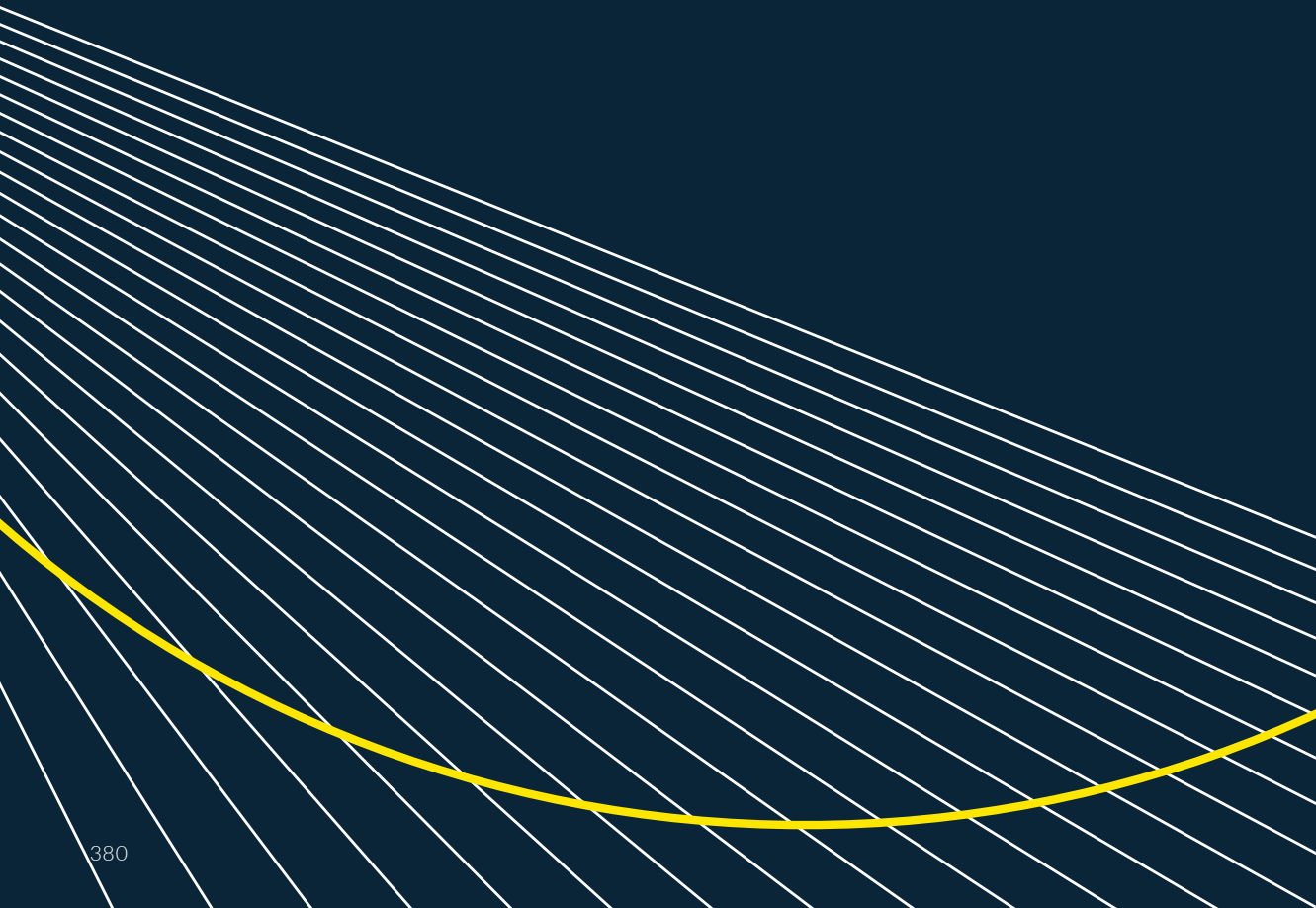


# APPENDIX 1: STATE SNAPSHOTS





## STATES

State Snapshots – Explanatory Note	382
Andhra Pradesh	383
Arunachal Pradesh	386
Assam	388
Bihar	391
Chhattisgarh	394
Delhi – National Capital Region	397
Goa	400
Gujarat	402
Haryana	405
Himachal Pradesh	408
Jammu and Kashmir	411
Jharkhand	414
Karnataka	417
Kerala	420
Madhya Pradesh	423
Maharashtra	426
Manipur	429
Meghalaya	431
Mizoram	434
Nagaland	436
Odisha	438
Punjab	441
Rajasthan	444
Sikkim	447
Tamil Nadu	449
Telangana	452
Tripura	455
Uttar Pradesh	457
Uttarakhand	460
West Bengal	463

## STATE SNAPSHOTS – EXPLANATORY NOTE

A snapshot of each of India's 29 state economies is annexed. Given its significance, the National Capital Region of Delhi is also included, although not a state. These snapshots are designed to introduce major features of each state economy and some of the most significant sectoral opportunities for Australia. They provide an evidence base for the competitiveness of states and offer a starting point to assess the risks and opportunities across states.

The snapshots are not designed to be exhaustive or to be solely relied on for commercial considerations – they are necessarily selective and general in scope and are current as at April 2018.

The snapshots provide information about the growth trajectory of the state economy, the main industry clusters, chief economic priorities, political leadership, the regulatory environment, the state's recent track record of reform and the key challenges.

Each snapshot also provides a table of key indicators for the relevant state, including measures of:

- market size – population, geographic area and GSDP (in particular, real GSDP at constant prices, base year 2011–12)
- the state's rate of urbanisation and the number of cities with a population of a million or more
- income and growth – average growth in GSDP over the period from 2012 to 2017 and per capita income (in particular, per capita net state domestic product at current prices, 2011–12 series)
- sectoral composition of the state economy and the state's contribution to national GDP
- infrastructure – power deficit, road density and rail density
- human development – literacy rate and the gender literacy gap
- the state of public finances – the fiscal deficit to GSDP ratio, debt to GSDP ratio, and health and education expenditure (as a percentage of total public expenditure)

- FDI inflow data from 2000 to 2017 from the Department of Industrial Policy and Promotion.

The snapshots reference a number of state-level rankings:

- The annual ease of doing business rankings released by the Department of Industrial Policy and Promotion ranks states on the degree of implementation of the **Business Reform Action Plan** using the responses of state governments themselves and technical experts. The 2016 ranking covered all 29 states and seven union territories.
- The **Investment Potential Index** developed by the National Council of Applied Economic Research ranks states on the potential for investment and job creation and business perceptions on the ease of doing business. The 2017 Index included 20 major states and Delhi (excluding Sikkim, Goa, Jammu and Kashmir, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura).
- The **Public Affairs Index** developed by Public Affairs India ranks states on the quality of governance, including economic freedom, fiscal management, transparency and accountability, environmental management, delivery of justice, law and order, women and children, social protection and education. The 2017 Index ranked all 29 states and Delhi.
- The **Gender Vulnerability Index** developed by Plan India is a composite index of all 29 states and Delhi, comprised of over 170 indicators ranking states across dimensions of gender equality.

In each of these, a higher ranking corresponds to better performance.

## ANDHRA PRADESH

Andhra Pradesh, on India's southeast coast, ranks among India's most business-friendly states. The Telugu Desam Party government led by Chief Minister Chandrababu Naidu was elected in 2014 after the state's north-western region was carved out to become the separate inland state of Telangana, taking with it the economic base of Hyderabad (it will be the joint capital until 2024). Naidu is leading an ambitious reform agenda to rebuild Andhra Pradesh's economy, attract investment, pilot policy reforms and drive innovation. Naidu led Hyderabad's development

as Chief Minister of undivided Andhra Pradesh from 1994–2004 and is hoping to achieve similar outcomes for the new state. The plans for major state-building projects include a greenfield capital city in Amravati, large-scale solar capacity, a new fintech hub in Visakhapatnam (already boasting the state's highest per capita income) and the Polavaram river-linking irrigation project to drought-proof the state. However, the pace of major infrastructure projects is disappointing expectations and the state is running a fiscal deficit of around \$4.5 billion.

Rankings		Rank
Business Reforms Action Plan 2016		1
State Investment Potential Index 2017		3
Public Affairs Index 2017		14
Gender Vulnerability Index 2017		12

Key statistics	Andhra Pradesh	India
Area (square km)	160 205	
Real GSDP 2016–17 (AUD billion)	109	1 972
Population (million)	49.7 (≈ROK)	1 300
Urbanisation rate (%)	29.6	31.2
Number of million plus cities	3	63
	(Hyderabad, Visakhapatnam, Vijaywada)	

Income and growth		
Per capita income (AUD)	2 433	2 052
NSVA by sector 2015–16 (%)		
Agriculture	34	17
Industry	21	31
Services	45	52
Average GSDP growth 2015–17 (%)	11.3	6.9
State contribution to GDP (%)	4.5	

Key statistics	Andhra Pradesh	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	–0.1	–0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	111.7	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	16.6	20.1
<b>Human development</b>		
Literacy rate (%)	67	73
Gender literacy gap (pp)	15.8	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	2.9	2.9
Debt to GSDP ratio (%)	23	23.9
Health spend (% of total spend)	4.7	5.6
Education spend (% of total spend)	15.3	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	4	

## Economic fundamentals

Andhra Pradesh is one of India's fastest growing states. Although it has achieved double-digit growth over the past three years, this has come off a low base. Chief Minister Naidu is keen to emphasise the Telugu Desam Party government's success in attracting substantial private investment, both domestic and foreign, including 22 per cent of new FDI projects announced in 2016–17. The state's single window clearance system has been regarded a model for other states.

The State Government is aggressively promoting a range of sectors, including agriculture (employing 62 per cent of the state's population), horticulture, aquaculture, food processing, life sciences, textiles, electronics and IT, aerospace and defence, automobiles and auto-components, petroleum, chemicals, energy and mining. Across these sectors, Chief Minister Naidu has emphasised the transformative impact of technological innovation.

Chief Minister Naidu is leading plans for an array of major infrastructure projects. However, a number of firms have expressed frustration at the rate of progress. High-profile foreign investments recently announced include those by major auto manufacturers such as Kia Motors, Isuzu and Hero MotoCorp, and by Taiwanese mobile phone giant Foxconn at the multi-product 7,000 acre Sri City industrial park home to 80 companies.

Bifurcation in 2014 put the public finances of Andhra Pradesh in a precarious position – the state not only inherited a large fiscal deficit (of around \$4.4 billion in 2015–16), but has struggled with a revenue deficit (estimated at \$82.7 million in 2017–18), after the state lost the substantial revenue-producing city of Hyderabad (which contributed 70 per cent of the undivided state's revenue). There are indications that revenue collection is picking up (without substantial tax increases), but there have been concerns raised, including by the RBI, that the state's debt levels are overstretched.

The state's finances are a source of contention with the ruling BJP. Central assistance promised as part of the bifurcation to bridge Andhra Pradesh's revenue deficit and fund the new capital city has been piecemeal. Chief Minister Naidu has repeatedly lobbied the Central Government for Special Category Status (entailing special financial assistance) as well as to argue for the raising of the state's borrowing limits under the *Fiscal Responsibility and Budget Management Act*.

### Current strengths

- India's best state (tied with Telangana) in ease of doing business rankings in 2016.
- Second longest coastline of any Indian state at 974 km.
- Focus on innovation and technology, including India's highest installed solar capacity, a moratorium on new thermal power plants until 2022, adoption of e-governance portals, the digitisation of land records using blockchain technology, and the roll out of a fibre-optic broadband network.
- India's largest exporter of fish and aquaculture produce, a major producer of mangoes, papaya, tomatoes, meat, milk and eggs.
- World's largest deposit of baryte, India's largest bauxite deposit and major ilmenite deposits; India's largest off shore gas field (operational).

### Sectoral opportunities for Australia

- Resources and Energy – mining, mineral processing (particularly for iron ore, gold, base metals and mineral sands) and METS, renewable energy technology (strong potential in solar and wind).
- Infrastructure and urban development – power transmission investment, architectural services, road safety and transport technology solutions; in the short term there will be greenfield roads investment opportunities.

- Fintech – Visakhapatnam is being developed as a fintech hub, including through strengthening fintech capabilities of existing academic institutions.

### Potentially transformative factors

- Enhanced inter-state connectivity – the planned Visakhapatnam-Chennai and Chennai-Bengaluru industrial corridors will bring further growth stimuli and infrastructure investment to the state, including to the state's Rayalaseema region which is relatively less developed than the coastal region.
- Coastal development – two coastal economic zones, two new ports, and an LNG terminal project expected to be developed could considerably expand port traffic.

## ARUNACHAL PRADESH

Arunachal Pradesh is the largest of India's north-eastern states and India's most sparsely populated state. The state is strategically sensitive – it borders Bhutan and Myanmar and is the subject of an ongoing territorial dispute

with China. Arunachal Pradesh is predominantly agrarian, but its economic potential lies in its capacity for hydropower. Much of the state is remote, with difficult terrain.

Rankings	Rank	
Business Reforms Action Plan 2016	31	
State Investment Potential Index 2017	NA	
Public Affairs Index 2017	25	
Gender Vulnerability Index 2017	26	
Key statistics	Arunachal Pradesh	India
Real GSDP 2015–16 (AUD billion)	3.3	1 972
Population (million)	1.4 (≈Estonia)	1 300
Urbanisation rate (%)	22.9	31.2
Number of million plus cities	0	63
Income and growth		
Per capita income (AUD)	2 434	2 052
NSVA by sector 2015–16 (%)		
Agriculture	41	17
Industry	27	31
Services	32	52
Average GSDP growth 2015–16 (%)	16.5	6.6
State contribution to GDP (%)	0.2	
Infrastructure		
Power deficit 2016–17 (%)	-2.1	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	30.3	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	0.1	20.1
Human development		
Literacy rate (%)	65.4	73
Gender literacy gap (pp)	14.1	16.7

Key statistics	Arunachal Pradesh	India
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	2.5	2.9
Debt to GSDP ratio (%)	23.9	23.9
Health spend (% of total spend)	6.3	5.6
Education spend (% of total spend)	15.3	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of all north-east states)	0.03	

## Economic fundamentals

Arunachal Pradesh remains largely agrarian, producing tea, fruit, plywood, cane and silk. The state recorded one of India's fastest growth rates with GSDP of 16.5 per cent in 2015–16, but this comes off a very low base. The state's strategic sensitivities can overshadow economic progress.

The state has a poor stock of infrastructure – there are no commercial airports in operation, poor roads and limited railway connections. Nonetheless, the state's potential for hydropower generation is among the best in India, due to its large river valleys. The potential hydropower capacity of these river valleys is estimated at around 60,000 MW, or approximately 22 per cent of India's total capacity. As of June 2016, the installed hydropower capacity in Arunachal Pradesh was 97.6 MW. The state is developing some of this potential – projects in the pipeline include Subansiri Lower (estimated 2,000 MW capacity), the Demwa Lower (estimated 1,750 MW capacity) and the 2,880 MW Dibag Multipurpose Project, one of India's largest multi-purpose dam projects.

## Current strengths

- Arunachal Pradesh's tourism industry is developing – the state attracts a small number of eco and adventure tourists. In 2015–16, foreign tourist arrivals in the state stood at 5,700 tourists.

## Potentially transformative factors

- Increased road and rail connectivity – the proposed East-West Industrial Corridor aims to improve connectivity of north-eastern states with the rest of India.
- A slated revival of the bamboo economy could benefit the state in terms of increased farmer income.



## ASSAM

Assam is the most populous and largest economy of India's north-eastern states. There is a renewed drive to develop this historically underdeveloped and insurgency-affected collection of states, which are also a priority under India's 'Act East' policy as they directly interface with India's eastern neighbours. Assam represents a gateway to the north-east. The state's economy is primarily agricultural, with fertile land running along the Brahmaputra River. Both rural and urban poverty remain higher than the national average. Although

the state has yet to develop large-scale industries, it accounts for half of India's tea production and has minor oil reserves, as well as India's highest production of onshore natural gas. Attempts to raise the state's economic prospects included its first global investor summit in February 2018. For decades, anxiety about illegal immigration from Bangladesh has driven social conflict in Assam. Security concerns remain, including in remote areas such as the Barak Valley. Assam experiences annual flooding.

Rankings	Rank
Business Reforms Action Plan 2016	24
State Investment Potential Index 2017	17
Public Affairs Index 2017	26
Gender Vulnerability Index 2017	24

Key statistics	Assam	India
Area (square km)	78 438	
Real GSDP 2015–16 (AUD billion)	36	1 972
Population (million)	31.2 (≈Malaysia)	1 300
Urbanisation rate (%)	14.1	31.2
Number of million plus cities	1 (Guwahati)	63

Income and growth		
Per capita income	1 203	2 052
NSVA by sector 2015–16 (%)		
Agriculture	20	17
Industry	32	31
Services	48	52
Average GSDP growth 2012–16 (%)	6.8	6.9
State contribution to GDP (%)	1.6	

Key statistics	Assam	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	-3.6	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	416.3	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	31.5	20.1
<b>Human development</b>		
Literacy rate (%)	72.2	73
Gender literacy gap (pp)	11.5	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	2.6	2.9
Debt to GSDP ratio (%)	18.8	23.9
Health spend (% of total spend)	5.3	5.6
Education spend (% of total spend)	21	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of all north-east states)	0.03	

## Economic fundamentals

Assam's economy is predominantly agrarian with 85 per cent of the state's population living in rural areas and around 70 per cent dependent on agriculture for their livelihood. Low agricultural productivity is driven by inadequate irrigation, perennial floods, and the persistence of traditional agricultural practices. The state's urbanisation rate is well below the national average at 14.1 per cent. Assam also lags the national average in terms of employment, with over 1.5 million unemployed youth in 2017–18. Assam has the highest maternal mortality rate of all Indian states, almost double the national average, with around 328 deaths per 100,000 live births (three quarters of these deaths are in tea plantations).

Assam's agriculture sector's growth declined from 16.5 per cent to 0.3 per cent between 2012–13 to 2014–15, while industrial growth increased from -5.5 to 5.1 per cent and services growth increased from 2.1 to 12.2 per cent over the same period.

Assam's industrial output is concentrated on petroleum, natural gas, food production, forestry and textiles. The state produces around half of India's tea production and over 10 per cent of world production (the tea industry employs almost a million plantation workers). Small scale industries include sugar, jute, silk, paper, handloom, sericulture and a range of traditional handicrafts, such as bamboo and cane products.

Assam has not attracted much private investment, but a renewed push to attract investment has identified a number of focus sectors, including agriculture and food processing, organic food, bamboo, textiles and handicrafts, inland water transport, river front development and logistics, as well as IT, pharmaceuticals, plastics, petroleum and natural gas.

State finances have been problematic in recent years. While the state's special category status entitles it to grants from the Central Government, internal revenue generation has stagnated, with

the state managing to collect only 25–35 per cent of the revenues collected by states of similar size. The World Bank is supporting the digitisation of systems, rationalisation of revenue collection, and improved finance management practices.

### Current strengths

- Reserves of oil, natural gas, coal, granite and limestone; one of Assam's major petroleum refineries is the Numaligarh Refinery Project and India's oldest oil refinery is at Digboi.
- Major producer of tea and third in India for raw silk production.
- Good rail connectivity with a rail density above the national average.
- Ample water resources.

### Sectoral opportunities for Australia

- Water – inland water ways (as part of a broader push for greater connectivity, the Assam Government, with World Bank support, is investing in infrastructure for inland water transport; the Australian Government has contributed to this objective through the regional aid program).

### Potentially transformative factors

- Assam's first global investor summit in February 2018 concentrated resources on the state's investment climate, including the introduction of a slew of new policies, including on pharmaceuticals, tech start-ups, the sugar sector, solar energy and biotechnology.
- Infrastructure upgrade – infrastructure is widely acknowledged to be inadequate in Assam. A number of new bridges over the Brahmaputra River, a significant expansion of the rail network and industrial corridors alongside the Brahmaputra River have been proposed.

## BIHAR

The northern hinterland state of Bihar, India's third most populous, has demonstrated one of the most dramatic turnarounds in economic performance of all states, consistently recording high rates of growth from a very low base. Much of this has occurred under the leadership of Chief Minister Nitish Kumar, who re-joined the ruling BJP in 2017. But Bihar remains one of India's most impoverished states; its per capita income, literacy rate and gender equality indicators are India's

lowest. The state has done well to improve law and order and target welfare to the poor. But in spite of the potential of its young demographics, Bihar remains uncompetitive across the spectrum of economic and human development indicators. Its political culture is undergoing a shift to a focus on governance, but recent improvements have been diluted by bureaucratic blockages and persistent caste-based politics.

Rankings	Rank	
Business Reforms Action Plan 2016	16	
State Investment Potential Index 2017	19	
Public Affairs Index 2017	30	
Gender Vulnerability Index 2017	30	

Key statistics	Bihar	India
Area (square km)	94 163	
Real GSDP 2016-17 (AUD billion)	65.9	1 972
Population (million)	104.1 (=Ethiopia)	1 300
Urbanisation rate (%)	11.3	31.2
Number of million plus cities	1 (Patna)	63

Income and growth		
Per capita income	708	2 052
NSVA by sector 2015-16 (%)		
Agriculture	22	17
Industry	20	31
Services	58	52
Average GSDP growth 2012-17 (%)	8.4	6.9
State contribution to GDP (%)	2.7	

Key statistics	Bihar	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	-2.3	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	218.8	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	38.8	20.1
<b>Human development</b>		
Literacy rate (%)	61.8	73
Gender literacy gap (pp)	20.1	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3.7	2.9
Debt to GSDP ratio (%)	28	23.9
Health spend (% of total spend)	5.3	5.6
Education spend (% of total spend)	15.8	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of Jharkhand)	0.03	

## Economic fundamentals

Although the most densely populated, Bihar ranks among India's least urbanised states; 89 per cent of the population is rural and 76 per cent dependent on agriculture for their livelihood. Bihar's economy is heavily dominated by agriculture and associated sectors, which account for over 22 per cent of GSDP. Agriculture was firmly entrenched after the division of the state in 2000 saw most mineral resources go to the newly created state of Jharkhand. But very poor agricultural productivity and some of the smallest landholdings means any growth in Bihar's economy is largely driven by the services sector, which comprises 59 per cent of GSDP, including hospitality, transport, construction and telecommunication services.

Bihar has the highest share of any state of people without power and the lowest teledensity. But it is on the way to rapidly expand electrification; the availability of energy has grown by 120 per cent from 2011–12 to 2016–17. Although the state's finances are heavily dependent on support from the federal government, the debt to GSDP ratio is well below 25 per cent and tax revenue has steadily increased by around 20 per cent annually since 2011–12. Bihar has among the highest rates of unemployment and outward labour migration – millions of Biharis leave the state for temporary and informal low-wage construction and agricultural work across India as well as in Nepal, Bhutan and in the Gulf.

## Current strengths

- High rail density.
- Eighth largest producer of fruits and vegetables; largest producer of lychees and major producer of wheat, sugarcane, sesame, milk and tobacco.
- Ample groundwater, particularly in northern Bihar.
- Second fastest growth in the number of registered vehicles.
- A long border with Nepal, including multiple trade transit points for Indo-Nepal trade.
- Tourism potential, including major Buddhist and other tourist circuits of historical and religious significance.

## Sectoral opportunities for Australia

- Agriculture – food processing, bovine genetics, cold chain logistics, and other specialised services related to precision farming, post-harvest solutions, logistics, seed treatment and soil health.
- Education (vocational) – large scale demand for skill development, but strained capacity to pay.

## Potentially transformative factors

- Progress on land acquisition and power reform – two issues which are seen as the greatest obstacles to investment.
- Urbanisation – continued outward labour migration of rural Biharis may result in persistently slow urbanisation, but if the state's capital and chief economic centre, Patna, continues to rapidly expand, it could provide a growth stimulus; Central and State Government funding is being deployed to develop Patna as a smart city.
- Demographic dividend – Bihar has one of India's youngest populations which could offer a greater dividend in the long term than relatively older peninsular Indian states.
- Institutional overhaul – improved transparency, public administration and the decline of clientelist identity politics would help to lift the state's persistent economic underperformance; these are persistent features and unlikely to shift in the short term.

## CHHATTISGARH

Located in central India, landlocked Chhattisgarh is one of India's poorest states, despite its mineral wealth of coal and iron ore resources. Chhattisgarh is a leading state in mining production. But to avoid an overreliance on the mining industry for growth, Chhattisgarh's government is attempting

to diversify the state's economy. The state hopes the low cost of doing business, cheap power and inexpensive land will help attract foreign investment. The state continues to be affected by persistent Maoist insurgency.

Rankings	Rank	
Business Reforms Action Plan 2016	4	
State Investment Potential Index 2017	14	
Public Affairs Index 2017	13	
Gender Vulnerability Index 2017	15	

Key statistics	Chhattisgarh	India
Area (square km)	135 192	
Real GSDP 2016-17 (AUD billion)	45	1 972
Population (million)	25.5 (≈Australia)	1 300
Urbanisation rate (%)	23.2	31.2
Number of million plus cities	2 (Raipur, Durg-Bhilainagar)	63

Income and growth		
Per capita income	1 824	2 052
NSVA by sector 2015-16 (%)		
Agriculture	19	17
Industry	44	31
Services	37	52
Average GSDP growth 2012-17 (%)	7.1	6.9
State contribution to GDP (%)	1.8	

Infrastructure		
Power deficit 2016-17 (%)	-0.2	-0.7
Road density 2014-15 (km/100 km <sup>2</sup> )	72.1	139.1
Rail density 2014-15 (km/1,000 km <sup>2</sup> )	8.8	20.1

Key statistics	Chhattisgarh	India
<b>Human development</b>		
Literacy rate (%)	70.3	73
Gender literacy gap (pp)	20.9	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	2.8	2.9
Debt to GSDP ratio (%)	15.8	23.9
Health spend (% of total spend)	5.7	5.6
Education spend (% of total spend)	19.7	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	4	

## Economic fundamentals

Chhattisgarh is an underdeveloped but resource-rich state of 25.5 million people. Even though the state has the lowest share of non-farm employment in India, Chhattisgarh produces 27 per cent of India's iron and steel, 20 per cent of iron ore and 15 per cent of aluminium. Some of the best quality iron ore deposits in the world are located in the south of Chhattisgarh. The state is also endowed with considerable reserves of bauxite, limestone and quartzite, and is the only state in India that produces tin concentrates. The abundant limestone reserves support a strong cement sector. Disputes between mining interests and tribal/Indigenous communities is a concern in Chhattisgarh.

Non-mining industries include power, IT and IT-enabling services, and biotechnology. Chhattisgarh is primarily dependent on industry, which contributes 44 per cent to GSDP.

Chhattisgarh is one of the greenest states in India, with 44 per cent of its landmass under lush forests. Chhattisgarh is endowed with 312 species

of commercially traded medicinal plants, helping the state contribute 17 per cent of India's total exports of herbs and medicinal plants.

Chhattisgarh, with its budget surplus and low interest burden leading, stands out as one of India's better managed states fiscally. It ranked fourth in 2016 among Indian states on the ease of doing business.

Chhattisgarh is a power hub, with a significant power surplus. This has helped Chhattisgarh achieve an annual growth rate of 7.23 per cent over the five years to 2017, higher than the national average.

Chhattisgarh is making significant investments in industrial infrastructure. The Chhattisgarh State Industrial Development Corporation has set up industrial growth centres, five industrial parks and three integrated infrastructure development centres.

About one third of Chhattisgarh's population lives below the extreme poverty line and 93 per cent of the state's population are considered to be poor.



## Current strengths

- Strong public finances.
- Ease of doing business – approvals for clearances for new business are considerably faster than average, as is the time taken to connect to water supply.
- Stable power supply – Chhattisgarh is one of the few states that has surplus power; the Korba district in Chhattisgarh is known as the power capital of India.

## Sectoral opportunities for Australia

- Mining, including METS, and mining-related education/skills.

## Potentially transformative factors

- Infrastructure development – Chhattisgarh is embarking on a series of roads, bridges and rail infrastructure investments, allocating billions of dollars to improving connectivity for industry.
- Solar panel hub – as one of India's leading producers of metals such as iron and tin, Chhattisgarh is a viable destination for setting up manufacturing industries for solar panels and solar modules; the state approved in 2017 a new Solar Energy Policy, which offers grid connectivity to rooftop and small scale solar power plants up to 10 kilowatts and exempts captive solar power producers from electricity taxes.

## DELHI – NATIONAL CAPITAL REGION

Delhi NCR is a planning region consisting the seat of Central Government in New Delhi and the surrounding districts of three north Indian states – Rajasthan, Haryana and Uttar Pradesh. The NCR ranks as one of the world's largest urban agglomerations stretching over 58,000 square km with over 46 million people. It accounts for 8 per cent of India's GDP, over a fifth of India's FDI inflows and attracts a vast number of workers from across India. The region has multiple special economic zones and industrial clusters, including Noida and Gurugram, known for their IT services sectors, Faridabad, an industrial centre, Meerut, an education hub, as well as Ghaziabad, Alwar

and Sonapat. The consumer base in the region is sophisticated; New Delhi's per capita income is almost three times the national average. Despite improvements in physical infrastructure and India's most extensive road network, congestion, air pollution, water and power shortages remain major concerns. The region's poor record on violence against women continues to generate national debate. The NCR is a common base for Australian business in India.

Note the table below relates to the National Capital Territory of Delhi, not the wider National Capital Region.

Rankings	Rank	
Business Reforms Action Plan 2016	19	
State Investment Potential Index 2017	2	
Public Affairs Index 2017	22	
Gender Vulnerability Index 2017	28	
Key statistics	Delhi	India
Area (square km)	1 483	
Real GSDP 2016–17 (AUD billion)	99	1 972
Population (million)	20 (≈Romania)	1 300
Urbanisation rate (%)	97.5	31.2
Income and growth		
Per capita income	6 025	2 052
NSVA by sector 2015–16 (%)		
Agriculture	1	17
Industry	17	31
Services	82	52
Average GSDP growth 2015–17 (%)	8.5	6.9
State contribution to GDP (%)	4.1	

Key statistics	Delhi	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	–0.1	–0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	2 166.7	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	123.6	20.1
<b>Human development</b>		
Literacy rate (%)	80.8	73
Gender literacy gap (pp)	10.1	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	0.5	2.9
Debt to GSDP ratio (%)	5.9	23.9
Health spend (% of total spend)	11*	5.6
Education spend (% of total spend)	25*	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	20	

\*New Delhi is an outlier in its expenditure on education and health as most of its police and rural development are funded by the Central Government.

## Economic fundamentals

The NCR derives the greatest share of its GDP from New Delhi, followed by the Haryana, Uttar Pradesh and Rajasthan sub-regions in that order. There is wide variation in economic conditions across these sub-regions. While New Delhi has an urbanisation rate of 97.5 per cent, the Rajasthan sub-region is as low as 18 per cent. As a whole, the NCR's urbanisation rate is twice the national average, at 62.5 per cent, and each sub-region is expected to continue to rapidly urbanise in the future.

At the centre of NCR's economy is New Delhi's services sectors, including communications, transport, construction, real estate, financial services, insurance and tourism. Many firms in the IT-enabled services, e-commerce, business process outsourcing, and design fields are concentrated in the cities of Gurugram and Noida.

The NCR is also a hub of automotive manufacturing, including major Japanese manufacturers in Gurugram and Alwar. New Delhi has a presence of garment and furniture manufacturers, as well as electrical machinery production and repair services. Faridabad is a manufacturing centre for small-scale mechanical and engineering units. The NCR's economy also includes agriculture (predominantly in the Rajasthan and Uttar Pradesh sub-regions).

Governance of the NCR is complicated by the fact that it is split between the Central Government, four sub-national governments (that of Delhi, Haryana, Rajasthan and Uttar Pradesh) as well as an array of urban bodies. The NCR Planning Body, formed in 1985, is the institution charged with formulating long term strategy to promote growth and balanced development of the region.

## Current strengths

- Proximity to the seat of Central Government and policy-making.
- Strong connectivity – Delhi international airport is among the busiest airports in Asia; the NCR has an excellent network of railways, roadways, and metro rail, including good connections between New Delhi and its satellite cities; the density of state and national highways is almost double the national average.
- The NCR is India's retail capital, with the largest number of shopping malls and luxury retailers.
- The NCR is home to leading education, research and scientific institutions.

## Sectoral opportunities for Australia

- Roads, urban infrastructure, energy, architecture and design, green building technology.

- Water management.
- Education, training and skill development.
- Hospitals, including consultancy and fit-outs.
- Research partnerships with industry and educational institutions.
- ICT and IT-enabled services consulting.
- Agriculture, horticulture and dairy.
- Sport.

## Potentially transformative factors

- The Delhi Mumbai Industrial Corridor is designed to facilitate large-scale industrial activity in the region and is anticipated to generate substantial employment and growth opportunities.

## GOA

Goa on India's western coast is the smallest state by area, home to just 1.5 million people, but the wealthiest state in per capita terms. The cultural legacy of Portuguese colonialism and the state's pristine coastline along the Arabian Sea make Goa one of India's major tourist drawcards, attracting almost six million visitors annually. Other major industries include mining and pharmaceuticals.

Goa also stands out for its high literacy rate. Goa's economic success has perhaps kept the state from pursuing vigorously the same level of foreign investment as other states. Despite efforts to improve its ease of doing business ranking, Goa ranked 21 in 2016. Businesses report difficulties in the availability of land, power, raw materials and skilled labour.

Rankings	Rank
Business Reforms Action Plan 2016	21
State Investment Potential Index 2017	NA
Public Affairs Index 2017	8
Gender Vulnerability Index 2017	1

Key statistics	Goa	India
Area (square km)	3 702	
Real GSDP 2015–16 (AUD billion)	8.9	1 972
Population (million)	1.5 (≈Bahrain)	1 300
Urbanisation rate (%)	62.1	31.2
Number of million plus cities	0	63

Income and growth		
Per capita income	6 502	2 052
NSVA by sector 2015–16 (%)		
Agriculture	8	17
Industry	55	31
Services	37	52
GSDP growth 2015–16 (%)	11.5	6.9
State contribution to GDP (%)	0.4	

Infrastructure		
Power deficit 2016–17 (%)	0	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	395.2	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	18.6	20.1

Key statistics	Goa	India
<b>Human development</b>		
Literacy rate (%)	88.7	73
Gender literacy gap (pp)	11	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	5	2.9
Debt to GSDP ratio (%)	23.9	23.9
Health spend (% of total spend)	6	5.6
Education spend (% of total spend)	14.2	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	0.3	

## Economic fundamentals

Goa is India's wealthiest state in terms of per capita GSDP and also one of the fastest growing. Goa grew by 9.75 per cent annually between 2005–06 and 2015–16. Goa's economic growth is driven by the strong performance of tourism, mining and pharmaceuticals sectors. Goa's high literacy rate – at 88.7 per cent, making it the third highest in India – supports the state's knowledge-based industries such as biotechnology and IT.

Tourism is the highest contributor to GSDP in the service sector. Goa received about six million tourist arrivals in 2016, with foreign tourists – predominantly from Europe – comprising 10 per cent of the total.

Major minerals produced in Goa include manganese, ferro-manganese, bauxite and silica sand. Goa is also one of India's top producers of iron ore.

Navigating environmental interests is a key economic challenge for the state. Mining ventures face pressure from environmental groups which have succeeded in having the courts intervene to halt or limit production from time to time.

Goa's strong social development indicators reflect the state's wealth. Goa is one of the few states in India to be recognised as achieving full rural electrification. Goa was rated the safest state in

India for women in 2017 according to the Plan India Gender Vulnerability Index.

## Current strengths

- Third highest literacy rate in India.
- Wealthiest state in India by per capita GSDP.
- Major tourist destination.

## Sectoral opportunities for Australia

- VET, including skills training in the tourism sector.
- Mining and METS.

## Potentially transformative factors

- Despite its high performance across social and economic indicators, Goa is not rated among the 20 easiest states in which to do business in India; attracting foreign capital, particularly if Goa plans to improve the productivity of its mining sector and increase other areas of industrial production, will depend on Goa transforming its business culture and approvals processes.

## GUJARAT

Strategically located on India's west coast as a gateway to both India's landlocked northern states and to seaborne export markets, Gujarat is India's fifth largest state economy. Its above average per capita income, mercantile culture and wide diaspora plugged into global trading networks make Gujarat a major drawcard for foreign investors. However the nature of the economy in this large industrial centre does not lend itself to many Australian companies that are outgunned by major foreign direct investments from global multinationals. Gujarat receives significant

political and economic attention. During Prime Minister Modi's time as Chief Minister of the state from 2001–2014, Gujarat's strong economic performance – driven primarily by infrastructure development, public service accountability, fiscal consolidation and streamlining regulations for business – became known as the 'Gujarat Model.' Foreign investment has come off the peak seen during Modi's tenure as Chief Minister – but remains relatively high – and job creation, particularly for young people, is slow.

Rankings	Rank
Business Reforms Action Plan 2016	3
State Investment Potential Index 2017	1
Public Affairs Index 2017	3
Gender Vulnerability Index 2017	16

Key statistics	Gujarat	India
Area (square km)	196 244	
Real GSDP 2015–16 (AUD billion)	179	1 972
Population (million)	60.4 (≈Italy)	1 300
Urbanisation rate (%)	42.6	31.2
Number of million plus cities	4	63
	(Ahmedabad, Surat, Vadodara, Rajkot)	

Income and growth		
Per capita income	2 491	2 052
NSVA by sector 2015–16 (%)		
Agriculture	18	17
Industry	45	31
Services	37	52
Average GSDP growth 2012–16 (%)	9.9	6.9
State contribution to GDP (%)	9.6	

Key statistics	Gujarat	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	0	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	93	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	26.8	20.1
<b>Human development</b>		
Literacy rate (%)	78	73
Gender literacy gap (pp)	16.5	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	2.2	2.9
Debt to GSDP ratio (%)	22.5	23.9
Health spend (% of total spend)	5.4	5.6
Education spend (% of total spend)	14.1	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	5	

## Economic fundamentals

Gujarat is one of India's most prosperous states and its per capita income is 40 per cent higher than the national average. With just 5 per cent of India's population and 6 per cent of its land mass, Gujarat accounts for 9 per cent of India's GDP, almost a tenth of its workforce and 22 per cent of its exports. Nearly two-thirds of Gujarat's population of 60.4 million lies in the working age cohort of 15–59 years.

From 2012 to 2016, Gujarat's GSDP growth averaged nearly 10 per cent, far outpacing the national average. Gujarat's industrial strengths include engineering and automotive manufacturing, food and agribusiness, textiles, gems, diamonds and jewellery, minerals and mining, port and shipbuilding, chemicals, petrochemicals, ceramics and pharmaceuticals. Gujarat accounts for 62 per cent of India's petrochemical production and 72 per cent of the world's share of processed diamonds. Gujarat is also a mineral rich state with large reserves of oil

and gas. It produces the highest amount of crude oil in India.

Alongside a stable electricity supply, the airports, ports and roads in Gujarat are high quality. Firms in Gujarat report that gaining and renewing regulatory approvals takes considerably less time than elsewhere in India. The state is an attractive destination for foreign investment and has often made big concessions for major projects.

Despite a lean bureaucracy, in 2016–17 Gujarat's debt stood at 22.5 per cent of GSDP, higher than comparable major coastal states. Gujarat's tax-to-GDP ratio, estimated at 6.5 per cent in 2016–17, is lower than most states, highlighting both a relatively inefficient tax collection system and the provision of tax incentives for manufacturing, boosting GSDP.

For all its success in facilitating foreign investment, developing world-class infrastructure and ushering in a long period of strong economic growth, the 'Gujarat model' has been criticised for failing to improve the lives of the state's poor.



The state's nutritional outcomes place it nearly at the bottom of league tables of Indian states. It is also among the slowest states to improve educational attainment.

Lagging social indices, wide disparity of growth within the state, and perceptions of communal tensions point to deeper cultural, social and political factors unique to Gujarat – Gujarat is a major base for the Hindu nationalist agenda.

Like other Indian states, many in Gujarat's minority Muslim population do not perceive the same improvement in economic conditions as the Hindu majority. The communal violence that swept through Gujarat in 2002 killed thousands and displaced many.

Gujarat is largely a heavy-industrial state with much of the economic activity occurring in chemicals, ports, and manufacturing; sectors that are often more suited to heavyweight foreign companies, such as those already engaged in market. These industry sectors do not map particularly well to the capability of Australian business looking to do business with India. Australian businesses need to engage through education, skilling and services as an adjunct to these larger projects if they are to be successful.

### Current strengths

- Regularly ranked at the top of World Bank's Ease of Doing Business surveys – ranked third in 2016 and first in 2015. Particularly strong in regulatory processes.
- Gujarat accounts for about a fifth of India's coastline and is well situated for trade routes to the Persian Gulf, Africa and South-East Asia; Gujarat is a major landing port for Australian commodities and coal in western India.
- Vibrant Gujarat, a biennial economic and investment conference, has been dubbed 'India's Davos' and regularly attracts corporate leaders, senior government officials, large foreign investors and international dignitaries.
- A strong and successful diaspora network, including sizeable numbers in the United Kingdom, United States and Australia, with a long history of entrepreneurship.

### Sectoral opportunities for Australia

- Education, training and skill development.
- Photovoltaic technologies.
- Waste water treatment and water technologies.
- Renewable energy, bioenergy (waste to energy, landfill gas).
- Food processing, logistics.
- Agriculture commodities, horticulture, agriculture business technology and services, dairy technology.
- Roads, ports, urban infrastructure, energy, architecture and design services, green buildings.

### Potentially transformative factors

- Enhanced inter-state and intra-state connectivity – the planned Mumbai-Ahmedabad high-speed rail corridor, is under development with Japanese expertise and capital and set for completion in 2022, though delays cannot be ruled out. It would cut travel time from six hours to two. The government is also undertaking significant infrastructure upgrades within the state, including the Ahmedabad metro and several new projects connecting far reaches of the state.
- Development of financial industry – the Gujarat International Finance Tec-City, a brainchild of Modi, is intended to bring back trading volumes in financial markets that India lost to off-shore destinations or tax havens. It is touted as India's answer to Singapore and Dubai for derivatives trading but has yet to gain traction.
- Development of domestic tourism – Gujarat is investing heavily in attracting domestic tourists and drawing back diaspora to the state. Success here would diversify the concentrated growth centres in the economy, potentially boost wages and increase investments in services and human capital formation.

## HARYANA

Surrounding New Delhi on three sides, Haryana has benefited from its proximity to India's capital. The state remains primarily agricultural, with 65 to 70 per cent of the population relying on the sector. It is India's largest basmati rice exporter. However, Haryana is also a major and growing industrial centre with a high per capita income. The state has emerged as a key hub for the automobile industry and a preferred destination

for IT and IT-enabled services in Gurugram. The state has demonstrated a strong appetite for reform and it is attempting to capitalise on its manufacturing capacity and micro, small and medium enterprises. Comprising 1.3 per cent of India's territory, 2 per cent of its population and contributing 3.6 per cent of the nation's GDP, Haryana is a dynamic state punching above its weight.

Rankings	Rank	
Business Reforms Action Plan 2016	6	
State Investment Potential Index 2017	4	
Public Affairs Index 2017	15	
Gender Vulnerability Index 2017	19	

Key statistics	Haryana	India
Area (square km)	44 212	
Real GSDP 2016-17 (AUD billion)	86	1 972
Population (million)	25.3 (≈Australia)	1 300
Urbanisation rate (%)	34.9	31.2
Number of million plus cities	2 (Faridabad, Gurugram)	63

Income and growth		
Per capita income	3 582	2 052
NSVA by sector 2015-16 (%)		
Agriculture	20	17
Industry	30	31
Services	50	52
Average GSDP growth 2012-17 (%)	8.3	6.9
State contribution to GDP (%)	3.6	

Key statistics	Haryana	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	0	–0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	104.7	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	36.9	20.1
<b>Human development</b>		
Literacy rate (%)	75.6	73
Gender literacy gap (pp)	18.6	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	4.6	2.9
Debt to GSDP ratio (%)	26.3	23.9
Health spend (% of total spend)	4.3	5.6
Education spend (% of total spend)	15.3	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of Punjab)	0.4	

## Economic fundamentals

Haryana has a strong agricultural sector, with wheat, rice, sugarcane, cotton and oilseeds its principal crops. It is also known for its high-yield Murrah buffalo.

Haryana also has a well-established industrial base with a large pool of skilled labour. The state has pursued a strategy of infrastructure-led development, leveraging its significant advantage of surrounding New Delhi on three sides. Large manufacturing firms in the state have access to good power, roads and railways. The state's physical infrastructure includes two international airports, five civil airports, and above average rail and road density, including 21 national highways. There is very good road connectivity to rural areas.

Despite the state's relatively lower literacy rate, Haryana hosts a large number of technical colleges (159 engineering colleges, 123 industrial training institutes, 187 polytechnic institutes) as well as 171 management colleges and a combined total of 37 universities. Employment opportunities for educated urban youth are generally positive.

Outside developed city centres, however, social structures remain intensely conservative and women face significant barriers to economic participation. The state's sex ratio is particularly poor (834 girls to 1,000 boys aged 0–6) due to sex selection and female infanticide.

## Current strengths

- Proximity to key markets in the National Capital Region.
- Haryana dominates the automobile and light engineering space in India, manufacturing 80 per cent of excavators, 52 per cent of cranes, 50 per cent of cars and 33 per cent of two-wheeled vehicles in India; 50 of the 250 largest Original Equipment Manufacturers in India are located in Haryana.
- Haryana is the third largest exporter of software from India.
- India's fourth largest producer of cotton, Haryana exports readymade garments internationally and its textile sector employs around one million workers.

## Sectoral opportunities for Australia

- Agriculture – specialised agribusiness opportunities given Haryana's strengths in food grains and dairy.
- Education and VET – Haryana is a major source of Australian students.
- Advanced manufacturing – Haryana is a major automotive hub.

## Potentially transformative factors

- The Delhi Mumbai Industrial Corridor, a part of which will run through Haryana, is expected to provide a growth stimulus to the region.

## HIMACHAL PRADESH

Himachal Pradesh, a small mountainous state in the Indian Himalayas, has demonstrated a strong record of poverty reduction and human development over the past decade, but remains a slower-growth economy. It is one of India's least urbanised states, with 90 per cent of the population in rural areas. Less than 20 per cent of the state is arable and much of it is inaccessible.

The state economy is driven by hydropower generation, agriculture, horticulture, and tourism. Difficult terrain, remoteness and severe climate have hindered large-scale industrial development. But the state stands apart from others in north India for its reputation for stability, inclusivity and good governance.

Rankings		Rank
Business Reforms Action Plan 2016		17
State Investment Potential Index 2017		15
Public Affairs Index 2017		4
Gender Vulnerability Index 2017		6

Key statistics	Himachal Pradesh	India
Real GSDP 2015–16 (AUD billion)	21	1 972
Population (million)	6.9 (=Bulgaria)	1 300
Urbanisation rate (%)	10	31.2
Number of million plus cities	0	63

Income and growth		
Per capita income	2 904	2 052
NSVA by sector 2015–16 (%)		
Agriculture	14	17
Industry	39	31
Services	47	52
Average GSDP growth 2012–17 (%)	7.7	6.9
State contribution to GDP (%)	0.9	

Infrastructure		
Power deficit 2016–17 (%)	-0.6	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	99.9	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	5.3	20.1

Key statistics	Himachal Pradesh	India
<b>Human development</b>		
Literacy rate (%)	82.8	73
Gender literacy gap (pp)	14.2	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3.3	2.9
Debt to GSDP ratio (%)	34.4	23.9
Health spend (% of total spend)	5.9	5.6
Education spend (% of total spend)	19.1	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes Punjab and Haryana)	0.4	

## Economic fundamentals

Agriculture is the mainstay of Himachal Pradesh's largely rural economy. The state's topography, altitude and fertile soils make it well suited to horticulture and it is India's second largest producer of apples.

Tourism, including pilgrimage and adventure tourism, contributes 7.2 per cent to GSDP. Known for its scenic beauty, the state attracted 17.9 million domestic tourists and 450,000 foreign tourists in 2016.

The state has tapped around 38 per cent of its hydropower potential of over 27,400 MW, which is around a quarter of India's total potential. Around 16.5 per cent of the state's industrial output comes from the manufacture of pharmaceuticals, medicinal chemical and botanical products.

Himachal Pradesh outperforms most Indian states on human development indicators. Between 1993 and 2011, poverty in rural areas,

where 90 per cent of the state's population lives, decreased fourfold. Life expectancy and workforce participation rates, particularly for women, are among India's best. Much of this is as a result of government investment in public services, enabled by the greater fiscal space the state has enjoyed from its special category status (entitling states to greater assistance from the Central Government).

The state's recent performance on educational outcomes is exceptional by north Indian standards. Over the five years to 2017, the state has opened 193 primary schools, commenced vocational education in 873 secondary schools, opened 65 degree colleges, and established three medical colleges, three engineering colleges, a pharmacy college and 40 training institutes. Solid public investment in education has culminated in a 15–30 per cent increase in the learning outcomes of primary students in 2016–17.

### Current strengths

- A reputation for stable government and sound institutions.
- Major producer of hydroelectric energy, and strong potential in wind energy.
- Major producer of horticulture, including apples, and floriculture.
- One of India's largest pharmaceutical hubs in Nalagarh.
- Innovative in sustainability practices – first state in India to have banned plastic bags, aims to become carbon neutral by 2020.
- Strongly marketed state tourism branding and tourism potential.

### Sectoral opportunities for Australia

- Education and VET opportunities.
- Resources – given the state's hydropower and wind energy potential.
- Niche agribusiness opportunities.

### Potentially transformative factors

- Greater urbanisation in one of India's least urbanised states could help push the state to a higher growth trajectory.

## JAMMU AND KASHMIR

Jammu and Kashmir is India's northern-most state and the only state with a Muslim-majority population. Parts of the state are the subject of longstanding territorial disputes between India, Pakistan and China. Militant insurgency in the Kashmir Valley since the 1990s has included competing claims for autonomy, independence and reunification. The state retains a unique legal identity within India, stemming from its special autonomy under Article 370 of India's Constitution, which requires the state to approve

some categories of central legislation before it comes into effect in the state. The state continues to attract a significant number of tourists. But security concerns are dampening economic opportunity, with little external investment and employment growth, particularly in the Kashmir Valley. The Jammu region has had better industrial prospects. The state economy is primarily dependent on agriculture and pockets of industry and services.

Rankings		Rank
Business Reforms Action Plan 2016		31
State Investment Potential Index 2017		NA
Public Affairs Index 2017		24
Gender Vulnerability Index 2017		20
Key statistics		India
	Jammu & Kashmir	India
Real GSDP 2015–16 (AUD billion)	19.3	1 972
Population (million)	12.5 (=Belgium)	1 300
Urbanisation rate (%)	27.4	31.2
Number of million plus cities	1 (Srinagar)	63
Income and growth		
Per capita income	1 484	2 052
NSVA by sector 2015–16 (%)		
Agriculture	20	17
Industry	23	31
Services	57	52
Average GSDP growth 2012–16 (%)	8.8	6.9
State contribution to GDP (%)	0.9	



Key statistics	Jammu & Kashmir	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	-18.4	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	17.6	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	1.3	20.1
<b>Human development</b>		
Literacy rate (%)	67.2	73
Gender literacy gap (pp)	20.3	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	5.6	2.9
Debt to GSDP ratio (%)	48.8	23.9
Health spend (% of total spend)	4.7	5.6
Education spend (% of total spend)	13.5	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	neg	

## Economic fundamentals

Jammu and Kashmir's GSDP grew by 14.7 per cent in 2017–18, making it one of India's fastest growing states, but this comes off a very low base, and follows a drop in growth to less than 1 per cent when unrest broke out in 2016. Security concerns affecting Jammu and Kashmir have eroded the state's economy. It is among the worst states on the ease of doing business.

Economic prospects in the state, as well as development, are unevenly split between the Hindu-majority Jammu (the winter capital) and the Muslim-majority Kashmir Valley (including Srinagar, the summer capital). Jammu has better prospects for industrial growth, including better connectivity to the neighbouring states of Punjab and Himachal Pradesh. Construction and services sectors there are growing. In contrast, Kashmir depends on seasonal agriculture, handicrafts and tourism. Kashmir's connectivity within the state and with neighbouring states remains a long term challenge, constrained by mountainous terrain.

Horticulture is a mainstay of Jammu and Kashmir's economy, and the state held a 74 per cent share in India's apple production in 2016–17. It is also a major exporter of walnuts to international markets, producing 98 per cent of India's total walnuts. Floriculture is another key sector concentrated in Jammu. Handicrafts and small-scale cottage industries, including carpet weaving, basketry, and silks, are significant employers in the state.

The provision of electricity is a first-order priority of government, given the large power deficit. Land acquisition in Jammu and Kashmir is structured differently from other states, which can make establishment costs comparatively lower. Land is leased for 90 years at concessional rates in industrial areas, and the state government offers attractive incentives along with a single-window clearance mechanism. There are restrictions on the purchase of property by residents from other states.

### Current strengths

- Producer of saffron, apples, walnuts, cherries, strawberries and apricots.
- Exporter of handicrafts, carpets and woollen shawls.
- Jammu and Kashmir is a globally recognised tourist destination. During January to October 2017, the total number of tourist visits was 7.31 million; the state anticipates 22.7 million tourist arrivals in 2020.

### Potentially transformative factors

- In the short term, there are few indications of a significant easing of the security concerns which have marred the state's prospects for development.

## JHARKHAND

The landlocked state of Jharkhand in eastern India has 40 per cent of India's mineral wealth. Jharkhand is a major steel producer and leverages the logistical advantage of its proximity to significant ports such as Kolkata and Paradip. The state is home to the Indian School of Mines in Dhanbad, the site of an Australia-India mining partnership. Perceptions about political instability and corruption have plagued Jharkhand's economic performance and prevented it from reaching its considerable potential. The state has had six chief ministers in 13 different regimes

since 2000 – by comparison, neighbouring Chhattisgarh has had two chief ministers in that time. Jharkhand's growth has been slow and volatile, consistently lagging behind the national average. Despite its resource wealth, poverty in Jharkhand remains among the highest in India, particularly when compared to neighbouring southern and eastern states. Only a tenth of working adults have salaried jobs, which is among the lowest in the country. Economic problems are compounded by sporadic outbursts of Maoist terrorism.

Rankings	Rank
Business Reforms Action Plan 2016	7
State Investment Potential Index 2017	18
Public Affairs Index 2017	28
Gender Vulnerability Index 2017	27

Key statistics	Jharkhand	India
Area (square km)	79 716	
Real GSDP 2016–17 (AUD billion)	42	1 972
Population (million)	33 (≈Canada)	1 300
Urbanisation rate (%)	24.1	31.2
Number of million plus cities	3 (Ranchi, Dhanbad, Jamshedpur)	63

Income and growth		
Per capita income	1 289	2 052
NSVA by sector 2015–16 (%)		
Agriculture	16	17
Industry	39	31
Services	45	52
Average GSDP growth 2012–17 (%)	7	6.9
State contribution to GDP (%)	1.8	

Key statistics	Jharkhand	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	-0.7	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	53.6	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	28.8	20.1
<b>Human development</b>		
Literacy rate (%)	66.4	73
Gender literacy gap (pp)	22.2	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	2.1	2.9
Debt to GSDP ratio (%)	23.7	23.9
Health spend (% of total spend)	4.8	5.6
Education spend (% of total spend)	15.3	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of Bihar)	0.03	

## Economic fundamentals

Jharkhand is a mineral rich state of 33 million people. It possesses 27 per cent of India's coal reserves, 26 per cent of India's iron ore reserves and 18 per cent of India's copper ore reserves. Its key industries include mining and mineral extraction, engineering, iron and steel production and chemicals.

Around one-quarter of India's total steel production emanates from Jharkhand. With the proposed expansion of a number of integrated steel plants, Jharkhand could emerge as a steel hub of India. The state is the sole Indian producer of coking coal, uranium and pyrite, and ranks first in the production of mica, kyanite and copper.

The sectoral landscape in Jharkhand has changed markedly in the last decade. While the share of mining has remained steady, the share of

services such as insurance, telecommunications and hospitality has increased dramatically. The respective shares of agriculture, services and manufacturing are moving to the national average.

Jharkhand's main agricultural products are cauliflower and cabbage. The state has high yields in paddy and pulses and offers opportunities in cashews, medicinal plants, honey, milk and meat products.

Jharkhand has one of the highest poverty rates in the country, with half of the population still on the farm. Job opportunities for women are few and declining – the female labour force participation rate halved from 49.1 per cent in 2004–05 to 23.5 per cent in 2009–10.

## Current strengths

- Investment-friendly climate – the state government is committed to attracting foreign investment. Jharkhand was ranked seventh in annual ease of doing business rankings in 2016.
- Jharkhand's economic strengths, notably its large endowment of natural resources, matches Australia's world class expertise in mining and related services.
- Despite being landlocked, Jharkhand is situated close to eastern ports like Kolkata, providing efficient access to export opportunities.
- Jamshedpur is home to the largest plant of Tata Steel.

## Sectoral opportunities for Australia

- Mining, METS, contract mining and associated infrastructure, including in relation to Jharkhand's steel production.
- Education and VET – mining-related education, skills and research, including under the Australia-India mining partnership at the Indian School of Mines, Dhanbad.

## Potentially transformative factors

- Reliable electricity supply – the state government has set a target of 20,000 MW installed capacity by 2020.
- Improving prospects for women and girls – currently, six in 10 girls in Jharkhand marry as children and thousands are trafficked every year; poverty, weak law enforcement and low education levels are contributing factors; enhancing the opportunities for girls to complete their schooling and enter the workforce could have a substantial effect on Jharkhand's long term economic growth.

## KARNATAKA

Karnataka is a significant growth engine of the national economy, growing at 8 per cent (in terms of GSDP) and contributing 7 per cent to India's GDP. The state's capital Bengaluru dominates the state economy. Bengaluru is the fourth-largest, and the second-fastest growing, technology cluster in world. The city is the epicentre of

India's IT, IT-enabled services, pharmaceuticals and biotechnology sectors, the home of India's highly successful space program, and India's largest start-up ecosystem, with around 5,000 start-ups. Strains on Bengaluru's congested infrastructure run the risk of detracting from the city's investment potential.

Rankings	Rank
Business Reforms Action Plan 2016	13
State Investment Potential Index 2017	9
Public Affairs Index 2017	5
Gender Vulnerability Index 2017	7

Key statistics	Karnataka	India
Area (square km)	191 791	
Real GSDP 2016–17 (AUD billion)	174	1 972
Population (million)	61.1 (=Italy)	1 300
Urbanisation rate (%)	38.7	31.2
Number of million plus cities	3	63
	(Bengaluru, Hubli-Dharwad, Mysuru)	

Income and growth		
Per capita income	3 131	2 052
NSVA by sector 2015–16 (%)		
Agriculture	12	17
Industry	22	31
Services	66	52
Average GSDP growth 2012–17 (%)	7.9	6.9
State contribution to GDP (%)	7.2	

Key statistics	Karnataka	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	–0.5	–0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	167.8	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	17.1	20.1
<b>Human development</b>		
Literacy rate (%)	75.4	73
Gender literacy gap (pp)	14.7	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	2.2	2.9
Debt to GSDP ratio (%)	16.9	23.9
Health spend (% of total spend)	4.1	5.6
Education spend (% of total spend)	12.7	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	8	

## Economic fundamentals

The capital Bengaluru is the pillar of the state's economy, accounting for a third of GSDP. It is the global centre for business processing operations, employs about 35 per cent of India's IT professionals and accounts for 40 per cent of software exports. Services dominate GSDP, contributing 66 per cent and growing at 8 per cent in 2015–16. Besides IT, major services include financial services, insurance and real estate.

Bengaluru is home to around 400 research and development centres (44 per cent of India's total), including over 300 belonging to Fortune 500 companies. The state ranked fourth in terms of FDI inflows over the period from 2000 to 2017, with 8 per cent of total inbound investment over that period.

The state also has a conducive policy environment for innovation – global rankings have placed Bengaluru among the top 20 start-up ecosystems in the world. The Karnataka Government's 2015 Information Technology, IT-enabled Services,

Innovation, Incentives Policy (I–4 Policy) offers space for start-ups at highly subsidised rates, aiming to stimulate the growth of 20,000 start-ups and generate 600,000 direct jobs. The Knowledge Commission is an expert panel of advisers set up by the Karnataka Government to provide specialist advice to government with an over-arching aim of transforming Karnataka into a vibrant knowledge society. The state also pioneered the formation of the Bengaluru Bio Innovation Centre and the NASSCOM 10,000 Start-ups Warehouse, which provides incubation and acceleration support to around 2,300 start-ups.

Agriculture contributes only 12 per cent to GSDP, but half the state's workforce is engaged in farming. Karnataka's farmers face significant challenges in maintaining their economic viability: around 80 per cent of farmers have land holdings of less than two acres, soil health is deteriorating, irrigation coverage is limited (to about a quarter of arable land) and the cost of technology is prohibitive. Karnataka is India's largest producer

of coffee, areca nut, pomegranate, rose-onions, various spices and the producer of 10 per cent of India's sugar.

The state has significant mineral resources, including reserves of gold, iron ore, limestone, manganese ore, bauxite, granite and felsite (with Karnataka being India's sole producer).

Karnataka faces considerable sustainability challenges, particularly with respect to water resources. The long-standing dispute between Karnataka and the neighbouring state of Tamil Nadu continues over the division of the water of the Cauvery River, an 800 km long river that supplies southern Karnataka, including Bengaluru, before flowing into Tamil Nadu downstream.

### Current strengths

- Bengaluru can lay claim to being India's Silicon Valley although there is increased competition for that title.
- Ready flow of venture capital – Bengaluru has seen tremendous growth (up to 400 per cent) in venture capital funding and around 40 per cent of all start-up venture capital in India is invested in the city.
- The presence of science and engineering institutions such as the Indian Institute of Science, National Institute of Technology and National Institute of Engineering support innovation.
- Karnataka is home to public sector enterprises in heavy industry, aeronautics, precision engineering, telecommunications, health and pharma and software development. Space research organisations such as the Indian Space Research Organisation and National Aerospace Laboratory are also based in the state.
- Karnataka is a leading producer of auto components, machine tools and heavy electrical machinery.
- Besides Bengaluru, there are opportunities for industrial investment in the second largest city of Mysuru (in food processing and engineering) and Mangalore, the state's major port on India's west coast (in petrochemicals and mining).

- Good connectivity to major national and international markets via air and sea.

### Sectoral opportunities for Australia

- Innovation – nanotech, ICT, healthcare, and start-ups, given Bengaluru's leading start-up ecosystem.
- Tourism – direct flights between Bengaluru and Australia would stimulate people-to-people links particularly beneficial to Australia's tourism and education sectors; it would also develop a range of business and investment opportunities.
- Resources and Energy – mining, mineral processing (particularly for iron ore, gold, copper, manganese and chromite), METS and renewable energy (solar, mini-hydel, wind, river rejuvenation, waste management).
- Infrastructure and urban development – road safety expertise, road and transport infrastructure investment opportunities.
- Agriculture – opportunities in applying niche Australian agribusiness technologies (such as those related to seed and fodder and small-scale sugar cane harvesters), honey, food processing, dairy technology and horticulture.
- Defence and space – surveillance systems, airport infrastructure and security.
- Education (higher and vocational) – research collaboration, including in biomedical research, skill development.

### Potentially transformative factors

- Wise water resources and environmental management – stronger environmental management could bolster growth prospects in the medium to long term; managing the water needs of Bengaluru is important for future growth prospects.



## KERALA

The small state of Kerala on India's south-western tip outperforms most states on human development, with India's highest literacy rate of 94 per cent, leading gender equality indicators and an infant mortality rate akin to that of the United States. Consistently high levels of health and education spending have earned the state its reputation as India's most socially progressive. The state also attracts large numbers of domestic and foreign tourists, with its 580 km coastline, vast network of backwaters and several hill stations. However, major sectors of the state economy

are currently sluggish. Successive communist and left-wing coalition governments (alternating between the ruling Left Democratic Front and the opposition United Democratic Front) have supported obstructionist trade unionism and privileged human development over industrial growth. Unemployment is India's highest at 10.6 per cent. The economy is heavily reliant on the remittances of around two million Keralite workers in the Gulf, accounting for over a third of GSDP.

Rankings	Rank
Business Reforms Action Plan 2016	20
State Investment Potential Index 2017	7
Public Affairs Index 2017	1
Gender Vulnerability Index 2017	2

Key statistics	Kerala	India
Area (square km)	38 852	
Real GSDP 2015–16 (AUD billion)	88.9	1 972
Population (million)	33.4 (≈Morocco)	1 300
Urbanisation rate (%)	47.7	31.2
Number of million plus cities	7	63
	(Kochi, Kozhikode, Thrissur, Kollam, Malappuram, Kannur, Thiruvananthapuram)	

Income and growth		
Per capita income	2 926	2 052
NSVA by sector 2015–16 (%)		
Agriculture	11	17
Industry	25	31
Services	64	52
Average GSDP growth 2012–16 (%)	6.3	6.9
State contribution to GDP (%)	3.9	

Key statistics	Kerala	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	-0.1	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	501.4	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	27	20.1
<b>Human development</b>		
Literacy rate (%)	94	73
Gender literacy gap (pp)	4	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3.5	2.9
Debt to GSDP ratio (%)	27.7	23.9
Health spend (% of total spend)	5.1	5.6
Education spend (% of total spend)	15.3	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	1	

## Economic fundamentals

Kerala's narrow industrial base, frequent industrial action and political strikes, as well as heavy reliance on foreign remittances continue to impede economic growth. The singular focus by successive governments on human development over economic growth means that Kerala has not only the highest per capita income (1.5 times the national average), but also the highest unemployment rate (three times the national average), which has led to millions of Keralites seeking work in the Gulf over the past generation (since the 1970s and 80s).

Kerala's economy is dominated by the services sector, which constitutes 64 per cent of GSDP. The real estate, tourism, health and transport sectors are among the most buoyant. The hospitality and tourism industries were hit by a policy of alcohol prohibition in 2016, but it was partially reversed in 2017 (before the ban, Kerala had India's highest per capita alcohol consumption). Growth

in construction and manufacturing is steady, at 8.6 per cent in 2015–16.

But agriculture is stagnating. The production of some of the major spices cultivated in the state, including pepper, cardamom and ginger has declined. Rapid urbanisation is putting pressure on transportation, housing, drinking water and solid waste management.

Foreign remittances constitute the single largest contributor to GSDP (around one-third), exposing the economy to volatility in economic conditions in the Gulf. Emigration from Kerala shows signs of decline, due in part to lower wages in the Gulf and Kerala's low birth rate.

Public finances are significantly overstretched – ambitious social spending, sluggish growth in revenue, a poor record of industrial investment and declining rates of tax collection are contributing to expanding fiscal and revenue deficits.

## Current strengths

- A political environment relatively less affected by inter-religious tensions.
- Ready access to senior officials and ministers.
- Strong state investment in education and health.
- A wide network of fibre-optic cable, including high speed rural broadband in several areas, and high financial inclusion rates.
- Major producer of rubber, spices, coconut, rice, coffee, pickles, chemicals and chemical products.
- Direct air connectivity to the Gulf and Southeast Asia (from Kerala's busiest airport in Kochi); major port at Kochi and 16 smaller ports.
- Kerala is the only state in India to have 1 per cent of its budget earmarked for entrepreneurship activities.

## Sectoral opportunities for Australia

- Resources and Energy – Petronet's LNG terminal in Kochi has generated interest by Australian exporters (Kerala currently imports the majority of its power). There are niche opportunities in hydroelectric energy, cloud seeding and 'micro' hydro projects (Kerala's experience of water management includes its long-standing dispute with neighbouring Tamil Nadu over the Mullaperiyar dam which it claims poses environmental and safety risks).
- Education (vocational) – skill development has good potential given Kerala's demand for skilled labour exports as well as the state's practical approaches, including the Additional Skills Acquisition Programme, Kerala Academy for Skills Excellence and Asian Development Bank-funded Community Skills Parks.
- Agriculture – fisheries research, deep sea fishing, aquaculture and sustainable fisheries management all offer potential for Australian businesses to offer their expertise.

## Potentially transformative factors

- Industrial access – Kochi is emerging as Kerala's commercial and industrial hub. It already has close proximity to international shipping centres, an all-weather seaport, with a cruise terminal, good connectivity through inland waterways, and a metro transport system. Kochi has India's largest shipbuilding facility. It hosts the international Kochi-Muziris Biennale. The city is emerging as a petrochemical hub, with an industrial park being planned to utilise niche petrochemical products from the recently expanded Kochi Refinery.
- Alternative political culture – A slew of legislative measures to expedite government approvals and ease of doing business were passed in 2017. But in a state that has routinely voted communist and leftist parties into power, perceptions about the state's apathy to the investment climate will require consistent effort to overcome. Disruptive strike action and violence between rival political party workers is not uncommon.

## MADHYA PRADESH

Madhya Pradesh, India's second largest state by area located in the country's centre, is attempting to transform its agriculture-based economy into a front-ranking industrial state. The state government has overseen a number of major reforms, including to ease restrictions on labour. Madhya Pradesh is one of the faster growing major states, standing out from its landlocked peers in northern India, but has performed poorly on human development. Madhya Pradesh has become an agricultural powerhouse, with India's highest agricultural growth rate and output. From 2012–13 to 2016–17, growth in agriculture averaged 21.5 per cent, leagues ahead

of the national average of less than 4 per cent. Some of the contributing factors to this include massive expansions in irrigation, power supply and road networks, providing better access to markets. However, the sustainability of the state's breakneck agricultural growth is coming into question. The oversupply of certain commodities has brought about price shocks, resulting in insolvency and recurrent unrest among rural communities. The state government announced a populist agricultural loan waiver scheme worth up to \$1.2 billion in 2017, alongside similar announcements in other states.

Rankings	Rank
Business Reforms Action Plan 2016	5
State Investment Potential Index 2017	10
Public Affairs Index 2017	19
Gender Vulnerability Index 2017	25

Key statistics	Madhya Pradesh	India
Area (square km)	308 252	
Real GSDP 2016–17 (AUD billion)	93	1 972
Population (million)	72.6 (≈Thailand)	1 300
Urbanisation rate (%)	27.6	31.2
Number of million plus cities	4 (Indore, Bhopal, Jabalpur, Gwalior)	63

Income and growth		
Per capita income	1 443	2 052
NSVA by sector 2015–16 (%)		
Agriculture	41	17
Industry	21	31
Services	38	52
Average GSDP growth 2012–17 (%)	9	6.9
State contribution to GDP (%)	3.8	

Key statistics	Madhya Pradesh	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	0	–0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	93.7	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	16.2	20.1
<b>Human development</b>		
Literacy rate (%)	69.3	73
Gender literacy gap (pp)	20.5	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3.9	2.9
Debt to GSDP ratio (%)	23.1	23.9
Health spend (% of total spend)	4.4	5.6
Education spend (% of total spend)	17	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	0.4	

## Economic fundamentals

Agriculture's share in GSDP has increased markedly as the sector has experienced double-digit growth. Its share in the state's economy is more than double agriculture's share in national GDP and agriculture employs 62 per cent of the state's workers. But increased agricultural production has not necessarily driven greater productivity – the state accounts for 10.4 per cent of India's cropped area but only 8.6 per cent of value addition in agriculture.

Madhya Pradesh has not been able to replicate its successes in agriculture within its industrial or services sectors. In the five years to 2010, growth in manufacturing fell from an average of 9.5 per cent to 2.9 per cent in the following five year period, while services saw a corresponding drop from 7.6 per cent to 6.3 per cent.

Industry in the state's east is driven by the region's rich mineral reserves, including limestone, coal, bauxite, iron ore, copper, manganese and silica. Madhya Pradesh is India's sole producer of diamonds.

The lack of a clear commercial hub makes engagement a challenge. The state capital of Bhopal is known for its small and medium scale industries; Ujjain in the east is one of the largest producers of oilseeds; Indore is a trading hub; Neemuch an agricultural trade hub; and Gwalior in the north, the tourism capital of the state.

## Current strengths

- Largest producer of pulses and oilseeds, second largest producer of food grains (including wheat), and major producer of dairy.
- Singrauli is home to a number of thermal power stations, and Asia's thickest coal seam; the state is the third largest producer of cement.
- Seven cities under the Smart Cities project – Bhopal, Indore Jabalpur, Ujjain, Gwalior, Sagar and Satna.
- One of India's largest proposed 750 MW solar park project at Rewa.
- Connectivity to industrial centres through the state's five airports and five inland container depots; and connectivity with the national capital, New Delhi and financial centre of Mumbai.
- Single window investment facilitation through the Madhya Pradesh Trade and Investment Facilitation Corporation.

## Sectoral opportunities for Australia

- Energy and resources – Madhya Pradesh is India's only diamond producing state, and a leading producer of copper and manganese. On renewables, Madhya Pradesh is among states with the most sunshine and available wastelands for solar parks, including the IFC-backed 750 MW Rewa solar park.

- Power – high capacity power transmission corridors are planned in Madhya Pradesh.
- Transport infrastructure – brownfield opportunities in the medium to long term given the number of planned projects (road density in the state still lags the national average).
- Agriculture, specialised services and food processing – opportunities given Madhya Pradesh's leading production of pulses, oilseeds and dairy.

## Potentially transformative factors

- Madhya Pradesh has partnered with NITI Aayog to radically transform its education sector, including targeted improvements to the efficiency of governance structures and service delivery.
- The Delhi Mumbai Industrial Corridor has the potential to attract investment to Gwalior, Indore and Ujjain.

## MAHARASHTRA

Maharashtra is India's second most populous state and its most economically advanced. The state alone contributes 40 per cent of India's total income tax. Its capital Mumbai serves as India's premier commercial and film hub, akin to combining New York and Los Angeles in one city. But Maharashtra's second (Pune) and third (Nagpur) largest cities are industrial powerhouses in their own right, and there is an array of rapidly growing third tier cities. Mumbai is the fulcrum of India's prosperous western region, headquarters

for national financial institutions and regulators as well as the gateway for imports into western India. It is the wealthiest city in South Asia, home to more than 46,000 millionaires. Maharashtra remains a good place to do business, although it has fallen outside the top five states in annual rankings. As elsewhere in India, the state has stark inequalities; its relatively prosperous urban centres include slums lacking basic amenities and contrast with the state's vulnerable rural communities.

Rankings	Rank
Business Reforms Action Plan 2016	10
State Investment Potential Index 2017	8
Public Affairs Index 2017	6
Gender Vulnerability Index 2017	9

Key statistics	Maharashtra	India
Area (square km)	307 713	
Real GSDP 2015–16 (AUD billion)	330	1 972
Population (million)	112.3 (≈Philippines)	1 300
Urbanisation rate (%)	45.2	31.2
Number of million plus cities (Mumbai, Pune, Nagpur, Nashik, Aurangabad, Vasai Virar)	6	63

Income and growth		
Per capita income	2 930	2 052
NSVA by sector 2015–16 (%)		
Agriculture	11	17
Industry	33	31
Services	56	52
Average GSDP growth 2012–16 (%)	7.3	6.9
State contribution to GDP (%)	7.2	

Key statistics	Maharashtra	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	0	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	197.6	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	18.6	20.1
<b>Human development</b>		
Literacy rate (%)	82.3	73
Gender literacy gap (pp)	14.3	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	1.6	2.9
Debt to GSDP ratio (%)	17.6	23.9
Health spend (% of total spend)	3.9	5.6
Education spend (% of total spend)	18.2	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	31	

## Economic fundamentals

Maharashtra's economy, with a GSDP of \$330 billion, is India's wealthiest state and roughly equivalent in size to Hong Kong. Home to over 112 million people, of which nearly two thirds are of working age, Maharashtra contributes 15 per cent of India's industrial output and over 40 per cent of national revenue. The state economy shows no sign of slowing down. It grew at 7.3 per cent annually from 2012–16, higher than the national average and from a higher base.

Services account for nearly two-thirds of the state economy, followed by industry (33 per cent) and agriculture (11 per cent). Major sectors include petrochemicals, automotive, pharmaceuticals, financial services, media and entertainment, information technology and textiles.

Maharashtra's port and road infrastructure enables the state to capitalise on its favourable

location on India's western coast. Jawaharlal Nehru Port Trust is the largest container port in the country, and Mumbai alone contributes a third of India's customs duties.

Maharashtra ranked 10 in annual ease of doing business rankings in 2016, slipping two spots from 2015. The sticky problems of land and labour reform remain a barrier to further boosting the state's investment potential.

Managing the state's water and urban problems is of high priority for Maharashtra. Like much of western India, Maharashtra is prone to severe droughts, which have had a devastating effect on farmers, who comprise half the state's workforce. The state is also confronting severe urban and transport infrastructure constraints, which have made asset recycling programs and attracting foreign infrastructure investments high order priorities.



Mumbai houses the headquarters of all major banks, financial institutions, insurance companies and many of the leading corporate houses in India. As such, it has been affected by slow progress on the stock of large non-performing assets, mostly held by public sector banks, which are inhibiting lending and diminishing economic growth. Mumbai is also the top source city for Indian FDI into Australia, accounting for 28 per cent of projects and the highest number of jobs created. India's corporates view Australia favourably but Brand Australia is competing in an increasingly crowded field.

### Current strengths

- Home to India's leading corporations and a key source and destination for FDI.
- Business-friendly environment that can be used as launching pad to the rest of the country.
- An increasingly sophisticated urban political class demanding more transparency and better service delivery.
- Highest number of internet users in India and a growing start-up scene.
- An early adopter of GST-related reforms and bringing more taxpayers to the revenue net.

### Sectoral opportunities for Australia

- Education, training and skill development.
- Infrastructure – metro rail build, development of townships, ports and water front.
- Water – waste water management.
- Research – collaboration and commercialisation.
- Agribusiness – food and beverage products, dairy technology and services.
- Financial services.

### Potentially transformative factors

- Water conservation reform – Maharashtra's rural economy, roughly 10 per cent of GSDP but over half the state population, is highly dependent on monsoons. Maharashtra only has 22 per cent irrigation potential, but aims to lift this with significant dam projects. Improving water use, conservation and decreasing climate vulnerability would potentially lift agricultural productivity and resilience.
- Infrastructure development – Maharashtra has proposed over \$20 billion worth of transport infrastructure and port projects, including a new expressway linking the east with the west, 21 new airports across the state and a second \$3 billion airport in Mumbai.
- Smart Cities – Maharashtra and the Central Government are investing in 10 smart cities. Urban renewal in existing large cities and development of new hubs will potentially act as economic multipliers as the state continues to urbanise. However, there are steep challenges to realising this vision.
- Delhi Mumbai Industrial Corridor – the planned industrial development linking the political capital to the financial hub, one of the world's largest infrastructure projects, involves a high-tech industrial zone spread across six states along the 1,500 km Western Freight Corridor. The dedicated freight corridor is expected to be completed by 2020. The project could have immense economic potential and boost connectivity between economic hubs and smaller industrial areas.

## MANIPUR

Manipur, a remote north-eastern state bordering Myanmar, is a strategic state for India's ambitions to improve connectivity to Southeast Asia, but progress on the ground is slow. The landlocked state remains largely dependent on agriculture, with about 70 per cent of its population relying on the sector. Ethnic tensions dominate state politics, with a long-running split between ethnically diverse tribal (Indigenous) groups in the hills and

those in the central valley. Despite its long history of insurgency, fatal armed conflict has drastically declined since 2009. But security concerns remain. And the Armed Forces Special Powers Act, granting the military emergency powers, remains in force in parts of the state. Cooperation in sports is a prospective sectoral opportunity for Australia, including the establishment of the National Sports University in the state.

Rankings	Rank	
Business Reforms Action Plan 2016	28	
State Investment Potential Index 2017	NA	
Public Affairs Index 2017	21	
Gender Vulnerability Index 2017	5	
Key statistics	Manipur	India
Area (square km)	22 327	
Real GSDP 2015–16 (AUD billion)	3.2	1 972
Population (million)	2.7 (≈Qatar)	1 300
Urbanisation rate (%)	32.5	31.2
Number of million plus cities	0	63
Income and growth		
Per capita income	1 105	2 052
NSVA by sector 2015–16 (%)		
Agriculture	21	17
Industry	14	31
Services	65	52
GSDP growth 2015–16 (%)	5	6.9
State contribution to GDP (%)	0.1	
Infrastructure		
Power deficit 2016–17 (%)	-3.1	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	108.6	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	0	20.1

Key statistics	Manipur	India
<b>Human development</b>		
Literacy rate (%)	79.2	73
Gender literacy gap (pp)	13.3	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3	2.9
Debt to GSDP ratio (%)	38.2	23.9
Health spend (% of total spend)	5.1	5.6
Education spend (% of total spend)	13.2	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of all north-east states)	0.03	

## Economic fundamentals

Some of Manipur's small-scale industries include handlooms, handicrafts and sericulture. Manipur has the highest number of skilled and semi-skilled artisans in the north-eastern region. The state ranks in the top five for its number of looms.

Agricultural activities include cultivation of food grains and fruit. Manipur is the largest producer of passionfruit in India and has the potential to diversify into crops such as olives, figs and mandarins. About 70 per cent of the state is densely forested, providing timber, firewood and bamboo.

Connectivity is a significant obstacle to trade. Despite statements of priority under the 'Act East' policy, local businesses report they have not seen any improvements on the ground in terms of trade. Manipur's capital, Imphal, hosts India's second largest airport in the north-east. Four national highways run through the state and its road network of 7,170 km connects the major towns and villages, although the quality of roads is poor. The railway line on the Manipur-Assam border is being constructed on a priority basis.

Foreign tourist arrivals to the state were a mere 3,260 in 2015. As security concerns continue to improve, the potential for tourism may steadily increase.

## Current strengths

- A National Sports University is being established in Manipur, under the direction of the Prime Minister's Office.
- Bamboo-based industries – the state is primed to benefit from a push from the Central Government to reinvigorate a range of bamboo-based industries, from food processing to construction.
- Significant hydropower potential, with some estimates placing it at about 2,200 MW. As of October 2017, Manipur had an installed capacity of 235 MW.

## Sectoral opportunities for Australia

- Sports governance – the National Sports University is to be established in Manipur.
- Sports consulting and performance management – including in football, boxing, gymnastics and archery in Manipur.

## Potentially transformative factors

- India-Myanmar-Thailand Trilateral Highway, originating from Moreh in Manipur, is under construction as part of India's 'Act East' policy.
- Work to explore the presence of hydrocarbons in Manipur has begun.

## MEGHALAYA

Bordering Bangladesh in India's northeast, the majority Christian state of Meghalaya receives the highest rainfall in India and is among the wettest places on Earth. Despite its natural resources, Meghalaya is predominantly an agrarian economy. It has a significant commercial forestry industry.

Its industrial potential, including in hydropower, is considerable but untapped. Road and rail infrastructure is poor. Political instability has constrained Meghalaya's economic growth in the past with the state having 23 governments since 1972 – an average term of less than 18 months.

Rankings	Rank	
Business Reforms Action Plan 2016	31	
State Investment Potential Index 2017	NA	
Public Affairs Index 2017	29	
Gender Vulnerability Index 2017	21	
Key statistics	Meghalaya	India
Area (square km)	22 720	
Real GDP 2015–16 (AUD billion)	4.4	1 972
Population (million)	3 (≈Mongolia)	1 300
Urbanisation rate (%)	20	31.2
Number of million plus cities	0	63
Income and growth		
Per capita income	1 405	2 052
NSVA by sector 2015–16 (%)		
Agriculture	16	17
Industry	31	31
Services	53	52
GSDP growth 2015–16 (%)	8.7	6.9
State contribution to GDP (%)	0.2	
Infrastructure		
Power deficit 2016–17 (%)	0	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	59.6	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	0.4	20.1

Key statistics	Meghalaya	India
<b>Human development</b>		
Literacy rate (%)	74.4	73
Gender literacy gap (pp)	3.4	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3.2	2.9
Debt to GSDP ratio (%)	29.1	23.9
Health spend (% of total spend)	6.9	5.6
Education spend (% of total spend)	15.3	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of all north-east states)	0.03	

## Economic fundamentals

One of India's smallest states, Meghalaya's population of three million depends primarily on agriculture, which accounts for 81 per cent of the state economy. Besides rice and maize, the diverse range of soil types in Meghalaya supports pulses, oilseeds and cotton. The state also produces potatoes, pineapples, bananas, papayas and spices; Meghalaya's turmeric is considered among the best in the world.

Meghalaya has a strong floriculture sector and is one of the leading states in the north-east in the supply of cut flowers to mainland consumer markets. About 14 per cent of Meghalaya is covered by bamboo forests and the state is a leading bamboo producer.

Alongside agriculture and food processing, key industries in Meghalaya include mining, cement, tourism, hydroelectric power, handlooms, handicrafts and sericulture.

The state has a range of mineral deposits – including coal, limestone, kaolin feldspar, quartz, granite, industrial clay and uranium and a small deposit base of sillimanite, bauxite, base metals and apatite – but has no significant extractive industries.

Meghalaya, like other north-eastern states, is heavily dependent on Central Government funds. There are widespread concerns that successive governments in the state have been complicit in graft and the mismanagement of public finances; the execution of some public projects have been marred by delays and cost overruns.

### Current strengths

- English is widely spoken and the official language of the state.
- Abundance of water resources.
- Conducive climate for agriculture.
- Untapped resource base, including hydropower potential.

### Potentially transformative factors

- Hydroelectric power development – the abundance of water resources makes Meghalaya an important location for hydroelectric power development. Total hydropower potential is estimated to be around 3,000 MW. Projects with a total capacity of 687 MW have been proposed, adding to the installed capacity of 356 MW.
- Improved connectivity – enhanced infrastructure to establish trade corridors between Meghalaya and the Indian mainland, as well as to neighbouring Bangladesh, more efficient could make Meghalaya a logistical centre for regional trade.

## MIZORAM

Wedged between Bangladesh and Myanmar, with 91 per cent of its land heavily forested, Mizoram is a small mountainous state and just about India's most isolated. It boasts a highly literate, agrarian economy. Slash and burn farming practices are slowly giving way to horticulture and bamboo production. Mizoram has the potential to become a transit point for trade with Myanmar and Bangladesh, which could bring significant

economic benefits if it continues to develop. While 20 per cent of the majority Christian state's population falls below the poverty line, increasing to 35 per cent poverty in rural areas, Mizoram's natural resources and a sizeable Central Government-funded investment in its tourism industry present some positive opportunities for growth and development.

Rankings		Rank
Business Reforms Action Plan 2016		29
State Investment Potential Index 2017		NA
Public Affairs Index 2017		9
Gender Vulnerability Index 2017		3

Key statistics	Mizoram	India
Area (square km)	21 081	
Real GSDP 2015–16 (AUD billion)	2.5	1 972
Population (million)	1.1 (≈Mauritius)	1 300
Urbanisation rate (%)	52.1	31.2
Number of million plus cities	0	63

Income and growth		
Per capita income	2 277	2 052
NSVA by sector 2015–16 (%)		
Agriculture	34	17
Industry	22	31
Services	44	52
GSDP growth 2015–16 (%)	10.9	6.9
State contribution to GDP (%)	0.1	

Infrastructure		
Power deficit 2016–17 (%)	-2.5	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	46.6	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	0.1	20.1

Key statistics	Mizoram	India
<b>Human development</b>		
Literacy rate (%)	91.3	73
Gender literacy gap (pp)	4.3	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	0.7	2.9
Debt to GSDP ratio (%)	48.5	23.9
Health spend (% of total spend)	5.2	5.6
Education spend (% of total spend)	14.6	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of all north-east states)	0.03	

## Economic fundamentals

Small-scale industries in Mizoram include handloom and handicraft workshops, sawmills and furniture manufacturing, grain milling, ginger processing and sericulture. Mizoram is focussed on a few key crops, including turmeric (largest producer in north-east India) and bamboo (occupying 31 per cent of land and producing 3.2 million tonnes per year, or 14 per cent of India's stock). In 2015–16, the state's total milk production amounted to 22,000 tonnes and meat production stood at 14,000 tonnes. Mizoram has underutilised fishing resources, with only 4,790 hectares for fish farming developed of the 24,000 hectares of potential area (as of 2015–16).

Mizoram was the third north-eastern state to become energy surplus (after Sikkim and Tripura). Major rivers flowing through Mizoram, such as Tlawng and Tiau, provide an estimated hydroelectric power potential of 4,500 MW. As at October 2017, the installed capacity was 167 MW.

Mizoram's road network is underdeveloped and among the lowest density anywhere in India. Prices for basic staples can cost as much as three times more in Mizoram when compared with most Indian cities.

Around 44,702 (domestic and foreign) tourists visited Mizoram during 2015–16. Mizoram has successfully sought large investments from the Central Government to develop its tourism sector.

## Current strengths

- Bamboo production and the potential to develop bamboo into export-oriented products.
- English widely spoken at a high level.
- Tourist numbers higher than other north-eastern states.
- Development of the Zoram Mega Food Park in the capital Aizawl, which seeks to create food-processing opportunities across the north-eastern region.

## Potentially transformative factors

- Increased physical connectivity – a number of connectivity projects were launched in 2017 to accelerate growth in north-eastern states. The establishment of rural 'haat' markets along the Mizoram-Myanmar border could increase trade volumes in the state.



## NAGALAND

Nagaland is a small agrarian north-eastern state that borders Myanmar. Home to 16 distinct ethnic groups, the state had a history of violent insurgency until a landmark ceasefire agreement was signed in 2015. Economic development has

not been a high priority given the long-running insurgency. The state has natural resources including crude oil and limestone, but there are limited investment opportunities to develop these resources.

Rankings	Rank	
Business Reforms Action Plan 2016	26	
State Investment Potential Index 2017	NA	
Public Affairs Index 2017	16	
Gender Vulnerability Index 2017	14	
Key statistics	Nagaland	India
Area (square km)	16 579	
Real GSDP 2015–16 (AUD billion)	3	1 972
Population (million)	2.3 (≈Qatar)	1 300
Urbanisation rate (%)	28.9	31.2
Number of million plus cities	0	63
Income and growth		
Per capita income	1 662	2 052
NSVA by sector 2015–16 (%)		
Agriculture	31	17
Industry	12	31
Services	57	52
GSDP growth 2015–16 (%)	3.1	6.9
State contribution to GDP (%)	0.1	
Infrastructure		
Power deficit 2016–17 (%)	-1.7	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	224.2	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	0.8	20.1
Human development		
Literacy rate (%)	79.6	73
Gender literacy gap (pp)	6.6	16.7

Key statistics	Nagaland	India
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	5.9	2.9
Debt to GSDP ratio (%)	34.6	23.9
Health spend (% of total spend)	5.1	5.6
Education spend (% of total spend)	14.8	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of all north-east states)	0.03	

## Economic fundamentals

Agriculture contributes around 30 per cent to Nagaland's GSDP and employs 71 per cent of the state's population. During 2015–16, fruit production (including kiwi and passionfruit) was over 436,000 MT and vegetable production was 701,000 MT. Nagaland is the largest producer of coarse cereals, especially maize, beans and tapioca in the north-east. It is the second highest producer of pulses in the region. Sericulture and bamboo are also mainstays of the state's agricultural output. A small but flourishing apiculture sector has the potential to produce 15,000 MT of honey and 100 MT of wax per year.

Nagaland's industrial output is limited to the construction sector, wood and wood products. Cottage industries include weaving, woodwork, and pottery.

The state's tourism potential has been limited by insurgencies spanning five decades. But the state's natural topology and cultural diversity provide a competitive advantage in attracting tourists. The Hornbill Festival, launched by the state government in 2000, attracts thousands of domestic and foreign tourists annually.

## Current strengths

- Relatively wide road network and airport at Dimapur.
- Estimated hydropower potential of 1,574 MW, with an installed capacity of 53 MW as of March 2017.
- Nagaland has more than 1,000 MT of high chemical grade limestone reserves, 600 million MT of crude oil, and more than 20 MT of hydrocarbon reserves underneath seven oil belts; the state is rich in mineral resources such as coal, limestone, iron, nickel, cobalt, chromium, and marble.
- However, there are limited investment opportunities to develop these resources.

## Potentially transformative factors

- Export Promotion Industrial Park in Dimapur for the food processing sector.
- Connectivity – enhanced road and rail connectivity, including for the capital Kohima, and improved air connectivity.
- The promotion of bamboo cultivation and bamboo-based industries with renewed support from the Central Government.

## ODISHA

Despite being richly endowed with water, forest and mineral resources, the state of Odisha on India's east coast remains one of India's most underdeveloped. Odisha has almost 20 per cent of India's mineral wealth, but despite strong growth during the past decade, economic output remains well below the state's potential. Poverty in Odisha is higher than in most states, with a large proportion of the population consisting of India's most oppressed social groups, including Scheduled Castes (the least privileged castes) and Scheduled

Tribes (indigenous groups). There is a sharp divide between the relatively more developed coastal areas and the poorer interior. The Biju Janata Dal government led by Chief Minister Naveen Patnaik has overseen a long period of political stability throughout its consecutive terms since 2000, but governance challenges persist. Odisha also struggles with persistent left-wing violence as well as recurrent natural disasters; the latter has prompted innovative disaster management strategies.

Rankings	Rank
Business Reforms Action Plan 2016	11
State Investment Potential Index 2017	11
Public Affairs Index 2017	27
Gender Vulnerability Index 2017	23

Key statistics	Odisha	India
Area (square km)	155 707	
Real GSDP 2016–17 (AUD billion)	62.5	1 972
Population (million)	41.9 (=Argentina)	1 300
Urbanisation rate (%)	16.7	31.2
Number of million plus cities	1 (Bhubaneswar)	63

Income and growth		
Per capita income	1 495	2 052
NSVA by sector 2015–16 (%)		
Agriculture	21	17
Industry	34	31
Services	45	52
Average GSDP growth 2012–17 (%)	6.8	6.9
State contribution to GDP (%)	2.6	

Key statistics	Odisha	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	0	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	182.2	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	16.2	20.1
<b>Human development</b>		
Literacy rate (%)	72.9	73
Gender literacy gap (pp)	18	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3.8	2.9
Debt to GSDP ratio (%)	17.9	23.9
Health spend (% of total spend)	5.0	5.6
Education spend (% of total spend)	14.7	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	0.1	

## Economic fundamentals

Odisha's economic underperformance stems from the state's subsistence agricultural base, its vulnerability to natural disasters, weak industrial sector and high levels of unemployment. Industrialisation and mining have steadily increased in recent years and Odisha has generated among the highest shares of India's mineral production. Odisha accounted for 21.6 per cent of India's coal production in 2015–16, and the state leads the production of chromite, manganese, iron ore and bauxite.

Iron ore exports to China provided a boom to the state economy in the 2000s. But the iron ore mining boom was short-lived and did not significantly reduce poverty in Odisha. The state government captured little value from the boom; due in part to illegal mining and in part to mismanagement and regulatory failure (the 2014 Shah Commission, set up to enquire into irregularities in Odisha's mining sector recommended a Mineral Resource Rent Tax,

among other things). The sector's expansion is being contested, including through popular resistance to land acquisition, mineral licensing and environmental clearances.

Although 65 per cent of the state relies on agriculture for its livelihood, the agriculture sector suffers from the small size of land holdings, a high incidence of indebtedness on the part of farmers, inadequate irrigation and limited access to credit and other inputs. The state's infrastructure also remains inadequate – the railway network is severely lacking in remote areas, rural electrification is a work in progress and transmission and distribution inefficiencies persist.

## Current strengths

- Rich mineral resources – particularly in western and north-western Odisha; the state accounts for a third of India's iron ore reserves, a quarter of coal reserves, half of bauxite reserves, and almost all chromite and nickel reserves; coal, sillimanite,

quartzite, pyroxenite, dolomite, fire clay, graphite, manganese ore and garnet are also found in the state; Odisha has around 50 per cent of India's aluminium smelting capacity and around 20 per cent of India's steelmaking capacity.

- Besides accounting for 20 per cent of India's mineral resources, Odisha has 7 per cent of India's forest coverage, 10 per cent of water resources, a coastline of 482 km and three ports (of which, Paradip is India's second largest in terms of capacity).
- An empowered state bureaucracy and political stability.

### Sectoral opportunities for Australia

- Resources and Energy – METS, renewable energy technology.
- Education (vocational) – skill development in areas such as mining and metals.
- Education (other) – Odisha's capital Bhubaneswar has in the past few years become a regional education hub for higher education.

### Potentially transformative factors

- A revival of the mining sector, including new large scale steel investments – in 2015–16 mining accounted for 13 per cent of the state economy, delivering over 10 per cent of government revenue.
- Establishment of an aluminium industrial park, based on hot metal, as the state has a globally competitive position for the aluminium industry.
- An agricultural revolution to assist poverty alleviation in Odisha's rural interior – this would require diversification into a wider range of crops, livestock and fishery (the state is India's fourth largest producer of prawns).
- Development of large scale tourism, including ecotourism (building on the current sector which consists a tenth of GSDP); the 2017 Hockey World League Final and Asian Athletics Championships were held in the capital Bhubaneswar.

## PUNJAB

The northern Sikh-majority state of Punjab has been India's breadbasket since the introduction of high yielding grains during the 1970s Green Revolution. Punjab continues to play an important role in national grain production, producing 16 per cent of the nation's wheat and 11 per cent of its rice. More than 83 per cent of Punjab is under intensive agriculture. The landlocked state remains among India's more prosperous states. But its economy is currently sluggish, having failed to diversify away from wheat and paddy agriculture, build industry and generate jobs (youth

unemployment is 16.6 per cent, above the national average of 10.2 per cent). Populist agricultural policy, including heavily subsidised electricity, fertiliser and pesticides for farmers, have resulted in their overuse and over-irrigation, leading to falling water tables and poor soil quality. Punjab has also become one of India's most indebted states. Punjab has strategic significance given its long border with Pakistan. It remains among the largest sources of Indian migrants to Australia (and there are also sizeable diaspora communities in the United States, United Kingdom and Canada).

Rankings	Rank
Business Reforms Action Plan 2016	12
State Investment Potential Index 2017	16
Public Affairs Index 2017	7
Gender Vulnerability Index 2017	8

Key statistics	Punjab	India
Area (square km)	50 362	
Real GSDP 2016–17 (AUD billion)	69	1 972
Population (million)	27.7 (=Nepal)	1 300
Urbanisation rate (%)	37.5	31.2
Number of million plus cities	2 (Amritsar, Ludhiana)	63

Income and growth		
Per capita income	2 561	2 052
NSVA by sector 2015–16 (%)		
Agriculture	31	17
Industry	23	31
Services	46	52
Average GSDP growth 2012–17 (%)	5.6	6.9
State contribution to GDP (%)	2.8	

Key statistics	Punjab	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	0	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	209.2	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	45.1	20.1
<b>Human development</b>		
Literacy rate (%)	75.8	73
Gender literacy gap (pp)	10.1	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	2.9	2.9
Debt to GSDP ratio (%)	32.6	23.9
Health spend (% of total spend)	4.9	5.6
Education spend (% of total spend)	15.1	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of Haryana)	0.4	

## Economic fundamentals

Punjab is a major agricultural producer, contributing over 20 per cent of India's food production. Even as its share of GSDP has sharply declined, agriculture continues to play a pivotal role in Punjab, with more than 83 per cent of the state under intensive agriculture. The yield of food grains per hectare is among the highest in India, around double the average. But the rate of agricultural growth has contracted sharply over the past decade, from 0.95 per cent in 2005–06 to a low of -3.4 per cent in 2014–15. And the distortionary effect of heavily subsidised agricultural inputs is marked. For example, the state consumes almost 10 per cent of India's fertiliser (despite covering only 1.5 per cent of India's land mass).

Punjab has a number of small scale industries, including textiles – cotton and blended yarn – machine and hand tools, bicycle components and sports goods. The state is also home to a petrochemical refinery in Bhatinda. But other modern industries have not taken root.

To revive the economy, the government is focussed on enhancing agricultural productivity, diversifying industry and addressing youth unemployment through skills training. Punjab's lack of industrial development and employment opportunities has led to a 'brain drain'. Retaining the state's highly educated and enterprising talent pool is a key challenge for the government.

Another key priority will be to reduce Punjab's high fiscal deficit, which has been impeding investments in education, health and infrastructure. Debt doubled between 2007 and 2014, soaring to around a third of GSDP.

## Current strengths

- Major producer of wheat (16.4 per cent of national production), rice (around 11 per cent nationally), barley, cotton, sugarcane and fruit.
- Major producer of dairy.
- Ludhiana, one of four Punjabi cities being developed as a Smart City, leads business-friendliness rankings of major Indian cities. Ludhiana is Punjab's industrial capital with strengths in textiles and engineering, while also being a major importer of Australian wool.
- High road density and five airports, including a newly-developed international terminal in Chandigarh, a services and tourist hub and the shared capital of the states of Punjab and Haryana.
- Largest producer of machine and hand tools and bicycle components.

## Sectoral opportunities for Australia

- Agriculture – conservation agriculture, food processing, dairy, logistics and warehousing, farming equipment, farm management, irrigation, post-harvest and technological applications.

- Water management – given Punjab's groundwater quality issues and irrigation network.
- Education – partnership opportunities for Australian VET providers, including for healthcare education.
- Sports – sports science consulting sports training, and development of physical literacy in schools, given the state's forward-leaning stance on sports, particularly in boxing and wrestling; the Netaji Subhas National Institute of Sports is located in Patiala.

## Potentially transformative factors

- Economic diversification – as the environmental sustainability of Punjab's agriculture sector comes into question, reducing the state's overdependence on low value-added agriculture would underpin a transition to greater industrial investment.
- Return to fiscal stability – fiscal consolidation would bolster the investable public resources for the state's basic social services.



## RAJASTHAN

Rajasthan is India's largest state by area, comprising the sparsely populated arid Thar Desert in the west and more fertile lands to the east of the Aravalli mountain range. Although the landlocked state has experienced a decade of strong economic growth with rapid poverty reduction, it remains underdeveloped industrially and lags in human development indicators. Rajasthan faces severe water scarcity, with large areas of desert and extensive dry land

farming. The state has supported a series of reforms to diversify the state's economic base and attract investment, including robust labour reforms, reforms in solar, agriculture, the start-up ecosystem, minerals, tourism, land allotment and financial inclusion. But there has been a measure of political churn; no state government has been able to secure consecutive terms in Rajasthan since 1993, a period during which BJP and Congress governments have alternated.

Rankings	Rank
Business Reforms Action Plan 2016	8
State Investment Potential Index 2017	13
Public Affairs Index 2017	12
Gender Vulnerability Index 2017	22

Key statistics	Rajasthan	India
Area (square km)	342 239	
Real GSDP 2015–16 (AUD billion)	109	1 972
Population (million)	68.6 (≈Thailand)	1 300
Urbanisation rate (%)	24.9	31.2
Number of million plus cities	3 (Jaipur, Jodhpur, Kota)	63

Income and growth		
Per capita income	1 637	2 052
NSVA by sector 2015–16 (%)		
Agriculture	28	17
Industry	26	31
Services	46	52
Average GSDP growth 2012–15 (%)	6.1	6.9
State contribution to GDP (%)	4.8	

Key statistics	Rajasthan	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	-0.6	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	72.5	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	17.2	20.1
<b>Human development</b>		
Literacy rate (%)	66.1	73
Gender literacy gap (pp)	27.9	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3.1	2.9
Debt to GSDP ratio (%)	30.4	23.9
Health spend (% of total spend)	5.6	5.6
Education spend (% of total spend)	14.9	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	0.4	

## Economic fundamentals

Rajasthan's economy is dominated by agriculture, which employs more than half the workforce and accounts for 26 per cent of the state economy, a greater share than most large Indian states. The state has severe water scarcity, with just 1.2 per cent of the country's surface water and 1.7 per cent of ground water. Industry accounts for less than a third of GSDP, including cement, minerals, marble, slate and sandstone industries, as well as crude oil production.

Rajasthan enjoys competitive advantages in the mining, textiles, gems, jewellery and tourism sectors. In recent years, Rajasthan has become one of the most indebted states in India, exacerbated by efforts to turnaround debt-saddled electricity distribution companies. There is an urgent need to generate more revenue and curb electricity distribution losses. Rajasthan is a major nuclear power generating state – one plant is operational and another has been

approved – and is emerging as a strong adopter of solar technology.

The state's north-eastern cities of Jaipur, Ajmer and Alwar are the main drivers of industrial growth, including an expanding industrial park in Neemrana for over 45 Japanese firms focusing on automotive, auto ancillaries, engineering and chemicals, as well as an emerging IT industry in Jaipur.

## Current strengths

- Reformist state government that has boosted investor sentiment.
- India's second largest producer of oilseeds; including a large producer of coriander, seed spices, guar gum.
- Major producer of wool, milk, cereals, pulses and polyester.
- Proximity to the Delhi NCR supports Rajasthan's economic growth.

- Sizeable mineral deposits and mining sector; India's second-largest crude oil producer, and a major producer of lead concentrate, zinc concentrate, calcite, silver and mineral gypsum.
- A leading tourist hub of north India, including six United Nations Educational, Scientific and Cultural Organisation (UNESCO) world heritage sites.
- Rapid poverty reduction – urban poverty has reduced by two thirds while rural poverty has halved.
- An online single-window industrial clearance system.

### Sectoral opportunities for Australia

- Water management, given the large areas of desert and extensive dry land farming in addition to the ambitious river interlinking project being undertaken by the state.
- Resources and Energy – METS, renewable energy technology.
- Transport – road safety expertise and technology; Rajasthan will offer a large number of brownfield transport projects as the state's poor rail and road connectivity improves.
- Education (vocational) – skill development in areas such as mining, renewable energy, oil and gas, hospitality and tourism.

### Potentially transformative factors

- The Delhi Mumbai Industrial Corridor – almost 40 per cent of the planned freight corridor and associated industrial development will run through Rajasthan, transforming the surrounding region's infrastructure. Improved roads, energy, public transport and water infrastructure would have far-reaching effects. The Rajasthan Government is implementing major infrastructure projects in roads, energy, public transport and water sectors through support from international agencies.
- Urbanisation – at 25 per cent, Rajasthan is one of India's least urbanised states. As in other Indian states, urbanisation could drive greater shares for industry and services in the state economy. Four cities in Rajasthan – Jaipur, Udaipur, Kota and Ajmer are being developed as smart cities under the Smart Cities Mission.
- The discovery of oil and gas in Rajasthan is expected to lead to the development of numerous upstream and downstream industries in petroleum and chemicals including an oil refinery in Barmer.

## SIKKIM

Sikkim is a northern hill state bordered by China, Bhutan and Nepal. It is India's least populous and second smallest state. Known for its biodiversity, floriculture and mountainous terrain, its economy is largely comprised of agriculture and tourism. The state's transport infrastructure is developing,

backed by Central Government investments. Sustainability is a key state government priority – as of 2016, Sikkim was the first state to transition its agricultural sector to completely organic production.

Rankings	Rank	
Business Reforms Action Plan 2016	30	
State Investment Potential Index 2017	NA	
Public Affairs Index 2017	10	
Gender Vulnerability Index 2017	4	
Key statistics	Sikkim	India
Real GDP 2016–17 (AUD billion)	3	1 972
Population (million)	0.61 (≈Macau)	1 300
Urbanisation rate (%)	25.2	31.2
Number of million plus cities	0	63
Income and growth		
Per capita income	5 113	2 052
NSVA by sector 2015–16 (%)		
Agriculture	9	17
Industry	60	31
Services	31	52
Average GSDP growth 2008–13 (%)	23.4	6.9
State contribution to GDP (%)	0.1	
Infrastructure		
Power deficit 2016–17 (%)	0	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	104.9	139.1
Human development		
Literacy rate (%)	81.4	73
Gender literacy gap (pp)	10.9	16.7

Key statistics	Sikkim	India
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3.2	2.9
Debt to GSDP ratio (%)	25	23.9
Health spend (% of total spend)	4.9	5.6
Education spend (% of total spend)	17	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of all north-east states)	0.03	

## Economic fundamentals

Sikkim's economy is rapidly growing, although it had the third smallest GSDP in 2014. With no operational airport, a lack of railway infrastructure, limited road connectivity, and difficult terrain, Sikkim is one of India's most isolated states.

More than 64 per cent of the state's population depends on agriculture for their livelihood.

Floriculture is a mainstay – Sikkim leads the production and supply of cut flowers, and has collaborated with international technical experts to develop the potential for floriculture further.

The state also produces spices, such as cardamom, ginger, turmeric, and food grains such as millet, ragi, maize and rice.

With attractive tax incentives, low labour costs, and a variety of botanical products available, pharmaceuticals are an emerging industry in Sikkim, attracting major pharma companies.

It is estimated that Sikkim has a potential capacity of 8,000 MW of hydroelectric power. Over 20 hydropower projects are in the pipeline, including as public-private partnerships.

The Indian Army maintains a presence in large parts of the state, concentrated around the sensitive border area with China. Some areas require official permits to visit and are restricted to foreigners.

## Current strengths

- Sikkim's Tourism Policy of 2017 aims to promote low impact sustainable tourism. Sikkim is home to the world's third highest peak, a large tourist drawcard. The state government is seeking to promote itself as a destination for adventure tourism and ecotourism.
- Sikkim is India's leading producer of large cardamom, contributing over 80 per cent to total production.
- Sikkim was certified the first fully organic state in India by the Central Ministry of Agriculture and Farmers' Welfare in 2016. Sustainability and environmental awareness are increasingly connected to Sikkim's projected tourist identity.
- Female work participation rate in Sikkim is 40 per cent, higher than the national average of 26 per cent.

## Potentially transformative factors

- The expansion of road and rail networks and the development of air connectivity in Sikkim, including the proposed industrial corridors at Rangpo-Gangtok, Melli-Jorethang, Jorethang-Rishi, and Ranipool-Gangtok.

## TAMIL NADU

Tamil Nadu is India's second largest economy and a leading industrialised state. The state, through a sound agricultural base, rapid industrial growth and a robust welfare system, has risen to the top of India's economic and human development rankings. It has delivered among the highest per capita incomes, the best health indicators and lowest poverty rates in India. Its capital Chennai, the 'Detroit of India' is the centre of

Indian automobile and component manufacturing and one of the world's top 10 automotive hubs. The state has achieved stable law and order, a high-quality and free universal healthcare system, tourism appeal and a well-functioning public service. But there are early indications of an economic slowdown, including fewer investments, slowing jobs and manufacturing growth, declining ease of doing business and water scarcity.

Rankings	Rank	
Business Reforms Action Plan 2016	16	
State Investment Potential Index 2017	6	
Public Affairs Index 2017	2	
Gender Vulnerability Index 2017	10	

Key statistics	Tamil Nadu	India
Area (square km)	130 060	
Real GSDP 2016-17 (AUD billion)	203	1 972
Population (million)	72.1 (≈Thailand)	1 300
Urbanisation rate (%)	48.4	31.2
Number of million plus cities	6	63
	(Chennai, Coimbatore, Madurai, Tiruchirappali, Salem, Tiruppur)	

Income and growth		
Per capita income	3 047	2 052
NSVA by sector 2015-16 (%)		
Agriculture	13	17
Industry	31	31
Services	56	52
Average GSDP growth 2012-17 (%)	6.6	6.9
State contribution to GDP (%)	8.4	

Key statistics	Tamil Nadu	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	0	–0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	200.8	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	31	20.1
<b>Human development</b>		
Literacy rate (%)	80	73
Gender literacy gap (pp)	13	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3	2.9
Debt to GSDP ratio (%)	19.1	23.9
Health spend (% of total spend)	4.5	5.6
Education spend (% of total spend)	14.7	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	7	

## Economic fundamentals

Tamil Nadu is India's most urbanised state. It has a well-developed manufacturing sector, with the largest number of factories in operation in India and the country's largest pool of skilled labour. The state leads in automotive, engineering, research and development, health care, IT and IT-enabled services, textiles, cotton, financial, and leather industries.

The state is also among India's top FDI destinations, accounting for 7 per cent of total inflows into India from 2000–2017. The state hosts manufacturing facilities over 50 Fortune 500 companies and is home to the largest Japanese and Korean investments in India. Its capital Chennai is a premier automotive hub.

Although Tamil Nadu has experienced rapid industrial growth over decades, there are signs of a period of economic slowdown. An increasing proportion of proposed investments over the

decade to 2017 have been falling through, the SME sector is stagnating, the state's rankings on ease of doing business are falling and the state's schools lag national averages for educational outcomes. Manufacturing growth slowed to 1.65 per cent in 2015–16. As wages in the state rise and other states improve on ease of doing business, automotive companies are increasingly investing elsewhere in India.

Tamil Nadu's fiscal position is stable, but its welfare system remains a burden on finances and declining manufacturing growth is also impacting revenue. As a manufacturing state, Tamil Nadu fared better than expected from the implementation of the GST (which shifted levies from the point of origin to the point of consumption). The state's debt has grown in double digits over the decade to 2017. But this has not corresponded with commensurate GSDP growth; GSDP grew at 6.5 per cent from 2012–17.

## Current strengths

- Robust public institutions.
- Solid infrastructure in road and rail; three major ports, and seven airports.
- Largest producer of eggs, banana, tapioca, coconut, turmeric and flowers.
- Major producer of sugar, maize, horticulture, chemicals, fertilisers, cement, paper and steel.
- Chennai is a major port for agricultural imports and exports (particularly cotton and seafood) and India's second largest source of software exports.
- A leading solar and wind energy producer, with among the highest installed capacity in India and the world's largest solar plant.
- India's largest number of special economic zones in operation.
- Tourism potential, with five UNESCO Heritage sites, the highest of any Indian state.

## Sectoral opportunities for Australia

- Advanced manufacturing, automotive technology and aftermarket products.
- Energy – development of LNG terminals in Tamil Nadu, world class wind and solar energy potential, complemented by a growing gas pipeline network and high capacity power transmission corridors.
- Roads, ports, urban infrastructure, architecture and design services – Tamil Nadu will see many brownfield road projects and has a track record of toll projects with good collection history.
- Education, training and skill development; research partnerships.
- Fisheries, aquaculture, agri-technology – given Tamil Nadu is a major agricultural producer and a major importer of Australian pulses and grains.

## Potentially transformative factors

- Innovative approaches to water – Tamil Nadu faces long term challenges in water management. It has long-running disputes with Kerala regarding the Mullaperiyar Dam and with Karnataka over water sharing of the Cauvery River.



## TELANGANA

The southern landlocked state of Telangana is India's newest state, having been carved out from Andhra Pradesh in 2014. It is also one of India's fastest growing, with an average GSDP growth rate of 9.5 per cent in the three years following the state's formation. The state ranked equal first in 2016 on ease of doing business. This is credited to the single-window system for industrial approvals established in 2015 by the Telangana Rashtra Samithi Party government led by Chief

Minister K Chandrashekar Rao, as well as to the expansion of installed power capacity, shoring up the state's power supply. Telangana's capital and economic epicentre is the IT, pharmaceuticals and Telugu-language film hub of Hyderabad, India's sixth largest metropolis and a home to major corporates including Facebook, Google, Apple and Microsoft. The city will remain the joint capital with Andhra Pradesh until 2024.

Rankings	Rank	
Business Reforms Action Plan 2016	1	
State Investment Potential Index 2017	5	
Public Affairs Index 2017	20	
Gender Vulnerability Index 2017	11	

Key statistics	Telangana	India
Area (square km)	112 077	
Real GSDP 2016–17 (AUD billion)	99	1 972
Population (million)	35.2 (=Canada)	1 300
Urbanisation rate (%)	38.7	31.2
Number of million plus cities	1 (Hyderabad)	63

Income and growth		
Per capita income	3 094	2 052
NSVA by sector 2015–16 (%)		
Agriculture	17	17
Industry	19	31
Services	64	52
Average GSDP growth 2015–17 (%)	9.5	6.9
State contribution to GDP (%)	4.09	

Key statistics	Telangana	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	0	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	87.3	139.1
Rail density 2015–16 (km/1,000 km <sup>2</sup> )	15.5	20.1
<b>Human development</b>		
Literacy rate (%)	66.5	73
Gender literacy gap (pp)	17.1	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3.6	2.9
Debt to GSDP ratio (%)	17.2	23.9
Health spend (% of total spend)	4.8	5.6
Education spend (% of total spend)	8.1	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	4	

## Economic fundamentals

Telangana is dominated by its services sector, which constitutes 64 per cent of the economy, driven by Hyderabad's IT and pharmaceuticals hubs. Services steadily grew by 11.4 per cent in 2015–16, including real estate, professional services (including IT-enabled services), hospitality and financial services. Growth in agriculture has fluctuated – it constitutes 17 per cent of the economy but this share is declining.

Telangana outperformed all southern states in attracting investment in 2016–17, accounting for 3.3 per cent of total investment in India's largest states. This is credited to its robust growth and infrastructure, including uninterrupted power, water and an improving road network.

The Telangana State Government's fiscal prudence means it is one of few states able to borrow up to 3.5 per cent of GSDP under the *Fiscal Responsibility and Budget Management Act*. Growth in tax revenue of 17.81 per cent in 2016–17 was India's highest.

Disputes with Andhra Pradesh over water sharing arrangements relating to two rivers – the Krishna and Godavari rivers – show no signs of resolution. Parts of Telangana suffer drought-like conditions each year and several irrigation projects remain mired in inter-state disagreements being litigated in the court system.

## Current strengths

- India's best state (tied with Andhra Pradesh) in ease of doing business in 2016.
- Hyderabad's established position as a centre for IT-enabled services, business process outsourcing, and financial services.
- Key pharmaceutical and biotechnology hub, including Genome Valley in Hyderabad dedicated to life sciences, biomedical research, training and manufacturing; producer of a third of India's pharmaceuticals.
- A focus on innovation through a formal innovation policy.

- India's largest generator of solar energy, with plans for further expansion.
- The largest thermal plant in south India – the Ramagundam thermal power station.
- Large reserves of granite, coal, limestone, bauxite and mica.

### **Sectoral opportunities for Australia**

- Biotechnology – alliances to commercialise Australian research and development.
- Resources and Energy – mining, mineral processing and METS and renewable energy technology, given the strong potential in solar and wind.
- Education (vocational) – skill development.

### **Potentially transformative factors**

- Telangana is developing a long term strategy to expand its IT and innovation sector; Hyderabad is developing a reputation as a hub for start-ups and incubators. T-Hub, a state government backed start-up incubator, is designed to give Hyderabad's already established start-up ecosystem an edge by bringing together start-ups, academics and corporates.

## TRIPURA

Tripura borders Bangladesh and is the second most populous state in the north-east region. The state economy is largely dominated by agriculture and forestry, with little developed industry. Although the state's natural resources include natural gas, tea, medicinal plants, limestone and rubber, processing of these resources is limited. Tripura performs well overall on human

development indices, including high literacy rates, but the state's economic potential remains largely untapped. Tripura has been one of the Communist Party of India's last strongholds, but the party was defeated by the BJP in state elections in March 2018 after having held power in the state for five terms.

Rankings	Rank	
Business Reforms Action Plan 2016	22	
State Investment Potential Index 2017	NA	
Public Affairs Index 2017	18	
Gender Vulnerability Index 2017	17	
Key statistics	Tripura	India
Area (square km)	10 492	
Real GSDP 2014–15 (AUD billion)	5	1 972
Population (million)	3.7 (≈Puerto Rico)	1 300
Urbanisation rate (%)	26.1	31.2
Number of million plus cities	0	63
Income and growth		
Per capita income	1 424	2 052
NSVA by sector 2015–16 (%)		
Agriculture	28	17
Industry	21	31
Services	51	52
GSDP growth 2014–15 (%)	9.2	6.85
Infrastructure		
Power deficit 2016–17 (%)	-1.4	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	356.4	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	14.4	20.1

Key statistics	Tripura	India
<b>Human development</b>		
Literacy rate (%)	87.2	73
Gender literacy gap (pp)	9.03	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	4	2.9
Debt to GSDP ratio (%)	29	23.9
Health spend (% of total spend)	4.4	5.6
Education spend (% of total spend)	14.5	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of all north-east states)	0.03	

## Economic fundamentals

Tripura is a strong primary producer, with large yields of bamboo, coffee, pineapple, cashew and tea. The state is also the largest producer of jackfruit and second-largest producer of rubber in India. While conventional agriculture is dominant in the plains, slash and burn farming practices are still prevalent in the hills.

Tripura is a power-surplus state and exports power to neighbouring Bangladesh. The Tripura Power Project is one of the largest clean development mechanisms in the world. As of March 2017, the state had an installed power generation capacity of 727 MW.

Despite recent developments in cement and steel, rubber and tea constitute the lion's share of the industrial base. Tripura has several industrial estates and food processing parks, although the secondary sector contributes only about 5 per cent of total employment.

## Current strengths

- Natural resources and capacity for agricultural output. However, secondary processing of these stocks is lacking and the economic potential of these sectors remains hampered by insufficient industry.

## Potentially transformative factors

- A change of government in March 2018 ousting the five-term rule by Communist Party of India (Marxist).
- The Airports Authority of India has plans to upgrade Agartala airport, the second busiest in north-east India, to an international airport. Improved connectivity through Bangladesh would reduce the distance between Agartala and Kolkata from 1,570 km to 463 km and greatly ease trade. Tripura depends on Bangladesh for low-cost supplies of bulk supplies and some food products.
- The Tripura Industrial Investment Promotion Incentive Scheme 2017 identifies the state's agricultural strengths as 'thrust sector industries', particularly those industrial units using bamboo, rubber, tea, horticultural produce and gas as major inputs.

## UTTAR PRADESH

Uttar Pradesh in northern India is the most populous state of over 220 million in the country (and indeed, anywhere in the world) and a bellwether for national politics. It is India's third largest state economy driven largely by agriculture, but remains one of India's less developed states, with per capita income half the national average. Despite improvements in recent years, the landlocked state has struggled with poor natural resource endowments, slow growth, and poor human development. The state has a history of truculent caste-based politics

and inter-religious tensions, which continue to carry risks of social conflict. Australian commercial engagement has been limited to date, including due to poor perceptions of the ease of doing business and infrastructure gaps. But the state has unparalleled scale, untapped markets and out to 2035, the significance of its young demographics and national political clout will only increase. There are pockets of economic potential with relatively higher income segments, particularly in the state's west, driven by proximity to New Delhi.

Rankings	Rank
Business Reforms Action Plan 2016	14
State Investment Potential Index 2017	20
Public Affairs Index 2017	23
Gender Vulnerability Index 2017	29

Key statistics	Uttar Pradesh	India
Area (square km)	240 928	
Real GSDP 2016–17 (AUD billion)	192	1 972
Population (million)	223.8 (~Brazil)	1 300
Urbanisation rate (%)	22.3	31.2
Number of million plus cities	10	63
	(Kanpur, Lucknow, Varanasi, Agra, Meerut, Allahabad, Ghaziabad, Aligarh, Bareilly, Moradabad)	

Income and growth		
Per capita income	1 032	2 052
NSVA by sector 2015–16 (%)		
Agriculture	28	17
Industry	24	31
Services	48	52
Average GSDP growth 2012–17 (%)	7	6.9
State contribution to GDP (%)	7.9	

Key statistics	Uttar Pradesh	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	-1.7	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	172.4	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	37.1	20.1
<b>Human development</b>		
Literacy rate (%)	67.7	73
Gender literacy gap (pp)	20	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3.9	2.9
Debt to GSDP ratio (%)	35.5	23.9
Health spend (% of total spend)	5.6	5.6
Education spend (% of total spend)	16.3	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	0.2	

## Economic fundamentals

Uttar Pradesh is India's third largest state economy, driven largely by agriculture. The state produces a fifth of India's total food and half of food grains. Agriculture is the largest employer, employing one in every two workers, but productivity is considerably lower than other major food growing states given small landholdings, weak investment and inefficiencies in water distribution. The state's decision to write-off farm debt has resulted in a sharp decline in capital expenditure (including much needed expenditure on agriculture and irrigation).

Economic development has been hampered by infrastructure gaps, energy deficits and skill shortages. Uttar Pradesh lags most states on human development indicators and poverty reduction has been slower than the national average.

Although per capita income across the state is around half the national average, there are wide regional disparities. Western Uttar Pradesh has

a stronger agricultural sector, greater agricultural productivity and is both more urbanised and industrialised than the rest of the state, driven by its proximity to New Delhi. The western part of the state includes the higher-growth cities of Ghaziabad, Meerut, Mathura as well as Noida, north India's emerging IT and business process outsourcing hub. Agra is a major agricultural processing centre, including of cotton, dairy and flour milling. Lucknow, the state capital, is the base of India's largest tanneries, and a centre for wheat, rice and sugarcane production, as well as an emerging centre for aeronautical engineering.

High on the state's agenda is improving ease of doing business, including setting aside land for industrial use, proposed expansions of highways across the state and improved training programs for the workforce. But in a state with complex governance challenges, and stretched public finances, visible results for the business environment are at least a medium to long term proposition.

## Current strengths

- Vast population and untapped consumer markets.
- Competitive wage rates for labour-intensive manufacturing.
- Major producer of pulses, dairy, wheat, sugarcane, maize, potatoes, mangoes, leather and handicrafts.
- Urban development in western Uttar Pradesh driven by proximity to New Delhi, including in Ghaziabad and Noida, north India's emerging IT and business process outsourcing hub.

## Sectoral opportunities for Australia

- Agriculture – food processing, bovine genetics, cold chain logistics, and other specialised services related to precision farming, post-harvest solutions, logistics, seed treatment and soil health.
- Education (vocational) – large scale demand for skilling.
- Defence – long term defence manufacturing opportunities.
- Transport Infrastructure – short term brownfield road projects (on a toll-operate-transfer model); the state ranks as India's third in terms of tourist arrivals.

## Potentially transformative factors

- Demographic dividend – with sustained improvements in human capital, Uttar Pradesh's demographics could offer in the long term a greater dividend from its proportionately younger working age population than peninsular Indian states; around 60 per cent of the state is between 15–59 years of age.
- Institutional overhaul – improved law and order, transparency, public administration and the pursuit of inclusive growth would help to reverse the state's persistent record of economic underperformance. The state has seen a pattern of favourable economic governance for politically relevant geographies, so the decline of clientelist identity politics would also be transformative. But these governance traits are persistent and unlikely to shift in the short term. More broadly, the subdivision of the state for better governance has long been proposed but contested.
- Agricultural productivity turnaround – continued initiatives to increase yields, adopt new technologies and strengthen procurement policies would have enduring effects (but wholesale agricultural reform is unlikely in the short term).
- Infrastructure upgrades – moves to expand electricity coverage, curb electricity theft and reform debt-ridden state power distribution companies could be transformative. Uttar Pradesh has the largest number of cities earmarked under the Smart Cities initiative (Aligarh, Kanpur, Allahabad, Lucknow, Varanasi and Agra).



## UTTARAKHAND

Uttarakhand is a landlocked state in the Himalayan foothills, consisting of plains and hill districts. The state holds strategic significance as it borders China and Nepal. Ever since the state was carved out from Uttar Pradesh in 2000, it has charted a path of high economic growth. A package of tax breaks and other incentives for business have seen manufacturing firms invest in the state. Many of these see Uttarakhand as a lower-cost base from which to access larger north Indian state economies. There remains large untapped potential in hydropower, tourism and horticulture. But the state's difficult terrain and connectivity

challenges mean that costs for business (and service delivery) are considerable. Uttarakhand's economic growth has been concentrated in several districts in the plains, to the exclusion of the hills. This lopsided development has contributed to widespread migration away from the hills. Besides the geographic inequalities, exploitation of Uttarakhand's natural resource base – including deforestation and dam construction for hydropower projects – has come under criticism (particularly since major floods in 2013 had a devastating effect on the state economy).

Rankings	Rank	
Business Reforms Action Plan 2016	9	
State Investment Potential Index 2017	12	
Public Affairs Index 2017	11	
Gender Vulnerability Index 2017	13	
Key statistics	Uttarakhand	India
Real GSDP 2016–17 (AUD billion)	32	1 972
Population (million)	10 (≈Portugal)	1 300
Urbanisation rate (%)	30.2	31.2
Number of million plus cities	0	63
Income and growth		
Per capita income	3 197	2 052
NSVA by sector 2015–16 (%)		
Agriculture	10	17
Industry	52	31
Services	38	52
Average GSDP growth 2012–16 (%)	7.2	6.9
State contribution to GDP (%)	1.3	

Key statistics	Uttarakhand	India
<b>Infrastructure</b>		
Power deficit 2016–17 (%)	–0.6	–0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	117.7	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	6.5	20.1
<b>Human development</b>		
Literacy rate (%)	78.8	73
Gender literacy gap (pp)	17.6	16.9
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	3.1	2.9
Debt to GSDP ratio (%)	21.8	23.9
Health spend (% of total spend)	5	5.6
Education spend (% of total spend)	18.2	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%) (includes that of all north-east states)	0.03	

## Economic fundamentals

Although agriculture remains the occupation of a large proportion of the state's workforce, the contribution of agriculture to GSDP has fallen since the state's formation. Low-yield subsistence agriculture in the hill districts has substantially declined – the net sown area in the state has decreased by around 10 per cent from 2000–2014.

Uttarakhand's economy has been shaped significantly by its proximity to the populous state economies of north India and by the generous tax breaks. The state has emerged as a second tier automobile cluster (after Chennai, Mumbai and Delhi), a pharmaceuticals cluster, and a home to manufacturing for chemicals and food products. On the back of implementing regulatory reforms, the state moved up 14 ranks on ease of doing business in 2015–16.

Uttarakhand is in need of significant tourism infrastructure investment. The state is home not only to some of India's most sacred Hindu temples (including the Char Dham pilgrimage circuit), but

also significant sites for Buddhists and Sikhs. Jim Corbett National Park, one of India's oldest national parks and a tiger reserve, is a major ecotourism destination.

While physical connectivity within Uttarakhand has seen some recent improvements, it remains a brake on growth. Transport costs put firms based in Uttarakhand at a distinct disadvantage and the rail network is confined mainly to the plains. Only two small airports connect the state with New Delhi.

Over 90 per cent of Uttarakhand is hilly and two-thirds forested, leaving only 12.5 per cent arable. The fact that the state's topography limits the agricultural and industrial sectors directly affects Uttarakhand's public finances. The state's tax base is necessarily limited, and the prospect of end user charges for infrastructure, impractical. So the state is dependent on Central Government assistance for infrastructure development – and the state's special category status (due to its hilly terrain, low population density and poor infrastructure) has afforded it a degree of fiscal space.

## Current strengths

- Competitive advantages in hydropower, tourism and horticulture.
- Among top three states for hydropower potential (up to 25,000 MW potential).
- Sizeable cluster of auto companies.
- Rich tourism infrastructure development opportunities.
- Ample water resources.
- India's oldest agricultural university, the GB Pant University of Agriculture and Technology.
- Home to key national civil service training institutes in the capital Dehradun.

## Sectoral opportunities for Australia

- Resources – given the state's hydropower potential.
- Niche agribusiness opportunities.

## Potentially transformative factors

- Productivity of labour – Uttarakhand's medium to long term growth will depend in part on its ability to attract further industry and services, including to serve the north Indian regional economy. The availability of land and power are bound to become constraints in the long term. Given the state's topography, land for industrial use is limited (only 8 per cent is available for non-agricultural use) and the entire state is vulnerable to seismic activity. So a focus on improving the productivity of workers could prove transformative.
- Air connectivity – the development of a number of helipads and five new airstrips are under consideration (to augment the existing air connectivity provided by two airports).

## WEST BENGAL

West Bengal on India's east coast is India's fourth most populous state and the centre for engagement on mining and METS. Although a former financial and industrial powerhouse, the state economy is steadily recovering from industrial decline under decades of socialist government and obstructionist trade unionism. The state's leadership has tended to a populist style but is increasingly focused on attracting

foreign investment to the state. West Bengal has been the most significant METS market for Australian companies in India and is the main entry point for Australian coking coal and pulses exports to India. West Bengal is a gateway to the mineral-rich states of Jharkhand, Chhattisgarh and Odisha and the northeast. The state's capital Kolkata is re-emerging as a growth centre.

Rankings	Rank	
Business Reforms Action Plan 2016	15	
State Investment Potential Index 2017	21	
Public Affairs Index 2017	17	
Gender Vulnerability Index 2017	18	
Key statistics	West Bengal	India
Area (square km)	88 752	
Real GSDP 2015–16 (AUD billion)	79	1 972
Population (million)	90.3 (≈Vietnam)	1 300
Urbanisation rate (%)	31.9	31.2
Number of million plus cities	2 (Kolkata, Asansol)	63
Income and growth		
Per capita income	1 625	2 052
NSVA by sector 2015–16 (%)		
Agriculture	17	17
Industry	18	31
Services	65	52
Average GSDP growth 2010–15 (%)	6.4	6.9
State contribution to GDP (%)	6.6	
Infrastructure		
Power deficit 2016–17 (%)	-0.3	-0.7
Road density 2014–15 (km/100 km <sup>2</sup> )	333.5	139.1
Rail density 2014–15 (km/1,000 km <sup>2</sup> )	45.9	20.1

Key statistics	West Bengal	India
<b>Human development</b>		
Literacy rate (%)	76.3	73
Gender literacy gap (pp)	11.5	16.7
<b>Public finances 2016–17</b>		
Proportion of fiscal deficit to GSDP	–	2.9
Debt to GSDP ratio (%)	33.8	23.9
Health spend (% of total spend)	4.5	5.6
Education spend (% of total spend)	16.8	9.7
<b>Investment</b>		
Share of FDI inflows 2000–2017 (%)	1	

## Economic fundamentals

West Bengal's economy is primarily dependent on agriculture and mid-sized industry. The state more than doubled its GDP between 2011 and 2016 and is India's sixth largest state economy.

West Bengal is a strong agricultural state, including the largest producer of rice, fish, prawns and jute and major producer of tea, potatoes and pineapples. The state is also home to leather, chemical and electric locomotive manufacturing industries.

The state capital Kolkata is the most developed city in eastern India. It is among India's fastest growing cities, with real GDP growth of 6.3 per cent from 2011–16 and is projected to be in the top 10 fastest growing cities in Asia in terms of GDP out to 2021. Kolkata's port is experiencing a 15.9 per cent increase in total traffic.

Kolkata is the centre of India's mining and resources sector. Coal India is headquartered in Kolkata and the city is a regional economic hub for the mineral-rich eastern states of Jharkhand, Chhattisgarh and Odisha. West Bengal itself is India's third largest in terms of mineral production, with strong minerals processing equipment and

mining industries. It also ranks in the top five producers of iron and steel in India. It is the main entry point for Australian coking coal and pulses exports to India.

West Bengal serves as a gateway to India's north-eastern states and India's eastern neighbours. The Siliguri Corridor linking the north-eastern states is of particular strategic importance. But perceptions of corruption, populist leadership and the lack of land and labour reform continue to keep West Bengal from entering the first-tier of state economies. It is among the most indebted in India in terms of the ratio of debt to GSDP.

## Current strengths

- Strong growth higher than the national average, and capacity for mineral production.
- Kolkata is a significant healthcare hub for eastern India and Bangladesh with a large number of super speciality hospitals and diagnostic centres.
- Digitised land records, high road and rail density and port facilities.

## Sectoral opportunities for Australia

- Resources and Energy – mining operations and METS.
- Agriculture – food processing services, and other specialised services related to precision farming, post-harvest solutions, logistics, seed treatment, soil health and fisheries.
- Education (vocational) – skills development in mining and project management, and leveraging Kolkata as a regional hub, hospitality training for students from the north-east, who comprise a substantial proportion of the hospitality industry nationwide.
- Healthcare – hospital systems, maintenance of electro-medical instruments and high-level skills.

## Potentially transformative factors

- Leadership of reform – political leadership prioritising robust reform could be transformative for the state's economy. West Bengal deindustrialised under three decades of left-wing rule. While recent years up to 2018 have seen a measure of political stability and increased growth, a populist style of governance remains. Perceptions of corruption, the unavailability of land for industrial development and rigid labour regulations remain.
- Enhanced infrastructure – West Bengal's prospects could accelerate with improvements in physical infrastructure, including a new major deep sea port and planned freight corridors between the state and India's north-eastern and western states, as well as regional trade connectivity (including with Nepal, Bangladesh and Bhutan). These developments are medium term propositions.