7
Thailand	71.4	25.6	7.7
Vietnam	100	10.4	8.5

Note: Bound average rate: simple average of final bound duties excluding unbound tariff lines. Binding in %: share of HS six-digit sub-headings containing at least one bound tariff line. Applied MFN (most favoured nation) average rate: simple average of MFN applied duties. Duty free in %: share of duty free HS six-digit sub-headings in the product group. Max MFN: highest ad valorem duty.

Table 16

Tariffs: minerals and metals, India and selected countries, 2016

Source: WTO, ITC & UNCTAD, *World Tariff Profiles 2017*, Geneva

Country	Bound AVE rate %	Maximum final bound rate %	Binding %	Applied MFN AVE rate %	Duty free %	Max MFN rate %
India	38.3	55	61.3	8.2	0.1	15
Brazil	32.9	35	100	10.1	6.4	20
Russia	8.0	20	100	7.8	6.9	20
Indonesia	38.8	40	97.3	7.0	17.5	30
China	8.0	50	100	7.8	5.9	50
South Africa	11.7	30	96.0	4.0	71.6	30
Malaysia	17.6	30	65.2	7.1	50.7	60
Philippines	24.5	50	35.3	4.6	5.7	20
Thailand	24.7	39	51.8	5.6	45.0	30
Vietnam	11.2	60	100	8.2	38.7	45

Note: Definitions as for Table 15.

Table 17

Average liberalisation of non-agricultural products in selected FTAs

Source: J-A Crawford, *Regional Trade Agreements and the Multilateral Trading System*, Cambridge University Press, 2016

	% share of duty free lines		
Country	MFN	EIF	EoL
India	2.5	7.6	50.1
China	6.3	42.3	86.5
Indonesia	13.9	65.7	94.1
South Africa	55.7	61.1	79.4
Average	34.5	70.6	93.4

Note: This table is based on a study of 115 free trade agreements/regional trade agreements notified to the WTO and in force as at December 2014. At this time India had notified 15 agreements involving 25 trading partners. The average refers to the average across 115 agreements. EIF refers to entry into force. EoL refers to end of liberalisation.

> The tariff is likely to long remain as one of the mainstays of India's trade and industry policies. But that does not mean that it will not change.

Three points stand out about the post-GST tariff and associated fees and charges:

- Tariffs on a range of goods, including some resources, metals and METS products, have risen. But available evidence suggests that the overall cost of importing has been reduced with total duty plus GST in the range of 10-15 per cent for ores and concentrates and coal, 25-35 per cent for metal products and 25-30 per cent for METS products (Tables 18 and 19).[155] Nonetheless, and despite the reductions, the trade costs associated with importing mining and mining-related goods remain relatively high in India compared with many other countries.
- Transparency has improved: previously many international companies were concerned that import-related fees and charges were inflated and corresponded only loosely with fees and charges applying to domestic businesses. These concerns should attenuate providing national and state governments resist the temptation to introduce new border fees in new guises.
- It remains as easy as ever for the Indian Government to adjust tariffs throughout the year. Rates are announced in the annual budget but can be adjusted at any time in response to changing international prices or domestic pressures. The wide gap between bound rates and MFN applied rates charged at the border for ores and concentrates and basic metals provides ample room for manoeuver. So too does the similar gap between applied MFN rates and bound rates for METS products.

Table 18

India's applied MFN duties and GST: selected minerals and metals, 2018

Source: India: customs duty after GST: Export Genius-in/customs duty in India after GST, viewed 11 June 2018; WTO Tariff for bound rates

HS Heading HS2012	HS Heading description	Simple Applied MFN Ad Valorem Duty %	GST %	Total duty plus GST %
2601	Iron ores and concentrates	10	5	15.5
2602	Manganese ores and concentrates	5	5	10.25
2603	Copper ores and concentrates	5	5	10.25
2604	Nickel ores and concentrates	5	5	10.25
2607	Lead ores and concentrates	5	5	10.25
2608	Zinc ores and concentrates	5	5	10.25
2612	Uranium or thorium ores and concentrates	5	5	10.25
2701	Coal; briquettes, ovids and similar solid fuels	10	5	15.5
2704	Coke and semi-coke of coal	10	5	15.5
7106	Silver, unwrought or semi-manufactured	10	3	13.3
7108	Gold, unwrought or semi-manufactured	10	3	13.3
7110	Platinum, unwrought or semi-manufactured	10	3	13.3
7201	Pig iron, blocks or other primary forms	15	18	37.5
7202	Ferro-alloys	15	18	37.5
7203	Ferrous products obtained by direct reduction of iron	15	18	37.5
7402	Unrefined copper, copper anodes for electrolytic refining	5	18	23.9
7403	Refined copper and copper alloys, unwrought	5	18	23.9
7406	Copper powders and flakes	5	18	23.9
7901	Zinc, unwrought	5	18	23.9
8101	Tungsten and articles thereof, including waste and scrap	5	18	23.9
8102	Molybdenum and article thereof, including waste and scrap	5	18	23.9

Note: Ad valorem refers to a tariff rate charged as a percentage of the price (or value for duty purposes) of the imported good. The applied MFN rate is the duty actually charged on imported goods. The bound rate refers to parties' commitment not to increase a duty beyond an agreed level without compensating the affected party or parties.

Table 19

India's applied MFN duties and GST, selected METS technologies, 2018

Source: India: customs duty after GST: Export Genius-in/customs duty in India after GST, viewed 11 June 2018

	Prepared explosives %	Safety fuses, detonators etc. %	Radio remote control apparatus %	Safety headgear %	Rock drilling & earth boring equipment %	Self-propelled coal or rock cutters & tunnelling machinery %	Parts, shovels, buckets etc for 8430 %
Code	36020010	36030011	852692	650610	820713	843031	843143
Tariff	10.0	10.0	7.5	10.0	10.0	7.5	7.5
GST	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Total	29.8	29.8	26.85	29.8	29.8	26.85	26.85

Trade facilitation

The facilitation agenda has been taken up by almost all economies around the world. This has involved taking up commitments in the WTO's Trade Facilitation Agreement (TFA) and, to varying extents, confirming or elaborating them or developing new commitments in bilateral and regional trade agreements. Common elements include strengthening mechanisms for exchanging customs-related information; intensifying customs cooperation; developing rules on simplifying import- and export-connected procedures and formalities; building high levels of coverage, legal enforceability and dispute settlement provisions on core customs-related commitments; developing mostly 'best endeavours' undertakings on non-core customs provisions, and intensifying regional cooperation to build capacity across the trade facilitation agenda.[156]

India is now actively involved in this agenda: it initially opposed the TFA largely because it did not have the hard and soft infrastructure in place to meet commitments.[157] Leadership on trade facilitation in the Asia-Pacific region has come mainly from developed economies, along with countries like Korea and Singapore. India has led among South Asian economies in areas like transparency measures, fees and formalities.[158] But it lags in many areas: on basic things like overlapping regulations and multiple procedures at ports to more complex ones like developing an efficient national window for trade and transport-related documentation and creating a firm basis for cross-border paperless trade.[159]

Table 20

Trading across borders, imports, 2016

Source: World Bank, *Doing Business 2017: Equal Opportunities for All*, Washington D.C., 2017

Economy	Time to import (hrs) Documentary compliance	Time to import (hrs) Border compliance	Cost (US$) Documentary compliance	Cost (US$) Border compliance
Australia	4	39	100	525
Brazil	120	63.1	106.9	969.6
China	65.7	92.3	170.9	776.6
India	**61.3**	**283.3**	**134.8**	**574.0**
Indonesia	132.9	99.4	164.4	382.6
Russia	42.5	96	152.5	1125
South Africa	36	144	213	657

Note: Documentary compliance relates to the time and cost in obtaining, preparing and submitting documents required by the destination country together with all documents required by law or practice to complete a trade. Border compliance relates to customs clearance and inspection, inspection by other agencies and port or border handling.

Table 20 provides a snapshot of the costs involved. There are some positives. For example, the time taken for documentary compliance to import is roughly equivalent to the time taken in China and is about half the time taken in Brazil or Indonesia. Since April 2015, the number of mandatory documents needed to import products has been reduced from ten to three, while those for exporters have been reduced from seven to three. In January 2016, the Ministry of Commerce and Industry announced that the number of documents required to obtain an Importer-Exporter Code would be cut from eight to two and that it would be possible to apply online. The picture is less good for border compliance. The time taken for compliance – essentially clearance and inspection by customs and other border agencies – far exceeds that of any other major emerging economy.[160]

High trade costs reduce trading possibilities, especially in value chain trading. The key to reducing them is streamlining border processes and more generally improving the quality of trade and transport infrastructure across various modes of transportation and logistics services. If India is to generate the millions of jobs needed just to keep pace with new entrants to the labour force, never mind extracting the dividend from a fast growing and youthful population, trade costs must be slashed to allow domestic manufacturing to compete more effectively on international markets. The Indian Government understands this.

One indication is its extensive commitments on the TFA. Another is commitments contained in major policy documents like the Integrated Multi-Modal Logistics and Transport Policy and the National Trade Facilitation Action Plan 2017–2020 to build logistics capacity and capacity more broadly across the various elements of trade facilitation.[161] India's progressive state governments understand this too, which is fortunate given their major role in rolling out hard and soft infrastructure.

Domestic reform is obviously key to the successful implementation of the trade facilitation agenda, but there are important international dimensions. Regional groupings play a role in facilitating progress on issues like single windows for electronic documentation. The ASEAN Free Trade Area and the Pacific Alliance have been proactive in this area, and APEC has advanced the broad suite of trade facilitation issues for around 25 years. India, on the other hand, is a member of regional organisations like the Indian Ocean Rim Association and the South Asia Association for Regional Cooperation that have not been especially pro-active in reducing trade costs or promoting trade liberalisation. India's free trade agreements also have been predominantly with developing economies and, except in its most recent FTAs, have low coverage and enforceability of customs measures and regional cooperation (another proxy for trade facilitation) that go much beyond WTO commitments.[162] This raises some interesting trade policy issues such as the merits of India's membership of APEC and the benefits to India (and the region more generally) of a solid outcome to negotiations for the Regional Comprehensive Economic Partnership (see pp. 54-55, 122-124).

Other non-tariff barriers

As previous sections have made clear, India's commercial policy continues to rely mainly on tariffs to protect domestic industry. But non-tariff barriers beyond impediments linked to inefficient border processing and domestic logistics system can also be important. As with other economies, they can be found in a complex web of government regulations. The summary below relies mainly on India's notifications to the WTO included in the WTO Non-Tariff Barriers Database and on the Global Trade Alert Database. The latter has monitored both tariff and non-tariff policies in a large number of economies since 2009.[163] These sources may well understate the incidence of non-tariff barriers, although each seeks to be comprehensive. Some examples of the measures they and other sources describe are listed below.

Anti-dumping and countervailing measures. India has used anti-dumping procedures extensively. Its most recent report to the WTO Committee on Anti-Dumping Practices identifies over 270 measures that were in place at the end of December 2017. A high percentage of these measures are applied against China, but Korea, Taiwan and Thailand are also frequent targets. There are only two measures applying directly to Australia, one of which – low ash metallurgical coke – is in the minerals sector.[164] Countervailing measures are much less frequently used: the WTO database of non-tariff barriers identifies only two, one in force and one where action has been initiated. Both apply to China, although the commodities covered, including stainless steel flat products, means that they are of indirect interest to Australia's mining sector.

Safeguards. Safeguards have been used sparingly by India. The WTO identifies only three measures, two of which are in force and one where action has been initiated. The safeguards in force apply to hot-rolled steel. They do not fall strictly within the definition of mining and metal manufactures used here, but are indirectly relevant to the Australian mining and metal industry.

Tariff rate quotas. The WTO identifies only three measures in place. None of them apply to the mining, metals or METS industries.

Quantitative restrictions and import licensing. The WTO identifies nearly 60 prohibited imports. None of these apply to the mining, metals or METS industries. Import licensing is opaque, but only applies to certain products. However, some of these items may be of potential interest to the mining and mining equipment industries like imported computer and computer-related systems and reduced duty on capital goods 'subject to a time-bound export obligation'. Imports of raw materials, parts and the like can enter tariff free under different types of licence if the product is to be exported.[165] The Office of the US Trade Representative states that all re-manufactured goods require an import licence.[166]

Technical barriers to trade. The WTO records 115 measures that have been notified to the Committee on Technical Barriers to Trade. Some of these are of interest to the minerals and metals sector. For example, one notification of December 2017 restricts the sale of non-iodised common salt. Another, dated June 2015, seeks to bring a wide variety of steel products into conformity with the relevant Indian standards and forbids the import of products in this group that do not bear the standard mark of the Bureau of Indian Standards. A similar notification, of August 2015, aimed to bring stainless steel products into conformity with Indian standards.

Other import restrictions. Used rails (included in the authors' classification of possible mining equipment) require pre-shipment inspection and certification before they can be imported. Until recently, a pre-inspection certificate was also required for imports of metallic waste and scrap. In May 2018, this was relaxed for six countries, including Australia, provided imports were cleared through specified ports with operational portal monitors and container scanners.

Export taxes. India has used export taxes on minerals as a way of ensuring supply for local processing industries. Iron ore is an important example. From Australia's perspective, taxes in this sector are principally of concern because they limit possibilities for developing an iron ore market, but there are also broader concerns. According to the US Export Administration:

> In recent years certain Indian states and stakeholders have increasingly pressed the central government to ban exports of iron ore. To improve the availability of iron ore for the local steel producers, the … [Government] in March 2016 enhanced and unified the rate of export duty for all types of iron ore (other than pellets) at 20 percent; earlier a 15 percent export tax was applicable on lumps and 5 per cent on fines. India's export duties impact international markets for raw materials used in steel production.[167]

Exporting as a condition for gold imports. Under the 20:80 arrangement put in place in July 2013, gold could only be imported if 20 per cent of the amount imported was used for export purposes as jewellery. The policy was intended to tackle India's current account

deficit, but resulted in a very substantial increase in gold smuggling. The policy was abandoned in November 2014.

Government procurement preferences for domestic goods. These can affect products of interest to the mining, metals or METS industries. For example, in May 2017 the Indian Government approved a policy that provided preferences for a large number of domestic iron and steel products where domestic value added was at least 15 per cent. This applied to purchases by the Government and its agencies. The goods covered some products included in the definition of mining and basic metal manufactures used here (for example certain types of alloy steel and semi-finished products), as well as some products defined as mining equipment (for example, rails and a number of different types of pipes and tubes). The policy was to be adjusted taking into account domestic manufacturing capacity.

Conclusions

The flexibility provided by the tariff should ensure that it remains central to India's trade and industry policies over the medium-to-long term. But the fact that Indian tariffs have fallen substantially on average over recent decades – though they have not fallen much in recent years and seem to have risen as part of introducing the GST – suggests that non-tariff barriers are likely to become bigger impediments to trade over time as they have in many other countries. The Indian Government and more business-minded states will intensify their efforts to bring down border barriers like inefficient customs processing and poorly performing logistics systems that add greatly to trade costs and frustrate India's ambitious development goals. This, however, may well create policy space for more creativity in developing new generations of NTBs.

The Indian Government and more business-minded states will intensify their efforts to bring down border barriers like inefficient customs processing and poorly performing logistics systems that add greatly to trade costs and frustrate India's ambitious development goals.

CHAPTER 8

Services and investment market access challenges

India has made big strides over recent years to liberalise border and behind-the-border restrictions in services and associated investment. This has happened mostly on a unilateral basis as successive governments have recognised the benefits of expanding and modernising services and boosting FDI.

Nonetheless, services restrictions, including on services delivered through commercial presence, are on average much higher than for goods. This is not unique to India. It applies globally. But India has one of the most restrictive regimes in the world, though it still attracts substantial inflows of FDI.[168]

Approximately 40 per cent of global inflows into India went into services in recent years, predominantly into telecommunications, financial services, insurance, outsourcing businesses, wholesale and retail distribution, and construction.[169]

Table 21 provides some evidence – much disputed by India – of the extent of restrictiveness in services that commonly support mining. Compared to other BRIICs, India has the highest level of restrictiveness in accounting, legal and computing services, and among the highest in engineering and construction services.

Table 21

Services Trade Restrictiveness Index, selected services, 2017

Source: OECD Services Trade Restrictiveness Index last viewed on 18 May 2018

Country	Accounting	Engineering	Legal	Computer	Construction
India	0.880	0.290	0.906	0.364	0.353
Brazil	0.301	0.246	0.307	0.311	0.243
China	0.391	0.234	0.472	0.309	0.298
Indonesia	0.436	0.265	0.879	0.291	0.402
Russia	0.318	0.267	0.217	0.328	0.327
South Africa	0.242	0.195	0.311	0.180	0.193

Note: OECD STRI composite indices quantify identified restrictions across five policy categories: restrictions on foreign entry (e.g. foreign equity limitations, requirements that management or boards of directors must be nationals or residents, foreign investment screening); restrictions on movement of people; other discriminatory measures (e.g. in relation to taxation, subsidies and government procurement where national and international standards differ); barriers to competition; and regulatory transparency. Restrictions are evaluated on a 0 (complete openness to trade and investment) to 1 (closed) scale.

Note also: Notwithstanding the apparent precision of these data, they are based on broad judgements and coding principles and should be seen as providing a very general indication of regulatory restrictiveness.

Restrictions on temporary movement of people are major impediments to supplying engineering services as are issues with regulatory transparency.

Barriers to services trade that are relevant to mining and METS include imposing additional professional standards (for example, for engineers), effectively limiting the practice of certain occupations (such as lawyers and accountants) to local residents, placing restrictions on services provided by commercial presence in the host economy, and limiting the movement of executives and specialists into the host economy or their period of stay. In schedules of services commitments, commitments for many sectors are often absent or left unbound (meaning that any measures can be introduced to limit market access or national treatment).

Table 22 provides some detail on the precise nature of these restrictions for construction and engineering services. Restrictions on temporary movement of people – intra-corporate transferees, contractual services suppliers or independent service suppliers – are major impediments to supplying engineering services as are issues with regulatory transparency. For construction services, Geloso-Grosso *et al* estimate that restrictions on people movement may account for one half of the impact of regulatory restrictions.[170] In both cases, these restrictions limit business opportunity. In a world where rapid technological change has led to the progressive unbundling of functions in manufacturing and services, skilled workers moving across borders contribute crucially to the growth of commercial relationships and are one of the keys to successful supply chain trading.

Table 22

Restrictions applying in India's construction and engineering services, 2016

Source: OECD Regulatory Database for Services Trade Restrictiveness, last viewed on 18 May 2018

Restriction	Construction services	Engineering services
Maximum foreign equity share	100 per cent	100 per cent
Limits on percentage of shares that can be acquired by foreign investors in publically controlled firms	Yes	Yes
Restrictions on land and real estate that can be acquired or used by foreigners	Yes	Yes
Restrictions on subsequent transfers of capital and investments	Yes	Yes
Restrictions on cross border mergers and acquisitions	Yes	Yes
Restrictions on commercial presence to provide cross border service	No	No
Board of Directors: at least one must be resident (but no requirement to be an Indian national)	Yes	Yes
Managers must be resident (but no requirement to be an Indian national)	Yes	Yes
Restrictions on cross border data flows except to countries with substantially similar privacy laws or with consent by government authority	Yes	Yes
Local labour market testing for intra-corporate transferees	Yes	Yes
Local labour market testing for contractual service suppliers	Yes	Yes
Local labour market testing for independent service suppliers	Yes	Yes
Limits on duration of stay of intra-corporate transferees, contractual service providers and independent service providers	24 months	24 months
Laws or regulations to establish process for recognising qualifications earned abroad		Yes
Public procurement: explicit preference for local suppliers	Yes	Yes
Public procurement: discriminatory qualification processes and procedures	Yes	
There are legal obligations to communicate regulations to the public within a reasonable time prior to entry into force	No	No
There are adequate public comment procedures open to interested persons, including foreign suppliers	No	No
Multiple entry visas for business visitors	Yes	Yes

Restrictions are especially onerous on foreign companies wanting to supply legal, accounting and auditing services to support mining and other activities in India. Accounting and audit services are reserved for licensed accountants and auditors. Licenses are required to own or manage accounting and auditing firms and only Indians are eligible for a full license. It is much the same for foreign suppliers of legal services. They are reserved for licensed Indian lawyers, and Indian nationality or citizenship is required to obtain a full license. Only fully licensed lawyers can form or own a law firm. Corporations are not permitted in the sector and lawyers may not enter into partnerships or associate with other professions or foreign lawyers. Foreign legal services providers can advise clients on foreign law and international legal issues only on a reciprocal fly in, fly out basis.[171]

Table 23 provides a snapshot of India's FDI regulatory restrictiveness compared with other emerging economies across mining, metals and machinery, and a range of service industries that are linked directly

Table 23

FDI Regulatory Restrictiveness Index, selected sectors, 2017

Source: Organisation for Economic Cooperation and Development (OECD), FDI Regulatory Restrictiveness Index last viewed on 18 May 2018

Country	Mining & quarrying (including oil extraction)	Metals, machinery and other minerals	Construction	Transport	Business services	Legal	Engineering
India	0.060	0.000	0.050	0.093	0.563	1.000	1.000
Brazil	0.025	0.025	0.025	0.275	0.025	0.025	0.025
China	0.213	0.105	0.265	0.538	0.250	0.750	0.150
Indonesia	0.598	0.060	0.210	0.384	0.579	0.660	0.660
Russia	0.327	0.050	0.050	0.350	0.175	0.550	0.050
South Africa	0.010	0.010	0.010	0.193	0.260	0.510	0.510

Note: The FDI Regulatory Restrictiveness Index measures statutory restrictions on FDI across 22 economic sectors. It gauges the restrictiveness of a country's FDI rules by looking at the four main types of restrictions on FDI: foreign equity limitations; discriminatory screening or approval mechanisms; restrictions on the employment of foreigners as key personnel; and other operational restrictions, e.g. restrictions on branching and on capital repatriation or on land ownership by foreign-owned enterprises. Restrictions are evaluated on a 0 (open) to 1 (closed) scale. The overall restrictiveness index is the average of sectoral scores. The discriminatory nature of measures (i.e. when they apply to foreign investors only) is the central criterion for scoring a measure.

Note also: Notwithstanding the apparent precision of these data, they are based on broad judgements and coding principles and should be seen as providing a very general indication of regulatory restrictiveness.

or indirectly to mining activities. What it shows is that India has one of the most open regimes among emerging economies to FDI in mining and metals and machinery, though restrictions rise steeply in sectors like business, legal and accounting and audit services. And, what it also suggests in the context of mining and related activities, is that a country's FDI rules are not necessarily a prime determinant of its attractiveness to foreign investors: more important are the general business environment and the predictability of policy and regulatory settings.

The types of FDI regulatory restrictions used by India in mining, metals and related services are examined in Table 24. Restrictions on equity are by far the most important – an outcome that aligns with many other countries for investment in backbone infrastructure.[172]

Key parts of India's FDI regime are changing, but the regime does not appear to have changed appreciably for mining or related services.[173] Establishing a company in India requires investors to register or obtain

Table 24

FDI Regulatory Restrictiveness Index, India, 2017, selected sectors by broad type of restriction

Source: OECD FDI Regulatory Restrictiveness Index last viewed on 18 May 2018

Type of restriction	Mining & quarrying (including oil extraction)	Metals, machinery and other minerals	Construction	Business services	Engineering
Equity	0.050	0.000	0.000	0.563	0.250
Screening and approval	0.010	0.000	0.000	0.000	0.000
Key foreign personnel	0.000	0.000	0.000	0.000	0.000
*Other restrictions	0.000	0.000	0.050	0.000	0.000
All types of restrictions	0.060	0.000	0.050	0.563	0.250

*Other restrictions includes limits on purchase of land and repatriation of capital or profit.

Note: Notwithstanding the apparent precision of these data, they are based on broad judgements and coding principles and should be seen as providing a very general indication of regulatory restrictiveness.

licences from various government agencies at the central and state levels where relevant. This tends to be very time consuming. Up to 100 per cent FDI is allowed for exploration of oil and natural gas fields, oil and natural gas pipelines, liquefied natural gas re-gasification infrastructure, and related market studies.[174] Up to 100 per cent FDI also is allowed for exploration and mining of metal and non-metal ores (including diamonds, gold, silver and precious ores but not titanium bearing minerals and ores), coal and lignite mining for captive consumption by power projects, iron and steel and cement units and other eligible activities, and mining and mineral separation of titanium bearing minerals and ores subject to value adding in India and technology transfers.[175] So why is there so little FDI, including from Australia, in Indian mining, and why is India such a limited market for Australian METS companies?

The answers to these questions have nothing to do with lack of interest in India in Australia or other countries. As previously indicated, India is very much at the centre of world attention both as an important market currently for a range of goods and services and prospectively as a major market and economic partner in the not too distant future. The answer gets back to ingrained challenges in India's business environment.

Restrictions are especially onerous on foreign companies wanting to supply legal, accounting and auditing services to support mining and other activities in India.

CHAPTER 9

India's approach to trade negotiations

India's rapid development over recent years and its potential to become one of the world's great economies have not erased its self-perception as a developing country in international trade negotiations, especially with developed countries. At one level this is perfectly understandable: India is still a poor country with daunting development challenges and large sections of its population will remain poor for some time yet. But at another level, growing economic strength and regional and global influence can jar with trading partners when India looks to them to make concessions on access for goods, services and temporary movement of business personnel but is cautious about offering much in exchange.

India remains anchored in a mercantilist mindset and in remnants of a worldview that India is owed something for colonial transgressions of the past: 'the old-India mentality of wanting something for nothing in trade talks is still much in evidence.'[176] Not surprisingly, failure to establish common ground with negotiating partners, particularly with developed economies, has delivered meagre outcomes for India, which fuels resentment in some influential Indian circles about the value of trade negotiations in general and FTAs in particular. India's future success in trade negotiations will depend in large part on the extent to which it builds common ground with its partners by using sustained domestic reform to create access opportunities to its markets and then binding that openness.

India's trade negotiations: some basics

At the global level there has been some progress multilaterally in recent years such as implementing the WTO Trade Facilitation Agreement in 2017 and expanding the coverage of the WTO's Information Technology Agreement. By and large, however, multilateral achievements have been underwhelming as the WTO has been incapable of developing practical and effective trade rules to liberalise behind-the-border non-tariff measures and barriers to services and investment that are at the heart of modern supply chain trade.

This underperformance has underpinned global and regional responses at two levels. The first is advancing specific issues plurilaterally among parties with common interests. The Trade in Services Agreement (TiSA) is an example and, if successful, should provide a basis to develop sectoral or broader regulatory frameworks that support expanding trade.

India has not participated in these negotiations because it has seen them as pursing the interests of developed economies: this is despite services constituting the greater part of its own economy. The second is advancing on a wide front through intense activity on bilateral and regional (multi-party) FTAs. India has been active in these negotiations.

India has negotiated several FTAs bilaterally and with multi-party trading partners such as the Association of Southeast Asian Nations (ASEAN), MERCOSUR and its South Asian neighbours.[177] All bilateral agreements, except with Chile, are with Asian neighbours and all but four – with Chile, Japan, Korea and Singapore – are with developing economies.[178]

Agreements with developing economies struck up to the mid-2000s were fairly shallow. They reduced tariffs to varying degrees, but often in a very limited way.[179] Coverage beyond goods was often non-existent.[180] Only one agreement – the Asia Pacific Trade Agreement (APTA) between Bangladesh, China, India, Laos, South Korea, and Sri Lanka – included services and investment.

Since the mid-2000s FTAs across the Asia-Pacific region and globally have changed dramatically as they attempt to respond to core changes in the international trading system by pursuing deeper integration to support value chain trading. Almost all recent agreements add in some way to existing WTO rules and commitments on issues ranging from customs procedures to standards and rules of origin to services. They are referred to as WTO+ commitments. Recent agreements also include commitments in areas like investment, competition and electronic commerce where there are no, or limited, WTO rules currently: they are referred to as WTO-X commitments.

India has been involved in these global and regional changes. Duty free treatment for around 96 per cent of India's tariff lines has been extended to over 30 Least Developed Countries under the Duty Free Tariff Preference Scheme. The recently expanded agreement with ASEAN and the 2011 agreement with Malaysia cover services and investment and include some WTO-X commitments mostly in areas like regional cooperation.

No agreement with developing economies, however, is as comprehensive as India's three agreements with Japan, Korea and Singapore which, in the most general terms, have coverage and enforceability that compare with agreements between developed and developing economies globally (Box 9). But two things standout about these agreements:

- India's reluctance to take on substantial binding commitments on tariffs and reluctance to negotiate comprehensively – or, in some cases, even to negotiate – on issues like government procurement, intellectual property protection, competition policy, services, investment regulation, the environment and labour standards (Box 10).[181]
- India's willingness to make only incremental improvements to its modest commitments under the General Agreement on Trade in Services (GATS).[182]

India has not negotiated a new FTA since 2011. On the credit side, it has extended coverage of its FTA with ASEAN to services and investment and with Chile to include far more tariff lines and broader sectoral coverage.[186] But reviews of agreements with Singapore and Korea have not been completed and several negotiations for new agreements have stalled, including with Australia.[187]

India is reported to be keen to revive stalled negotiations with the European Union, though meaningful progress will presumably be contingent on it making satisfactory offers on market access.[188] It stands to make gains in areas like services and information technology, but is reported to have baulked at reducing agricultural tariffs, agreeing to intellectual property protection that goes

much beyond World Trade Organization (WTO) disciplines, and strengthening options for foreign investors to pursue claims under international law. India's standoff with Canada seems to be for similar reasons: there was a negotiating round in August 2017 after a hiatus of two years but an early conclusion is unlikely.[189] Negotiations with New Zealand have stalled – the last formal negotiating round (the 10th) occurred in New Delhi in February 2015. And negotiations on the Australia-India Comprehensive Economic Cooperation Agreement (AICECA) are officially in 'stocktaking mode' with a big mismatch on the level of ambition, including on temporary movement of business personnel.

Negotiations on bilateral investment treaties (BIT) with India also have stalled following India renouncing all its BITs early in 2017 after a surge of claims, beginning with a long running and contentious case brought by Australia's White Industries concerning an agreement with Coal India on coal processing that India lost in 2011.[190] India's new model BIT winds back protections for foreign investors, reduces obligations on the state and requires foreign investors to exhaust local remedies over a period of five years.[191] Problems have been building over time. For example, in the on again, off again negotiations for the United States-India Bilateral Investment Treaty, India was unwilling to commit to things like pre-establishment rights for potential investors, core non-discrimination provisions such as most favoured nation and national treatment, fair and equitable treatment, and safeguards for public welfare and other measures.[192] Similarly, the United States was unwilling to meet India's demands on temporary movement of business personnel.[193] Investor-state dispute settlement also is intensely political in India.[194]

Negotiations on the Australia-India Comprehensive Cooperation Agreement are officially in 'stocktaking mode'.

India's free trade agreements

India is a party to around 20 free trade agreements.[183] Nine are partial scope agreements (PSAs) with limited coverage and enforceability. Three were signed before 2001; five between 2000 and 2005, including with Sri Lanka (2001) and Singapore (2005); and 12 between 2006 and 2011, including with ASEAN (2009), Korea (2009), Japan (2010), and Malaysia (2011).

India's agreements with developing economies overall have lower coverage and enforceability of WTO 'plus' (WTO+) and WTO 'extra' (WTO-X) provisions than most agreements between developing economies. Coverage and enforceability for the three agreements with developed economies (Japan, Korea and Singapore) are much higher. They are also above the average of all agreements between developing and developed economies. But the quality and extent of their commitments still fall short of what could be expected in modern FTAs.

For example, modern FTAs in the Asia-Pacific region, and ambitious FTAs more generally, aim to liberalise at least 90 per cent of all trade and some agreements make 95 per cent a key threshold. In India's agreements with Singapore and Japan, it committed to liberalise 23.6 per cent and

Table 1 Free trade agreements, India and the world, entering into force 2001-15
Percentage of policy areas covered and with enforceable provisions

	FTAs, 2001-15, between:			
	Developing & developed economies		Developing economies	
	World	India	World	India
Policy areas covered				
WTO+	82	90	68	41
WTO-X	25	26	17	4
Policy areas with enforceable provisions				
WTO+	64	86	41	34
WTO-X	12	18	6	3

Source: World Bank dataset on content of deep trade agreements at https://datacatalog.worldbank.org/dataset/content-deep-trade-agreements[184]

86.6 per cent respectively of all tariff lines. Further, its commitments on services were only marginal improvements on existing modest commitments under the WTO Trade in Services Agreement and fell short of India's applied services regime

Currently, around 17 trade agreements are being negotiated by India or are under consideration. Negotiations have been launched with Australia, Canada, Egypt, the Eurasian Economic Union, the European Free Trade Association, the European Union, Indonesia, Israel, Mauritius, New Zealand, the Southern African Customs Union, and with ASEAN and ASEAN's FTA partners in the Regional Comprehensive Economic Partnership (RCEP) negotiations.[185] Some of these negotiations, for example with the European Union, Australia and RCEP, are controversial in India and generate resistance in some quarters, which helps to explain their slow progress.

India is part of the South Asia FTA, the Bay of Bengal Initiative on Multi-sectoral Technical and Economic Cooperation (a grouping of seven regional countries that wants to develop an FTA among other things), the Asia-Pacific Trade Agreement, and the India-Brazil-South Africa triangle that aims to develop a trilateral South-South FTA.

Modern FTAs in the Asia-Pacific region, and ambitious FTAs more generally, aim to liberalise at least 90 per cent of all trade.

BOX 10

Free trade agreements and new trade issues

Approximately 70 per cent of world trade is in intermediate products and services. Technological change and competitive pressures have led to the latest great phase of globalisation with ever finer unbundling of functions in manufacturing and services and with value added often sourced from many different countries in delivering final products and services to consumers. This has produced massive benefits globally, delivering growth and opportunity across the globe over the last 30 years and lifting hundreds of millions of people out of poverty.

FTAs are increasingly addressing new generation trade and investment issues. They encompass WTO+ commitments in areas such as liberalisation of services (often boosted by 'negative listing' of commitments); technical barriers to trade (TBTs); customs administration; chapters devoted to regulatory issues in specific services industries, such as telecommunications and financial services; protection of intellectual property rights; government procurement; and investment. They also include commitments in a wide range of areas not covered by WTO agreements (WTO-X), for instance in electronic commerce and the digital economy; competition policy; regional cooperation and dialogues; and labour and the environment. Further, modern trade agreements focus increasingly on promoting consultation and cooperation among parties so that provisions and schedules of commitments can be reviewed regularly, making them 'living' agreements.

Services trade liberalisation is associated closely with initiatives on issues like temporary movement of skilled workers, electronic commerce and government procurement. Most agreements provide for greater ease in temporary movement of skilled workers (GATS 'mode 4' for the delivery of services). Government procurement provisions address transparency and non-discrimination in awarding contracts, though vary in scope, including lists of sectors included and excluded. Provisions for electronic commerce typically prohibit, or impose a moratorium on, customs duties on electronic transmissions and some agreements provide for non-discriminatory trade in digital products.

Protection and enforcement of intellectual property rights are key features of recently concluded trade agreements. Protection of patents, copyrights and trademarks, including newer areas such as guarding against cyber-theft, are seen as especially important for innovative small and medium-sized enterprises looking to establish presence in foreign markets. The WTO agreement on Trade-Related Intellectual Property Rights was negotiated before the spread of the internet.

Competition policy provisions in trade agreements are aimed primarily at levelling the playing field for foreign businesses by addressing pricing practices, enforcement of competition law and cooperation among parties to strengthen competition policy regimes. Ensuring that state-owned enterprises do not distort markets is a feature of recent agreements. Other areas covered include the promotion of trade and investment without compromising adoption and protection of internationally recognised labour standards and rights and advancement of environmental protection.

Possible future perspectives on Indian trade policy

Protectionist and liberalising views on India's future economic direction jostle for prominence in policy formulation. It is sobering that the Modi Government's signature *Make in India* initiative skips over how imported inputs are essential for efficient production and export in a world that is increasingly reliant on supply chain trading. But the implications of supply chain trading – and of India being more closely integrated with international trade and investment as part of the strategy to generate the millions of jobs it sorely needs – are compelling and cannot hopefully be downplayed by India indefinitely. This will not be an easy transition for India to make, just as it was not in countries like Australia where the ideological shift from protectionism to liberalism took the best part of half a century and where the battle for policy ideas is never really won or lost as the policy pendulum shifts between relatively more liberalising and protectionist positions.

In India, there is a strong view among certain groups that the country has gained little or nothing from FTAs and may well have lost out. An example is a recent discussion paper published by the National Institution for Transforming India (NITI) that suggests that India's exports to FTA partners have grown more slowly than exports to the rest of the world; that FTAs have led to India's imports growing faster than exports, leading to bigger trade deficits with ASEAN, Japan and Korea; and that India's strong export growth since 2006 has been a function of diversifying markets and products rather than negotiating FTAs.[195] These observations are not wrong: '…insiders admit that India's trade partners have gained more from these agreements than India has.'[196] But the observations do not explain why India has not benefitted from its FTAs.

According to one former Secretary of India's Department of Commerce, Rajeev Kher, 'The reasons are obvious: lack of our manufacturing competitiveness vis-à-vis these countries [i.e. major trading partners] has not allowed us to harness advantage out of the FTAs.'[197] And, according to another insider, a former Secretary for Economic Relations in India's Ministry for External Affairs, Hardeep Singh Puri, part of the explanation for unsatisfactory trade outcomes is that the domestic and international dimensions of India's trade policy framework have not been brought together in ways that support a more open and competitive economy:

> India's experience with regional trade agreements (RTAs) has been less than satisfactory because of the lack of competitiveness of its manufacturing sector and the lack of innovation and investment in sectors such as textiles, garments, and pharmaceuticals. This has resulted in little enthusiasm for adopting a more activist trade policy posture within the government, think tanks, and the trade policy community…
>
> The real challenge in India, as in several other countries, is the lack of full understanding of the benefits of trade liberalisation, policy paralysis, and consequently the lack of political will. Crafting a successful trade policy requires an understanding of geopolitics and global economic trends and the ability to negotiate to advantage. Effective negotiating is possible only if decision makers have the confidence and capacity to execute the necessary corresponding domestic reforms—some of which require painful adjustments.[198]

These ideas are important in two ways. They are important first because they expose the international and domestic dimensions of trade policy and their potentially powerful impact when combined and harnessed to complementary economic policies:

> Domestic policy settings form the basis of [international trade] negotiating positions. Modifying those positions, in conjunction with adjusting domestic policy settings, is the most challenging aspect of trade policy.[199]

It requires injecting international perspectives into domestic policy decision making. An FTA, or any other kind of trade agreement, only provides an opportunity to increase trade and investment with partner countries. It provides no guarantee because outcomes – good or bad – depend on industries' international competitiveness and on the competitiveness of individual companies within those industries. An FTA can contribute to increasing competitiveness by exposing domestic industries to greater competition or by creating opportunities for companies to access economies of scale through more secure integration within regional value chains. But whether this happens or not, or the extent to which it happens, depends ultimately on the quality of countries' own efforts in social and economic reform.

And second, the views of Puri and Kher have additional significance because they are based on the practical experience of former senior Indian officials with responsibility for trade policy. Their views are not mainstream. It is conceivable that they might never be mainstream. Globalisation is in retreat and there is no telling when the international policy pendulum will swing once again in the direction of open markets for trade and investment. India's sensitivity on agricultural and manufacturing tariffs goes back to its huge and growing population, and the imperative to create jobs to alleviate and reduce poverty. And doubts about the value of international trade agreements grow among Indian politicians and other groups when countries rebuff India's interests in accessing markets for manufactures and particularly markets for skilled labour when India does not put enough on the table.[200]

But it is also conceivable that, bit by bit and with occasional backsliding, a more liberalising approach to international trade and investment will take hold in India. This assessment is not based on any ideological shift on the part of leading policy makers and business. It is based on the pragmatic need to address two inter-related dilemmas at the heart of India's economic development: the possibility of de-industrialisation while India still has low per capita incomes and the real prospect that India will be marginalised from emerging regional economic and trade architecture.

The Modi Government's *Make in India* and *Skill India* strategies are, at least in part, aimed at making sure that the spectre of de-industrialisation is banished once and for all, and that India manufacturing sector grows as a share of GDP and potentially lifts its share of world trade. Trade policy working with other economic and social policies can assist in achieving these outcomes insofar as it contributes to rising levels of productivity across the Indian economy.

And trade policy working with other economic and social policies can assist on the issue of India's possible marginalisation in

regional economic architecture insofar as a stronger, more productive India is more able to find more common ground with its trading partners on issues spanning services, investment, government procurement, and competition policy. India potentially has much to gain from engaging effectively in negotiations: it is a major services exporter and leading importer and exporter of capital, and has advanced companies that want to compete on level terms in foreign government procurement.[201] A more ambitious trade policy would allow India to:

- Revive stalled negotiations with several countries, in some cases connecting to large markets.
- Play a more active role in RCEP negotiations.
- Join APEC at some point. Membership of RCEP holds the key.
- Build more beachheads into TPP-11.[202] India is unprepared at present to take on the commitments that would be part of such an undertaking, but reviving negotiations with countries like Australia and Canada would be one way to build capacity to take on more international standards that would be part and parcel of eventual membership of TPP. Commencing negotiations with Peru would be another way and would have the additional benefit of linking India more closely to the Pacific Alliance, the fastest growing grouping within Latin America.[203]
- Play a role in defining, shaping and addressing the next generation issues that may underpin a possible Free Trade Area of the Asia-Pacific.
- Help to put multilateralism once again at the centre of the global trading system. India's controversial proposal in the WTO to develop a Trade Facilitation Agreement for Services might be a good sign of its growing creativity in trade policy and capacity to play a constructive role at the global level.[204]

These are not forecasts and no timeframe is attached to them. India clearly has a long way to go in responding to the changing character of international trade, particularly with respect to developing the types of policies at and behind the border that can support supply chain trade. Similarly, India has a long way to go in integrating with regional economic architecture and particularly the mega-trading blocs that have emerged over the last decade or two or that are likely to continue to emerge. But in the long run, no major economy can remain uninfluenced by these blocs, either because they do not want to miss out on trade and investment opportunities that are vital for their continued growth and development, or because their preferential rules have consequences for the trade of non-member economies.

CHAPTER 10

Trade policy considerations for Australia

The stars that have guided Australia's international trade policy for two generations have dimmed in recent times. There are uncertainties about US commitment to the international rules-based system of international trade as a core national interest. The first shots in America's trade wars have been fired. The potential for retaliation and counter retaliation is real enough. Protectionism is on the rise, though this should not be overblown. Global leadership of free trade has faltered, though again this should not be overblown: agreement on TPP-11 in 2018 after US withdrawal is a timely reminder of the commitment of governments in our region to pursue a rules-based liberalising approach to trade, as is the EU-Japan Economic Partnership Agreement signed in 2018. Nonetheless, the general point still stands: no one knows whether recent backsliding on international trade, investment and labour is just an aberration or something more permanent. But it is a fair guess that there will be no straightforward return to the previous trade and economic policy environment. The loss of trust in the competence of governments and international institutions and in the fairness of society that was exposed by the Global Financial Crisis (and subsequently) has been too massive, especially in some advanced countries. This will not be repaired easily or quickly.

Australia's trade policy is just one part of responding to, and engaging with, this confusing and shifting international landscape. As emphasised through this report, trade policy has domestic and international dimensions. Both are equally important and are complementary. International perspectives need to inform domestic considerations of reform initiatives to raise productivity, drive growth, create jobs and raise living standards. In the face of slowing growth in world trade, trade policy's contribution to economic and social reform, including through negotiating trade commitments, is more important than ever. And international perspectives obviously must inform and drive initiatives on old and new trade and investment issues bilaterally and in multi-party groupings to improve market access and more broadly deepen economic relationships.

Australia has a vital interest in keeping regional and global markets open and growing. Our approach to India cannot be divorced from the bigger regional and global picture for three broad reasons. First, our national prosperity depends on international trade and the open rules-based system, and therefore on encouraging economic and social reform and deepening support for the rules-based system in India, as well as in other countries across the region and beyond.

Second, India is influential in global bodies like the G20 and WTO; it is a sizeable and growing part of the regional economy; it participates in regional trade negotiations (RCEP) with Australia and 14 other countries; and our two countries have invested a great deal of time and effort in bilateral and multi-party trade negotiations. [205]

And third, Australia's current negotiations with India fit into, at least from an Australian perspective, a dynamic long-term process of regional integration and institution-building where Australia builds a major economic relationship with India, among other partners in the Asia-Pacific; RCEP becomes a core part of emerging regional economic architecture; RCEP provides a basis (much like ASEAN) to lift standards and assurance systems over time in a world that is now profoundly reliant on them; and RCEP in some form provides a stepping stone for more countries to take on higher levels of commitments in TPP-11 as parties increase their openness to market forces, move up the value chain and develop institutions and cross-border cooperative mechanisms that anchor future growth and development.

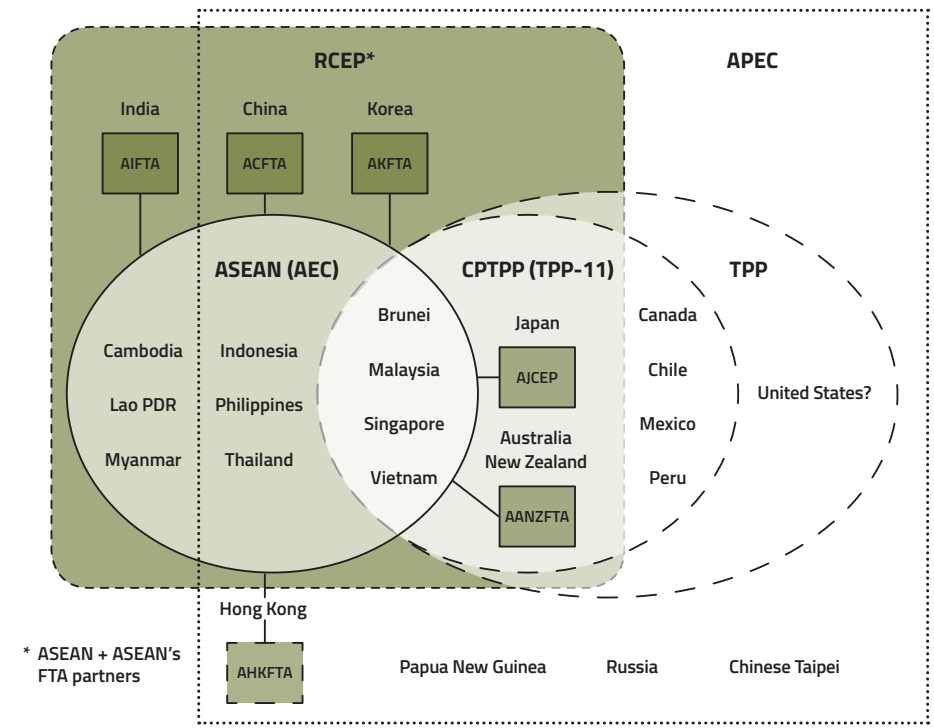
In this latter conception, a basis could be established over time for a broader Free Trade Area of the Asia-Pacific (FTAAP).[206] Chart 9 indicates the substantial overlap that exists between parties to various trade agreements across the broader region and that makes some region-wide integration and rationalisation feasible, at least in theory. Whether or not this integration will be achieved is an open question, but the processes of defining and implementing ambitious regional benchmarks could feasibly be taken up by wider sub-groups of the WTO membership in sector-specific or issue-specific plurilateral negotiations or more broadly by the whole membership of a re-invigorated WTO. But however it may be done, Australia has an abiding interest in regionalism strengthening the global trading system: 'Defending, promoting and strengthening the international rules-based order is [Australia's] highest foreign policy priority.'[207]

In the face of slowing growth in world trade, trade policy's contribution to economic and social reform, including through negotiating trade commitments, is more important than ever.

Chart 9

Asia-Pacific regional economic integration (as at March 2018)

Source: M Mugliston and M Churche, 'Regional economic integration: where to from here', presentation, Taipei, 16 April 2018



Australia's current negotiations with India fit into, at least from an Australian perspective, a dynamic long-term process of regional integration and institution-building.

Australia-India Comprehensive Economic Cooperation Agreement (AICECA)

AICECA is a high priority for Australian business, including the mining and METS sector (see pp.128, 134-135). From a resources and METS perspective, a credible agreement would deliver more certainty for Australian traders and investors in the Indian market by:

- Eliminating or reducing tariffs on key Australian minerals and METS exports and then legally binding the agreed outcomes. At this stage at least, India has not been able to make a credible offer on goods, perhaps concerned about creating precedents that China or others might use in other trade negotiations to increase access to India's market, potentially weakening the *Make in India* initiative.
- Providing more assurance to services providers through better market access, including streamlined temporary movement of business personnel in areas like exploration and mining services, consulting, research and development, engineering, environmental services, technical testing, and analysis services. Australian companies deliver around 70 per cent of services across-the-board to India via movement of skilled workers.[208]
- Delivering education and training services in a more straightforward way. There are significant regulatory impediments in providing these services. For services delivered in India, there are legal restrictions as Curtin University experienced when it explored the possibility of establishing a campus in India: it could supply educational services but not establish a campus. And for services delivered outside of India, there are difficulties that, reduced to bare fundamentals, may reflect a conflict within Indian education and training policies: India wants to send able students to Australia and other developed countries but it also wants them back, and is not convinced that they will return. Unpicking the Gordian knot on education and upskilling should be a key part of bilateral FTA negotiations.
- Providing more assurance to Australian investors and prospective investors in India. Investment is the weakest link in the economic relationship at present.
- Creating a platform that over time could define important new avenues for fostering reform-oriented collaboration between Australia and India and engaging government, business, academia and other stakeholders on some of India's reform challenges. Good FTAs have a huge potential to evolve across a wide landscape of economic and commercial issues.

From an Indian perspective, a credible agreement must include facilitating temporary access for skilled Indian workers to the Australian labour market.

Negotiations have reached an impasse: India will not commit to broad based, legally binding tariff reductions over particular timeframes in line with Australia's recent FTAs while Australia will not commit to what India wants on temporary access of skilled business personnel to the Australian labour market. The way forward is far from clear.[209] But AICECA is too important for advancing the economic relationship to be allowed to remain in limbo.

A more proactive approach is needed that accepts the very difficult issues facing negotiators but continues the conversation. It should focus less on specific negotiating outcomes and much more on building trust to address both parties' sensitivities and reform prospects. Such an approach could be a useful platform for the substantive negotiations to conclude a mutually beneficial agreement.

For example, tariffs are sensitive for India and are likely to remain so because they are a major element of industry policy and contribute significantly to the Union Government's revenue (around 9 per cent in 2017). FTAs can deal with these sensitivities in different ways:

- Tariffs can be reduced gradually over a lengthy period (say 10 years)
- Especially sensitive tariff lines can be excluded from phasing altogether or can be subject to longer phasing
- Phasing can be back-loaded to minimise the impact of tariff reductions for many years, giving more opportunities for domestic adjustment
- And, beyond this, modern FTAs are 'living agreements' that can be re-visited and improved over the years to take advantage of opportunities created by domestic reform and the evolving requirements of business. For example, as India's manufacturers become more integrated with global supply chains, their interests will become more closely tied to reducing tariffs on their inputs. There will always be scope for parties to agree to more and faster reductions in tariffs.

What this comes down to, at least from a business perspective, is Australia being realistic about what India has negotiated in its previous FTAs on tariffs, while ensuring AICECA meets or exceeds the benchmarks achieved in India' previous FTAs, in particular those with advanced economies.

A similar approach could be tried on temporary movement of business personnel. Again from a business perspective and without trying to define possible outcomes, the conversation with India should recognise that Australia has some skill shortages and can benefit from temporary flows of Indian business personnel. It also should recognise that Australia's requests on tariffs are just as challenging for India as their requests on skilled worker movement are for Australia.

So what confidence building measures can be injected into the bilateral conversation that in some way might start to address core areas of sensitivity? We cannot be prescriptive, but strongly suggest that, if both parties are really serious about developing the long-term relationship, the conversation needs to resume.

There may be other approaches to tackling this conundrum. One approach might be to salvage useful elements of AICECA, for example on investment. This might be attractive given India's unilateral cancellation of the bilateral investment treaty (p. 109). But this point cannot be pushed too hard: cancelling the BIT did not cause significant problems for Australian business presumably because of its remoteness from most of the nuts and bolts decisions of Australian companies investing in India. Could the

investment provisions of AICECA be re-packaged and at some time be re-injected into a revitalised investment agreement? This might be an attractive option if negotiations could be expedited quickly. However, the reality is that negotiations with India are often a slow grind. A great deal of time and effort could be wasted to produce a nebulous outcome that probably would have no practical relevance to Australian mining companies or to others investing in India.

A more interesting approach to breaking the logjam might be to ask what triggers potentially exist in the broader relationship on apparently unrelated issues – for example advancing common interests by working together and with others to improve neighbourhood connectivity and Indo-Pacific security – that might generate momentum on trade negotiations or at least make this a more feasible prospect? Twenty years ago, there was a view, at least in Australia, that an FTA must stand essentially on its economic merits while furthering broader relationships. These days, the linkage between economic merits and relationship building is much closer. There may therefore be some merit in looking for possible triggers in the broader relationship, but it would have to be seen as a long shot.

In the end there would seem to be two approaches to advancing AICECA: resuming a bilateral conversation aimed at building confidence over time, and harnessing the pulling power of Regional Comprehensive Economic Partnership (RCEP) negotiations.

Tariffs are sensitive for India and are likely to remain so because they are a major element of industry policy and contribute significantly to government revenue.

Regional Comprehensive Economic Partnership (RCEP)

Slow progress – even no progress for a time – in AICECA negotiations would not necessarily be a bad thing if it provides time for RCEP to do the heavy lifting on market access issues and institutional arrangements that are directly important to Australian mining, METS and other companies doing business in India. If this were to happen, the way forward could involve RCEP outcomes forming a baseline for progress in AICECA negotiations with no RCEP minus commitments and some RCEP plus commitments just as breakthroughs in the ASEAN-Australia-New Zealand Free Trade Agreement (AANZFTA) underpinned progress in the Malaysia-Australia Free Trade Agreement (MAFTA).

This raises the obvious question: Is there potential for RCEP to do much of the heavy lifting on issues from tariffs and developing modern approaches to product specific rules of origin to benchmarking sectors for liberalising foreign equity limits and institution building that might flow through to AICECA (Box 11). The answer is a qualified yes. Big FTAs address big structural issues and can move smaller agreements along in their wake. RCEP has a strong profile in India unlike AICECA. India is serious about RCEP: it wants to be part of the regional economic architecture and RCEP is a priority at the highest levels of government. Reformers in India see RCEP providing the opportunity and means to re-think India's role in regional trade, especially in manufacturing. And beyond India, there are major countries with a strong interest in negotiating significant outcomes in RCEP. For example, RCEP provides the opportunity for China and India and for China and Japan to make progress in their economic relationships, which would be more difficult to handle through bilateral negotiations: there would be a high risk of igniting popular opposition in India and Japan.[210] And RCEP also provides an opportunity to lock in liberalisation and reform in China, India, Indonesia, and others.[211]

A more perplexing question is: are some RCEP parties unwilling or unable to harness the liberalising potential? It would be hard to find a more eclectic grouping in any other serious trade negotiation. The negotiating parties have disparate interests and priorities reflecting their levels of development and commitment to economic reform. Some bring with them considerable historical baggage. The mercantilist mind set of many is challenging. And, the one common element – Australia, New Zealand, China, Japan, Korea and India have FTAs with ASEAN – is complicated by the fact that these agreements embody very different levels of commitment.

Beyond the eclectic nature of the group, there are other factors that could limit RCEP's ambition. Wariness of making good market access offers to China is one generalisable factor. Another is the central role ASEAN plays in these negotiations. It is more restrained and subtle in its approach than the assertive and shaping role played by the United States in the original Trans Pacific Partnership (TPP) negotiations or

BOX 11

Institutional development

It might be instructive to see what is transferrable from the ASEAN-Australia-New Zealand FTA (AANZFTA) to RCEP or even AICECA in widening the scope for institutional developments between Australia and India to support trade and wider economic engagement.

AANZFTA has many stakeholders and beneficiaries and requires strong government-to-government contact and ownership. It takes time and resources to go through the work program and become heavily involved in project delivery. But it produces outcomes in terms of economic cooperation projects, and by creating relationships at various levels that are vital for progressing the liberalising and economic cooperation ambitions of the Agreement.

These relationships deliver more certainty to business by providing a structure for countries' trade and investment relationships. Problems in relation to goods, services and investment can be referred to oversighting or specific committees set up by AANZFTA. This is especially valuable for trade and investment with developing countries, where different languages and legal codes come into play and where supply chain trading requires institutional machinery that operates regionally as modern business does.

AANZFTA contains fairly modest commitments on services and investment. But this is still valuable. Services trade often requires firms to establish a commercial presence in particular markets, which requires investment. AANZFTA provides some measure of security for investors. It also can put a spotlight on countries' services and investment policies – in some cases the main spotlight because governments are focused on agriculture and manufacturing. Periodic reviews of the Agreement provide a basis for strengthening services and investment commitments, as well as commitments more broadly. This in turn provides a benchmark potentially for more liberalising commitments in bilateral negotiations.

AANZFTA works by encouraging increased policy dialogue and critical thinking on trade and investment issues, and by establishing machinery both to grasp new opportunities created by changing political, economic and technical circumstances and to resolve irritants in regional and bilateral trading relationships.

One possible model for fostering more cooperation around the mining, energy and METS cluster of industries is the one funded by the AANZFTA Economic Cooperation Support Program and developed by the Australian Competition and Consumer Commission (ACCC) and other international experts in relation to competition policy. The Competition Law Implementation Program (CLIP) delivers tailored training and mentoring to ASEAN member states to implement national laws and policies to meet commitments under the ASEAN Economic Community Blueprint, AANZFTA and ASEAN's post-2015 vision for competition.[212] This in turn benefits Australia through potentially more trade, more high-level contact and closer institutional ties.

It would be reasonable to expect that RCEP or AICECA would be no less demanding in terms of time and resourcing, but just as valuable in creating the networks and institutions that underpin closer economic engagement.

the roles played by Australia and Japan in reviving TPP-11 in the aftermath of US departure: both Australia and Japan were prepared to push hard for an outcome. ASEAN for a range of reasons may not be prepared to push anywhere near as hard to resolve outstanding problems like crafting a package that challenges some countries' sensitivities on industrial and agricultural tariffs and other countries' sensitivities on services, investment and temporary movement of business personnel. This raises the distinct possibility that the final outcome could be fairly modest or that negotiations could 'pause' as the parties take stock of their positions or even (and less likely) that consensus in the group is restored by applying the 'ASEAN minus X formula' where a country or several countries are not party to the concluded agreement.[213]

Australia has been pushing to stiffen outcomes and raise ambitions, but this falls on deaf ears to the extent that momentum appears to building to fast-track RCEP and conclude with a moderate quality agreement. Assessments of quality, of course, are to an extent subjective, so would Australia want to risk being marginalised from an evolving piece of regional architecture that both government and industry recognise as a high priority for Australia's future engagement with the region? When push comes to shove, it may be better to partake of a modest feast, with the prospect of better fare to come, than to watch the diners from outside, nourished only by high principle and rectitude.

Conclusion

India is a significant market for Australia and could become a major one in time. From a mining and METS perspective, India's impact on global trade and investment and specifically on Australia may not be as transformative as the impact of China during its period of rapid growth. But it will be very important for Australia, and realising this potential will require setting in place the building blocks for a much stronger and enduring economic relationship. AICECA and RCEP are two such building blocks among the many discussed in this report. AICECA is stuck so it is important (a) to find triggers in the relationship that may unlock the logjam and (b) for RCEP to advance to a reasonable conclusion both for its own sake and possibly to provide impetus for unlocking some elements of bilateral negotiations.

The Australian Government understandably takes a wide view on issues like the credibility of trade agreements given their many critics. But in determining a position on RCEP two things need to be considered: Australia cannot allow itself to be marginalised from emerging regional economic architecture, and the end point of a trade negotiation is never really fixed. Agreements evolve over time as circumstances for domestic reform evolve and push out the boundaries of negotiating mandates. Australia has a major investment in RCEP succeeding and forming a platform for bilateral negotiations with India, even if it is not as lofty initially as we would like.

India's development and transition towards a more open economy have the potential to create huge opportunities for business, including in mining and METS.

CHAPTER 11

Policy priorities for mining and METS

This report has argued that India's development and transition towards a more open economy have the potential to create huge opportunities for business, including in mining and METS. But a second major theme running through the report is that ongoing reform in India and action by Australian governments in cooperation with the business sector will be needed if these opportunities are to be realised. Much of this work – like encouraging India to build effective institutions and to continue to move towards a more open economy – can benefit many areas of industry in Australia.

There is, however, a very strong case for a specific Australian Government strategy for Australia's world class mining and METS sectors that will seek to address the impediments to trade and investment in India. The resources sector is critically important to Australia. This is most obvious in the significance of mining and METS exports in Australia's trade and investment and in the development of regional and remote Australia that services this trade. But it is no less true for the growth and jobs generated through the resource sector's powerful links to industries supplying essential hard infrastructure and advanced services: more jobs are created through these linkages than directly through mining exports.

As this report notes, the broad business environment in India – characterised by excessive government involvement in the economy, the dominance of state-owned enterprises, frequent shifts in government policy, ingrained protectionist attitudes, regulatory opaqueness and corruption – is the most significant impediment to stronger Australian business engagement with India. Addressing these issues will be a long march, perhaps over decades, for Indian governments. Australia can influence many of these areas only at the margin. But it is nevertheless important to do what we can. At the margin, it is possible, for example, to use trade agreements to build foundations for more effective policies and institutions and aid programmes to improve the physical and human infrastructure that is necessary for commerce to flourish and living standards to rise.

Three over-arching priorities for strengthening the Australia-India relationship

If the Australia-India relationship is to move to a higher level, three priorities stand out. First, the relationship must deliver benefits both ways and they must be seen as significant.

> The Australian Government has built up expectations on the relationship and needs to do much of the heavy lifting to meet them. Australia is not the only country courting India.

Second, the Australian Government has built up expectations on the relationship and needs to do much of the heavy lifting to meet them. Australia is not the only country courting India. Because of difficulties on trade, it would be disastrous to put India into the 'too hard basket' and let the relationship wither on the vine.

And third, building the trade and economic relationship with India will only take us part of the way to making a step change in the quality of the overall relationship. Over the medium-to-long term, a key priority for Australia must be to build an understanding of India and its enormous variety within Australia. India is a single country but it is not homogeneous like the United States, notwithstanding its considerable regional variations. It is more akin to Europe with many countries within a single continent, with their different traditions, languages, religions and development needs; different governments, governing parties and approaches to organising business activity; and different levels of business awareness, capacity and curiosity about the outside world. These differences need to be better understood, and this will call for a long-term commitment by federal and state governments to build more informed awareness (Box 12).

BOX 12

Awareness of India's languages and culture

Studying foreign languages in Australia is low by international standards. A 2014 report by the Asia Education Foundation in collaboration with other experts estimated that around 11 per cent of senior secondary students studied a language other than English. The most popular languages in Year 12 were three Asian languages (Japanese, Mandarin and Indonesian) and three European (French, Italian and German). Hindi and other Indian languages are not widely studied in Australia, although Hindi has now been added to the Early Learning Languages Australia (ELLA) program and courses in an Indian language are available at two universities. Another current national program that is relevant to languages and the study of Indian society and culture is the New Colombo Plan, which was established in December 2013 to provide assistance to young Australians to live and work in the Indo-Pacific. Around $50 million is provided each year to assist around 10,000 students. Between 2014 and 2018, over 3300 students were assisted to go to India under this program. Even so, the numbers studying India's language and culture remain small considering its importance.

Trends in the uptake of courses in Indonesia studies provide a useful case study when considering Australia's strategy towards India. Numbers of year 12 school students learning Indonesian in Australia surged from 1994 partly as a result of the Keating Government's introduction of the National Asian Languages and Studies in Australian Schools (NALSAS) program, which reflected its broader strategy of closer engagement with East Asia and built upon an earlier program established by the Hawke Government. The introduction of NALSAS followed the Rudd report on Asian language studies to the Council of Australian Governments in 1994, which argued for four trade-priority Asian languages: Chinese, Korean, Japanese and Indonesian. The states and territories contributed to the initiative.

Using data on year 12 ACT school enrolments and national data at tertiary level, a paper by Passmore concluded that the numbers studying Indonesian declined in the years immediately after 2000 and that there was a broader decline in the numbers studying foreign languages. These trends were attributed to the termination of the NALSAS scheme in 2002 by the Howard government and to a much less favourable general climate for studying in Indonesia. Numbers also declined at tertiary level. The important lessons are that well-funded strategies at the national level in cooperation with state and territory governments, and the broader context of the relationship with Asian economies, can make a critical difference to studying Asian languages and culture in Australia.

Australia's Indian diaspora, which numbers almost 700,000, also provides a way of strengthening understanding of Indian society, culture and ways of doing business. Its potential to contribute more strongly in this way is examined in some detail in the Varghese Report, which judges its influence at senior levels in politics, academia and business to be below that in the United States, the United Kingdom, Canada and Singapore, and recommends steps to engage it more effectively.

Source: Asia Education Foundation et. al., *Senior Secondary Languages Education Research Project, Final Report*, October 2014, pp. 3, 30; Australian Government, *2017 Foreign Policy White Paper*, pp.111-113; H Passmore, 'The National Interest and the Decline and Fall of Indonesian Language Learning in Australia', Paper prepared for the Embassy of the Republic of Indonesia, May 2009, p.9, 11-17; P Varghese, *An India Economic Strategy to 2035*, Chapter 18.

Policy Instruments in a mining and METS strategy for India

Australian Governments should use all of the policy instruments at their disposal in a mining and METS strategy for India. These instruments include:

- **Multilateral trade policies.** These have taken a back seat to negotiations on FTAs over the past decade, but they remain extremely important and it is possible that they will come to the fore again in the medium and long term if the global policy environment improves. Even in the current vexed climate, the negotiation of the Trade Facilitation Agreement in the WTO constitutes a major step forward. The WTO estimates that this agreement, which entered into force in 2017, could cut global trade costs by an average of 14 per cent.[214] The costs targeted, like reducing paperwork in customs procedures and harmonising and modernising requirements, have the potential to significantly improve trading conditions for METS firms in particular.
- **Mega-FTAs and regional trade policies.** RCEP negotiations are a key way to engage with the Indian Government about its policy strategies and objectives. Negotiations have proved to be slow and difficult and the final result (assuming it is achieved) may not be as ambitious as Australia seeks. But even a partial success may provide a base for further negotiations in the framework of AICECA. Though not technically an FTA and outside the WTO, the Trade-in-Services Agreement (TiSA) could also prove important for both mining and METS firms in the longer term. Negotiations for TiSA are currently stalled: if they were to become active again it will be important for Australia and like-minded economies to encourage India to join the negotiations and to make meaningful offers on services (which it typically has not done in the past). In the case of regional trade policies, this report has noted a number of advantages for promoting India's membership of APEC.
- **Bilateral trade policies.** AICECA is of fundamental importance to the mining and METS sectors. While negotiations have been difficult (and are likely to continue to be so), a successful agreement would have the potential to address many of the impediments to trade with India. Although India's record in negotiating free trade agreements is not strong, it is possible that the policy environment is changing. Achieving solid outcomes will depend on India's willingness to embrace reform. Priorities for an AICECA are discussed below.
- **Trade promotion.** There is a key role for Austrade and for state governments in developing trade and investment links with India. Their role is particularly important in the case of METS firms which are typically small and medium enterprises and for which the fixed costs of entering a market may be relatively high. These agencies could also work to ensure better outcomes from trade missions involving India, for example, by better coordinating missions to Australia by major state-controlled enterprises like Coal India.

  On a related issue, the Australian Government could assist METS companies by engaging in an ongoing conversation with Indian authorities, state owned enterprises and business more generally about value versus price and best practice in procurement.

- **Policies on foreign investment.** The limited nature of investment links is a key weakness in the economic relationship. Policies towards inward and outward FDI have an extremely important role to play. The weakness in Australian investment in India can, in part, be tackled through FTA negotiations and government facilitation of investment, though much will depend on the Indian Government improving the investment climate. Australia's inward FDI policies also need attention. There is a strong case for giving higher priority to advocacy programs that demonstrate to the Australian public the benefits of inward FDI from countries such as India and that clearly convey the message that Australia welcomes foreign investment.
- **Development assistance and cooperation.** Australia currently provides aid to India through the South and West Asia Regional Aid Program, one of whose main objectives is to develop regional connectivity through trade facilitation and addressing infrastructure gaps. The amount allocated to this programme is small at around $25 million in official development assistance in 2017-18. There is a strong case for increasing this allocation. There are also other forms of cooperation that would be of great interest to the mining and METS sector, particularly training Indian Government officials and officers with large state-owned/controlled enterprises in areas where Australia has expertise, such as mine safety and environmental aspects of mining. This would assist India, but would also showcase Australia's excellence, raise the profile of Australian METS companies and could in time lead to more trading and investment opportunities. Using an existing Indian mine, in partnership with Indian companies, to demonstrate Australian techniques and skills also is an idea that warrants further examination. To succeed, it would require government and industry cooperation (Box 13).
- **Domestic reform.** This is essential to allow Australian firms to compete in circumstances where other economies are improving their own competitiveness. Governments need to provide a competitive policy framework that helps to build a more trade-focused economy and to do so in line with the aphorism that no policy area is more domestic than international trade policy. Areas relevant to mining and METS include, for example, taxation, technical training, education, infrastructure, environmental management and project approval processes.

Some of these instruments of policy must be targeted principally at the central government level in India. But it will be important for the Australian Government (and state and territory governments) to also work closely with India's state governments because they control 'many of the things which make the day to day life of a foreign business in India easy or difficult: access to land, regulation of labour, provision of infrastructure, the application and interpretation of regulation and so on.'[215] It will be necessary to consider carefully the business environment of states and their commitment to reform as well as the significance of their mining sectors. Some states (for example, Chhattisgarh and Rajasthan) are both reform-oriented and substantial mining states, but this is not always the case.

BOX 13

Demonstration mining project

Over recent years there has been intermittent discussion within the mining sector and in Australian government agencies on developing a demonstration mine in India that would incorporate Australian standards and showcase how Australian and Indian technologies and practises can combine to improve specific mining operations. It would operate on a commercial basis, though setting it up would probably require some assistance from government like waiving duties on some imports and perhaps assistance in shipping goods to India.

To succeed, it would require high level government support in both countries. Australia could not approach this as the teacher and India as the student: - it would have to be done with India bringing its skills and technologies to the table and Australia leveraging its strengths. The mine would need to be an existing one (to keep capital outlays modest) and one which, if not already profitable, is identified as having the potential to deliver commercial returns during the life of the project. And the mine's work program would have to be constructed to demonstrate, step by step, how to improve outcomes at critical points in the mine on a commercial basis. For example, an initial priority might be on controlling dust or reducing noise or improving mine logistics.

Building a fuller understanding of Australian companies' strengths in mining and METS among the different levels of government in India and in business would take time. Choosing the right mine and right Indian companies to work with would be critical. A boutique mine operated by a good private company with local contractors open to new products and ways of working would be a solid start. And choosing a well-run state with an interest in mining and modernising environmental and health regulations and enforcing them would be essential. Most mining operations are in less reform-oriented states where state-owned and private companies use vast quantities of very cheap, unskilled labour. Interest in modern approaches to mine efficiency, safety and health issues is patchy in these states and is likely to remain so until the labour market eventually tightens.

Possible downsides of the demonstration mine concept are that the project might advance when government funding was available and wither when it was not, might or might not deliver tangible outcomes measured by increasing METS sales into the Indian market and, perhaps most significantly from a government perspective, claim scarce funding that might have been used more productively elsewhere, such as funding mining-related technical and tertiary courses.

As already suggested, Australian state and territory governments will need to be closely involved in developing trading, investment and other links. At present, five states have significant programs for engaging India. These programs can include representation: for example, Western Australia established a trade and investment office in India as far back as 1996, while Victoria has offices in Bengaluru and Mumbai. The Varghese Report suggests that the states work more closely together and with Austrade to ensure that there is a national approach. This would include 'joined-up approaches across sectors where several states are active' including resources and energy.[216]

Australian state and territory governments will need to be closely involved in developing trading, investment and other links.

If it is to be successful, any strategy targeting India must address its objectives and concerns or at least provide a process for dealing with them. One of India's key trade goals is to secure freedom of movement for its business personnel, but this is a sensitive issue for Australia. Another is more favourable treatment when establishing investment enterprises in Australia. Better access for its merchandise exports is probably not a high priority given that Australia's tariffs are either zero or very low. But a high value is likely to be placed on capacity building in areas where Australia has expertise. This puts mining and METS on to centre stage.

Issues for mining and METS

Specific issues on the trade and investment agenda of key interest to Australia's mining and METS industries include:

- **Tariffs.** Many minerals (for example, copper ores and concentrates) incur relatively low tariffs of around five per cent. But tariff escalation is a problem. For example, although iron ore incurs a tariff of ten per cent, the tariff on pig iron blocks and ferro alloys is 15 per cent. The METS sector advises that India's tariffs are the highest of countries on the industry's radar, with tariffs of up to 65 per cent on some mining equipment. Cutting high tariffs will be a pre-condition for trade for some areas. WTO bound tariffs are extremely high, creating uncertainty for traders, particularly in the context of frequent changes to tariffs by the authorities. Eliminating tariffs and binding them at zero should be a high priority wherever possible and would level the playing field with ASEAN and Chile, which have free trade agreements with India.
- **Trade costs and logistics.** This is a key issue for both mining and METS exporters. It is reflected in problems in Indian ports, inefficient railway links and difficulties crossing state borders. India dwarfs other emerging economies in terms of the time taken to implement border compliance and the dollar cost of so doing. The WTO Trade Facilitation Agreement, in which India is now actively engaged, should assist with this issue in the medium and longer term, but there is also a role for additional capacity-building work by Australia and other regional partners.
- **Other non-tariff barriers.** India relies mainly on tariffs to protect domestic industry, but non-tariff barriers can also be important. For example, recourse to anti-dumping is frequent (though only one mining product from Australia is currently affected). Gold exports have been affected in the past by misguided attempts to address the current account deficit by limiting imports. Iron ore imports are affected by export taxes intended to increase domestic supplies for India's own steel and processing industries.
- **Barriers to services trade.** Services trade is important both to the mining and METS sectors. Modern mining requires access to a considerable range of services inputs – like engineering and construction services, legal and accounting services and a variety of niche services that the METS sector provides, among them specific mining software and mine management solutions. Delivering these services often relies on experts traveling to India. This can present difficulties. For example, labour market testing and limits on duration of stay apply to intra-corporate transferees, contractual service suppliers and independent service suppliers in construction and engineering, while firms and professionals supplying accounting services must have a limited license for a specific project or period.
- **Barriers to investment.** India is theoretically quite open to foreign investment in mining, metals and machinery compared to other emerging economies.[217] But there are very substantial impediments in practice because of the poor business environment, with the

result that Australian FDI in mining (and indeed other sectors) is extremely small. This is a key issue for both mining and METS firms. India's extensive resource base means that investment will probably be an extremely important way of accessing the market, particularly for METS firms, which commonly operate by establishing a commercial presence abroad.

- **Intellectual property.** Notwithstanding some initiatives by the Modi Government, protection of intellectual property remains a problem in India. The extent of this problem is illustrated by the fact that the United States Trade Representative has placed India (with 11 other countries, including China) on its 'Priority Watch List' on intellectual property, citing among other things major problems in patent protection, high levels of piracy and counterfeit sales, and poor enforcement.[218] This is an issue for Australian METS firms, which mostly rely on advanced technology in their operations.
- **Thinking beyond the box.** More high quality analysis is needed from within the Australian Government and the states and territories on how to build the strategic Australia-India relationship around mining and METS. In taking this forward, four ideas deserve serious consideration:
    - Education and training is a key element of the overall economic relationship and may even be the foundation of the long-term relationship given the synergies between what Australia has to offer and what India needs in sectors from resources and energy to infrastructure, agri-business and financial services.[219] What more could be done to develop early and mid-career business exchange programs with India in the first instance and with other countries over time? And what more could be done to bolster mining-related research collaboration between Australian and Indian universities, research groups and companies? Varghese's recommendation to increase financial and political support for the Australia-India Mining Partnership at the Indian School of Mines at Dhanbad has serious merit because of its potential to showcase Australian expertise and build networks across the mining value chain that could form the basis of enduring business collaboration.[220] Similarly, Satchwell and Redden's recommendation for closer working relations between Australia's mining industry and the Australian Government – and, by extension, between businesses and governments in the Indo-Pacific region – merits serious consideration in expanding 'Australia's role in the delivery of mining related educational services prioritising short courses, collaborative research and capacity-building with foreign institutions, and scholarships for Masters and PhD courses in mining, engineering, geology, international trade and mining governance related fields.'[221]
    - Second, to what extent can Australia draw on the experience of countries like Canada and Norway in developing (a) a fuller understanding of the importance of mining and METS in Australia's global and

regional engagement, and (b) elevating the branding of Australia as not only a centre of excellence in extractive mining but across the entire mining value chain?

In the case of the former, this would require more and better data on the value-added, jobs, trade and investment that are directly and indirectly linked to mining and the industries that cluster around it. An example of the analysis required is a 2017 Deloitte Access Economics study commissioned by the Minerals Council of Australia, which examined linkages between the mining, METS and other sectors in Australia: it estimates that mining and METS together accounted for around 15 per cent of the Australian economy in 2015-16.[222] Studies such as this might lead to a better understanding of the importance of mining in our domestic and global economic footprints and might sharpen policies and approaches to the roles Australia can play not only as a trader and investor but more broadly in supporting capacity building in extractive mining and resources governance in India and elsewhere.

In the case of the latter, Australia has built up a world class METS sector based for the most part around small to medium sized companies that are supported by strong national-level capabilities in mining-related education, training and research and development. This capability is not fully appreciated, particularly at the highest levels of government in the region and beyond. Elevating Australia's METS brand in India (and elsewhere) at trade fairs and through coordinated communications and marketing strategies warrants serious consideration and potentially Australian Government facilitation.[223]

- Third, India's massive infrastructure investment is being partly funded by the United Arab Emirates and one or two other Gulf States. Would it be possible to triangulate Australian resources, Gulf funding and India's infrastructure requirements? Other partnerships might be possible involving Singapore as a funds provider or with Japan, say, as a technology partner.
- And fourth, are there opportunities for Australian and Indian METS companies to work together, especially in Africa, the Middle East and more generally around Asia? On the face of it, this warrants careful consideration: to have much chance of success it would require careful coordination across companies and across branches of government responsible for trade, foreign policy and development.

Priorities for mining and METS in current trade negotiations

RCEP and AICECA are the main games in current negotiations with India. Both sets of negotiations are important and there is a strong case for including a dedicated mining and METS chapter or annex in both agreements. RCEP is progressing: a broad package of outcomes could be announced around the end of 2018 with detailed negotiations concluding in 2019. AICECA, however, is in 'stocktaking mode' and must not be allowed to wither on the vine. At the very least the conversation needs to continue, focusing less on specific negotiating

outcomes and much more on medium-to long-term reform and building trust to deal with both parties' sensitivities.

As part of the outcome from negotiations, it will be important to provide capacity-building assistance to India in international trade and investment. This is often overlooked, but it can be a critical step in ensuring effective implementation of FTAs and promoting increased two-way trade and investment with developing economies. Capacity-building was an important outcome of AANZFTA and will almost certainly be a key outcome of the bilateral FTA with Indonesia when it is formally concluded and of the PACER Plus agreement with Pacific Island nations when it is implemented. The sums of money involved need not be large: what is critical is that it be targeted carefully at areas where it can make a difference to trade and investment outcomes.

Both RCEP and AICECA should aim to build more effective official practices and institutions. This also is an underrated objective of free trade agreements with emerging and developing economies. A practical step for the mining and METS sectors would be to encourage exchanges of personnel between regulatory and trade promotion agencies in both Australia and India and to develop workshops in areas like mine management and environmental regulation (including modern techniques for minimising greenhouse gas emissions from mining). There might be scope for the customs authorities of both countries to discuss ways to move to best international practice. Australian state and territory governments have a valuable role to play here in highlighting the way in which they approach the regulation of mining activity.

It will be important to provide capacity-building assistance to India in areas relevant to international trade and investment. This is often overlooked as an element of free trade agreements, but it can be a critical step in ensuring effective implementation of FTAs.

Priorities in developing industry-to-industry links

Business organisations need to establish closer links to facilitate commerce and mutual understanding and to ensure that their views inform governments. The Varghese Report found that the 'framework for business-to-business engagement is markedly undeveloped'. It suggests some practical steps to promote closer engagement, including broadening the membership of the Australia-India Business Council and a greater role for the Business Council of Australia in strengthening the Australia-India CEO Forum.[224] It will be important that the resources and METS industries support these proposals. There may also be scope to develop closer links between mining and METS industries in Australia and India: some ways to do so have been suggested above.

Mining and METS and Australia's national interest

Australia has core national interests in India becoming part of a growing, liberal and integrated Asia-Pacific economy, and in the region being well integrated into a strong and growing global economy that is responsive to the needs and interests of established and rising powers alike. Managing the complexities of trade with China and India amid the uncertainties of the multipolar world will be among Australia's most important foreign and trade policy challenges in the years ahead and will be critical for future growth of our foreign trade-exposed industries. This will require integrating economic, trade, foreign and 'strategic' approaches.

And Australia has a core national interest as a mining, mining technology and energy superpower. 'Exchanging commodities for manufactures will continue to account for the bulk of Australia's trade for years to come. It is the natural consequence of our comparative advantages.'[225] But is this reflected in the trade policies of Australian governments? The answer is that resources issues have been prominent from time to time – developing trade in liquefied natural gas to East Asia has been a very high priority – but that prominence has not been sustained in government policies and programs in a comparable way, say, to education and financial services or agriculture and processed foods. In that sense, Australia is different from countries like the United States, Russia and Canada that assiduously push their mining and energy interests. It is well beyond time for Australia to push this core national interest.

Constant market share analysis

Constant market share analysis has been widely used for almost 70 years to separate out different influences on a country's exports or imports. It was first introduced into the trade literature by Tyszynski in 1951.[226] There are now two main types of constant market share analysis in use, one following Leamer and Stern, and the other Fagerberg and Sollie.[227] Following Widodo, the two methods are seen here as complementary. The Leamer and Stern approach is appropriate when the emphasis is on the growth of a country's exports or imports over a period, while that of Fagerberg and Sollie is more appropriate when the focus is directly on market share.[228]

Leamer and Stern's method is used in this paper. In the simple formation used here, it essentially divides country A's growth rate into three components, on the assumption that country A's exports to country B will expand quickly where B's overall imports grow rapidly, where A benefits from a shift in the composition of B's imports to commodities in which A specialises, and where A experiences an improvement in its competitiveness which leads to greater market share for particular commodities important to it.

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For the situation here where there is only one importer, Leamer and Stern's method is based on the identity that:

$$E^F - E \equiv rE + \sum_{i=1}^{n}(r_i - r)E_i + \sum_{i=1}^{n}(E_i^F - E_i - r_iE_i), \text{ where}$$

E is the initial value of the exporting country's (say A's) exports to country B and E^F is the final value of A's exports to B.

n is the number of commodities.

r is the rate of increase of B's imports from all sources. That is $r = (M^F - M)/M$

where M and M^F denote B's initial and final imports from all sources.

E_i and E_i^F are the initial and final values of A's exports of commodity i to country B.

r_i is the rate of increase of B's imports from all sources of commodity i, that is $r_i = (M_i^F - M_i)/M_i$ where M_i and M_i^F are initial and final imports by B of commodity i from all sources.

The fact that the above equation is an identity can be seen by noting that $E = \sum_{i=1}^{n} E_i$ and that $E^F = \sum_{i=1}^{n} E_i^F$

Normalising the equation above by dividing both sides by E allows it to be expressed as:

$$(E^F - E)/E \equiv r + \sum_{i=1}^{n}(r_i - r)E_i/E + \sum_{i=1}^{n}(E_i^F - E_i - r_iE_i)/E$$

The term on the left-hand side is the rate of growth of A's exports to B. The terms on the right-hand side splits this up into three components, namely (1) the general rate of increase of B's imports from all sources (called the standard rate, or 'r'); (2) a composition effect (the second term on the right-hand side), which is sum of the extent to which the growth in B's imports of specific commodities exceed, or fall below, the standard rate, weighted by the share of these commodities in A's exports; and (3) a residual competitiveness effect (the third term on the right. Term (3) can be rewritten a little differently as the sum of the difference between the growth rate of A's exports of commodity i to B and r_i (the standard represented by the growth rate of all imports of that commodity into B), weighted by the significance of each commodity in A's exports. It will clearly have a strong positive impact on the results to the extent that A's exports of a commodity grow faster than the standard rate for the world (that is, where A gains market share in that product) and that the commodity is important in A's exports.

A more general formulation of this approach involving multiple importing countries is derived in Leamer and Stern and is applied, in, for example, Ariff and Hill for the case of ASEAN.[229]

Constant market share analysis has been subject to a number of criticisms, many of which were set out by Richardson in a 1971 paper.[230] Where data at current prices are used, the third term on the right-hand side of the equation may not accurately measure a competitiveness effect (for example, were Australia to become more price competitive for a commodity, this might show up as a decline in its market share). Richardson recommends data on quantities be used in place of data based on values, but these data are not typically available. To a degree, problems of this type can be addressed by using short periods for the calculations. The use of short periods can also help address changes that occur outside the framework of constant market share analysis, including, for example, the introduction of new commodities and the obsolescence of others.

A loss of competitiveness may turn out to be a composition effect when B's imports are viewed at a higher level of disaggregation. For example, the apparent loss of market share for Australian coal in India is quite misleading and largely results from the more rapid expansion of thermal coal, where Australia's market share is low, with Australia maintaining its dominant position in supplying metallurgical coals that are among the best for steel making in the world. This is properly a composition effect and has been taken into account in the analysis by treating metallurgical coal, thermal coal and two other smaller categories of coal imports, as presented in International Trade Centre data, as distinct commodities. But a similar problem might occur with other commodities. The choice of the standard growth rate is a further issue. Here, it has been defined as Country B's imports from all sources, but it is possible to define it more generally so that it provides other benchmarks (for example, as the rate of increase of exports to B of countries comparable to A).

Constant market share analysis is sometimes carried out using commodities at a relatively high level of disaggregation (perhaps the three-digit level of the Standard International Trade Classification). Here, the two-digit level of the Harmonised System is used, with commodities important in Australia's export mix, such as metallurgical coal and gold, separated out for the analysis on exports to India.

BOX A.1

An example of constant market share analysis

Suppose India imports two commodities, manufactures and ores, and that another economy, say Ruritania, supplies some of each as the table below shows in US$ billion.

The fact that the growth in manufactures and ores in India's imports differs from growth in India's overall imports suggests that there will be a composition effect for Ruritania. Using the formula above in percentage form, its magnitude will be:

(16.67–20) * 0.4 + (50-20) * 0.6 = 16.67 percentage points

Rurutania's share of India's imports of both manufactures and ores has also changed. In the case of manufactures, the share has gone from 4/90 or 4.44 per cent to 12/105 or 11.43 per cent. For ores the share has also increased. This suggests that there is also likely to be a competitiveness effect. Its magnitude, using the method above, is:

(200-16.67) * 0.4 + (66.67-50) * 0.6 = 83.33 percentage points.

Note that the overall growth in Ruritania's exports to India's (120 per cent) is equal to the sum of the general growth in India's imports (20 per cent), the composition effect (16.67 percentage points) and the competitiveness effect (83.33 percentage points).

	Year 1	Year 5	Growth %
India's imports	100	120	20
Manufactures	90	105	16.67
Ores	10	15	50
Ruritania's exports	10	22	120
Manufactures	4	12	200
Ores	6	10	66.67

This is reasonable given major commodities discussed in the text made up a very high share of India's imports from Australia. Given this approach, there were 105 separate commodities in merchandise trade used in constructing the exports by Australia (E_i) and growth rates for India's imports (r_i) for each of three periods over 2007-17. (In practice, India's imports from Australia are used rather than Australia's exports to India in measuring E and E_i). India's imports of metallurgical and thermal coal are derived from Table 4 (p. 27). For the analysis on Australia's imports from India, various petroleum oils falling within HS2710 were separated out given their importance to bilateral trade.

India's tariff regime prior to the implementation of the goods and services tax

Prior to implementing the goods and services tax (GST) in India in July 2017, the simple picture of India's tariff regime is conveyed in Table B1, which shows duties and bound rates on selected minerals and metals. It reveals mostly low average applied rates of ad valorem duty – those rates paid by exporters of products to India – and considerably higher legally bound rates that India has agreed to in the World Trade Organization.

This simple picture, however, hid a more intricate story of fees and charges that lacked transparency and made it difficult to determine – or perhaps to justify – the overall costs of importing.[231] These fees and charges involved:

- A: a landing fee of one per cent. This applied to the customs, insurance and freight (cif) value of imported goods unless exempted through separate official customs notification
- B: the basic tariff on the imported good
- C: an additional 'countervailing duty'. This applied on top of the basic customs duty and landing fee (A+B) and was intended to correspond to the excise duties imposed on similar domestic products
- D: a central excise education 'cess' or surcharge of three per cent
- E: a customs education cess of three per cent. This was imposed on top of elements B+C+D
- F: a special additional countervailing duty of four per cent. This was applied to all imports, except those exempted through separate notification. The duty was calculated on top of elements A+B+C+D+E.

The cumulative nature of these fees and duties raised the level of border protection considerably, typically adding over 25 per cent to the landed cost of minerals and well over 30 per cent to some METS products (Tables B2 and B3). It also inevitably raised concerns among some traders that they were subject to higher fees and charges than the required rate of duty on the real value of their products.

GST simplifies movement of goods within India by removing state-based fees and charges at the border, and also applies to imports, subsuming changes like additional duties, special additional duties and various state charges. Increasing transparency may well reduce the overall costs of importing.

Table B1

Simple average MFN duties & bound rates: selected minerals and metals, 2016

Source: WTO Tariff Download Facility

HS Heading HS2012	HS Heading description	Simple Average of MFN Ad Valorem Duty %	Simple Average of Bound Ad Valorem Duty %
2601	Iron ores and concentrates	2.5	25
2602	Manganese ores and concentrates	2.5	25
2603	Copper ores and concentrates	2.5	40
2604	Nickel ores and concentrates	2.5	25
2607	Lead ores and concentrates	2.5	Unbound
2608	Zinc ores and concentrates	2.5	Unbound
2612	Uranium or thorium ores and concentrates	2.5	40
2701	Coal; briquettes, ovids and similar solid fuels	2.5	31.3
2704	Coke and semi-coke of coal	5	25
7106	Silver, unwrought or semi-manufactured	10	40
7108	Gold, unwrought or semi-manufactured	10	40
7110	Platinum, unwrought or semi-manufactured	8.1	40
7201	Pig iron, blocks or other primary forms	5	27.5
7202	Ferro-alloys	7.3	38.9
7203	Ferrous products obtained by direct reduction of iron	10	40
7402	Unrefined copper, copper anodes for electrolytic refining	5	Unbound
7403	Refined copper and copper alloys, unwrought	5	Unbound
7406	Copper powders and flakes	4.6	Unbound
7901	Zinc, unwrought	5	Unbound
8101	Tungsten and articles thereof, including waste and scrap	6	40
8102	Molybdenum and article thereof, including waste and scrap	5.8	40

Table B2

Customs tariffs, duties and charges on selected minerals and metals: 2016

Source: India, Import-Export Customs Data; WTO Tariff Download Facility database 2016

	Coal; briquettes, ovids & similar fuels %	Iron ores and concentrates %	Copper ores and concentrates %	Unwrought aluminium %	Lead waste & scraps %	Tungsten inc. waste & scrap %	Articles of Tungsten %	Molybdenum inc. waste & scrap %
A	1	1	1	1	1	1	1	1
B	2.5	2.5	2.5	5	5	6	10	6
C	6	12	12	12	12	12	12	12
D	3	3	3	3	3	3	3	3
E	3	3	3	3	3	3	3	3
F	4	4	4	4	4	4	4	4
A-F	21.1	27.9	27.9	31.0	31.0	32.3	37.3	32.3

Note: For consistency with data for Indonesia and other ASEAN members, base tariff data are sourced from the WTO Consolidated Tariff Schedules database. These data sometimes differ from Indian Customs data.

Table B3

Illustrative customs tariffs, duties and charges on METS products: 2016

Source: India, Import-Export Customs Data; WTO Tariff Download Facility database 2016

	Prepared explosives %	Safety fuses, detonators etc. %	Radio remote control apparatus %	Safety headgear %	Rock drilling & earth boring equipment %	Self-propelled coal or rock cutters & tunnelling machinery %	Parts, shovels, buckets etc for 8430 %
Code	36020010	36030011	852692	650610	820713	843031	843143
A	1	1	1	1	1	1	1
B	10	10	7.5	10	10	7.5	7.5
C	12	12	12	12	12	12	12
D	3	3	3	3	3	3	3
E	3	3	3	3	3	3	3
F	4	4	4	4	4	4	4
A-F	37.3	37.3	34.2	37.3	37.3	34.2	34.2

Note: For consistency with data for Indonesia and other ASEAN members, base tariff data are sourced from the WTO Consolidated Tariff Schedules database. These data sometimes differ from Indian Customs data.

Endnotes

Executive summary

1 P Varghese, *An India Economic Strategy to 2035: Navigating From Potential to Delivery: A Report to the Australian Government*, July 2018, p. 8.

Introduction

2 M Turnbull, 'Address to the India-Australia Business Dinner' by the Prime Minister of Australia, Mumbai, India, 11 April 2017.

3 P Varghese, op. cit., p. 4.

4 Ibid, pp. 96, 166.

1 Australia's exports to India

5 The export intensity is a measure of the strength of the trading relationship and, roughly speaking, is measured by the share of the focus country in Australia's exports divided by the share of the focus country in world imports. After making technical corrections to the denominators, Australia's export intensity with respect to India was 1.9 in 2016, while those for China, Japan and Korea were 2.9, 3.1 and 2.5 respectively. On the concept of intensity and its application, see P Drysdale & R Garnaut, 'Trade intensities and the analysis of bilateral trade flows in a many-country world', *Hitotsubashi Journal of Economics*, Vol. 22, No. 2, 1982, pp. 62-84.

6 The growth rates given above compare the average of 2016 and 2017 with 2006 and 2007 and are compound annual growth rates. The averaging has been carried out to avoid the results being too greatly affected by the beginning and end years, in what are very volatile series. The Australian data are from the ABS as adjusted by the Department of Foreign Affairs and Trade. The Indian data are from UN Comtrade.

7 A loss of market share in a particular country is not always an unwelcome development. It may simply reflect more profitable opportunities elsewhere for Australian exporters or long-term shifts in Australia's comparative advantage leading to specialisation in commodities that are a modest share of the imports of the country in question.

8 Statements about the impact of price movements on the composition of imports assume that global price movements are not more than offset by changes in volume in the opposite direction; that is that import demand is price inelastic. This assumption is reasonable for coking coal and gold imports into India.

9 J Rowland, 'The Bad Mozambique', *World Coal*, 8 February 2016.

10 Smuggling increased significantly in 2013 when measures intended to control gold imports were introduced with the aim of reducing the current account deficit. The World Gold Council estimates that around 335 tonnes of gold were smuggled into India between the third quarter of 2013 and the fourth quarter of 2014. See World Gold Council, *India's Gold Market: Evolution and Innovation*, London, 2017, pp. 15-16, 60. For an historical account of India's gold policies that also examines smuggling, see N Emmanuel, 'Indian Gold Policies and Reforms and its impact on Imports and Consumption', *Asia Pacific Journal of Research*, Vol. 1, Issue XXXVI, February 2016, pp.76-81.

11 As in many other cases, the data on Indian imports from Australia and Australia's exports to India are very different, suggesting that this result too needs to be viewed cautiously.

[12] University of Sydney for the Export Council of Australia and partner institution, *Australian International Business Survey 2016, Industry Profile Report, Mining Equipment, Technology and Services (METS)*, Sydney, 2016.

[13] Austmine, 'New Realities, Bigger Horizons: Australian Mining Equipment, Technology and Services (METS) National Survey', Sydney, June 2015, pp.32, 39. In the Austmine survey, companies were asked to identify the top three countries that were most important currently and also the top three in which they wished to grow their business.

[14] For the list of possible METS products, see M Adams, N Brown & R Wickes, *New Frontiers: South and East Asia*, 01 Trade Agenda, Minerals Council of Australia, Canberra, 2017, Technical Annex. Data are from UN Comtrade.

[15] Services delivered through commercial presence are discussed in chapters 3, 5, and 8 in relation to the investment relationship.

[16] A more detailed table on services to India in 2016 can be found in F. Bingham, 'Australia's Trade in Services with India', in Department of Foreign Affairs and Trade, *Trade in Services Australia 2016*, Canberra, August 2017, pp. 34-36. However, much of the detail in the table has been supressed for confidentiality reasons.

[17] On GroundProbe, see Austrade, 'Australian mining technology company breaks ground in India', July 2015 viewed 26 May 2018, at www.austrade.gov.au/news/success-stories

[18] P Varghese, op. cit., p. 105.

2. Australia's imports from India

[19] The full description of this import item is 'diamonds; non-industrial, (other than unworked or simply sawn, cleaved or bruted), but not mounted or set.' Petroleum oils are not classified as among minerals and basic metal manufactures in this series of reports.

3. Australia's direct investment relationship with India

[20] P Varghese, op. cit., p. 43

[21] Much of India's reported FDI flows go through financial hubs that are also tax havens. Mauritius and Singapore alone have accounted for around half of reported FDI flows (inward plus outward) in recent years. There is also evidence of 'round-tripping' of funds distorting FDI flows. The government has, however, amended its tax treaties with Mauritius and Singapore. Preferential tax benefits were partially removed from fiscal year 2017 (beginning 1 April 2016) and are to be removed completely from fiscal year 2019. For further background, see S Jaiswal, *Foreign Direct Investment in India and Role of Tax Havens*, Centre for Budget and Governance Accountability (CBGA) and Institute for Studies in Industrial Development (ISID), New Delhi, 2017, www.cbgaindia.org/wp-content/uploads/2017/12/Foreign-Direct-Investment-in-India-and-Role-of-Tax-Havens.pdf

[22] Data for inward FDI are available from India's Department of Industrial Policy and Promotion, *Fact Sheet on Foreign Direct Investment (FDI)*, http://dipp.nic.in/publications/fdi-statistics

[23] Data for outward FDI are available from the Department of Economic Affairs, *Fact Sheet*

on Overseas Direct Investment (ODI), https://dea.gov.in/overseas-direct-investment.

24 Athukorala P & C Veerami, 'Internationalisation of Indian Enterprises: Patterns, Determinants and Policy Issues', ANU College of Asia and the Pacific, Working Paper 2016/04, March 2016, pp. 8-9.

25 This report focuses on FDI because of its links to trade, especially as economies open up, and the benefits that flow from transfers of technology, skills, management expertise, links to supply chains and the like. Foreign portfolio investment is also of some interest. It reflects international engagement in countries' capital markets and international perceptions of the attractiveness of available investments. It also includes a proportion of committed long-term investments that may at some point become direct investment. As the Varghese reports points out (pp. 55-57), ongoing reforms have attracted growing international interest in India's large, efficient and rapidly growing capital markets. Both net inward and outward foreign portfolio investment are over US$200 billion. But portfolio investment between Australia and India, like FDI, is very under-developed, though outward investment from Australia to India has increased from a very low base – from $0.8 billion in 2005 to $8.3 billion in 2017 (or from 0.3 per cent to 0.8 per cent of total outward portfolio investment). Total portfolio investment from India to Australia is not published, but is most likely concentrated in debt instruments rather than equity. Indian investment in debt securities rose from $10.8 billion in 2015 to $14.8 billion in 2017 and accounted for over 90 per cent of all Indian investment in Australia.

26 M Adams, N Brown & R Wickes, *Trading Nation: Advancing Australia's interests in world markets*, UNSW Press, Sydney, 2013, p. 86; P Varghese, op. cit., p. 51.

27 Australian statistics also show that outward portfolio investment from Australia to India increased from $3.5 billion in 2012 to $8.3 billion in 2017 (or from 0.6 per cent to 0.8 per cent of total outward portfolio investment), most likely reflecting greater interest in India's large and well developed equities and bonds markets and ongoing reforms to open up India's financial markets to foreign portfolio investors. Portfolio investment from India to Australia is not published and almost certainly is insignificant.

28 The source for the FDI statistics for Australia is ABS, *International Investment Position, Australia: Supplementary Statistics 2017*, cat. no. 5352.0, May 2018. The Indian statistics, published by the Department of Industrial Policy and Promotion, are from its FDI fact sheet for January to March 2017, at http://dipp.nic.in/publications/fdi-statistics

29 See M Thirwell, *Australia-India economic ties: Room to grow*, Austrade, 15 April 2016, www.austrade.gov.au/news/economic-analysis/australia-india-economic-ties-room-to-grow, viewed 14 October 2017.

30 The 2015 Austmine Survey of Australian METS companies reported India as among the top 10 country locations for overseas operations and offices.

31 Investment in coal processing plants like washeries is subject to the condition that the company shall not mine coal.

32 India was ranked among leading countries for Foreign Investment Review Board

(FIRB) foreign investment approvals in 2009-10, 2010-11 and 2011-12. See FIRB annual reports at http://firb.gov.au/about/publication/

[33] Adani has also invested in renewable energy projects: solar energy in Whyalla (South Australia) and Queensland's Bligh coal basin.

[34] India has a less restrictive rating in the OECD's FDI Regulatory Restrictiveness Index for mining and quarrying than Australia – 0.060 compared with Australia's 0.088 (2018 data).

[35] P. Varghese, op. cit., pp. 9, 59.

4. Shaping the future of Australia-India trade and investment

[36] Australian Government, *2017 Foreign Policy White Paper*, Canberra, 2017, pp. 40-42.

[37] According to the UNCTADstat.database, imports and exports as a share of India's GDP were over 50 per cent in 2014, 43 per cent in 2015 and 42 per cent in 2016. The corresponding shares of trade openness for China were 45 per cent, 39 per cent and 37 per cent.

[38] This assessment is based on UNCTAD *World Investment Reports* for 2016, 2017 and 2018.

[39] A Kazmin, 'Narendra Modi's vision of a 'new India' is being tested', *Financial Times*, 16 October 2017; and 'A Year in a Word: GST', *Financial Times*, December 24 2017.

[40] OECD TiVA (trade in value added) database.

[41] UNCTAD, *World Investment Report*, 2018, Geneva, 2018.

[42] Government of India, Ministry of Commerce and Industry, *Highlights of Foreign Trade Policy 2015-2020*, New Delhi, 2015.

[43] The sense that Australia's time may have come for doing business with India is conveyed in surveys of Australian business, for example University of Sydney for the Export Council of Australia and partner institutions, *Australia's International Business Survey: 2016 Report*, Export Council of Australia/University of Sydney, 2016. It also is now almost a given in surveys of international business, for example Baker McKenzie, *Asia Pacific Business Complexities Survey 2017: simplifying business in a complex world*, 2017.

[44] There is a reasonably common assumption that India will, in the normal course of events, join the ranks of middle income countries and proceed to join the ranks of developed countries sometime in the second half of the 21st century. This may happen, but if it does it will depend on India (i) dealing with the economic and social pressures attendant on becoming one of the world's most unequal societies – income inequality is at its highest level since income tax was introduced by the British Raj in 1922; (ii) managing corruption that dominates much of public life; (iii) creating a sustainable growth model that accommodates its back-to-front development where services have taken centre stage ahead of manufacturing industry; and, most importantly, (iv) building capacity at all levels of government to provide the regulation, predictability, education, health care, and social supports that a stable economy and society require: J Crabtree, *The Billionaire Raj: A Journey Through India's New Gilded Age*, Kindle Edition, 2018; L Chancel & T Piketty, 'Indian income inequality, 1922-2015: From British Raj to Billionaire Raj?', World Inequality Database, WID.World Working Paper Series 2017/11, March 2017.

45 In a 2017 review of 28 Indian states and territories, NITI Aayog & IDFC Institute found that nine states and territories grew at an annual average rate of nine per cent or more between 2004-5 and 2013-14, while seven grew at seven per cent or less per year over the same period.

46 For the 2019 fiscal year, the World Bank defines upper middle income economies as economies with gross national income per capita of US$3896 to US$12,055.

47 Government of India, Ministry of Finance, *Economic Survey 2017-18*, Vol 1, New Delhi, 2018, Chapter 5.

48 See PwC, *The Long View: How will the global economic order change by 2050?*, February 2017.

49 See https://data.oecd.org/gdp/gdp-long-term-forecast.htm

50 A Johansson et. al., 'Long-Term Growth Scenarios', *OECD Economics Department Working Papers*, No. 1000, OECD Publishing, Paris, 2013.

51 W Au-Yeung, M Kouparitsas, Nghi Luu & D Sharma, 'Long-Term International GDP Projections', Treasury Working Paper 2013-02, October 2013 (modified January 2014).

52 P Varghese, op. cit., p. 24.

53 Ibid, pp.34-38.

54 V Joshi, *India's Long Road: The Search for Prosperity*, Oxford University Press, Kindle Edition, 2017, pp. 315, 317.

55 According the United Nations (2015), India's population in 2015 was 1.311 billion. It is estimated to rise to 1.527 billion by 2030 and 1.705 billion by 2050.

56 Australian Government, op. cit., p. 31.

57 United Nations Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2017 Revision*, United Nations, New York, 2017.

58 United Nations Department of Economic and Social Affairs, Population Division, *World Urbanisation Prospects*, United Nations, New York, 2014.

59 The tax base is improving with the share of revenue in GDP now rising. This reflects initiatives like changes in the tax code, increasing compliance and introducing the goods and services tax.

60 N Modi, Address to the Opening Plenary of the World Economic Forum 2018, Davos, 23 January 2018.

61 A Ayres, *Our Time Has Come: How India is Making Its Place in the World*, Oxford University Press. Kindle Edition, 2018, p.19.

62 M Adams, N Brown & R Wickes, *Trading Nation: Advancing Australia's interests in world markets*, p. 155.

63 This section is based on the MCA's submission to the Foreign Affairs White Paper, 2017.

64 Australian Government, op. cit., p. 26.

65 R Blackwill & Harris J, *War by other Means: Geoeconomics and State Craft*, A Council of Foreign Relations Book, Belknap Press of Harvard University, Cambridge Mass and London, 2016, p. 8.

66 Ibid, pp. 7-14.

67 P. Varghese, op. cit., p. 7.

68 See pp. 117-118 for a discussion of trade policy developments that might lead to an FTAAP and benefits this could bring to Australia and others in the region.

69 D Jaishankar, 'India's Five Foreign Policy Goals: Great Strides, Steep Challenges', The Wire, May 2016. At a broader level, Puri (2016, p.7) discusses the importance of establishing a partnership between US capital and innovation and Indian resources (including human resources) and entrepreneurship. Australia is obviously in a different league from the United States but the concept of partnerships in areas like education, resources/energy and agro-food is attractive.

70 P Varghese, op. cit., p. 59. The target of India becoming Australia's third largest investment destination in Asia encompasses all investment, including FDI and portfolio investment.

71 The Washington Consensus refers to a shared view across the International Monetary Fund, World Bank and US Treasury that developing countries maximise opportunities for growth and perform better by allowing markets to operate and reducing state involvement in their economies. The reference to 'precocious, cleavage India' comes from Government of India, Ministry of Finance, *Economic Survey 2016-17*, Ch. 2, January 2017.

72 Ibid.

5. Opportunities for mining and METS

73 NITI & GIZ, *Strategy Paper on Resource Efficiency*, June 2017, p. 11.

74 NITI Aayog, *Draft Energy Policy* (draft of 27 June 2017), p. 4.

75 India's experience over the last few years suggests just how hard it will be to replace resources imports with domestic production. On the demand side, the pace of growth in demand for resources has slackened somewhat with the slowing pace of economic growth and the falling share of investment in GDP. The five-year moving average of growth of GDP per capita reached 7.2 per cent in the years up to and including 2007, before slowing to 5.8 per cent in the years to 2017. Investment peaked at 40 per cent of GDP in 2011 but fell to 30 per cent in 2017. India is well endowed with mineral resources and production rose substantially in these years. But even with this increase plus the import replacement policy in place and a period of relatively weak growth in demand for resources, there was still pressure to import.

76 Indian thermal coal imports slipped in 2016 and 2017 but came back strongly in 2018 in response to logistical bottlenecks and a pick-up in demand for power. See N Hume, 'Thermal coal defies the sceptics as Asian demand rises', *Financial Times*, 11 June 2018.

77 For example, the International Energy Agency projects a moderate fall in India's thermal coal imports from 2016 to 2022: IEA, *Coal 2017: Analysis and Forecasts to 2022*, OECD/IEA, Paris, 2017, p.104. Other research suggests, on the other hand, a moderate increase over the same period. For example, Commodity Insights, *Market Demand Study: Australian Export Thermal Coal: Final Report*, commissioned by the Minerals Council of Australia, 13 June 2018, p. 19.

78 NITI Aayog, *Draft Energy Policy*, p.4.

79 IEA, Coal 2017, pp. 84-85; NITI Aayog, *Draft Energy Policy*, p.34.

80 IEA, Coal 2017, pp. 84-85, 104; NITI Aayog, op. cit., pp. 4-5.

81 Along the coast, coal-fired power stations designed to use low ash coal require around 45 Mt of imported coal per year (IEA, Coal 2017, p.104).

82 BHP, Submission to the India Economic Strategy, 23 October 2017.

83 Government of India, Ministry of Power, Central Electricity Authority, *National Electricity Plan: Generation*, Vol.1, 2018, p. xl.

84 Total Indian energy demand is projected to more than double in the period to 2040 and its power system will quadruple in size to keep pace with demand for electricity: IEA, *India's Energy Outlook*, pp. 11-12. A strong upward trend in energy demand is also projected by Commodity Insights, op. cit. pp. 20-21. They suggest an increase in electricity consumption per capita from 800kWh in 2014 to nearly 1,800kWh in 2030, an annual average growth rate of 5 per cent.

85 BP, *Energy Outlook 2018*, 2018, pp. 58, 93, 113.

86 IEA, *World Energy Outlook 2017*, OECD/IEA, Paris, 2017.

87 R Bansal, 'Overall Energy Scenario of India till 2047', in NITI Aayog and Institute of Energy Economics Japan, *Energising India: A Joint Report of NITI Aayog and IEEJ*, 2017.

88 For a contrary view, see Varghese, op. cit., pp. 174-75. A fall in thermal coal imports from over 150 Mt in 2016 to 40-50 Mt by 2030 is considered possible largely on the optimistic assumption that Coal India can achieve a steady rate of growth in output of 6 per cent per year over this period. The possibility of Indonesia focusing more on domestic coal markets to meet rising demand for coal-fired power generation was discussed in Adams, Brown & Wickes, *Indonesia: New Frontiers: South and Southeast Asia*, Report commissioned by the Minerals Council of Australia, 2017.

89 P Varghese, op. cit., pp.175-176.

90 IEA, *India's Energy Outlook: World Energy Outlook*, 2015, pp. 135-137.

91 Negotiations for the agreement commenced under the Gillard Government in 2012. The Rudd Government had refused to sell uranium to India.

92 See P Varghese, op. cit., pp. 175-176.

93 Ibid, p.176.

94 See D Chaudhury, 'Uranium supply to power Uzbek-India growing ties', *The Economic Times*, 3 October 2017.

95 P Varghese, op.cit., p. 166.

96 IEA, *Coal 2017*, p. 89.

97 Ibid, p.114.

98 Government of India, Ministry of Steel, National Steel Policy 2017, New Delhi, 2017.

99 P Varghese, op. cit., p. 101.

100 ICMM, *Role of Mining in National Economies*, third edition, n.d., p.12

101 For example Government of India, Ministry of Steel, National Steel Policy 2017, New Delhi, 2017; and N Modi, 'Address to the Opening Plenary of the World Economic Forum 2018', Davos, 23 January 2018.

102 If India were to reach 160kg of crude steel per capita consumption by the early 2030s, this would still be below current world average per capita consumption of around 200kg.

103 Government of India, Ministry of Steel, National Steel Policy 2017, New Delhi, 2017.

104 For example, V Saraswat & R Bansal, 'Need for a New Steel Policy', NITI (n.d.)

105 To put this in context, India imported 3Mt of iron ore in 2016 compared with 1035Mt by China, 131Mt by Japan and 75Mt by the Republic of Korea.

[106] Production data are from CARE Ratings, *Copper Industry*, Mumbai, July 2017, pp.5, 7; and International Copper Study Group, *The World Copper Factbook 2017*, Lisbon, 2017, pp. 20, 25.

[107] CARE Ratings, op.cit., p.7 and International Copper Study Group, op. cit., p. 21.

[108] For an assessment of risks in specific areas, see J. Laddha, 'India – An emerging copper consumer to support global copper demand?', Address to the 11th Asia Copper Conference, Shanghai, 17-19 November 2015.

[109] It is, for example, a big net importer of copper wire and copper pipes and tubes.

[110] K. Renaud, 'The Mineral Industry of India', US Geological Survey, *2014 Minerals Yearbook: India* (Advance Release), November 2017, p. 10.4.

[111] Indian Bureau of Mines, 'Aluminium and Alumina', from *Indian Minerals Yearbook 2015* (Part II: Metals and Alloys), 54th Edition, Advance Release, Nagpur, 2017, p. 1.14. 'Aluminium, Alumina and Bauxite', *Resources and Energy Quarterly*, Office of the Chief Economist, March 2018, pp. 87-88.

[112] US Geological Survey, *Mineral Commodity Summaries 2018*, January 2018, pp. 21, 31.

[113] See CARE Ratings, 'Aluminium Industry: The Silver Knight of the Economy', Mumbai, August 2017.

[114] K. Renaud, op. cit., p. 10.2.

[115] 'Nalco's alumina export to halve in 3-4 years, to impact profit margins', *The Business Standard*, 10 January, 2018.

[116] World Gold Council, *Market Update: India's Budget: policy and progress*, London, February 2018, p. 1.

[117] World Gold Council, *India's Gold Market: evolution and innovation*, London, January 2017, pp. 7, 64-66, 68.

[118] Ibid, Chapters 1, 5.

[119] Ibid. While this modelling is valuable, the Council does not present all of the diagnostic statistics necessary to evaluate the results of its research.

[120] For interesting assessments of future trends, see T. Keel, 'Technology on the rise' and J. Reade, 'Gold in 30 Years', in World Gold Council, *Gold 2048: the next 30 years for gold*, London, 2018, pp. 40-43 and 44-48 and comments on the findings at www.gold.org/research/gold-2048 . Several of the long-term trends described would apply to the growth of global demand, not simply that of India. The Varghese Report also discusses the long-term outlook for gold briefly. It projects India's demand for gold by 2030 as between 36 and 50 per cent up on 2016 levels, with India continuing to rely almost entirely on imports to meet demand. See P Varghese, op. cit., pp. 104-105.

[121] 'India to produce lithium-ion batteries', *Hindustan Times*, New Delhi, 10 June 2018, at https://www.hindustantimes.com/india-news/india-to-produce-lithium-ion-batteries/story-tAiWiEGIqGNgQNXAOOdy6J.html

[122] See M O'Sullivan, I Overland & D Sandalow, *The Geopolitics of Renewable Energy*, Working Paper, Center on Global Energy Policy, Columbia University/Belfer Center for Science and International Affairs, Harvard Kennedy School, June 2017.

[123] Future Smart Strategies, 'A lithium industry in Australia: A value chain analysis for downstreaming Australia's lithium resources', Report Prepared for

the Association of Mining and Exploration Companies', Perth 2018.

124 'Will India's electric vehicle boom be powered by Bolivia's lithium reserves?' *Financial Express*, 17 July 2018, at https://www.financialexpress.com/industry/will-indias-electric-vehicle-boom-be-powered-by-bolivias-lithium-reserves-bolivian-ambassador-exclusive/1247625/

125 IEA, *India's Energy Outlook: World Energy Outlook*, 2015.

126 There are varying estimates of Australian METS companies operating in India, but the number seems to be growing. According to a recent Austrade presentation, around 24 Australian METS companies make infrequent sales in the Indian market and there are few consultancies. This compares with over 70 Australian METS companies with offices or subsidiaries in Chile, with many more companies selling directly into the market from Australia or through local distributors: Austrade, 'Economic Cooperation Partnership: Australian METS Demonstration Project', presentation, New Delhi, n.d. The Varghese report put the number at 35 companies. In private discussions with Austrade in New Delhi in July 2018, the number was put at 43-45 Australian companies operating in India either through Indian agents or via commercial presence.

127 NITI Aayog, Draft Energy Policy, draft of 27 June 2017, p. 5.

128 Ibid, p. 36.

129 Ibid.

130 Ibid, pp. 29-30.

131 M Adams, N Brown & R Wickes, *Trading Nation: Advancing Australia's interests in world markets*, p. 335.

6. Business and investment environment

132 World Bank, *Doing Business 2018: Reforming to Create Jobs*, International Bank for Reconstruction and Development, p. 23.

133 WEF, *The Global Competitiveness Report 2017-18*, World Economic Forum, Geneva, 2017.

134 J-F Arvis et al, *Connecting to Compete 2016 Trade Logistics in the Global Economy: The Logistics Performance Index and Its Indicators*, The International Bank for Reconstruction and Development/The World Bank, 2016, pp. 8, 13.

135 The World Bank Logistics Performance Index is a weighted average based on a economy's performance in relation to: (i) efficiency of clearance processes (speed, simplicity, predictability of formalities) by border control agencies, including customs; (ii) quality of trade and transport related infrastructure (ports, rail, road, information technology, ease of arranging competitively priced shipping; (iii) competence and quality of logistics services (transport operators, customs brokers); (iv) ability to track and trace consignments; and (v) timeliness in shipments reaching their destinations within the scheduled time or expected delivery time.

136 A Ayres, op. cit., p. 226.

137 Government of India, Ministry of Finance, *Economic Survey 2017-2018*, Vol 1, New Delhi, 2018, Ch. 9.

138 USTR, *2016 National Trade Estimate Report on Foreign Trade Barriers*, Washington D.C. 2016, p. 205.

139 USITC, *Trade Investment and Industrial Policies in India: Effects on the US Economy*, Publication No: 4501, Washington D.C., 2014, pp. 18-19; USTR op. cit., p. 207.

[140] In 2017, India ranked 81 out of 180 countries on Transparency International's Corruptions Perceptions Index. Problems with corruption may have diminished slightly in the last five or six years but India still exceeded the world average in perceived levels of corruption.

[141] NITI Aayog & IDFC Institute, *Ease of Doing Business: An Enterprise Survey of Indian States*, NITI Aayog IDFC Institute, 2017. In 2016 NITI Aayog and the IDFC Institute surveyed 3276 manufacturing enterprises across India covering coke and refined petroleum, chemical, non-metallic metals, base metals, fabricated metals etc. Their general finding was that fast-growing states had fewer delays than slower-growing states in granting permits and clearances across a range of industries and also were more flexible in implementing labour and environmental laws.

[142] Australia-India Business Council, 'Submission to the Department of Foreign Affairs and Trade: Australia-India Comprehensive Economic Cooperation Agreement Negotiations', March 2015.

[143] Indian investment in Australian mining has also been a challenging story. Indian companies are interested in investing in Australian resources and land, but they struggle with Australia's regulatory system as well as with community campaigns. Resources and land are sensitive issues in Australia (as they are around the world) that can provoke kneejerk reactions. Recent concerns over Chinese and Indian investment in Australia echo earlier concerns over investment from Japan in the 1980s and from the United States in the 1960s and 1970s.

[144] T Jackson & K Green, *Fraser Institute Annual Survey of Mining Companies 2016*, Fraser Institute, February 2017, pp. 2, 9. Note: India was not included in the *Fraser Institute Annual Survey of Mining Companies 2017*.

[145] In August 2014, India's Supreme Court cancelled more than 200 coal licences awarded to industry groups on the grounds that allocations were arbitrary and illegal: J Crabtree, 'Jindal Steel and Adani short listed for India coal auctions', *Financial Times*, 12 February 2015.

[146] M Kumar, 'The 2015 Mining and Minerals Law in India – A step towards making 'Make in India' globally competitive', *US-China Law Review*, Vol 12, 2015, pp. 489-497; K Randive, 'National Minerals Policy and its Impact on India's Minerals Sector', *Journal of Geo-sciences Research*, Special Vol 1, 2016, pp.1-15.

[147] While major problems have been revealed in the auction system for exploration licences and a high priority is placed on attracting private investment into mining, no remedial action is expected in the short term for two reasons. The first is that a general election will be held in 2019 and the Government is not interested in changing the regulation ahead of that. The second and more substantive reason is that the auction system is part of a broader program of reforms aimed at removing discretion in allocating key resources, reducing corruption and removing one of the main constraints on growth and development: N Modi, 'Prime Minister's Keynote Speech to the 40th AGM of the US-India Business Council, 8 June, Washington D.C., 2016.

[148] Chhattisgarth and Rajasthan ranked 6th and 9th among Indian states on the Department

of Industry Policy and Promotion's Business Reform Action Plan 2017. This placed them among India's top performing states on a combined measure based on evidence of reform and feedback from the states. These two states also ranked well on the Public Affairs Centre's governance rankings for India's states in 2017. Rajasthan and Chhatttisgarth ranked 7th and 8th respectively among India's 18 large states in 2017 on an aggregate measure that combined elements like infrastructure, support for human development, social protection, transparency and accountability, and economic freedom. They ranked 5th and 7th respectively on transparency and accountability, and 5th and 9th on economic freedom.

7. Goods market access challenges

149 Productivity Commission, *Rising protectionism: challenges, threats and opportunities for Australia*, Productivity Commission Research Paper, Commonwealth of Australia, July 2017, p. 75.

150 M Adams, N Brown & R Wickes, *Australian Mining: New Frontiers: South and East Asia*, p. 47.

151 WTO, *Trade Policy Review: India*, Report by the Secretariat, WT/TPR/S/313, 2015, p. 44.

152 A Ayres, op. cit. India's inner conflicts on trade policy are probably embedded in the fact that, despite its impressive growth and progress in development, it still has a fifth to a quarter of the world's most poverty stricken people.

153 H Sender, 'India's misguided war on solar panel imports', *Financial Times*, 11 April 2018. Another example of India's reliance on tariff protection, admittedly in the more sensitive agricultural sector, is recent tariff hikes for chickpeas. India imposed a 30 per cent tariff in December 2017, increased this to 40 per cent in February 2018, increased it again to 60 per cent in March and to 70 per cent in June: K Keenan, 'Australia halves chickpea plantings', *The West Australian*, 26 June 2018.

154 USTR, 2018, *National Trade Estimate Report on Foreign Trade Barriers*, Washington D.C., 2018, p.224.

155 The GST of course applies both to local sales as well as imports and therefore does not advantage domestic industry.

156 R Ruta, 'Preferential trade agreements and global value chains: Theory, evidence, and open questions', in World Bank, Institute of Developing Economies, OECD, & Research Center of Global Value Chains, *Global Value Chain Development Report 2017: Measuring and Analysing the Impact of GVCs on Economic Development*, International Bank for Reconstruction and Development/ The World Bank, Washington D.C., 2017, p.175. Y Duval, N Neufeld & C Utoktham, 'Do trade facilitation provisions in regional trade agreements matter? Impact on trade costs and multilateral spillovers', Asia-Pacific Research & Training Network on Trade (ARTNeT) Working Paper Series No. 164/2016, Bangkok, ESCAP, 2016, pp. 9-10.

157 S Singh, U Mishra & H Sandha, 'The Trade Facilitation Agenda of the WTO and India's Commitments: where does India stand?', International Trade Working Paper 2018/01, Commonwealth Secretariat, 2018, p. 6.

158 Y Duval, N Neufeld & C Utoktham, op cit., p. 9.

159 Y Duval & A Kravchenko eds., *Digital Trade Facilitation in Asia and the Pacific*, Studies in Trade, Investment and Innovation No. 87, UN Economic and Social Commission for Asia and the Pacific (ESCAP), Bangkok, 2017, pp. 16-20.

[160] Over the period 2015-17, there was little improvement on trading across borders indicators on the World Bank's *Ease of Doing Business* index. In fact, India's overall ranking slipped slightly from 133 in 2015 to 146 in 2016. The hours taken for documentary compliance to import have gone down from 63.3 to 61.3 and the time for border compliance has gone down from 287.4 hours to 264 hours. Costs also have gone down but not by much: documentary compliance costs for imports have gone down from US$144.7 to US$134.8 and border compliance from US$574 to US$543.

[161] S Singh, U Mishra & H Sandha, op. cit., pp. 6-10, 13-14.

[162] This assessment is based on a review of the World Bank's database on the content of preferential trade agreements notified to the WTO between 1958 and 2015. See pp. 110-112.

[163] The latter database is at www.globaltradealert.org

[164] See Government of India, 'Semi-Annual Report Under Article 16.4 of the Agreement: India', for the period 1 July to 31 December 2017, WTO Committee on Anti-Dumping Practices, 19 April 2018, p. 20.

[165] US Trade Administration, 'India-Import Requirements and Documentation', at https://www.export.gov/article?id=India-Import-Requirements-and-Documentation, last updated 1 August 2017.

[166] Office of the United States Trade Representative, *2018 National Trade Estimate Report on Foreign Trade Barriers*, Washington, D.C. 2018, p. 226.

[167] US Trade Administration, 'India – Trade Barriers', at www.export.gov/article?id=India-Trade-Barriers last updated 1 August 2017.

Different sources give somewhat different export duties over the past decade, but these do not affect the general point being made.

8. Services and investment market access challenges

[168] India has an OECD Services Trade Restrictive Index score above the average in all services sectors across the 44 countries in the index: OECD Services Trade Restrictiveness Index: country note: India.

[169] S Benz, A. Khanna & H. Nordås, op. cit., p. 13.

[170] M Geloso Grosso *et al.*, 'Services Trade Restrictiveness Index (STRI): Construction, Architecture and Engineering Services', *OECD Trade Policy Papers*, No. 170, OECD Publishing, 2014, Paris.

[171] USTR, *2016 National Trade Estimate Report*, 2016, p. 210.

[172] OECD, 'OECD Services Trade Restrictiveness Index', Trade Policy Note, June 2017.

[173] For example, in May 2017, the Union Cabinet approved the dismantling of the Foreign Investment Promotion Board (FIPB) that is currently responsible for considering FDI applications in sectors such as defence, retail trading, titanium mining and some agricultural products. In targeting increased flows of inward FDI, FDI proposals in these sectors will in future be reviewed by ministers and departments with responsibility for those sectors. Currently, 90-95 per cent of FDI comes into India without reference to the FIPB: R Chitravanshi, 'Cabinet okays winding up of FIPB', *The Economic Times (of India)*, 25 May 2017.

[174] World Trade Organization, *Trade Policy Review: India*, Report by the Secretariat, WT/TPR/S/313/Rev.1, Geneva, 2015, pp. 32, 106.

[175] India has been opening its mining sector to FDI for over 20 years. In 1997 foreign equity participation up to 50 per cent was allowed for mining projects that did not require prior approval by the Government or Reserve Bank of India. For mining services projects this was 74 per cent. In 2006, the FDI cap was raised to 100 per cent for exploration and mining of diamonds and other precious stones not requiring prior by the Government. The only restrictions were that (i) mining concessions were available to Indian nationals and companies registered in India, but there was no cap on foreign ownership of such companies, (ii) there were certain registration requirements for importing and exporting equipment and (iii) there were restrictions on foreign nations working over 180 days. There has been 100 per cent FDI in mining for over a decade: Kumar, op. cit.

9. India's approach to trade negotiations

[176] V Joshi, op. cit., p. 300. A mercantilist approach to trade negotiations often prevails in economies with a recent history of protectionism. It was certainly characteristic of Australia's approach to multilateral trade negotiations until the Uruguay Round. See M Adams, N Brown & R Wickes, *Trading Nation: Advancing Australia's interests in world markets*, Ch. 3.

[177] Mercosur is an economic and political bloc comprising Argentina, Brazil, Paraguay, Uruguay, and Venezuela.

[178] Developed economies are defined broadly to include OECD economies and high income economies as defined in World Bank statistics.

[179] The agreement with Afghanistan, for instance, covers 38 lines, of which 13 are duty free. The agreement with Mercosur includes just one duty-free tariff line: WTO, *Trade Policy Review: India*, Report by the Secretariat, Geneva, 2015, pp. 145-46.

[180] Most of these are 'partial scope agreements' (PSAs) between developing countries. They cover only certain products and are notified to the WTO under the GATT Enabling Clause for differential and more favourable treatment of developing countries. India's PSAs are the Asia Pacific Trade Agreement (APTA), the Global System of Trade Preferences among Developing Countries (GSTP), the South Asian Preferential Trade Agreement (SAPTA), and agreements with Afghanistan, Chile, Mercosur, and Nepal.

[181] Government procurement is not addressed in negotiations for the Australia-India Comprehensive Economic Cooperation Agreement. Competition Policy and Intellectual Property Protection are included from the perspectives of capacity building and exchanging information.

[182] WTO, *Trade Policy Review: India*, Report by the Secretariat, Geneva, 2015, p. 29. A subsequent OECD review of these FTAs concluded: "These [FTAs] do not seem to provide market access or national treatment beyond regulations in force as far as access to the Indian market is concerned.": S Benz, A Khanna & H Nordås, 'Services and Performance of the Indian Economy: Analysis and Policy Options', *OECD Trade Policy Papers*, No. 196, OECD Publishing, Paris, 2017, p. 18.

[183] India's trade agreements in force are listed at http://www.indiantradeportal.in/vs.jsp?lang=0&id=0,55,288 (accessed 27 May 2018).

[184] The World Bank dataset is explained in detail in C Hofmann, A Osnago & M Ruta, 'Horizontal Depth: A New Database on the Content of Preferential Trade Agreements',

World Bank Group Policy Research Working Paper, No.7981, February 2017.

185 RCEP parties are ASEAN, Australia, China, India, Japan, the Republic of Korea, and New Zealand.

186 The agreement with Chile entered into force in May 2017 but remains limited to selected goods. It is a PSA, not a full FTA.

187 The reviews of the Singapore and Korea agreements commenced in 2010 and 2015 respectively. The review of the Korean agreement is reported to be close to conclusion at time of writing. See, for instance, 'India, Korea for early conclusion of CEPA review', *The Economic Times*, 27 February 2018, https://economictimes.indiatimes.com/news/economy/foreign-trade/india-korea-for-early-conclusion-of-cepa-review/articleshow/63098667.cms

188 See A. Sen, 'India, EU try to revive free trade talks as US shadow looms over world trade', *The Hindu*, 11 April 2017.

189 M Hemmadi, 'Canada and India can't seem to make a trade deal. Here's Why', *Maclean's*, 21 February 2018.

190 India unilaterally terminated its investment promotion and protection agreement (IPPA) with Australia on 23 March 2017. The provisions of the Agreement will continue to apply to investments made on or before 22 March 2017 until 23 March 2032. Investments made on or after 23 March 2017 will not be covered: http://dfat.gov.au/trade/investment/Pages/investor-state-dispute-settlement.aspx.

For a commentary on the White Industries case, see B Dhar, *India's Experience with BITs: Highlights from Recent ISDS Cases*, South Centre, Investment Policy Brief No.3, July 2015.

191 After a two-year review, the Indian Government decided to tighten rules on foreign investors going to international arbitration to settle disputes. This includes a requirement that foreign companies must first pursue cases in India's domestic courts — often a long and tortuous process: K Stacey, 'India toughens stance on Dutch trade deal', *Financial Times*, 20 November 2016.

192 B Mercurio, 'Negotiations on the United States-India Bilateral Investment Treaty: An Exercise in Futility', *Trade Pacts*, 7 September 2016.

193 K Kaszubska, 'Deconstructing India's Position on the Trade in Services Agreement', Observer Research Foundation (ORF) Issue Brief, No. 146, June 2016.

194 India was among the most prominent respondent states for investor-state dispute settlement over the period from 1987 to 2015: UNCTAD, 'Investor-State Dispute Settlement: review of developments in 2015', IIA Issues Note, June 2016.

195 V Saraswat, P Priya & A Ghosh, 'A Note on Free Trade Agreements and their Costs', NITI, n.d.. The views expressed in this paper did not necessarily reflect those of NITI.

196 H Puri, 'India's Trade Policy Dilemma and the Role of Domestic Reform', Carnegie Endowment for International Peace, Washington D.C., 2017, p.4.

197 R Kher, 'A trade policy for India – 1', *Business Standard*, 27 April 2016.

198 H Puri, op. cit., pp. 4-5.

199 M Adams, N Brown and R Wickes 2013, *Trading Nation: Advancing Australia's interests in world markets*, p. 87.

200 Temporary movement of business personnel is a major sticking point in India's

negotiations with its principal developed trading partners. With a big English speaking population and massive diaspora, India has a strong interest in advancing this issue in its trade and investment agreements. Conversely, in an environment where real wages are subdued and members of the public have concerns about employment opportunities, India's developed country trading partners have a strong interest in managing migration and public perceptions about its impact on local jobs.

201 Services account for more than 30 per cent of India's gross exports and more than 60 per cent of value added exports. Simulations undertaken by the OECD Secretariat suggest that India's services exports could increase over time by between 15 per cent and 200 per cent, depending on the sector, if its services trade policy was brought in line with the average for OECD members plus Brazil, China, Colombia, Costa Rica, Indonesia, Lithuania, Russia, and South Africa. The largest predicted increases would occur in telecommunications and commercial banking: S Benz, A Khanna & H Nordås, 'Services and Performance of the Indian Economy: Analysis and Policy Options', *OECD Trade Policy Papers*, No. 196, OECD Publishing, Paris, 2017, p.6.

202 This refers to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, an agreement struck in 2018 between Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, Peru, New Zealand, Singapore, and Vietnam. TPP-11 retains as much as possible of the original TPP-12 after the United States withdrew its signature early in 2017.

203 The Pacific Alliance is a critical piece of Asia-Pacific economic architecture. It consolidates bilateral trade relations between Chile, Colombia, Mexico and Peru; provides a common trade policy platform because all four Alliance members have FTAs with each other and with the United States that are based on the North American Free Trade Agreement (NAFTA); and this common platform then forms the basis for FTAs between Alliance members and others, including Asia-Pacific economies.

204 The proposal to the WTO includes some highly controversial elements relating to cross-border portability of health insurance, immigration arrangements (visas) and social security contributions. But it also includes elements like improving information available to services providers, 'single window' service, greater transparency in fees and charges, improved processes for recognising professional and academic qualifications, and improved cooperation between governments on regulatory issues. Progress on these sorts of issues should be possible – there is considerable common ground on them judging by recent developments in FTAs – and they could be expected to strengthen cross-border trade and direct investment. See A Chakravarty, 'India's Proposal for Trade Facilitation of Services: a breath of fresh air for global trade?' CTIE Working Paper No 2017-10, 2017.

10. Trade policy considerations for Australia

205 The group of 16 countries negotiating RCEP include all the leading countries of Asia as well as Australia and New Zealand.

206 The FTAAP vision goes back more than a decade. The basic idea is to develop a comprehensive, high quality FTA that incorporates new generation trade and investment issues that is based on ongoing

regional trade undertakings, spans the APEC membership, supports and complements the multilateral trading system, and would be negotiated outside of APEC but in parallel with it: APEC Committee on Trade and Industry, Report to Ministers: *Collective Strategic Study on Issues Related to the Realisation of the FTAAP*, November 2016, Ch.1.

207 S Newnham, presentation, 'Japan and Australia: Leading Asia-Pacific regionalism in uncertain times', Research Institute of Economy, Trade and Industry, Tokyo, 15 March 2018, at https://dfat.gov.au/news/speeches/Pages/japan-and-australia-leading-asia-pacific-regionalism-in-uncertain-times.aspx

208 University of Sydney for the Export Council of Australia and partner institutions, *Australia's International Business Survey: 2016 Report*, 2016.

209 There is a general perception that the negotiation is stuck fast. This was alluded to in carefully crafted language in the Australian Government's 2017 Foreign Policy White Paper. In discussing Australia's future FTAs, very definite language was used in relation to the Indonesia – Australia Comprehensive Economic Partnership. 'This agreement will strengthen commercial links and help stimulate increased two-way investment. Both governments want this agreement to unlock future growth opportunities for Australia and Indonesia.' Similarly, in relation to FTAs with the European Union and United Kingdom, the same definitive note was stuck: 'The [Australian] Government will negotiate an ambitious FTA with the European Union ...Australia will also negotiate a comprehensive FTA with the United Kingdom once it has left the European Union.' The language on India was more nuanced: 'India has striking economic potential with scope for sustained catch-up growth ... To cement India as a priority economic partner, the Government is developing an India Economic Strategy to take advantage of India's strengths in services, technology and innovation, and to identify new ways to do business together. The Strategy will also position us for opportunities that should come from India's domestic reform agenda. We will keep working towards freer trade with India through our bilateral FTA negotiations, as well as regionally and multilaterally.' Australian Government, op. cit., pp.61-62.

210 Since the 1997-98 East Asian Financial Crisis, proposals for ASEAN-centred regional economic cooperation have included a 2001 proposal to establish an ASEAN+3 (China, Japan and Korea) East Asia Free Trade Area, and Japan's 2006 proposal to establish an ASEAN+6 Comprehensive Economic Partnership in East Asia (which would additionally include Australia, New Zealand and India). These proposals generated an intense debate. In November 2011, ASEAN ended the debate by proposing its own model for an ASEAN-centred regional FTA – RCEP. In Australia's view, RCEP and the Trans Pacific Partnership Agreement (TPP-11) provide possible pathways for establishing the free trade area of the Asia-Pacific (FTAAP). Source: DFAT website.

211 S Armstrong, presentation, 'Japan and Australia: Leading Asia-Pacific regionalism in uncertain times', Research Institute of Economy, Trade and Industry, Tokyo, 15 March 2018, at https://www.rieti.go.jp/jp/events/18031501/pdf/p-1_armstrong.pdf

212 'AANZFTA Economic Cooperation Support Program: supporting competition in ASEAN Member States through the Competition Law Implementation Program', Factsheet, August 2015: https://www.accc.gov.au/system/files/AECSP_Fact_Sheet_CLIP_Aug2015.pdf

213 P Rana & Xianbai Ji, 'Rising Protectionism in US: Asia-Pacific's Response', CMS/RSIS Commentaries, April 2018.

11. Policy priorities for mining and METS

214 See WTO, *World Trade Report 2015*, Geneva, 2015, Section D.

215 P. Varghese, *An India Economic Strategy to 2035*, p. 8.

216 Ibid, pp. 311-313.

217 See M Adams, N Brown & R Wickes, *New Frontiers: South and East Asia*, Vol. 1, pp. 54-55.

218 Office of the United States Trade Representative, *2018 Special 301 Report*, Washington, D.C., 2018, pp. 5-6, 49-51.

219 P. Varghese, op. cit., p. 7.

220 Ibid, p. 114.

221 I Satchwell & J Redden, *Sharing the Benefits: enhancing Australia's global leadership in the mining value chain: the case for economic diplomacy investment in resources governance*, Centre for Exploration Targeting, July 2016, p. 8.

222 Deloitte Access Economics, *Mining and METS: engines of economic growth and prosperity for Australians*, Minerals Council of Australia, Canberra 2017. The study also looks at the employment implications of mining and at the impact on specific regions.

223 P Varghese, op. cit., p. 114.

224 Ibid, pp. 346, 350-353.

225 M Adams, N Brown & R Wickes, *Trading Nation: Advancing Australia's interests in world markets*, p. 85.

Annex A: Constant market share analysis

226 On Tyszynski's contribution, see J Fagerberg & G Sollie, 'The method of constant market shares reconsidered', *Applied Economics*, Vol. 19, 1987, pp. 1571-72.

227 See E Leamer & R Stern, *Quantitative International Economics*, Allyn and Bacon, Boston, 1970, Chapter 7, and J Fagerberg & G Sollie, op. cit., pp. 1571-83.

228 See T Widodo, 'Market Dynamics in the EU, NAFTA, North East Asia and ASEAN: the Method of Constant Market Share (CMS) Analysis', *Journal of Economic Intezgration*, Vol. 25, No. 3, September 2010, p. 484.

229 M Ariff & H Hill, *Export-Oriented Industrialisation: The ASEAN Experience*, Allen and Unwin, Sydney, 1985.

230 J Richardson, 'Constant-Market Shares Analysis of Export Growth', *Journal of International Economics*, Vol. 1, No. 2, 1971, pp. 227-239.

Annex B: India's tariff regime prior to implementation of the GST

231 USTR, *2016 National Trade Estimate Report on Foreign Trade Barriers*, Washington D.C. 2016, pp. 203, 205, 214.

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Glossary

AANZFTA	ASEAN-Australia-New Zealand Free Trade Agreement
ABS	Australian Bureau of Statistics
ACFTA	ASEAN-China Free Trade Area
AICECA	Australia-India Comprehensive Economic Cooperation Agreement
AHKFTA	ASEAN-Hong Kong Free Trade Agreement
AIFTA	ASEAN-India Free Trade Area
AJCEP	ASEAN-Japan Comprehensive Economic Partnership Agreement
AKFTA	ASEAN-Korea- Free Trade Area
APTA	Asia-Pacific Trade Agreement. Participating States are Bangladesh, China, India, Laos, South Korea and Sri Lanka
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
Austrade	Australian Trade and Investment Commission
BAU	business as usual
BITs	bilateral investment treaty
BRIICS	Brazil, Russia, India, Indonesia, China and South Africa
DFAT	Department of Foreign Affairs and Trade
EDB	Ease of Doing Business Index (World Bank)
EIF	entry into force
ESCAP	UN Economic and Social Commission for Asia and the Pacific
EVs	electric vehicles
FDI	foreign direct investment
FIRB	Foreign Investment Review Board
FTA	free trade agreement
FTAAP	Free Trade Area of the Asia-Pacific
G20	The Group of Twenty is the premier international forum for global economic cooperation. Its members are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, United Kingdom, United States, and the European Union

GATT	General Agreement on Tariffs and Trade
GATS	General Agreement on Trade in Services
GDP	gross domestic product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Corporation for International Cooperation)
GST	Goods and Services Tax
HELE	high efficiency, low emissions [coal-fired power station]
HS	Harmonized Commodity Description and Coding System
ICMM	International Council on Mining and Metals
IEA	International Energy Agency
IEEJ	Institute of Energy Economics Japan
IMF	International Monetary Fund
IPRs	intellectual property rights
ISDS	investor-state dispute settlement
ITC	United States International Trade Commission
LPI	Logistics Performance Index (World Bank)
MCI	Mining Contribution Index (ICMM)
METS	mining equipment, technology and services
Mercosur	Mercado Común del Sur (Southern Common Market). Member states are Argentina, Brazil, Paraguay and Uruguay. Venezuela joined in 2012, but was suspended in 2016
MFN	most-favoured-nation
NALCO	National Aluminium Company (India)
NITI	National Institution for Transforming India
NTBs	non-tariff barriers
NTMs	non-tariff measures
OECD	Organisation for Economic Cooperation and Development
PACER Plus	Pacific Agreement on Closer Economic Relations Plus. Signed in 2017 by Australia, New Zealand and nine Pacific island countries - Cook Islands, Kiribati, Nauru, Niue, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu

PSA	partial scope agreement - notified to the WTO under the GATT Enabling Clause for differential and more favourable treatment of developing countries
PwC	PricewaterhouseCoopers
RCEP	Regional Comprehensive Economic Partnership
ROO	rules of origin
RTA	regional trade agreement (equivalent to an FTA)
SOE	state-owned enterprise
STRI	Services Trade Restrictiveness Index (OECD)
TBTs	technical barriers to trade
TFA	WTO Trade Facilitation Agreement
TiSA	(on-going negotiations for the) Trade in Services Agreement
TNC	Trading Nation Consulting
TPP	Trans-Pacific Partnership Agreement
TPP-12	Agreement between Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, Vietnam, and the United States signed on 4 February 2016. It was not ratified as required and did not enter into force
TPP-11	Comprehensive and Progressive Agreement for Trans-Pacific Partnership: trade agreement between TPP parties following US withdrawal. Agreement signed on 8 March 2018
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
USITC	United States International Trade Commission
USTR	United States Trade Representative
WEF	World Economic Forum
WTO	World Trade Organization
WTO+	Refers to provisions in FTAs that go further and deeper into issues covered by the WTO (e.g. technical barriers to trade, services, intellectual property, trade-related investment measures etc)
WTO-X	Refers to provisions in FTAs that go beyond issues covered by the WTO (e.g. competition policy, investment and movement of capital, environmental laws, labour market regulations, measures on visa and asylum etc)

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India

NEW FRONTIERS: SOUTH AND EAST ASIA

The Minerals Council of Australia is the peak national body representing Australia's exploration, mining and minerals processing industry, nationally and internationally, in its contribution to sustainable economic and social development. This publication is part of the overall program of the MCA, as endorsed by its Board of Directors, but does not necessarily reflect the views of individual members of the Board.

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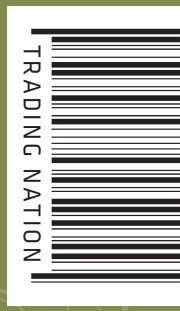
ISBN 978-0-9946078-3-6



India is in the midst of momentous economic and social change. Within a decade it will be the world's most populous country and by mid-century it could be the world's second biggest economy. Australia already has close links with India ranging from trade, investment, business and government to migration, education, tourism and sport.

Mining and mining services are key sectors where this relationship can be expanded. Australia can provide minerals commodities and mining services to help India meet its development challenges. India is a source of investment, skills and business services that can help Australia to realise new economic opportunities. But it will not be plain sailing. This report sets out a policy agenda for Australia and India to take advantage of their complementarities in mining and mining equipment, technology and services.