National Council of Applied Economic Research

The NCAER State Investment Potential Index

Second Edition
2017

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N-SIPI 2017

Second Edition

July 2017

National Council of Applied Economic Research
11 Indraprastha Estate, New Delhi 110 002

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Foreword

Global growth trends look more optimistic in 2017. Both advanced and the emerging market economies are showing signs of accelerated GDP growth. Even in this more optimistic scenario, India's GDP growth at 7.2 percent is still the fastest in the world, and expected to further pick up in 2018 and 2019. India remains a highly desirable investment destination. The AT Kearney FDI Confidence Index ranks India eight in the world. The World Economic Forum's 2016-17 Global Competitiveness Index ranks India third in market size after China and the United States.

Business opportunities are expanding in India and were given a further boost with the launch of the Goods and Services Tax (GST) on July 1, 2017. The GST will create a common market for the US$ 2 trillion Indian economy and its 1.3 billion people. The GST is expected to be a game changer, improving market efficiency, reducing the cost of doing business, and boosting competitiveness. It will weave India's states together in ways that has not been possible before.

In 2015, NCAER launched a research initiative to measure each state's investment climate and to track it over time. In March 2016, NCAER presented the first NCAER State Investment Potential Index 2016(N-SIPI 2016), which uniquely provided a single composite investment rating of how 20 Indian states and the Union Territory of Delhi were positioned to encourage and attract investment. N-SIPI 2016 was a pioneering effort to provide metrics of economic governance, competitiveness and growth opportunities at the state and regional levels. The Index is designed to provide a systematic and reliable "go-to" reference for potential investors. N-SIPI 2017 is the second edition in what we hope will be an annual series of states' ranking by NCAER.

Building on the success of N-SIPI 2016, this second edition improves its methodology in ranking states' in two key ways. First, N-SIPI 2017 adds a sixth pillar on "land", a significant element in investment decisions, to N-SIPI's previous five pillars, enabling a more granular analysis of state investment potential. Second, a key pillar of N-SIPI 2016 was a perception-based ranking of business climate built on firm surveys. N-SIPI 2017 improves the statistical accuracy of this measure through improvements in survey methodology using NCAER's core strengths of conducting large, national surveys that are rigorously designed and scientifically carried out. The results of the industry survey shed interesting light on the pace of business reforms and government policy changes at the state level. We believe these results will be of considerable value to the leadership of India's states as they continue to improve their investment climates.

NCAER greatly appreciates the feedback from state and industry representatives on the first edition of N-SIPI in 2016. I am grateful to the two NCAER team leaders, Dr Indira Iyer and Ms Mythili Bhusnurmath, for their leadership of the dynamic N-SIPI project team comprising Dr Anjali Tandon, Dr Arun Srivastava, Dr Tarujyoti Buragohain, Dr Anusha Avyukt, Dr Prerna Prabhakar, Anupma Mehta, Asrar Alam, Khushvinder Kaur and Shashi Singh.

This second edition of N-SIPI helps build continuity, consistency and rigour in ranking India's state investment potential for investors and policymakers. We hope to roll out the N-SIPI in the middle of every year, and the N-SIPI team looks forward to working hard in the coming year to improve the value of the next N-SIPI.

New Delhi
July 14, 2017

Shekhar Shah
Director-General
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At NCAER, the work benefitted from important inputs from Dr. Rajesh Chadha, Senior Research Councillor and the overall guidance of Dr. Shekhar Shah, Director General. We would like to extend our special thanks to Dr Arun Srivastava, former Joint Director at the Indian Agricultural Statistics Research Institute, for his very useful inputs into our survey design and methodology and Praveen Sachdeva for his help in coordinating the training of survey agencies. We would also like to thank Sudesh Bala, Sangita Chaudhary and Debarati Basu for their organizational support. In conclusion, we would like to thank our entire research team who worked tirelessly throughout the study. Ms. Khusvinder Kaur and Ms Shashi Singh deserve special thanks for ably looking after the administrative aspects of the study and making sure the deadlines were met.

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Abbreviations

ASI	Annual Survey of Industries
CAGR	Compounded Annual Growth Rate
CES	Consumer Expenditure Survey
CMIE	Centre for Monitoring Indian Economy
CSO	Central Statistical Office
CST	Central Sales Tax
DDA	Delhi Development Authority
DIPP	Department of Industrial Policy and Promotion
EME	Emerging Market Economy
EU	Employment and Unemployment
FDI	Foreign Direct Investment
FICCI	Federation of Indian Chambers of Commerce and Industry
FY	Fiscal year
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
GOI	Government of India
GSDP	Gross State Domestic Product
GST	Goods and Services Tax
GVA	Gross Value Added
IMF	International Monetary Fund
IPC	Indian Penal Code
ITES	Information Technology Enabled Services
J&K	Jammu & Kashmir
LFPR	Labour Force Participation Rate
LWE	Left-wing Extremism
MHA	Ministry of Home Affairs
Min-Max	Minimum-Maximum
MOSPI	Ministry of Statistics and ProgrammeImplementation
MSME	Micro Small and Medium Enterprises
NCAER	National Council of Applied Economic Research
NCR	National Capital Region
NCRB	National Crime Records Bureau
NIC	National Industrial Classification
NIMZ	National Investment Manufacturing Zone
N-SIPI	NCAER State Investment Potential Index
NSS	National Sample Survey
PM	Particulate Matter
SEZ	Special Economic Zone
TI	Transparency International
UT	Union Territory
VAT	Value Added Tax
WGI	Worldwide Governance Indicator
Y-O-Y	Year over Year

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Executive Summary

When, writing in Young India in April 1931, Gandhiji contended that 'India lives in its villages,' his statement carried the inherent conviction that any effort to ensure economic growth and prosperity among the vast majority of people in the country must begin with the upliftment of the individual states and the numerous villages constituting these states. This aspiration is reflected in recent attempts at decentralisation by the Central Government that recognise states as equal partners, and the rising spirit of 'competitive cooperative federalism' entailing healthy competition among states in all spheres, including in the sphere of attracting investment and offering a conducive environment for growth of business.

With India growing as a land of investment opportunities, informational asymmetries quite often drive a wedge between investment decisions and spatial location. In March 2016, the NCAER rolled out the first of its kind ranking of states'(*The NCAER State Investment Potential Index, March 2016*), a pioneering and unique effort to address these informational asymmetries by providing a single composite investment score that gives a holistic sense of how the states in this Index are positioned to encourage and attract investment.

While N-SIPI does not measure streamlining of regulatory procedures and business reforms, it perfectly complements the World Bank and the DIPP's ranking of states on how well they performed on a 405-point action plan for business reforms. Both these indices signify a response to the present government's focus on increasing investment opportunities at the state level. N-SIPI also complements NCAER's own study that attempted to match business reforms with ground-level realities (*Building Synergies: Matching Business Reforms to Improved 'Ease of Doing Business, NCAER, April 2017*).

N-SIPI 2017 is the second edition in the annual series of states' ranking by NCAER that provides a systematic, consistent and reliable "go-to" Index for potential investors. N-SIPI 2017 builds on the framework and methodology of N-SIPI 2016, and incorporates the results of an extensive survey across the 20 states and one Union Territory surveyed in April and May 2017. The agencies surveyed during this time were asked to rate the difficulties they had faced with respect to obtaining land, labour and access to infrastructure in addition to their perceptions on the economic climate, governance and future business opportunities in their respective states, all of which are critical apriori information for making investment decisions.

As with N-SIPI 2016, N-SIPI 2017 is an evidence-based index. However, while N-SIPI 2016 was based on five pillars, N-SIPI 2017 adds another important pillar-land-bringing the total number of pillars to six (land, labour, infrastructure, economic climate, political stability and governance, and a perceptions-based survey). Each of the pillars is, in turn, based on a number of sub-pillars, the number varying from four in the case of land to 11 in the case of infrastructure.

As expected, the rankings in N-SIPI 2017 show some churn vis-à-vis N-SIPI 2016. Hence, while Gujarat and Delhi, in that order, retain their top rankings in N-SIPI 2017, Andhra Pradesh makes an entry at number three, even as the erstwhile number three, Tamil Nadu, slips to number six. At the other end, we have Bihar and Uttar Pradesh as the two constants (at ranks 19 and 20, respectively) among the three states at the bottom of the league tables, while West Bengal at rank 21 has slipped from the 15th rank in N-SIPI 2016.

The states that have greatly improved their rankings over the year include Haryana, up from 16th to 4th, and Telangana, up from 13th to 5th. In contrast, Chhattisgarh and Uttarakhand have slipped seven and four places, respectively, to ranks 14 and 12 in N-SIPI 2017. The regional divide, often observed in other spheres, is reflected in investment potential as well, with the southern and western states performing far better than the eastern and central states.

A noteworthy feature is the below average showing of northern states, especially Punjab, once considered among the more prosperous states. Although Punjab's ranking has improved marginally, from 18th in N-SIPI 2016 to 16th in N-SIPI 2017, the regional disparity is undeniable and unless prudently addressed, could lead to further widening of gaps between the states at the upper and lower ends of the Index.

When assessed at the disaggregated level of the individual pillars, Madhya Pradesh leads under the 'land' pillar, which was introduced in the 2017 Index, with Telangana and Tamil Nadu following at number two and three. Chhattisgarh, Uttarakhand and Assam bring up the bottom. Given that easy availability of land is a key element in any investment decision and land is part of the concurrent list under the Constitution, the clear message is that the states must ensure ease of land acquisition for investors.

On the labour front, there has been a churn at both the top and bottom of the league tables. While Tamil Nadu, Andhra Pradesh and Telangana occupy the top three spots in N-SIPI 2017, displacing the earlier trio of Kerala, Tamil Nadu and Karnataka, Assam has been relegated to number 19, followed by Jharkhand and Madhya Pradesh, in that order.

The 'infrastructure' pillar, however, reflects only one change among the top trio, with Maharashtra dislodging Punjab to make a dramatic improvement, moving up from the 7th position in N-SIPI 2016 to the second rank in N-SIPI 2017. The states at the bottom with respect to this pillar are Jharkhand, UP and Bihar, with Bihar replacing Rajasthan, which has moved up from the 19th rank in N-SIPI 2016 to the 15th in N-SIPI 2017.

Rankings with regard to the pillar on 'economic climate' also indicate major changes with only Delhi retaining its position among the top three, moving down to number two from its top position in N-SIPI 2016. Gujarat, now leading at the head of the league table, moves up from number four in N-SIPI 2016 while Uttarakhand shows a dramatic improvement from being at the 10th rank in N-SIPI 2016 to number three in N-SIPI 2017. Punjab, Uttar Pradesh and Bihar are at the bottom with Bihar edging out West Bengal, which moves up dramatically from 20 to number nine in N-SIPI 2017.

Haryana, Gujarat and Uttarakhand lead the league tables on the 'governance' pillar in which Himachal Pradesh, Delhi and Rajasthan are at the bottom. A striking outcome of the rankings with respect to this pillar is the notable decline of Delhi from rank 11 in N-SIPI 2016 to the last but one rank of 20 in N-SIPI 2017.

The investment potential of any state is a complex amalgam of socio-political and economic realities at the ground level and the perceptions regarding the business climate prevailing in the state, of people already engaged in business there.

NCAER has been at the forefront of assessing the impact of the reforms at the ground level. Consequently, the 'perceptions-based survey' pillar, which attempts to capture the 'ease-of-doing business', is an integral part of the N-SIPI index. The perceptions-based findings show that except for Gujarat, which holds on to its top rank, other states have slipped in rankings, with Rajasthan and Chhattisgarh ceding their erstwhile positions to Andhra Pradesh and Telangana, which have come in at numbers two and three, respectively, in N-SIPI 2017. In terms of perceptions on ease of doing business, West Bengal, Maharashtra and UP are at the bottom.

It must be emphasised that N-SIPI 2017 is one of the many indices being developed by different agencies to benchmark different states on the ease of doing business front. However, by ranking states in terms of their investment potential, it is more forward-looking than other extant indices. To the extent that investment decisions are based on assessments of the future, NCAER thus believes that N-SIPI, particularly N-SIPI 2017, would be a valuable addition to the newly-emerging literature on competitive, cooperative federalism.

Section 1

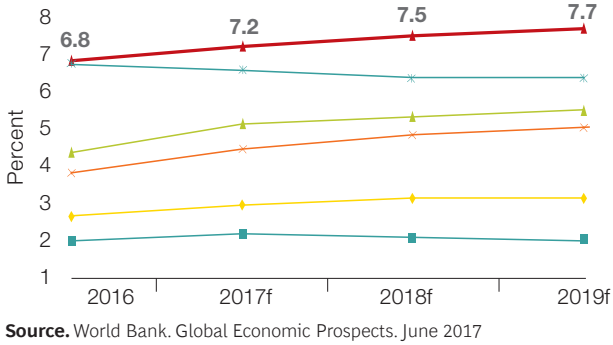
Introduction, Methodology and Main Findings

1.1 INTRODUCTION

India remains the fastest growing economy in the world, and the pace of growth is expected to pick up further in 2018 and 2019. In 2017, India is poised to grow at 7.2 percent which is faster than China and other developing countries and well ahead of the 1.9 percent growth in advanced economies (Figure 1.1)[1]. The World Bank forecasts that global growth will strengthen to 2.7 percent in 2017 and the accelerated growth in advanced economies in 2017 would benefit trading partners including India. India continues to make rapid strides to remain competitive globally. The World Economic Forum's Global Competitiveness Index (GCI) which ranks 138 countries[2], had India's ranking improve for the second year in a row by 16 spots from 55th in 2016 to 39th in 2017, mainly due to gains made in goods market efficiency and business sophistication and innovation.

The recently introduced Goods and Services Tax (GST)[3] is a game changer in terms of improving market efficiency, reducing the cost of doing business, and boosting competitiveness. It will create an integrated common market for the USD 2 trillion Indian economy and 1.3 billion people and, together with the ongoing focus on Make in India, Start-up India, Digital India and Skills India, will generate greater opportunities for growth and investment in the near and medium terms.

Figure 1.1 Global Real GDP Growth



Source. World Bank. Global Economic Prospects. June 2017

The State Investment Potential Index

The *Doing Business* in India climate is getting better. While India is growing as a land of investment opportunities, informational asymmetries quite often have driven a wedge between investment decisions and spatial location. The NCAER's State Investment Potential Index (N-SIPI) is uniquely poised to address these informational asymmetries by providing a single composite investment score that gives a holistic sense of how the states' in this Index are positioned to encourage and attract investment. N-SIPI assesses the factors creating investment opportunities and driving investment decisions as measured by certain specific parameters. These parameters include a state's factors of production, its efficiency in the use of these factors of production, the growth prospects in this state and industries' perception of investment opportunities in that state.

In March 2016, the NCAER rolled out the first of its kind ranking of states based on their investment potential. The NCAER State Investment Potential Index (N-SIPI 2016) was a pioneering and unique effort to provide metrics of economic governance, competitiveness and growth opportunities at the state and regional level. A unique component of N-SIPI 2016 was that it merged a perception based index (constructed using surveys) with fundamentals driving investment decisions.

The N-SIPI 2017 is the second edition in the annual series of states' ranking by NCAER that provides a systematic, consistent and reliable "go-to" Index for potential investors.

1 World Bank. Global Economic Prospects: A Fragile Recovery. June 2017

2 The GCI has 12 pillars that measure competitiveness determined by the set of institutions, policies, and factors that increase the level of productivity of an economy.

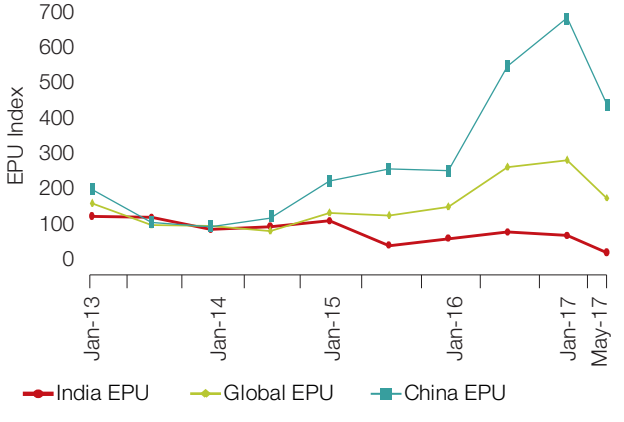
3 The Goods and Services Tax (GST) Bill was introduced in 2014 as The Constitution (One Hundred and Twenty-Second Amendment) Bill, 2014. The Goods and Services Tax (GST) was launched on the midnight of 30 June 2017 in Parliament by the Prime Minister of India,and implemented with effect from July 1, 2017.

N-SIPI 2017 builds on the framework and methodology of N-SIPI 2016, and incorporates the results of an extensive survey across 21 states in April and May 2017. The agencies surveyed during this time were asked to rate the difficulties they had faced with respect to obtaining land, labor and access to infrastructure, in addition to their perceptions on the economic climate, governance and future business opportunities in their state – all of which are critical apriori information for making investment decisions.

India on the move

The Economic Policy Uncertainty Index[4] (EPU) for India is very favourable compared to the rest of the world (Figure 1.2). But for a brief spike during December 2016 to February 2017 following demonetization, the EPU has shown a steady decline since January 2015 which suggests strong fundamentals supporting growth and investment in India. At the heel of reforms initiated in foreign direct investment (FDI) regulations, the FDI inflows into India have touched record highs, and India has moved to the 8th spot in AT Kearney's FDI Confidence Index[5]. While foreign investors see the "Make in India brand" in a very positive light and are evenly split on deciding whether the investment climate is better in India or China, the bullish investors are most drawn by India's low cost of labour and its availability due to India's demographic dividend, as well as India's vast market size and tax reform measures.

Figure 1.2 Global Trends in Economic Policy Uncertainty (EPU)



Note: The lower the EPU Index, the greater is the confidence in economic policy
Source: Economic Policy Uncertainty. 2017

With a view to continually improve the business climate to attract domestic and foreign investments, as well as promote competitive and cooperative federalism among states, in October 2016, the Department of Industrial Policy and Promotion (DIPP) and the World Bank released its second edition of its report on 'Assessment of State Implementation of Business Reforms'. This index-based assessment ranked states' on the degree of success in the implementation of the government's 340-point Business Reform Action Plan. With the national implementation average in 2016 at 49 percent significantly higher than 2015 national average of 32 percent[6], it is seen that states' have significantly embraced reforms facilitating ease of doing business. In the World Bank's latest 'Doing Business' 2017 report, India's place remained unchanged from last year's original ranking of 130 among the 190 economies. However, with demonstrable reforms at the state level and game-changing reforms like the Goods and Services Tax, India's global rank is expected to improve significantly over the coming years.

N-SIPI is a complementary index to DIPP's assessment of states' performance. While DIPP's index measures regulatory procedures and business reforms, N-SIPI assesses states' potential for investment and job creation, as measured by their policy intent, ground-level realities and perceptions on the ease of doing business . The N-SIPI Index is constructed using secondary data from published sources and primary data from the survey.

By providing a highly credible, evidence-based yardstick to address information gaps, N-SIPI complements the present focus of the government on business reforms and policies to promote the Make in India and Start-up India campaigns. N-SIPI can be especially helpful in balancing risks and rewards in making locational choice for domestic and FDI investments. This second edition of N-SIPI helps build continuity, consistency and reliability in ranking India's state investment potential over the coming years.

4 Measuring Economic Policy Uncertainty (EPU). NBER Working Paper No 21633. October 2015. For India, the Index reflects scaled monthly counts of articles containing 'uncertain' or 'uncertainty' or 'uncertainties' or 'uncertainties', 'economic' or 'economy', and some policy-relevant terms. The series is normalized to mean 100 from 2003 to 2010 and based on the following newspapers: The Economic Times, Times of India, Hindustan Times, The Hindu, Financial Express, Indian Express, and the Statesman.

5 The 2017 AT Kearney Foreign Direct Investment Confidence Index: Glass Half Full

6 Department of Industrial Policy and Promotion and World Bank. Assessment of State Implementation of Business Reforms. October 2016.

1.2 METHODOLOGY

N-SIPI a year Ahead

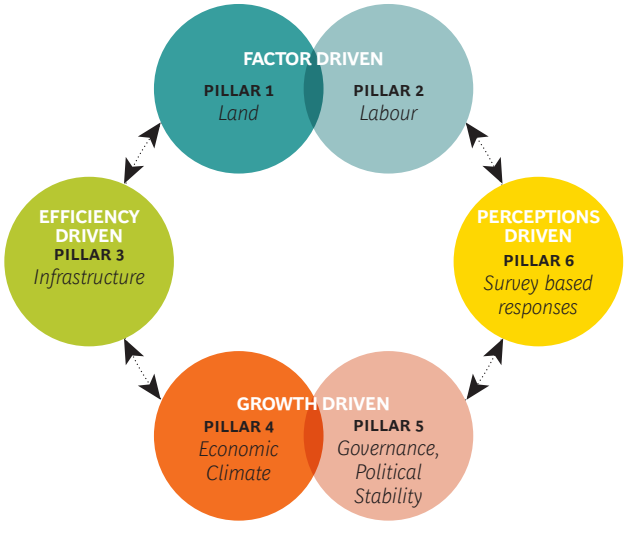
Building on the success of N-SIPI 2016, this second edition of state rankings improves its methodology in two key ways. First, while N-SIPI 2016 was built on five main pillars, the 2017 version adds a sixth pillar on "land" that is key to investment decisions. The land pillar reflects the land policy and the environment for land acquisition within the states. Second, one of the key pillars on which the N-SIPI 2016 stood was the perception-based rankings of business climate based on industry surveys. To improve the efficiency of survey estimates and provide more accurate feedback, the other key change in N-SIPI 2017 was an improvement in survey methodology to make it more robust, representative, and scientifically rigorous. The detailed methodological note is in Appendix A.

The Six Pillars

The NCAER's State Investment Potential Index (N-SIPI) is constructed under six broad pillars that can be classified under four broad categories as being factor driven (land and labour), efficiency driven (infrastructure), growth driven (economic climate; governance and political stability), and perceptions driven (responses to the survey) (Figure 1.3).

Under each of the six pillars there are a number of sub-indicators. Each sub-indicator has been normalized to make it unit-free. As such, 100 would now represent the best state and zero the worst state under each sub-indicator. There are 50 sub-indicators under the six main pillars. The sub-indicators under each of the main pillars have been aggregated using a weighted arithmetic mean. The labour, infrastructure, economic climate, political stability and governance, and survey pillars have been given equal weights and the nascent land pillar has been given half the weight. The weighted geometric mean has been used to give a single composite investment score. Details of the aggregation method, and the pillars with the sub-indicators under each pillar are described in the Methodology section in Appendix A. The main findings are discussed below.

Figure 1.3 The Six Pillars of N-SIPI



The 2017 Rankings

The industry survey was conducted in 21 states. Among the seven North-Eastern states, only Assam was covered. Other states not covered by this survey include Goa, Jammu and Kashmir and Sikkim. The Index in this study is hence N-SIPI 21 which ranks 21 states based on the six pillars and 50 sub-indicators. Appendix B gives the details of the states' ranking under N-SIPI 21 under each pillar and sub-indicator separately.

Figure 1.4 Overall rankings under N-SIPI 2017: All Six Pillars

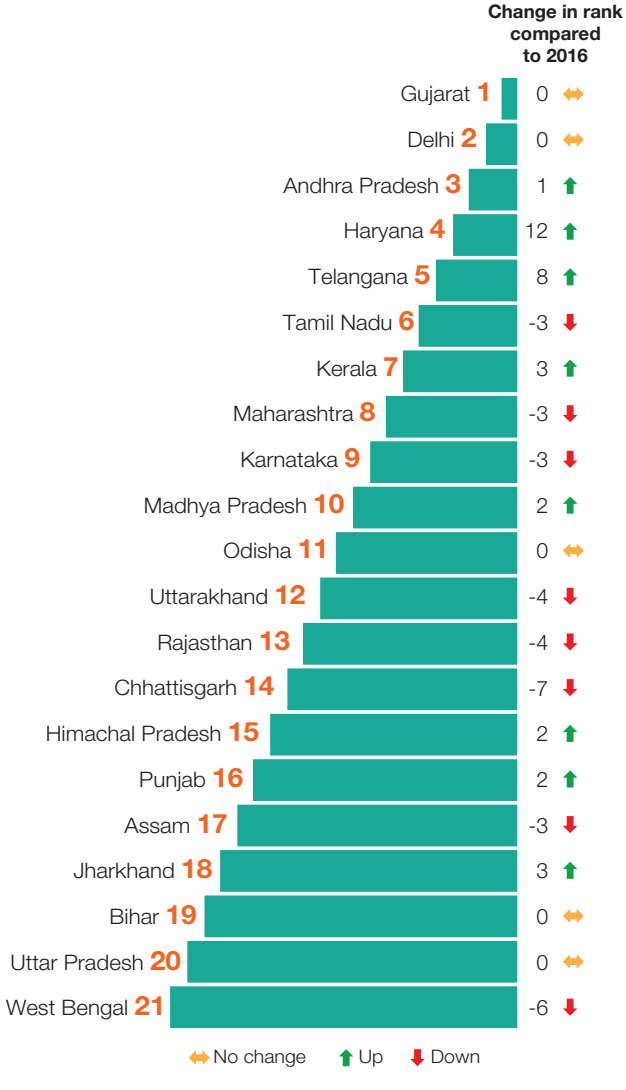


Table 1.1 Dynamic shifts: Change in rankings in 2017 as compared to 2016, Overall and Individual Pillars
(with the exception of the Land Pillar which was not included in 2016)

OVERALL		LABOUR		INFRASTRUCTURE		ECONOMIC CLIMATE		GOVERNANCE/ POL STABILITY		SURVEY	
Haryana	12	Bihar	10	Maharashtra	5	West Bengal	11	West Bengal	6	Telangana	13
Telangana	8	Maharashtra	7	Karnataka	4	Uttarakhand	7	Kerala	5	Punjab	12
Jharkhand	3	Haryana	6	Odisha	4	Gujarat	3	Haryana	4	Haryana	10
Kerala	3	Uttarakhand	6	Rajasthan	4	Jharkhand	3	Punjab	4	Kerala	10
Rajasthan	-4	Kerala	-5	Punjab	-2	Assam	-4	Andhra Pradesh	-4	Tamil Nadu	-8
Uttarakhand	-4	Madhya Pradesh	-5	West Bengal	-4	Odisha	-4	Madhya Pradesh	-5	Maharashtra	-9
West Bengal	-6	Odisha	-7	Assam	-5	Rajasthan	-5	Rajasthan	-6	Rajasthan	-11
Chhattisgarh	-7	West Bengal	-8	Uttarakhand	-9	Andhra Pradesh	-9	Delhi	-9	Uttarakhand	-12

Note: Trends for all states under all pillars are in Appendix B

1.3. FINDINGS

Gujarat continues to lead N-SIPI 21; Haryana and Telangana move into top 5

Gujarat, Delhi, Andhra Pradesh, Haryana, Telangana and Tamil Nadu are the top six states for business investment potential under N-SIPI 21[7] which ranks states based on all six pillars (Figure 1.4) Gujarat tops the rankings under the fourth and sixth pillars on economic conditions and the perception of a favorable industrial climate in this state. Delhi is second and tops the ranking in infrastructure but loses out in governance and political stability. Though Bihar, Uttar Pradesh and West Bengal are ranked among the least favorable states for investment, they rank higher under individual pillars with Bihar doing better in the labour pillar, Uttar Pradesh in the land pillar, and West Bengal in the economic conditions pillar. Odisha maintains its ranks from last year at eleventh position.

Compared to the 2016 ranking, Haryana and Telangana made the most rapid gains in closing the distance to the frontier by moving up 12 and 8 spots to fourth and fifth positions respectively in 2017. Chhattisgarh and West Bengal lost the most ground by moving down 7 and 6 spots to fourteenth and twenty-first positions respectively.

Dynamic shifts under the individual pillars

Bihar and Maharashtra made the most rapid gains in becoming more competitive under the labour pillar, while West Bengal and Odisha slid down the ranking (Table 1.1). In the infrastructure pillar, Maharashtra, Karnataka and Odisha moved closer to the frontier, whileUttarakhand and Assam moved further away. West Bengal made the most gains in the economic climate and governance pillars, while Telangana, Punjab, Haryana and Kerala made significant gains under the survey pillar.

7 N-SIPI-21 includes all major states except the six North-Eastern states of Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura; as well as Sikkim, Goa, and Jammu and Kashmir.

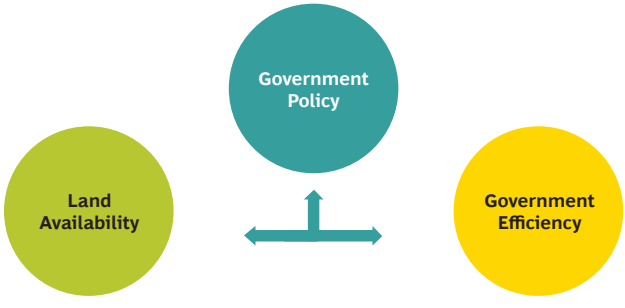
1.4 THE SIX PILLARS OF N-SIPI

PILLAR 1: LAND

With a view to continuously improve the Index and capture as many relevant factors important for starting and continuing a business, new indicators for "Land" have been added as a separate Pillar in 2017. Together, both land and labor give an indication of the factors of production available in a state. The land pillar as it stands now captures the availability, efficiency and policy space in land[8] across the states.

Figure 1.5 The First Pillar: Land

What does the Land Pillar indicate?



	2017
Top 6 states	Madhya Pradesh
	Telangana
	Tamil Nadu
	Uttar Pradesh
	Gujarat
	Andhra Pradesh

Key takeaways

Acquiring land is perhaps one of the most difficult and contentious process in setting up an industry. The Land Acquisition Rehabilitation and Resettlement Act (LARR) of 2013 envisages a more transparent and fair process for acquiring land for developing industries and infrastructure. Quite expectedly then, survey responses indicate that a state that had more industrial parks had less difficulties in acquiring land (Figure 1.6). States which also had more land available for industrial purposes, defined as the total area in a state less agricultural land, had a greater share of industry in gross state value added (Figure 1.7), which suggests that a strong push towards having more land demarcated as industrial zones would create more employment opportunities and increase growth.

Figure 1.6 Industrial parks and difficulties in getting approvals for land

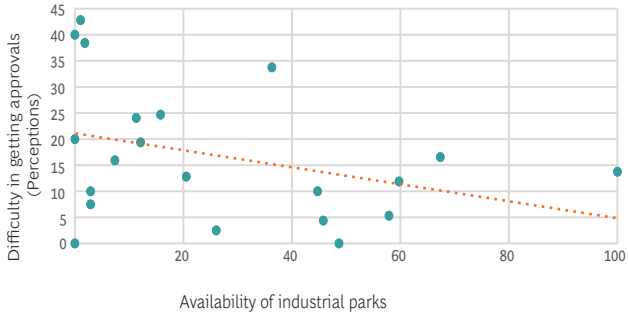
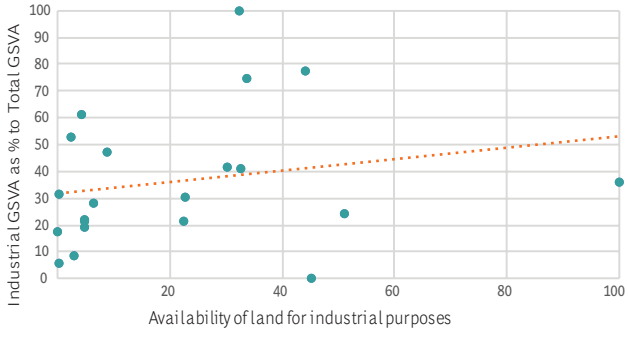


Figure 1.7 Availability of land for industrial purposes and industrial GSVA



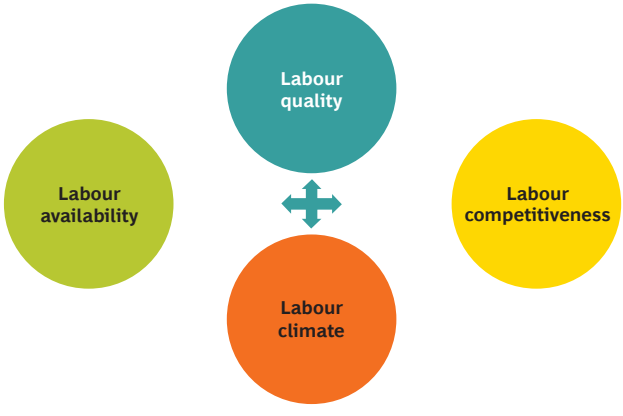
8 Apart from the availability and policy space for land, the price of land is equally important for locational choice. However, there are no comparable and reliable published data state-wise. With market prices of land varying very significantly from the fundamental value of land and with wide-ranging prices within a state itself, getting consistent and reliable data for the price of land remains a challenge.

PILLAR 2: LABOUR

For industry, the availability of an educated and skilled workforce at competitive wages in a favorable labour environment is a significant factor affecting locational choice. While some of the labour sub-indicators are unambiguously unidirectional, others can be interpreted in two ways. For instance, higher manufacturing wages in a state are better from a social point of view, but from an industry point of view, it makes the state less competitive. On the other hand, a less educated workforce or low availability of skilled workers makes both industry and the labour force worse off making these indicators unidirectional from both the society and industry points of view.

Figure 1.8 The Second Pillar: Labour

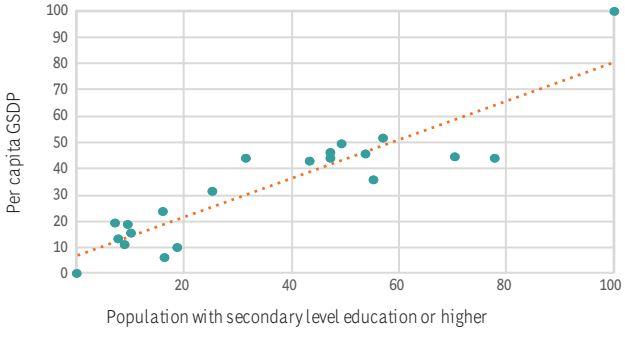
What does the Labor Pillar indicate?



	2017	Trend[1]
Top 6 states	Tamil Nadu	▲ (+1)
	Andhra Pradesh	▲ (+5)
	Telangana	▲ (+4)
	Maharashtra	▲ (+7)
	Karnataka	▼ (- 2)
	Kerala	▼ (- 5)

Note 1: Change in ranking compared to 2016
Note 2: Trends for all states are in Appendix B

Figure 1.9 Educated workforce and per capita GSDP



Key takeaways

Not unsurprisingly, there is a very strong correlation between an educated workforce and per capita GSDP (Figure 1.9). However, there is an inverse relationship between the number of workers with technical education available in a state and the perception of the availability of skilled labour in that state which suggests that more efforts to match labour market skills with industry demand may help smoothen labour market frictions (Figure 1.10). It is also seen that states that have a higher number of contract workers are those that are perceived to have more stringent labour laws (Figure 1.11). With labour laws and regulations continuing to be complex and varying across different states, the challenge to labour market reforms would be to ensure that economic growth translates to better labor market conditions for the over 500 million people currently in the workforce.

Figure 1.10 Number of persons in technical courses and quality of skilled labour

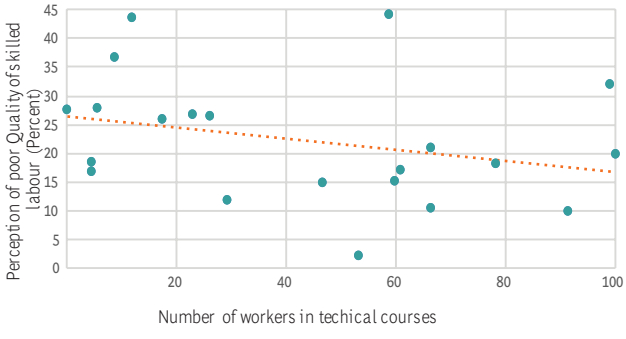
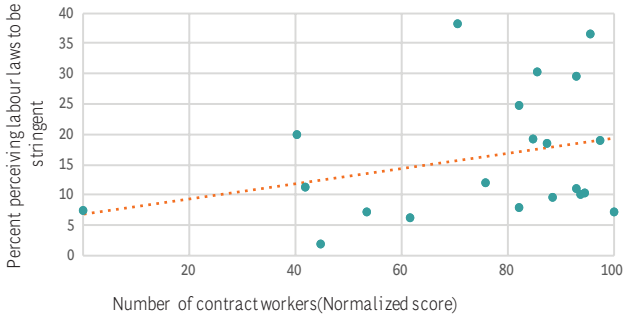


Figure 1.11 Number of contract workers and stringent labour laws



PILLAR 3: INFRASTRUCTURE

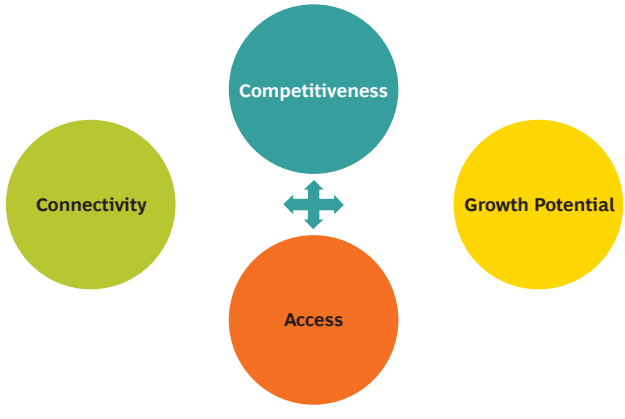
Infrastructure is a key driver of investment decisions and an important factor in locational choice and profitability of investment. The infrastructure pillars captures how states stack up in terms of the various facets necessary for continuous growth and capacity utilization including the availability of power, roads, and credit. India is making strides in improving its infrastructure facilities. In 2016, India jumped 19 places in World Bank's biennial Logistics Performance Index (LPI), to rank 35th amongst 160 countries[9]. Not only is the existing infrastructure important, but the potential for new investment in infrastructure is tremendous in the coming years. The Economic Survey (2015)[10] notes that increased infrastructure investment is an instrument for "transformational" growth in the manufacturing and services industry and the private sector is envisaged as being key to rapid delivery of high quality infrastructure.

Key takeaways

Road density (measured as a proportion of the area of the state) and industrial parks are positively correlated (Figure 1.13). Though the level of overall infrastructure in as state is a composite of many coexisting factors, industry perceives that the most significant factor in a state driving perception of adequate infrastructure is the level of road and rail connectivity (Figure 1.14). This suggests that the recent government announcement to spendRs 31 trillion (US$ 455 billion) on infrastructure development over the next five years to develop 27 industrial clusters, roads, ports and power will increase connectivity and competitiveness in states and propel economic growth. Despite higher tariffs, industry perceives that power supply is unreliable (Figure 1.15) which indicates that efficiency and service delivery systems may need to be strengthened to attract investment.

Figure 1.12 The Third Pillar: Infrastructure

What does the Infrastructure Pillar indicate?



	2017	Trend[1]
Top 6 states	Delhi	⇔
	Maharashtra	▲ (+5)
	Gujarat	⇔
	Punjab	▼ (-2)
	Kerala	⇔
	Haryana	▲ (+2)

Note 1: Change in ranking compared to 2016
Note 2: Trends for all states are in Appendix B

Figure 1.13 Road density and industrial parks

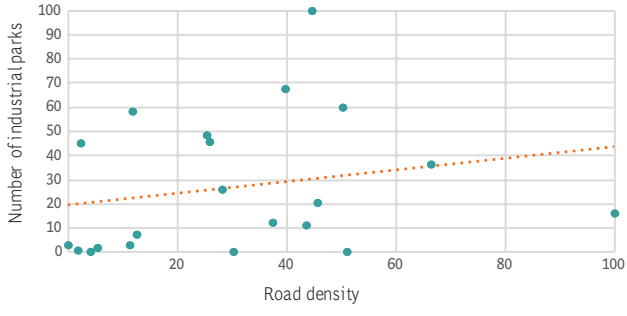


Figure 1.14 Level of infrastructure in a state and the perception of poor road/rail connectivity

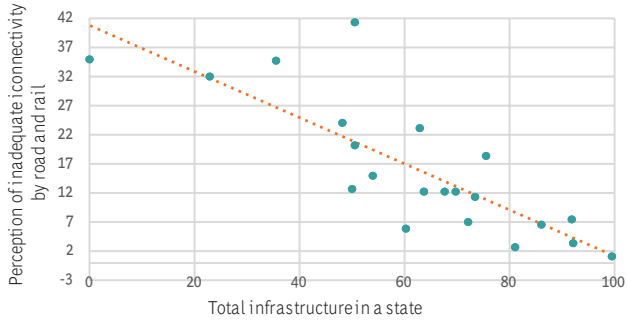
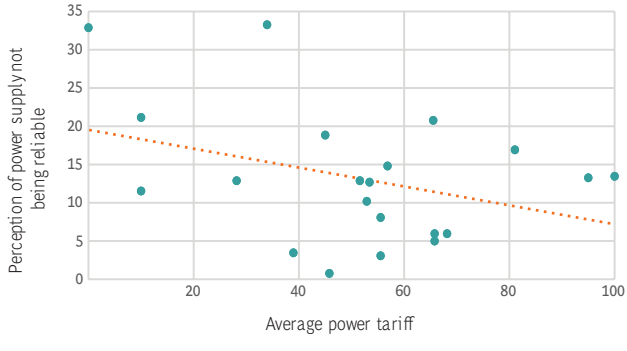


Figure 1.15 Average tariff for power and reliability of power supply



9 World Bank. 2016. Connecting to Compete: 2016 Trade Logistics in the Global Economy.

10 Government of India. 2015. Economic Survey. P32

PILLAR 4: ECONOMIC CLIMATE

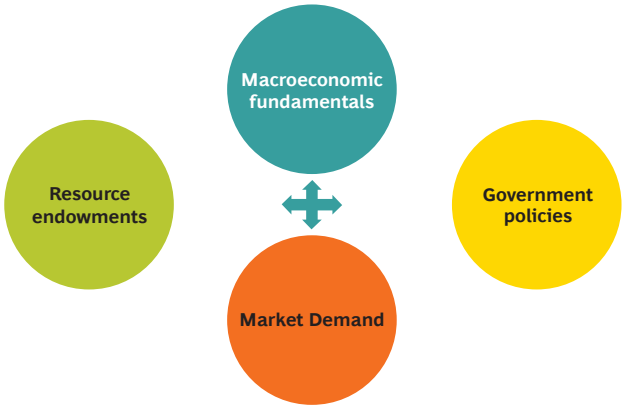
N-SIPI's economic pillar draws upon a broad spectrum of parameters, encompassing macroeconomic fundamentals, government policies, market demand and resource endowments. States with greater growth and per capita incomes are naturally more attractive for investors. However, the economic pillar also tries to capture the negative externalities associated with greater concentration of industry and population by using a "congestion" index, which acts as a proxy for increased rental values and market saturation.

Key takeaways

Industry does better in a state with a more favourable labour climate (Figure 1.17). Survey responses indicate a strong negative correlation between capacity utilization in a state and its average GSDP growth which suggests that growth effects can come from greater utilization of existing installed capacity (Figure 1.18). The roll out of the GST from July 2017 onward, by creating a single integrated market, would enable greater use of existing capacity in firms by creating demand within and across states and hence increase production and profitability firms. As expected, more favourable industrial policies in a state leads to increased welfare (measured in per capita income) (Figure 1.19).With states making significant efforts to improve their business climate and facilitate the ease of doing business on the DIPP/World Bank's Business Reforms Action Plan[11], the increased competitiveness and business friendly environment in the states is certain to have multiplier effects on investment and growth.

Figure 1.16 The Fourth Pillar: Economic Conditions

What does the Economic Pillar indicate?



	2017	Trend[1]
Top 6 states	Gujarat	▲ (+3)
	Delhi	▼ (-1)
	Uttarakhand	▲ (+7)
	Tamil Nadu	▲ (+2)
	Maharashtra	▼ (-2)
	Telangana	▼ (-1)

Note 1: Change in ranking compared to 2016
Note 2: Trends for all states are in Appendix B

Figure 1.17 Industrial GSVA and favorable labour climate (fewer man-days lost in industry)

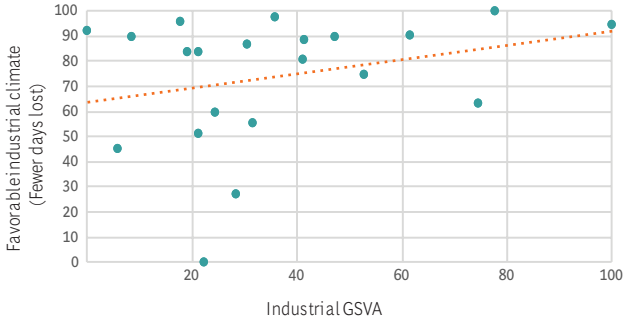


Figure 1.18 Average GSDP growth (last 3 years) and unutilized capacity in firms

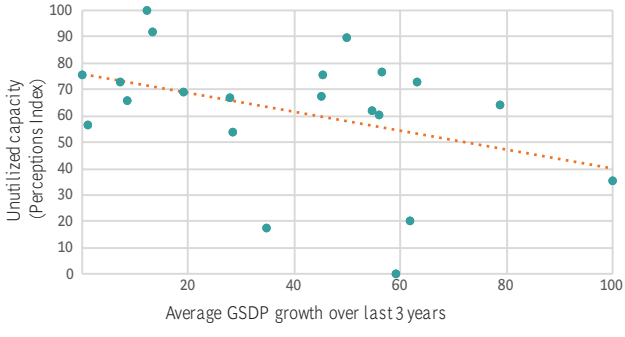
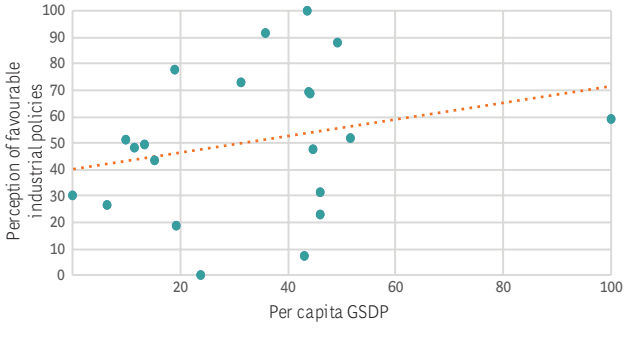


Figure 1.19 Per capita GSDP and perception of favourable industrial policies



11 Department of Industrial Policy and Promotion and World Bank. October 2016. "Assessment of State Implementation of Business Reforms". The national implementation average of 340 business reforms in 2016 was 49 percent as against the 2015 national average of 32 percent.

PILLAR 5: GOVERNANCE AND POLITICAL STABILITY

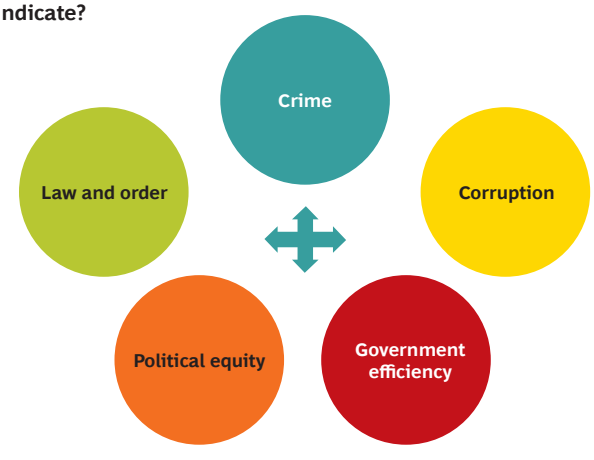
The pillar on governance and political stability captures broad dimensions related to law and order, crime, corruption, government efficiency and political equity as measured by politicians with a clean criminal record in the legislative assembly. The Worldwide Governance Indicator (WGI) of the World Bank[12], which is exclusively a perceptions based measures of governance, is the major cross-country comparison index for governance and political stability. In the WGI 2015, India has improved in all six governance indicator pillars as compared to WGI 2014. India moved to the forty-fourth percentile for controlling corruption as compared to the thirty-seventh percentile and fifty-sixth percentile in government effectiveness as compared to the forty-fifth percentile in the previous year. While India improved in political stability and absence of violence, it still falls in the lower fifth of countries in this dimension though it continues to rank fairly high in the sixty-first percentile for voice and accountability of its citizens.

Key takeaways

More well-off states have fewer economic offenses which suggests that better off states have more effective regulatory mechanisms in place that make it more conducive to do business there (Figure 1.21). The number of stalled projects in a state does not seem to be a dampener for the business which perceives that the business climate over the next one year as being better than this year (Figure 1.22). This could perhaps be because of more optimistic business expectations due to the recent switch to GST. Increased police strength translates to a perception of good law and order in the state (Figure 1.23). This suggests that, on average, perception of service delivery in states is probably improving, as the previous survey results reported in N-SIPI 2016[13] indicated lower levels of satisfaction with the law and order situation in states compared to the present 2017 perceptions.

Figure 1.20 The Fifth Pillar: Governance and Political Stability

What does the Governance and Political Stability Pillar indicate?



	2017	Trend[1]
Top 6 states	Haryana	▲ (+4)
	Gujarat	▼ (-1)
	Uttarakhand	▲ (+4)
	Punjab	▲ (+4)
	Tamil Nadu	▼ (-3)
	Chhattisgarh	▼ (-2)

Note 1: Change in ranking compared to 2016
Note 2: Trends for all states are in Appendix B

Figure 1.21 Economic offenses and per capita GSDP

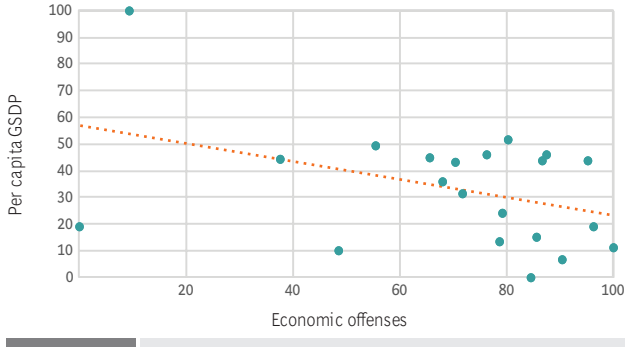


Figure 1.22 Stalled projects and business climate

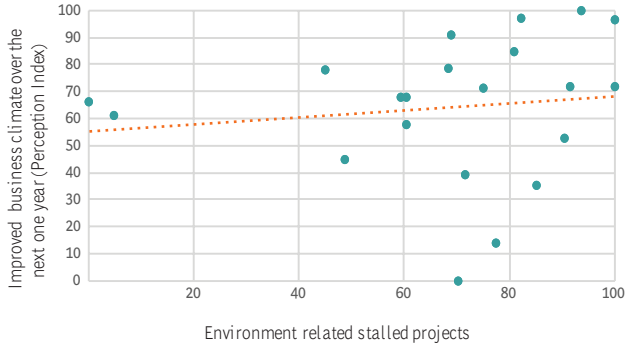
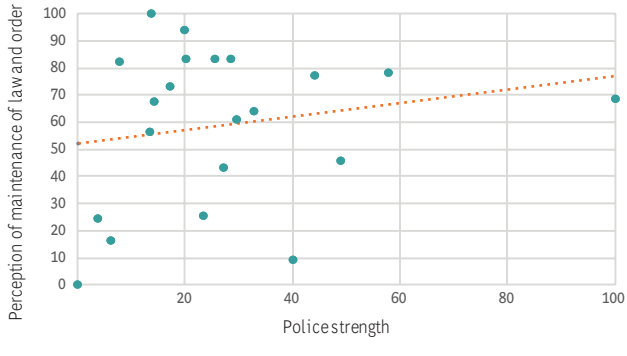


Figure 1.23 Police strength and law and order in the state



12 World Bank, Worldwide Governance Indicators. 2016. The six pillars to indicate good governance are: Voice and accountability; political stability; government effectiveness; regulatory quality; rule of law; and control of corruption

13 N-SIPI 2016 was released in March 2016. The industrial survey for the 2016 report was conducted in August-September 2015. The industrial survey in N-SIPI 2017 (the present volume) was done in April-May 2017.

PILLAR 6: PERCEPTIONS

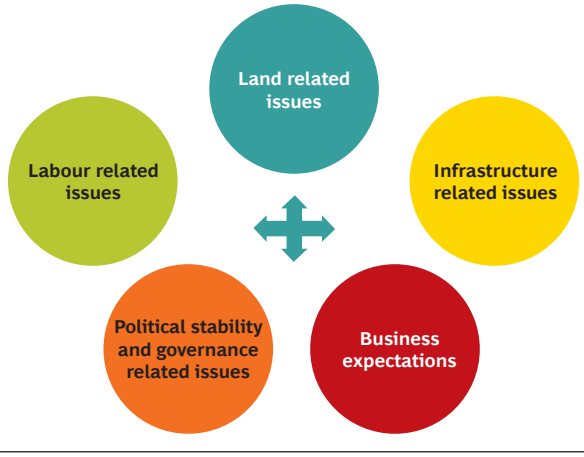
The nationwide N-SIPI 2017 survey was conducted between April and May 2017 and covered 1030 industrial units in 44 districts across twenty major states and one union territory (Delhi). The aim of the survey was to have a better understanding of the ground realities, as seen through the eyes of industrialists, in different states of India. The survey sought responses to a number of questions ranging from the current business climate to availability of land, labour and infrastructure, to various other issues faced by the businesses in their respective states.

Key takeaways

Figure 1.25 shows the results of N-SIPI survey and presents the percentage of respondents who preceive a set of 19 constraints as either severe or moderate hurdles for their business operations. Compared to the previous survey results in N-SIPI 2016, in 2017 too, corruption continues to remain the number one constraint faced by business. The Global Competitiveness Report (2017) also ranks corruption, along with tax regulations, as the most problematic factor for doing business in India[14].

Figure 1.24 The Sixth Pillar: Perceptions

What does the Perceptions Pillar indicate?



	2017	Trend[1]
Top 6 states	Gujarat	⇔
	Andhra Pradesh	▲ (+3)
	Telangana	▲ (+13)
	Haryana	▲ (+10)
	Himachal Pradesh	▲ (+5)
	Delhi	▲ (+6)

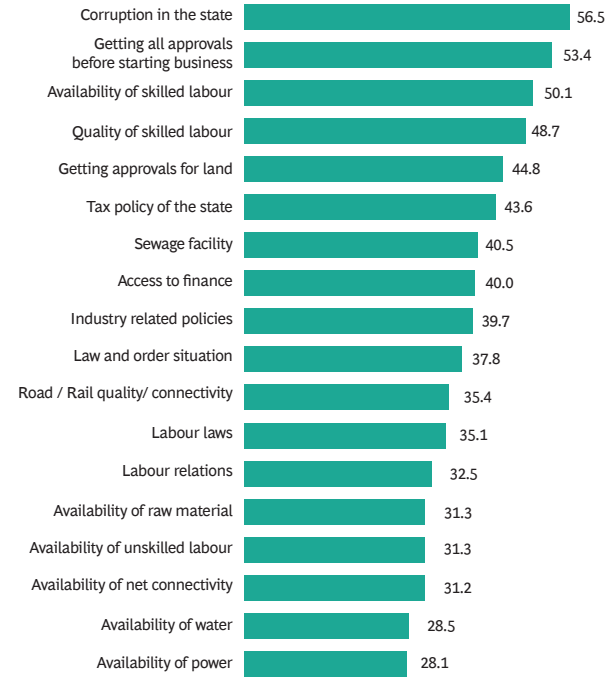
Note 1: Change in ranking compared to 2016
Note 2: Trends for all states are in Appendix B

Interestingly, however, the severity of constraints faced by businesses under all categories is declining. In N-SIPI 2016[15], 79.4 percent of the respondents rated corruption as being the biggest problem. In contrast, N-SIPI 2017 finds that while corruption is still the dominant constraint faced by industry, just 56.5 percent rank this as being a major constraint.

Getting approvals for starting a business was the second most pressing constraint faced by businesses both in 2016 and 2017, though this percentage has decreased from 72.1 percent to 53.4 percent over the two years. This suggests that states are on track to streamline the process of getting approvals and improve the ease of doing business, which is also reflected in the improved national average implementation score in the DIPP's/ World Bank's assessment of state business reforms.

Other major issues of concern found by the N-SIPI 2017 survey were the availability and quality of skilled labour, tax policy and access to finance. These issues are also the focus areas of the present government under the National Skill Development Mission launched in July 2015, the Jan Dhan Yojana in August 2014, and the rollout of GST in July 2017. Interestingly, labour laws and labour relations are not that problematic for industry, while the availability of net connectivity, water and power are the least problematic areas for the firms in the sample.

Figure 1.25 Constraints faced by business (% respondents)



14 The Global Competitiveness Report. 2017. p202.

15 The industry survey for N-SIPI 2016 was carried out between August and September 2015

Section 2

N-SIPI Survey Findings

2.1 INTRODUCTION

The N-SIPI Industry Survey 2017 was conducted at a nationwide level to have a better understanding of the constraints to business at the ground level. The survey sought to get feedback from the firms' viewpoint of key drivers of investment into the state – Land, Labour, Infrastructure, Economy, Governance and Business Environment, which in turn determine the business environment of the state. The results of this survey form the sixth pillar of N-SIPI 2017.

2.2 SURVEY FEATURES

This report presents the key results of the survey carried out during April and May 2017. The survey covered 1030 industrial units in twenty one states including Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand, West Bengal and Delhi. The primary respondents in this survey were medium and large enterprises in different industries. The respondents were usually the MDs, CEOs, HR Head, or Manager of the enterprise. The data was collected on the basis of questionnaires and face to face interviews.

Figure 2.1 Survey coverage by ownership type and industry

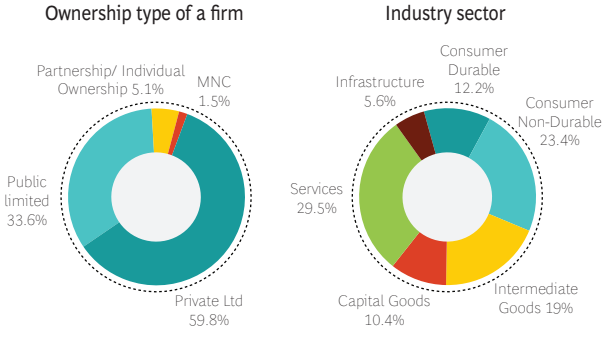
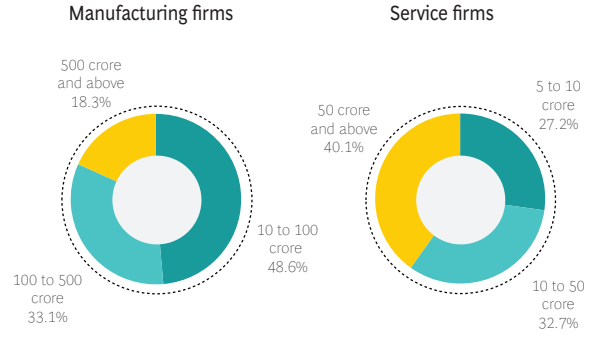


Figure 2.2 Survey coverage by firm size (Annual turnover)



In this survey, the firms were classified by ownership (private limited, public limited, partnership, multinational corporations and public sector enterprises), industry (consumer durable, consumer non-durable, intermediate, capital goods, infrastructure and services), and by firm-size (annual turnover). Nearly three-fifth of the firms were privately owned while one-third were in the public sector (Figure 2.1). Close to half the manufacturing firms were those with an annual turnover ranging between Rs 10-100 crore while large firms with annual turnover exceeding 500 crores account for close to a fifth of the firms surveyed. Two-fifths of the firms in the service sector had annual turnover exceeding Rs 50 crores (Figure 2.2)

Questionnaire design

The survey questions related to land primarily attempted to capture the level of difficulty in acquiring land for the existing business, while also identifying the type of firms that experienced relatively fewer problems in the process of acquiring land. The questions related to labour have been designed to not just identify but also assess the level of difficulty faced by firms on key related issues including – availability of skilled labour, quality of skilled labour, availability of unskilled labour, labour relations, and labour laws. Questions related to infrastructure included the availability of power, net connectivity, sewage facility, and road/ rail quality/ connectivity. As in the case of the labour related issues, the firms were asked to rank their level of difficulty in each of the spheres. Questions on the economy and governance related to the following issues – industry related policies, access to finance, availability of raw material, getting approvals (including environment clearance) before starting the business, corruption, law and order situation, and tax policy.

The survey was also designed to capture the business environment of the state. The respondent firms were asked to provide a comparative assessment of the present

and future business conditions, the overall investment climate within the state, and an assessment of their financial position a year ahead. The firms' assessment of the conditions within their state helped to assess the potential attractiveness of that state for business in the future.
The detailed tabulation of state-wise results is given in the Appendix C which contains Tables C.1-C.24.

2.3 KEY FINDINGS

2.3.1 Land related issues

Acquiring land for industry can be a challenge due to the complexities and the arbitrage in regulations. The multitude of middle-men involved only adds to the hassle. However, over eighty percent of the respondents located mainly in Andhra Pradesh, Assam, Kerala, Gujarat, Maharashtra, Telangana and Karnataka faced no difficulty in acquiring land for industrial use (Figure 2.3). Firms which faced problems in acquiring land were concentrated in Uttar Pradesh, Tamil Nadu, Bihar and Jharkhand (Appendix C.2). Inter-state comparisons indicate that Andhra Pradesh and Assam faced the least problems, while Bihar and Jharkhand faced the most difficulty with over forty percent of the firms finding acquiring land finding it to be a moderate or severe problem. Over a quarter of the firms found it easier to get land for a service unit while more than half the respondents found it equally easy to acquire land either for a manufacturing unit or a service unit (Figure 2.4).

Andhra Pradesh and Assam are seen as the top states for ease in acquiring land for industrial purposes

Firms were also surveyed for the level of difficulty faced in obtaining permission and approvals from the government departments before starting business. The survey response shows that 17 percent firms faced severe difficulty while another 28 percent reported having faced moderate level of difficulty (Figure 2.5). The remaining 55 percent firms faced no significant level of difficulty in obtaining approvals. Firms in Gujarat, Chhattisgarh, Himachal Pradesh and Delhi found the least difficulty in getting approvals for land, while firms facing moderate to severe difficulties were the highest in Karnataka, Tamil Nadu and Uttar Pradesh (Appendix C.3).

Figure 2.3 Respondents finding acquiring land a problem

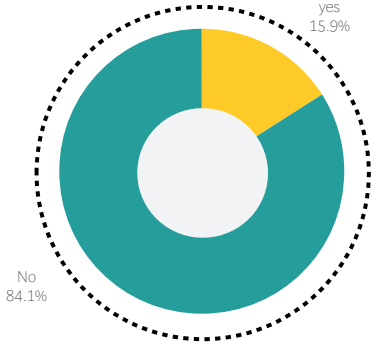


Figure 2.4 Perception of type of industry that gets land more easily

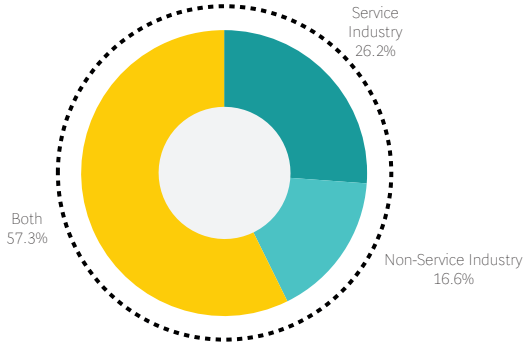
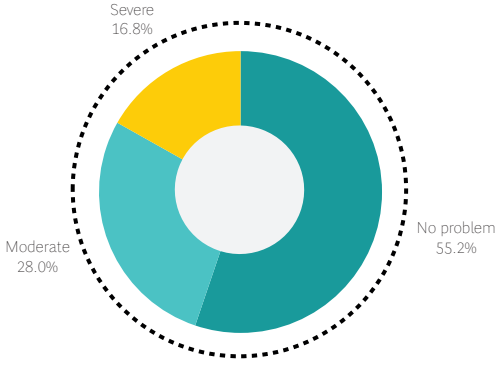


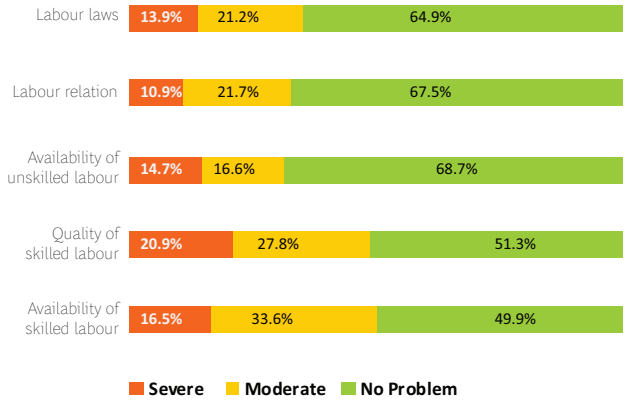
Figure 2.5 Respondents finding it difficult to get approvals for land before starting business



2.3.2 Labour related issues

In the N-SIPI survey, the respondents were asked whether, for operating their businesses, they find a given set of labour related constraints to be severe, moderate, or not a constraint at all. The quality and availability of skilled labour appears to be the most vexing problem with close to half the respondents rating this as a severe or moderate constraint. Over two-thirds of the respondents viewed labour laws, labour relations, and the availability of unskilled labour as being not a problem for the state (Figure 2.6).

Figure 2.6 Perceptions on Labour related indicators (% respondents)



The respondents' views on the availability of skilled labour vary widely across states. Assam, Chhattisgarh, Karnataka, Tamil Nadu and West Bengal are at one extreme with more than 70 per cent of the respondents showing concern regarding availability of skilled labour, while companies located in Gujarat, Haryana and Andhra Pradesh have a more favourable view (Appendix C.4). States also varied widely in the perception of labour quality. Gujarat continues to be viewed as the best state in terms of the quality of skilled labour while it is seen as a serious constraint in Chhattisgarh, Karnataka and West Bengal (Appendix C.5). Gujarat, Haryana, Uttar Pradesh and Karnataka were seen as being the best states to get unskilled labour, while the availability of unskilled labour was seen as a stumbling block in Chhattisgarh, Rajasthan and West Bengal (Appendix C.6).

Gujarat and Haryana are seen as the best states in terms of labour, while Tamil Nadu and West Bengal are seen to be in deficit

Labour relations are not seen to be a problem for over two-thirds of the respondents across all the states. Gujarat and Haryana top the chart, while it is a moderate or severe problem for over 60 per cent of respondents in Karnataka and West Bengal (Appendix C.7).

Likewise, two-thirds of the firms surveyed did not report significant difficulties with regard to labour laws in the state, while another 22 percent reported a moderate level of difficulty. The remaining 14 percent faced severe difficulties due to labour laws. Labour laws seem to have been a constraining factor in West Bengal, Uttar Pradesh and Karnataka. Amongst the firms less affected by labour laws, a large number belonged to Maharashtra, Gujarat, Chhattisgarh, Haryana and Tamil Nadu. Across states, largest proportion the firms in Gujarat reported no problem as compared with largest proportion of the West Bengal firms reporting a severe problem (Appendix C.8).

Labour laws are viewed as not being a constraint to industry by the majority of the firms surveyed

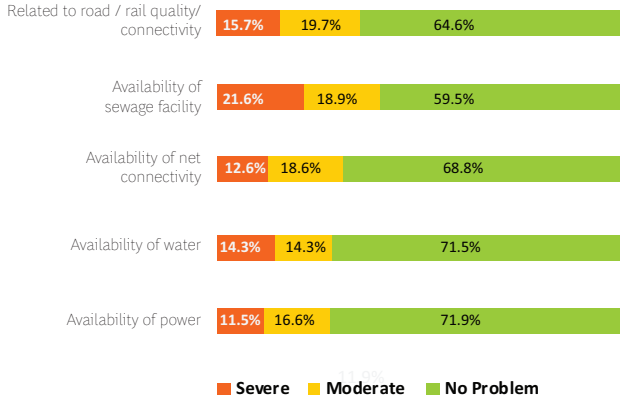
Firms were further asked to rank each of the labour related issues for their relative importance in their business in the state. The availability of skilled labour was ranked as most important by more than one-third of the firms (37 percent respondents ranked it as the top most factor constraining business), followed by quality of labour (30 percent), labour laws (13 percent), availability of unskilled labour (11 percent) and labour relations (9 percent) in declining order of importance.

2.3.3 Infrastructure related issues

The progress on infrastructure has not been uniform. Many announced projects stay incomplete for a long time. The N-SIPI survey has a comprehensive list of questions that covers infrastructure issues that are critical for the smooth functioning of business. Responses from this survey suggest that infrastructure across a broad set of parameters are viewed to be adequate by 60 per cent or more of the respondents (Figure 2.7). Industry is more concerned about the availability of sewage facilities, while the availability of power is viewed as being the least problematic.

Infrastructural issues are wide ranging from physical facilities to soft infrastructure. An infrastructural deficit is well known with regard to power, railways, road, ports, airports, water supply and sewage. In the survey, the respondents were asked whether, for operating their

Figure 2.7 Perceptions on Infrastructure related indicators (% respondents)



businesses, they find a given set of infrastructure related constraints to be severe, moderate, or not a constrained at all. The feedback on power availability has been relatively pleasant, with no significant difficulty faced by 72 percent of respondents. Gujarat, Haryana, Andhra Pradesh, Telangana and Jharkhand are seen to be states with excellent supply of power, while states that lag behind include West Bengal, Assam, Chhattisgarh and Uttar Pradesh (Appendix C.9).

Three in every four firms do not find power supply to be a problem

Similarly, most firms are satisfied regarding water availability, with close to three-fourths of them facing no problem. Amongst the states facing no difficulty, the situation was best in the case of Gujarat, Haryana and Odisha. Surprisingly, despite being a coastal state, nearly a quarter of the severely constrained firms belonged to West Bengal; the second most severely water-constrained being Rajasthan (Appendix C.10).

Internet connectivity was viewed as a moderate or severe problem by over half the respondents in Himachal Pradesh, Uttar Pradesh, Uttarakhand and West Bengal. The top three states in internet connectivity are Gujarat, Haryana and Karnataka (Appendix C.11).

Inadequate sewage facilities are seen as a severe infrastructure constraint

The responses on sewage are relatively more worrying as compared with the other infrastructure issues. The issue was reported to be severe by 22 percent, the worst performance among all infrastructure issues considered in the survey. As has been the case for most other indicators on infrastructure, Gujarat and Haryana do extremely well along with Andhra Pradesh, Telangana and Jharkhand. Sewage facilities are seen to be inadequate in Chhattisgarh, Uttar Pradesh and West Bengal (Appendix C.12).

The state performance with regard to road and rail connectivity was not an issue with two-thirds of the firms surveyed while another one-fifth shared a moderate concern on the issue. Yet again, Gujarat and Haryana do very well, and so do Andhra Pradesh and Himachal Pradesh. The trio of Uttar Pradesh, Uttarakhand, and West Bengal once again drop to the last positions in the perception of good road and rail connectivity in the state (Appendix C.13).

2.3.4 Economic environment related issues

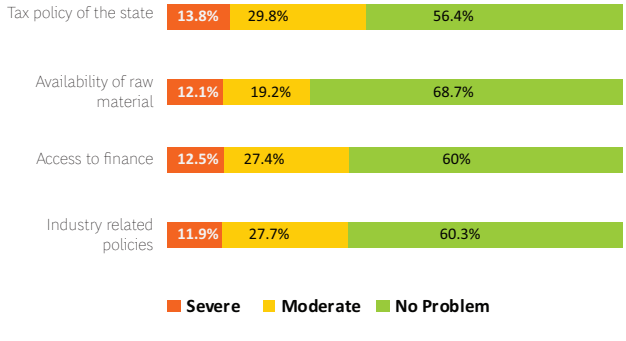
Industrial policy is key determinant in firms' decisions regarding where to invest. Even though, the firms' viewpoint on different aspects of business related to land, labour, infrastructure, clearance and regulatory procedures has been separately captured through individual questions; their perception of the industrial policy remains important. Broadly, industrial policy of a state refers to the government efforts to alter the industrial structure to promote efficiency and productivity. These efforts can be attempted through different levers, such as special promotion activities to encourage select industries to achieve their perceived potential, through efforts such as establishment of the SEZs to attract foreign participation or investment. Other efforts could be channelled through privatisation of state PSUs, PPP ventures, etc. Firms generally view industrial policy to be favourable in states that do well on these fronts.

Gujarat, Haryana, Punjab and Rajasthan are seen as being most industry friendly

The N-SIPI survey finds that about 60 percent of the firms expressed no significant apprehensions with regard to the industry policy of their state (Figure 2.8). Another 28 percent respondents are moderately concerned while 12 percent are severely concerned on the industrial policies, indicating their expectations from state government. Among the states with high proportions of positive responses, Gujarat, Haryana, Punjab and Rajasthan topped the chart. On the other extreme, Chhattisgarh, Karnataka and West Bengal, appeared to be worst performers (Appendix C.14).

At an aggregate level, access to finance was viewed as being favourable by 60 percent of the respondents. Gujarat appears as a bright spot on the parameter, followed closely by Haryana and Delhi. Tamil Nadu, Uttarakhand and West Bengal fall behind in providing greater access to finance to firms (Appendix C.15).

Figure 2.8 Perceptions on Economy related indicators (% respondents)



Firms are little more optimistic with regards to raw material availability, with 69 per cent respondents finding no difficulty in getting raw materials. (Figure 2.8). Most of the confident firms belong to Maharashtra, Gujarat and Haryana, though the resource rich states of Chhattisgarh and Jharkhand are also viewed as being excellent. Not unsurprisingly, the availability of raw materials is poor in Assam which is mainly due to its infrastructural constraints (Appendix C.16).

Tax policy is the most pressing problem faced by most firms with close to half the firms having a moderate or severe difficulty on this front. Gujarat emerged as the most tax friendly state, while firms from Karnataka, Uttar Pradesh and West Bengal faced significant problems (Appendix C.17). The implementation of Goods and Services tax (GST) from July 2017 onward will reduce the complexity and multiplicity of tax rates, thereby significantly increasing the ease of doing business over the coming years.

Tax policy is viewed as the most pressing economic constraint

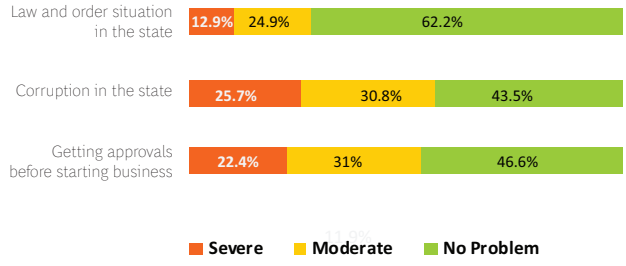
2.3.5 Governance related issues

Governance conditions at an aggregate level are worrisome. Less than one-half (only 47 per cent) of the respondents reported no problem in getting approvals (including the environment clearance) before staring business in their states (Figure 2.9). Another 31 per cent firms reported a moderate difficulty while almost a quarter (22 per cent) respondents reported severe difficulty. At the state level, approvals were most difficult to obtain in Uttar Pradesh, where 50 per cent respondents expressed a severe difficulty. The firms facing severe difficulties belonged to Uttar Pradesh, West Bengal and Tamil Nadu. Approvals before starting were relatively easiest to obtain in Gujarat, as indicated by the highest proportion of firms reporting no problem. West Bengal appears at the other extreme (Appendix C.18).

Corruption is reported to be the most serious issue among the three governance issues with only 44 percent of the firms facing no problems in their respective states. As many as 26 percent firms acknowledged corruption as a serious issue. The situation is grave (by comparison) in West Bengal where 53 percent of the respondents faced severe difficulty which is double the national average of 26 per cent. Tamil Nadu and Karnataka are also seen as being the corrupt states, while Gujarat and Chhattisgarh as the least corrupt (Appendix C.19).

Corruption remains the single biggest problem faced by business

Figure 2.9 Perceptions on Governance related indicators (% respondents)



Gujarat, Telangana and Haryana are seen to be the best states for maintenance of law and order. On the other hand, conditions in West Bengal and Uttar Pradesh are reported as most worrisome by large number of firms. At an All-India level, nearly two-thirds of the firms faced no problems while 25 percent faced moderate problems, and 13 percent faced severe problems (Appendix C.20).

2.3.6 Perception regarding business climate

Business depends on both internal and external factors. Earlier sections have discussed the perceptions regarding factors that influence the business directly or indirectly. Some of the factors are internal, under the firms' control, e.g. the quality of skilled labour can be improved through internal trainings, managing unions to some extent; while most of the others are external factors and are a given for firms e.g. economic, regulatory, tax, legal conditions in a state. Collectively, they determine the business environment for firms and in turn influence the firms' future investment in capacity augmentation and business expansion.

Business environment across the country appears to have improved or is at least stable. Only 5 per cent of the respondents expressed concerns regarding future business environment, while a large proportion (60 percent) are hopeful of a better business environment, one year ahead (Figure 2.10). Interestingly, Karnataka was the most optimistic about the next year, while Gujarat which has fared very well on most other counts, was the least optimistic along with West Bengal (Appendix C.21).

Industries are optimistic about improvement in business climate over the next one year

It is heartening to note that a significant 68 per cent per cent firms are hopeful of a better financial position

(Figure 2.11). Another 28 percent give a sense of no significant change while tiny fraction is wary of worse financial conditions. Incidentally, the highest proportion of firms in Assam are optimistic regarding a better financial performance, as opposed to highest proportion of firms expecting a worse performance in Chhattisgarh (Appendix C.22).

As many as half the firms declared an improved investment climate compared with the last year (Figure 2.12). Another 38 per cent reported no change in investment conditions. 13 per cent of firms that feared facing a worsening climate are mainly located in Maharashtra, Bihar and Chhattisgarh. Overall, firms in Himachal Pradesh, Madhya Pradesh and Andhra Pradesh hold a better perception of the investment climate (Appendix C.23).

Firms in Uttar Pradesh utilise their installed capacity the most

Close to two-thirds of the firms operate at their optimal capacity (Figure 2.13). At the same time 16 percent operate below their installed capacity. These could be on account of infrastructural deficits related to power, water; raw material availability, or labour issues. Uttar Pradesh has the highest proportion of firms operating above installed capacity. A state-wise comparison shows highest proportion (of the firms surveyed in the state) in Uttar Pradesh reporting to operate above their installed capacity, while highest proportions of firms operating below the installed capacity belonged to Bihar (Appendix C.24).

Figure 2.10 Perceptions on business environment one year ahead

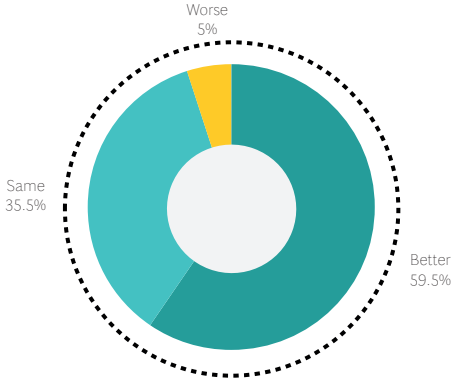


Figure 2.11 Perceptions on firm's own financial position one year ahead

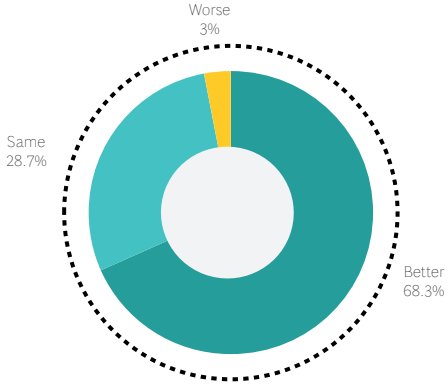


Figure 2.12 Perceptions on present investment climate as compared with a year ago

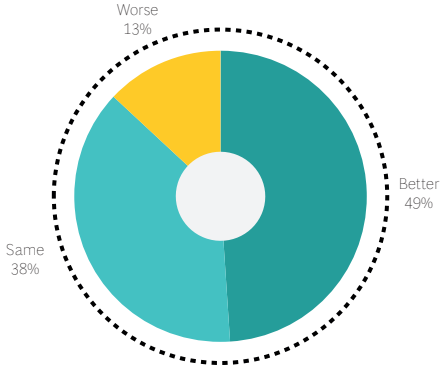
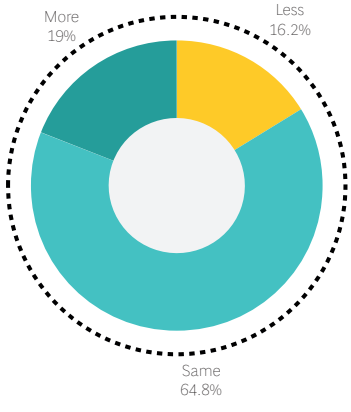


Figure 2.13 Firms' level of operation compared with installed capacity



Locational choice

With improving economic climate and the ease of doing business, states are competitively wooing investors. However, almost half the firms were satisfied with the overall business climate and opportunities within the state where they are presently located. When asked if business conditions would have been better in another state, 44 percent firms gave a clear verdict in favour of their present state. Another 41 per cent had no firm judgment (Figure 2.14).

More firms are in favour of expanding their business over a period of next five years (Figure 2.15). While as many as 41 per cent were confident of their future plans of business expansion, another 15 percent were contemplating an expansion. This is an indication of the huge competition that states face when it comes to either attracting new investment or retaining the existing businesses along with their additional investment. Nearly a quarter of the firms (24 per cent) firms would prefer to expand elsewhere in future and feel much more is desired by the state government (Figure 2.16). Gujarat tops the list with highest proportion of firms choosing to expand within the state. Firms that intend to expand and also chose to remain in the same state were also located in Maharashtra, Uttar Pradesh, Tamil Nadu and Haryana.

Expansionary business sentiment over the next five years will likely be accompanied by some churn in cross-border investments

Figure 2.14 Perceptions on business being easier in another state

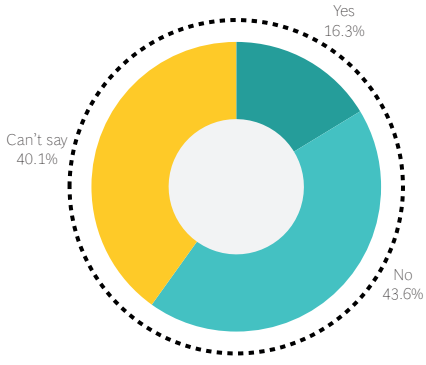


Figure 2.15 Possibility of firms' business expansion over next five years

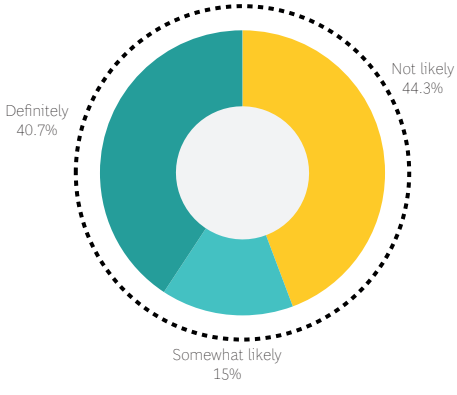
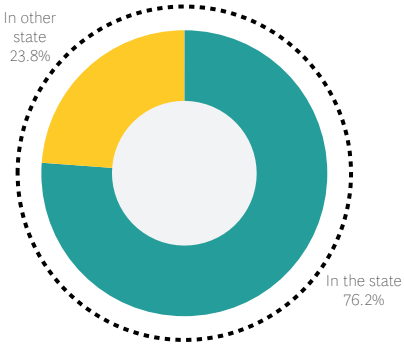


Figure 2.16 Firms' preferred location for business expansion



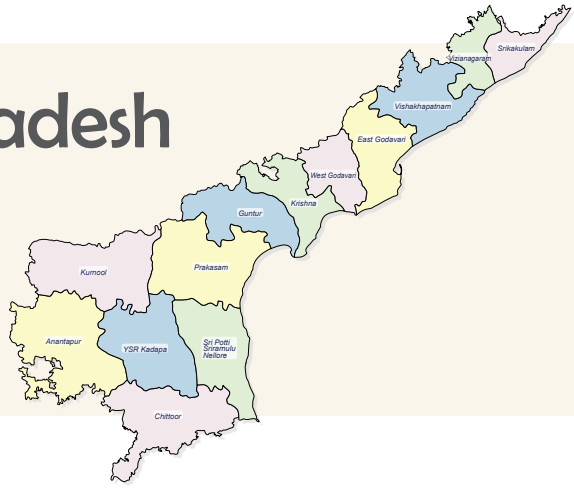
Section 3

N-SIPI State Profiles

Andhra Pradesh

RANK

2017	3
2016	4



Statistics

Capital	Amaravathi
Area (sq. km)	1,60,205
Location	Southern India
Per capita income (Rs.)	97,855
Literacy Rate (%)	67.0

State Focus Sectors

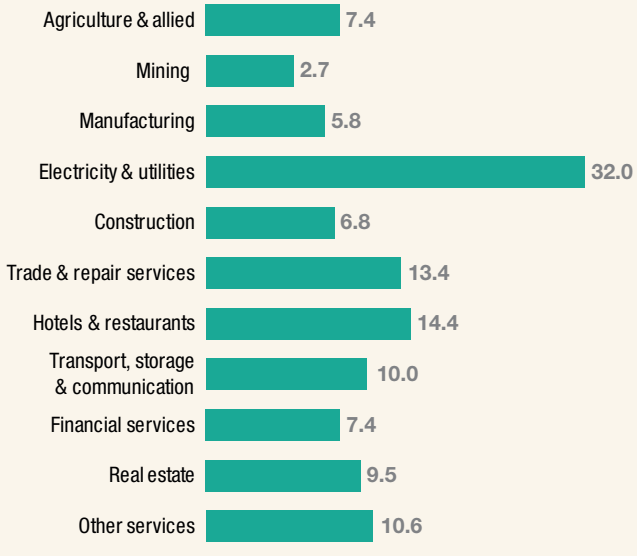
- Agro & Food Processing
- Life sciences (including pharmaceutical, biotechnology & medical equipment)
- Textile & Apparel
- Electronics & Information Technology
- Aerospace & Defence
- Automobiles& Auto Components
- Petroleum, Chemicals, (including Fertilizers) and Petrochemicals
- Energy
- Mineral based industry
- Leather

Source: Industrial Development Policy (2015-2020)

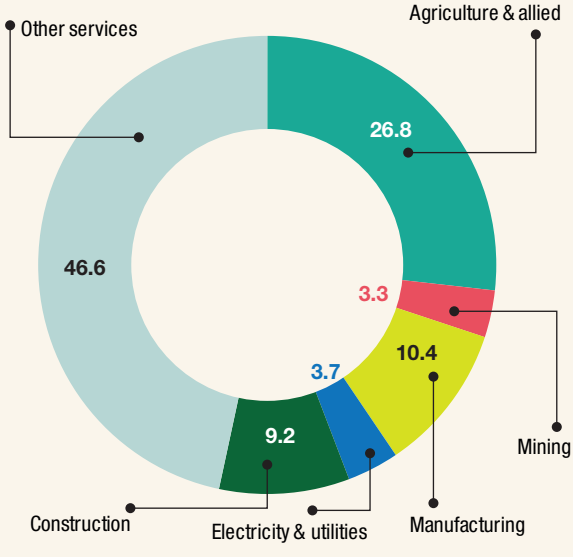
Incentives

- Reimbursement of 100% stamp duty on purchase/lease of land and of net VAT/CST/SGST at a rate and for a fixed period depending upon industry size and of fixed power cost @ Rs1.00 to Rs 1.50 per unit depending on the sector.
- 0% VAT for MSME projects engaged in recycling waste into environment friendly products/energy, 35% subsidy on cost of plant & machinery for specific cleaner production measures for MSME, 25% subsidy for sustainable green measures, for waste water treatment, green buildings, etc.
- 300 industrial parks including sector-specific industrial parks such as Food Processing parks, Textile parks, Electronic Complexes, etc. and tailor-made benefits to mega projects to suit particular investment requirements on case to case basis, differential definition of mega project depending on industry
- For more details on the incentives and eligibility of the industrial units, please refer to State Industrial Development Policy (2015-2020)

Growth in Gross Value Added, 3 year average ending 2015-16



Sector-wise contribution in Gross Value Added, 2015-16



ANDHRA PRADESH RANK 3

States Performance on the Six Broad Pillars

Andhra Pradesh is one of the top three states in the labour and N-SIPI perceptions survey pillars, but lags relatively behind in the infrastructure and economic conditions pillars.

Strengths

The state ranks high in labour conditions, especially availability of skilled labour. The state also fares well on DIPP score, perception on ease of acquiring land, number of smart cities and cargo handled per port.

Weaknesses

The state has one of the lowest average GSDP growth compared to other states. The state also falls behind in the share of the industrial sector in total gross value added, police strength and ground level water availability.

LAND

		Rank
LAND - OVERALL	**54.1**	6
Digitized land records	100.0	1
Land related stalled projects	63.3	8
Industrial parks in state	48.6	5
Land available for industrial purpose	4.7	14

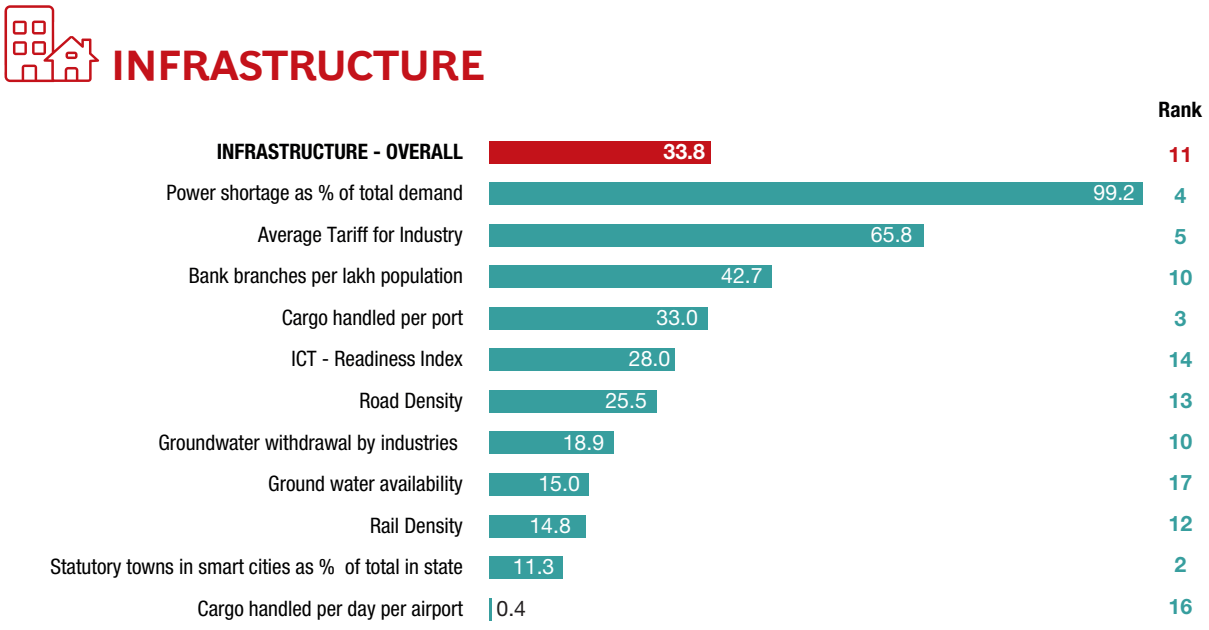
LABOUR

		Rank
LABOUR - OVERALL	**65.7**	2
Average wages of salaried persons	94.6	4
Share of contract workers in total labour force	93.8	5
Percent of workforce having technical education	91.3	3
Least mandays lost due to strike	83.8	11
Labour force participation rate	79.3	2
Average wages in manufacturing sector	59.3	15
Seating capacity of ITIs	32.4	10
Share of workforce in manufacturing sector	32.0	13
Share of labour force with secondary education and above	25.2	12

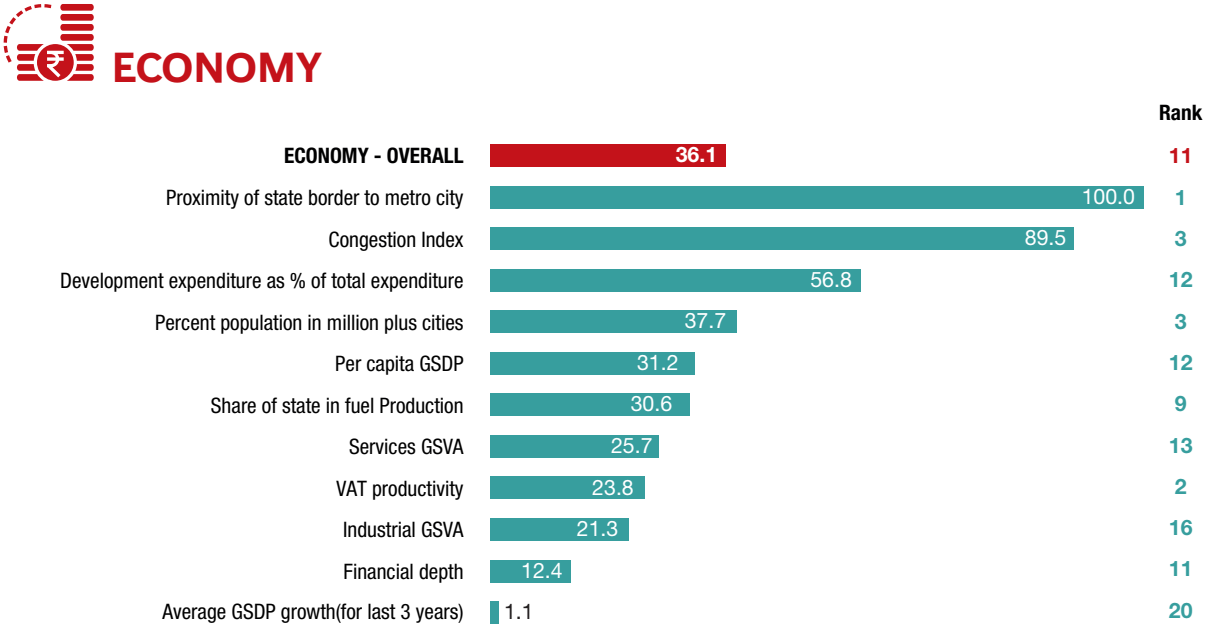
SURVEY

		Rank
SURVEY - OVERALL	**83.5**	2
Perception on land	100.0	1
Perception on infrastructure	92.2	2
Perception on labour	80.6	3
Perception on business climate	79.2	6
Perception on governance and political stability	75.2	4
Perception on economic conditions	73.8	6

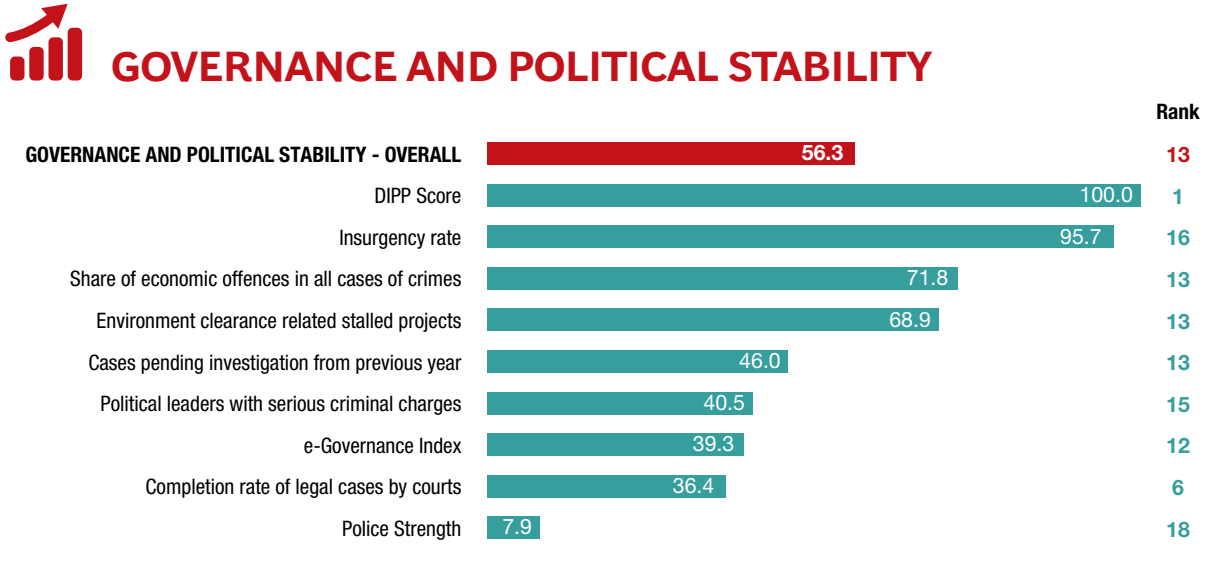
INFRASTRUCTURE



ECONOMY



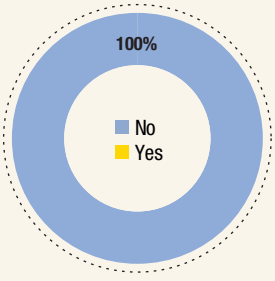
GOVERNANCE AND POLITICAL STABILITY



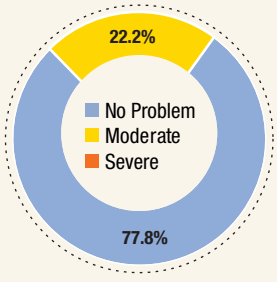
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

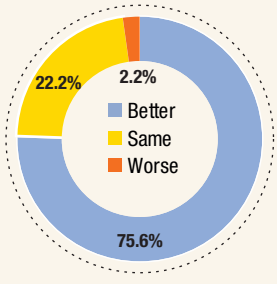


Percentage respondents facing problem in getting approvals for land

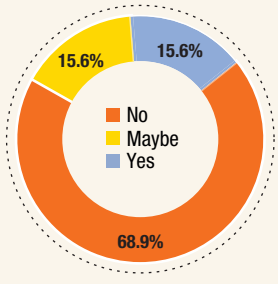


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

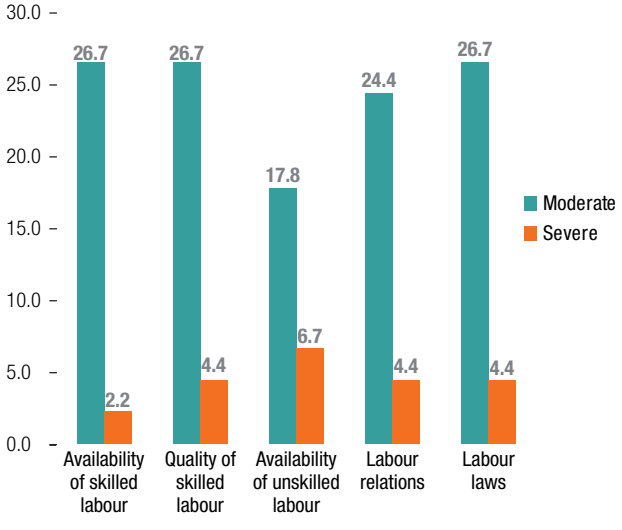


Percetage of respondents planing expansion in next five years



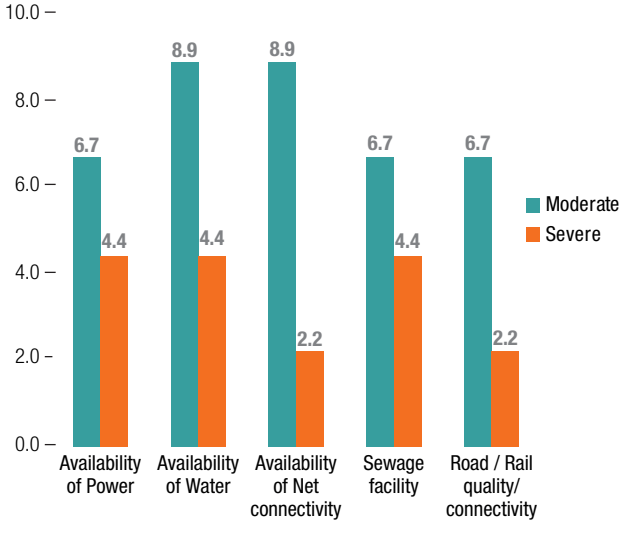
Labour related issues

% respondents finding these a moderate or severe problem



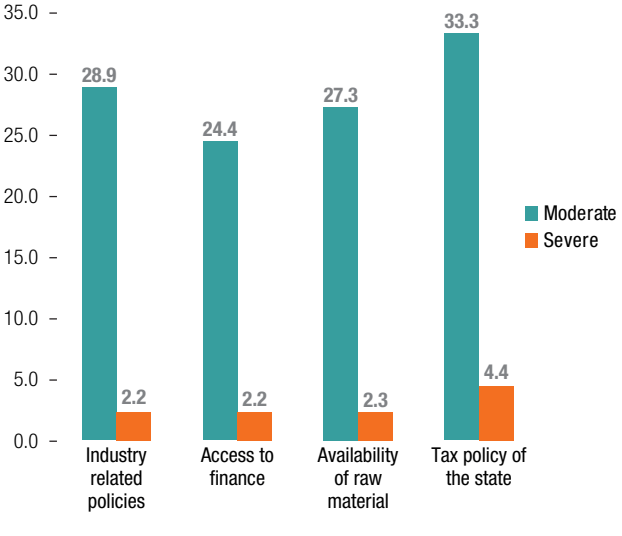
Infrastructure related issues

% respondents finding these a moderate or severe problem



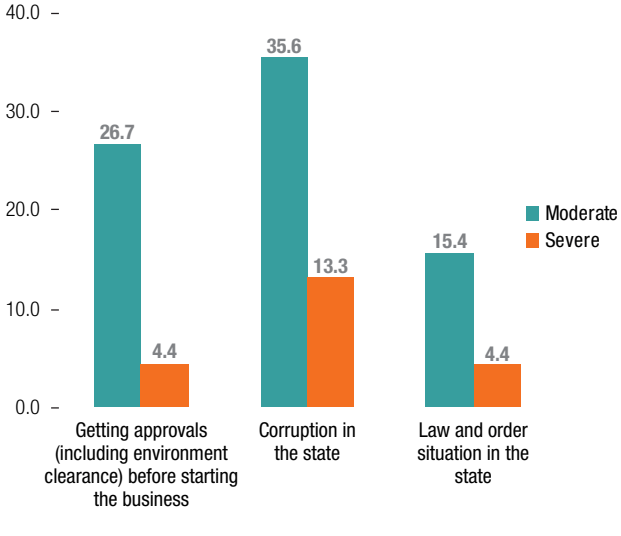
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

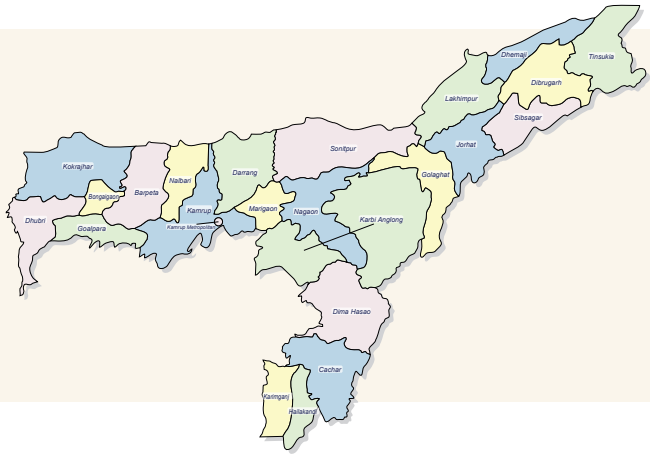
% respondents finding these a moderate or severe problem



Assam

RANK

2017	17
2016	14



Statistics

Capital	Dispur
Area (sq. km)	78,438
Location	North-eastern India
Per capita income (Rs.)	51,016
Literacy Rate (%)	73.2

State Focus Sectors

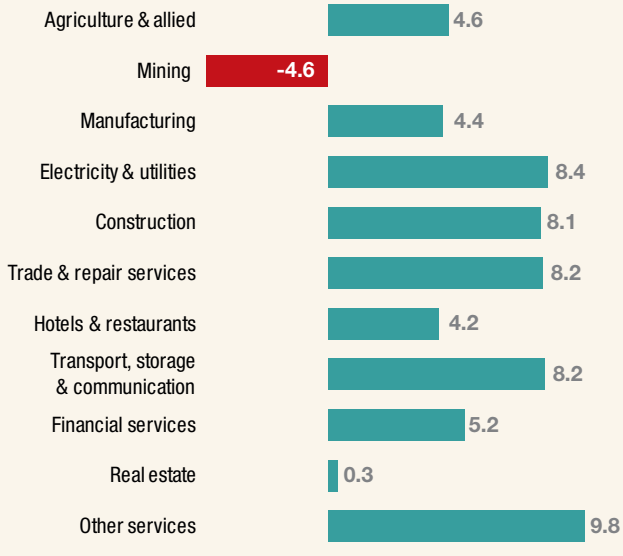
- Food processing and agro based industries
- Extraction and Value Addition of Herbal Medicinal and Aromatic Plants
- Mineral based industries
- Bamboo based industries
- Horticulture
- Information Technology related activities
- Hospitality industry and Tourism
- Bio-Technology sector.

Source: Assam Industrial Development Corporation Limited, 2014

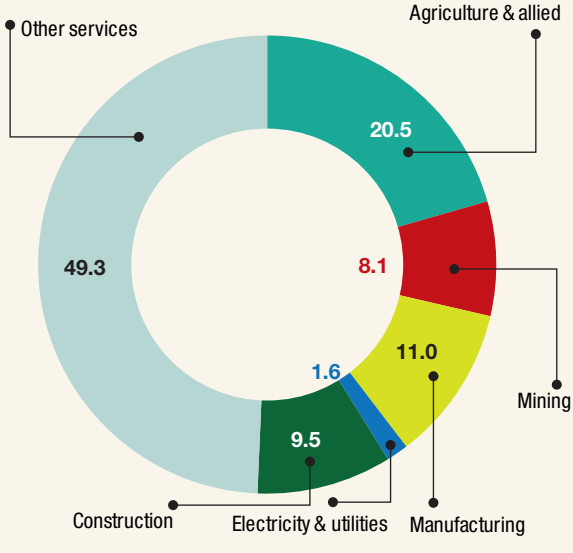
Incentives

- State Capital Investment subsidy at 30% to new micro units
- Exemption from tax payable under the Assam Value Added Tax Act (2005), the Central Sales Tax Act (1956) and Assam Luxury Tax Act (1989) for units set up in plastic parks, bamboo parks, food parks and tea parks
- State Capital Subsidy at 20% offered to Educational Institutions, Research facilities, Hospitals, Nursing Homes and Public utility facilities in the non-governmental sector
- Special status for mega projects with fixed capital investment of Rs 100 crore and above
- For more details on the incentives and eligibility of the industrial units, please refer to Industrial Policy Statement of Assam (2014).

Growth in Gross Value Added, 3 year average ending 2014-15



Sector-wise contribution in Gross Value Added, 2014-15



ASSAM

RANK 17

Assam has made an improvement in the governance and political stability pillar, but broadly lags behind in all other pillars.

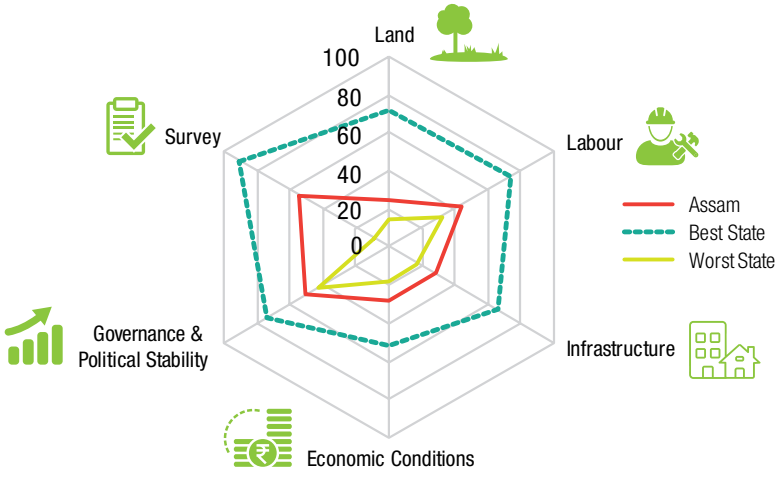
Strengths

The state has competitive wage rates in the manufacturing sector, fewer man-days lost and perception of a good business climate.It also does well on road density and ground water availability.

Weaknesses

The state lags in bank branches and financial depth. The state also falls behind in DIPP score, percent of workforce with technical qualifications and perception on quality and availability of the labour force.

States Performance on the Six Broad Pillars



LAND

		Rank
LAND - OVERALL	25.0	19
Land related stalled projects	100.0	1
Digitized land records	0.0	20
Land available for industrial purpose	0.0	21
Industrial parks in state	0.0	19

LABOUR

		Rank
LABOUR - OVERALL	43.5	19
Share of contract workers in total labour force	97.3	2
Least mandays lost due to strike	95.5	3
Average wages in manufacturing sector	93.7	2
Average wages of salaried persons	51.7	17
Labour force participation rate	28.0	11
Share of labour force with secondary education and above	18.6	13
Share of workforce in manufacturing sector	6.8	20
Percent of workforce having technical education	0.0	21
Seating capacity of ITIs	0.0	21

SURVEY

		Rank
SURVEY - OVERALL	53.9	14
Perception on business climate	85.7	2
Perception on land	57.1	11
Perception on economic conditions	52.3	13
Perception on infrastructure	48.3	18
Perception on labour	44.4	17
Perception on governance and political stability	35.8	16

INFRASTRUCTURE

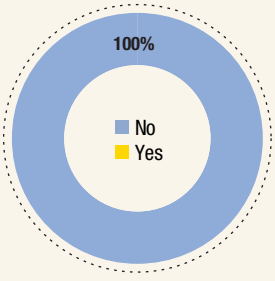
ECONOMY

GOVERNANCE AND POLITICAL STABILITY

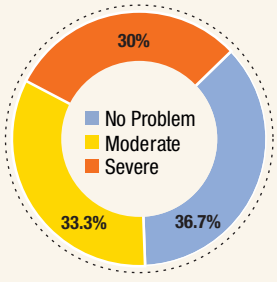
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

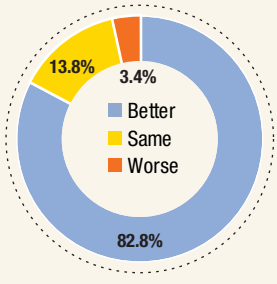


Percentage respondents facing problem in getting approvals for land

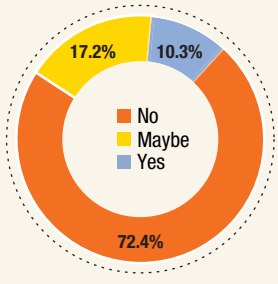


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

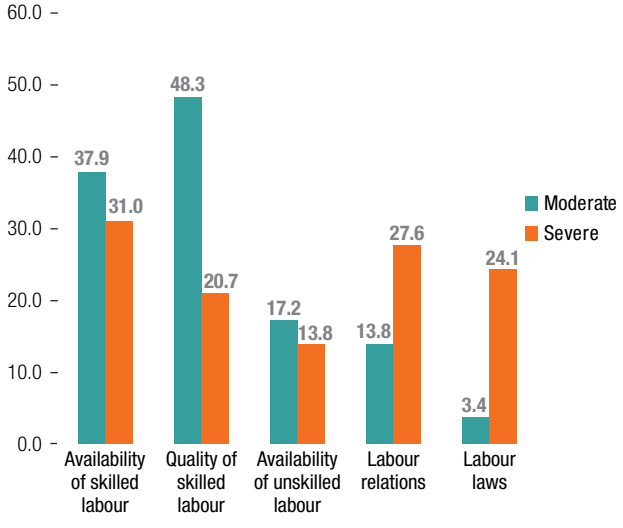


Percetage of respondents planing expansion in next five years



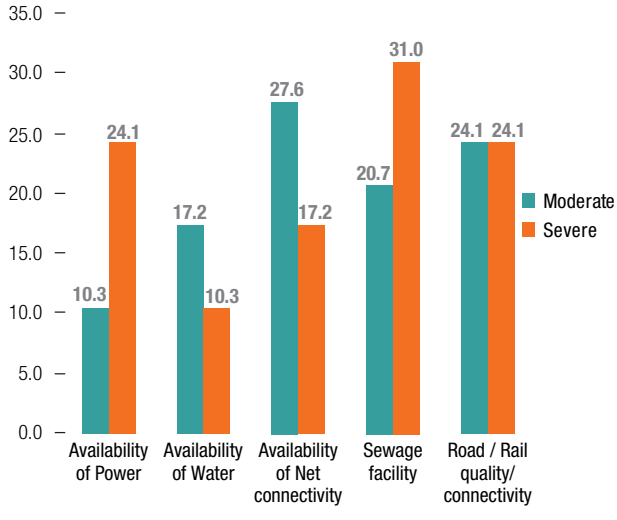
Labour related issues

% respondents finding these a moderate or severe problem



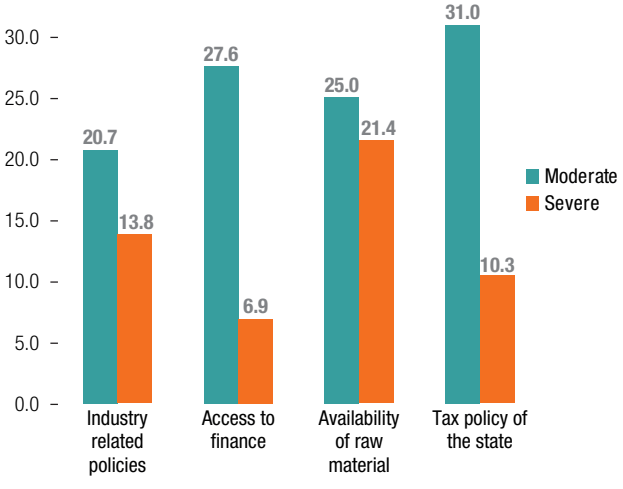
Infrastructure related issues

% respondents finding these a moderate or severe problem



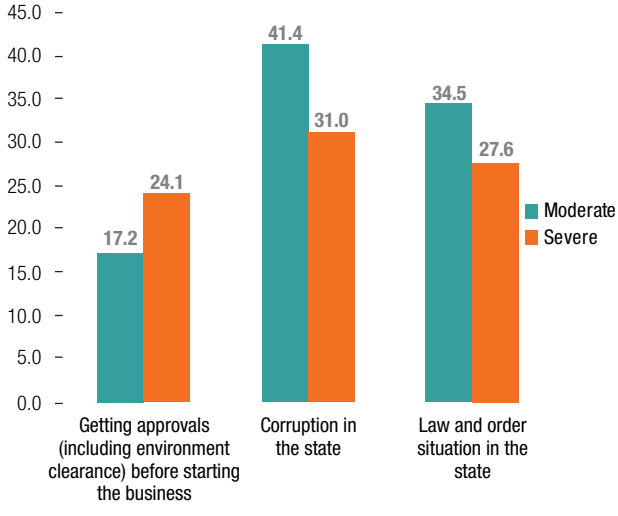
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

% respondents finding these a moderate or severe problem



Bihar

RANK

2017	19
2016	19

Statistics

Capital	Patna
Area (sq. km)	94,163
Location	Northern Central India
Per capita income (Rs.)	29,190
Literacy Rate (%)	61.8

State Focus Sectors

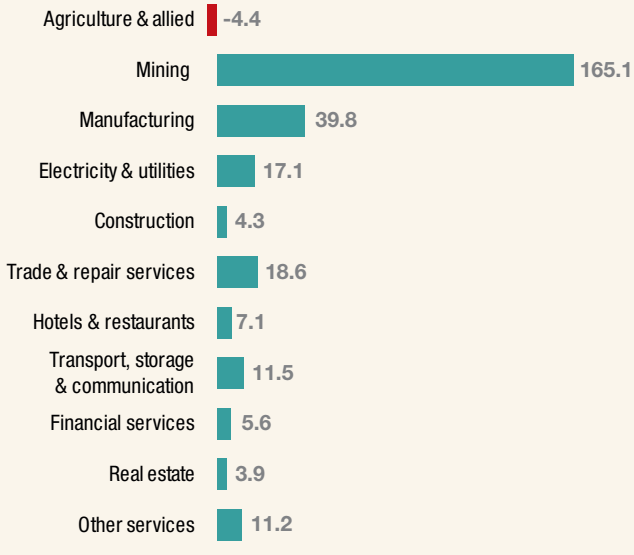
- Food processing
- Sugar Industry
- Power Sector
- IT and Communication
- Electronic hardware (computers, medical and automotive)
- Small machine manufacturing industries (seeders, dibbler, de-huskers, diesel pumps etc)
- Leather Industry
- Mines and Minerals
- Energy and Infrastructure
- Textiles
- Tourism
- Higher / Technical Educational Institution.

Source: Bihar Industrial Investment Promotion Policy, 2016

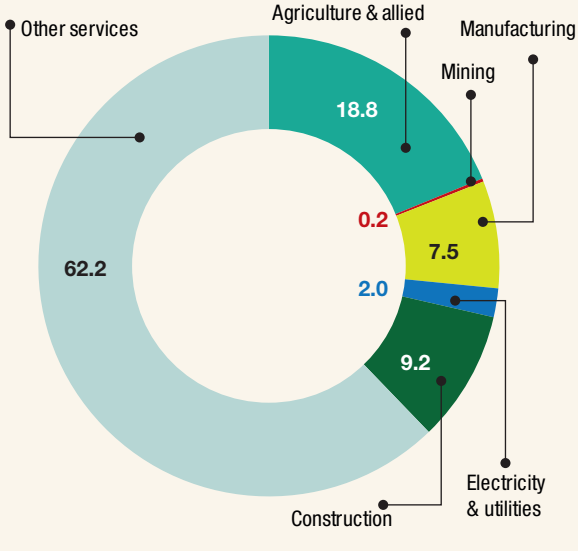
Incentives

- Incentives for setting up private industrial parks
- 100% exemption from Stamp Duty / Registration Fees on Lease/ Sale / Transfer of Industrial Land/Shed.
- 100% exemption in luxury tax and land conversion charge, 100% Re-imbursement of electricity duty for the new industrial units
- Capital Subsidy for industrial units, inclusion of Entry- Tax in the re-imbursement of 80% of VAT and subsidy on non-conventional sources of energy production
- Industries set up under the Green category exempt from getting Consent to Establish (CTE) and Consent to Operate (CTO)
- Preferential purchase policy for MSMEs with significant value -addition manufacturing activities
- For more details on the incentives and eligibility of the industrial units, please refer to BiharIndustrial Investment Promotion Policy, 2016

Growth in Gross Value Added, 3 year average ending 2015-16



Sector-wise contribution in Gross Value Added, 2015-16



BIHAR RANK 19

Bihar made rapid gains in the labour pillar to rank among the top ten states,but lags behind in all other pillars.

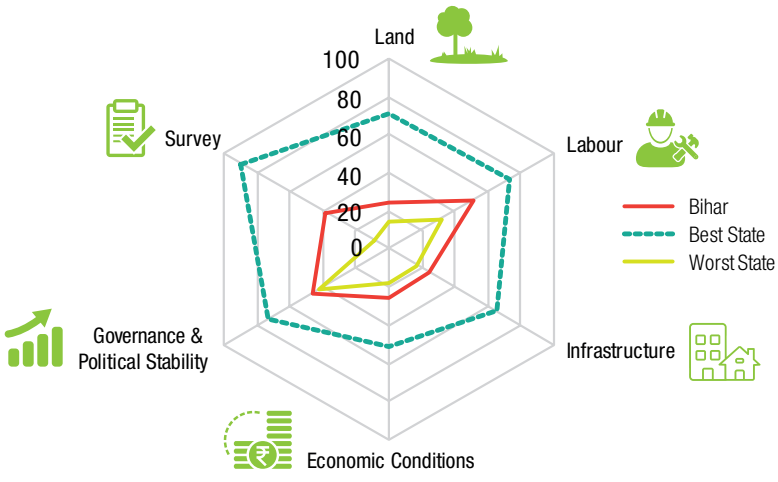
Strengths

The state tops in being competitive in manufacturing wages and also ranks high in services GSVA. It also does well in rail density, ground water availability and perception on business climate.

Weaknesses

The state lags behind in per capita income, projects stalled due to land related issues, and an educated labour force. The state also falls behind in police strength and perception on governance and political stability.

States Performance on the Six Broad Pillars



LAND

		Rank
LAND - OVERALL	25.1	18
Digitized land records	97.6	10
Land available for industrial purpose	2.8	17
Land related stalled projects	0.0	20
Industrial parks in state	0.0	19

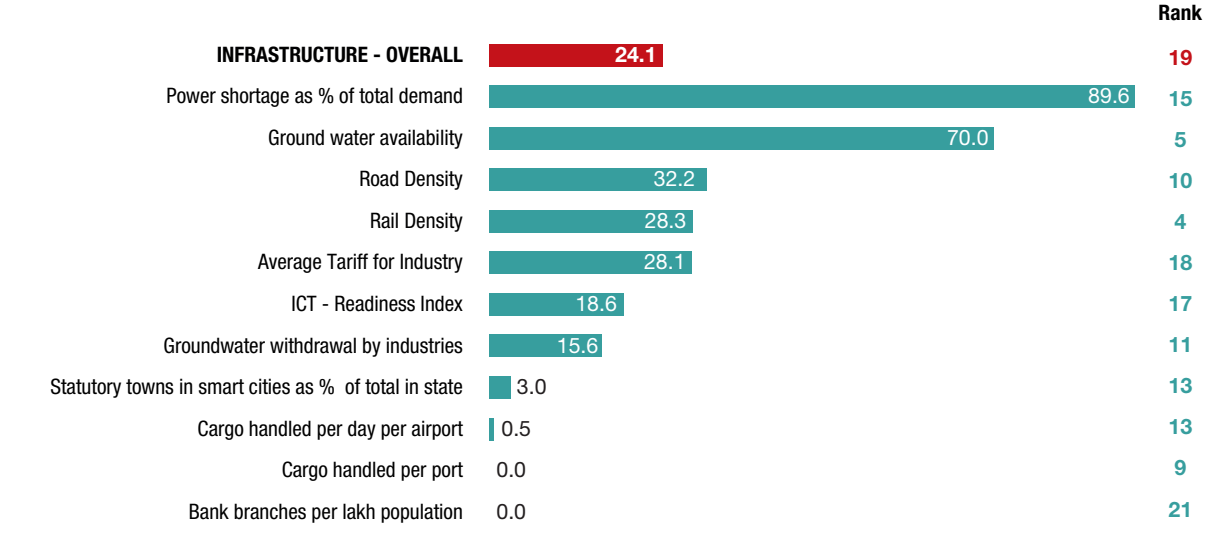
LABOUR

		Rank
LABOUR - OVERALL	51.8	10
Share of contract workers in total labour force	100.0	12
Least mandays lost due to strike	96.5	7
Average wages in manufacturing sector	89.6	1
Average wages of salaried persons	82.1	2
Labour force participation rate	51.2	14
Share of labour force with secondary education and above	25.7	21
Share of workforce in manufacturing sector	17.0	18
Percent of workforce having technical education	4.3	19
Seating capacity of ITIs	0.0	6

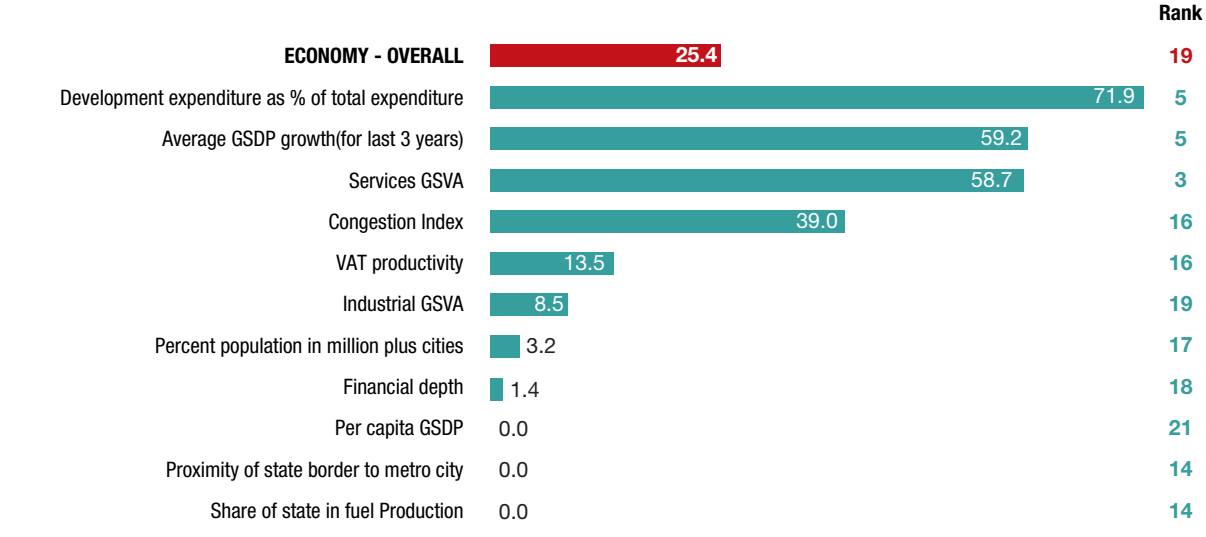
SURVEY

		Rank
SURVEY - OVERALL	38.5	18
Perception on labour	75.1	6
Perception on infrastructure	63.6	11
Perception on economic conditions	50.2	15
Perception on governance and political stability	29.8	18
Perception on land	12.4	17
Perception on business climate	0.0	21

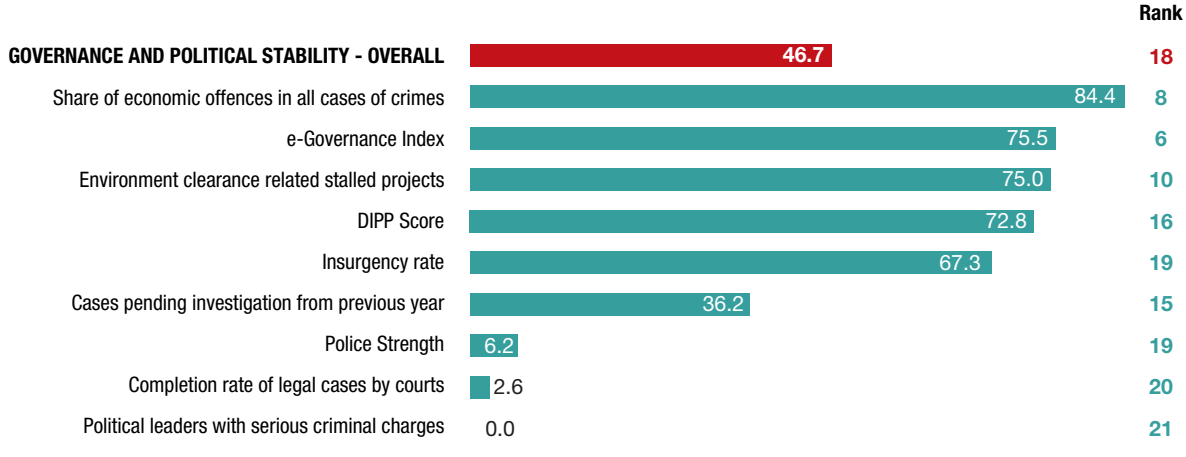
INFRASTRUCTURE



ECONOMY



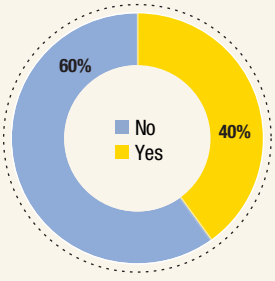
GOVERNANCE AND POLITICAL STABILITY



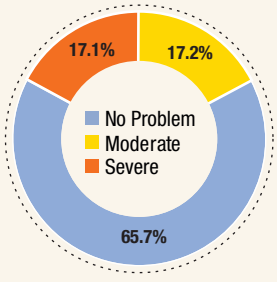
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

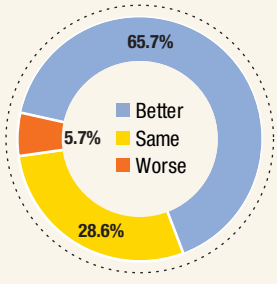


Percentage respondents facing problem in getting approvals for land

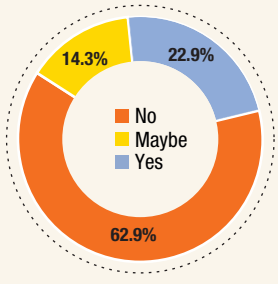


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

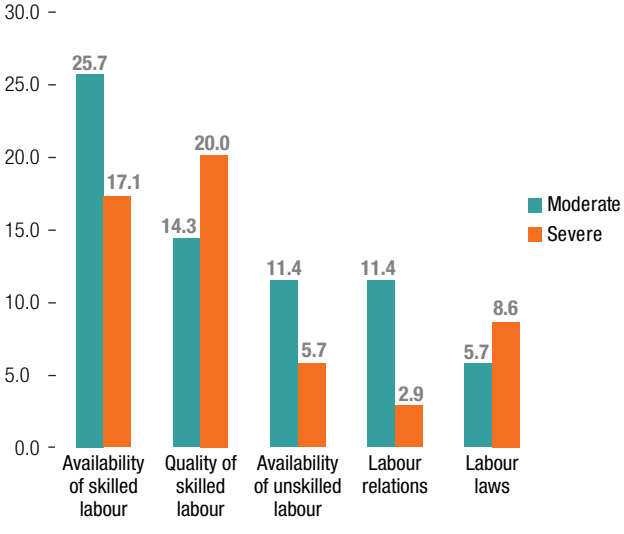


Percetage of respondents planing expansion in next five years



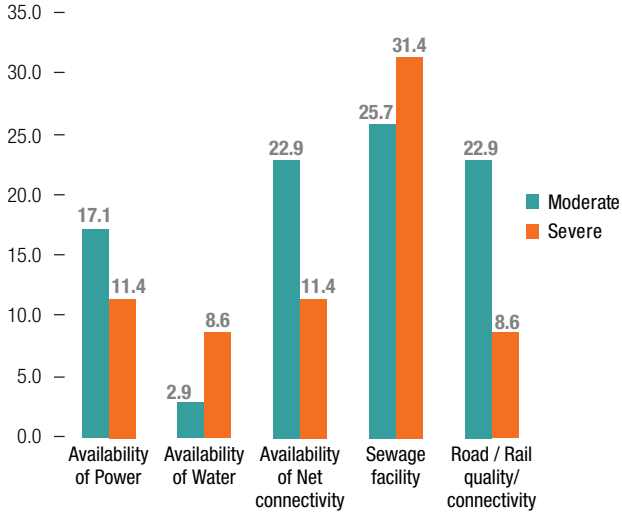
Labour related issues

% respondents finding these a moderate or severe problem



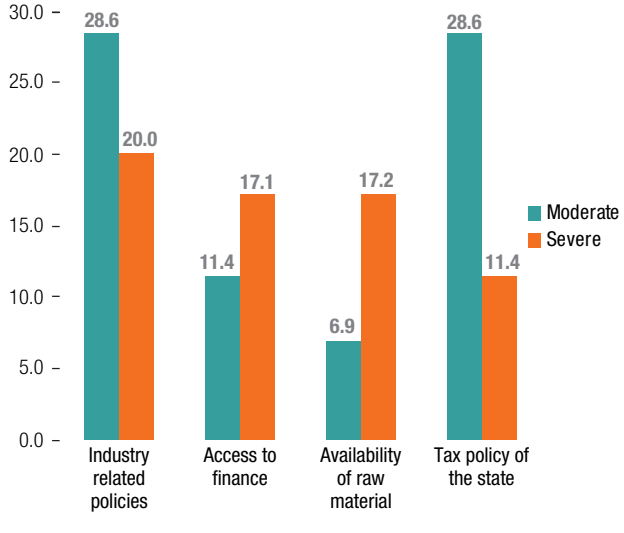
Infrastructure related issues

% respondents finding these a moderate or severe problem



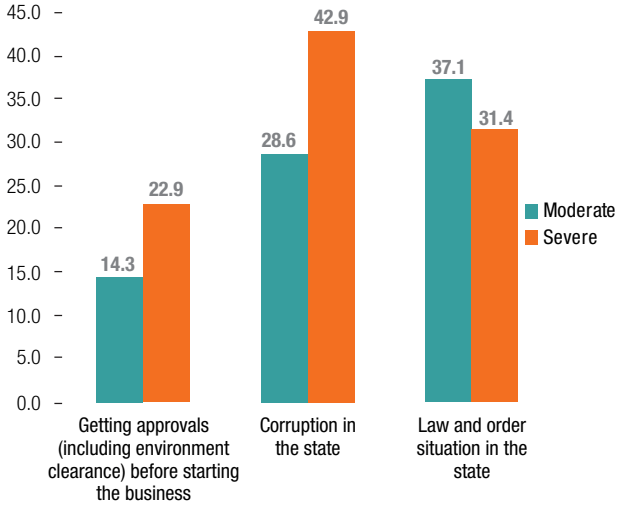
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

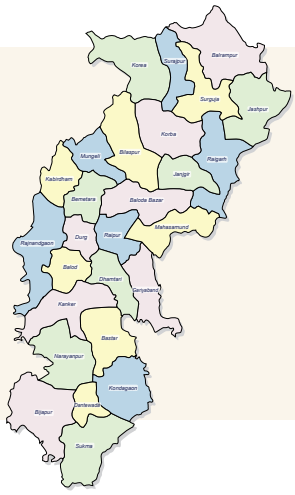
% respondents finding these a moderate or severe problem



Chhattisgarh

RANK

2017	14
2016	7



Statistics

Capital	Raipur
Area (sq. km)	1,35,192
Location	Central India
Per capita income (Rs.)	71,450
Literacy Rate (%)	70.3

State Focus Sectors

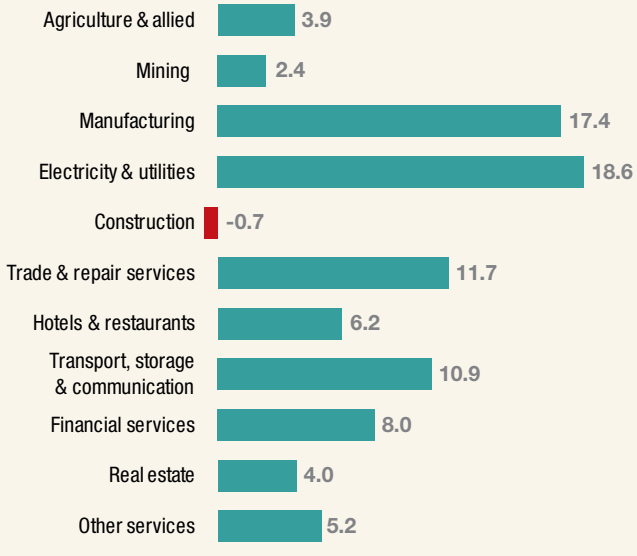
- Food processing
- Sugar Industry
- Power Sector
- IT and Communication
- Electronic hardware (computers, medical and automotive)
- Small machine manufacturing industries (seeders, dibbler, de-huskers, diesel pumps etc)
- Leather Industry
- Mines and Minerals
- Energy and Infrastructure
- Textiles
- Tourism
- Higher / Technical Educational Institution.

Source: Bihar Industrial Investment Promotion Policy, 2016

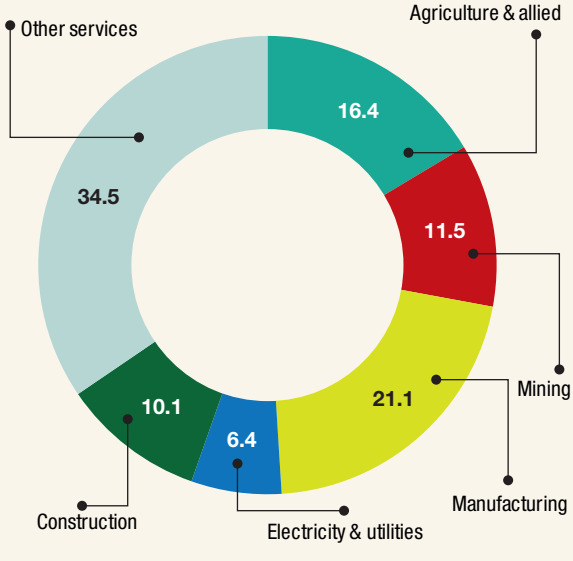
Incentives

- Incentives for setting up private industrial parks
- 100% exemption from Stamp Duty / Registration Fees on Lease/ Sale / Transfer of Industrial Land/Shed.
- 100% exemption in luxury tax and land conversion charge, 100% Re-imbursement of electricity duty for the new industrial units
- Capital Subsidy for industrial units, inclusion of Entry- Tax in the re-imbursement of 80% of VAT and subsidy on non-conventional sources of energy production
- Industries set up under the Green category exempt from getting Consent to Establish (CTE) and Consent to Operate (CTO)
- Preferential purchase policy for MSMEs with significant value -addition manufacturing activities
- For more details on the incentives and eligibility of the industrial units, please refer to BiharIndustrial Investment Promotion Policy, 2016

Growth in Gross Value Added, 3 year average ending 2014-15



Sector-wise contribution in Gross Value Added, 2014-15



CHHATTISGARH RANK 14

Chhattisgarh is among the top ten states in two pillars: economic conditions and governance and political stability, but has lost ground in perception.

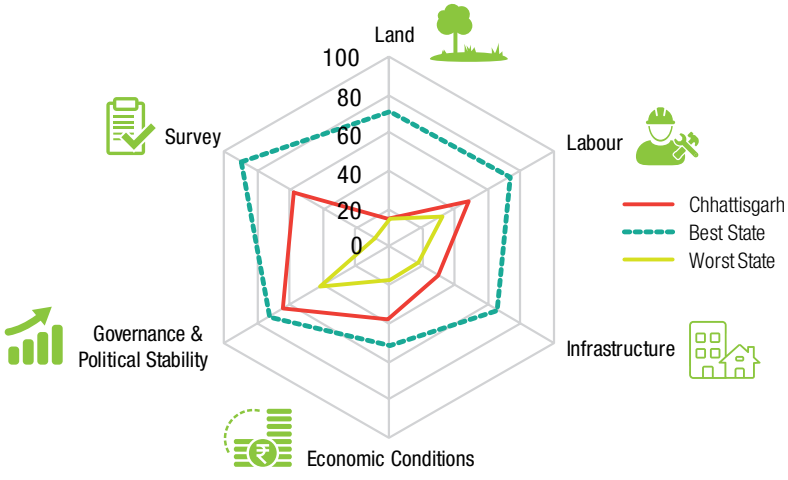
Strengths

The state ranks at the top in development expenditure, labour force participation rate and good labour climate. The state also fares well on perception of ease of getting land for business, average tariff for industry, and political leaders with few criminal charges.

Weaknesses

The state falls behind due to high number of incidences of insurgencies and fewer bank branches. It also lags behind in an educated labour force, rail density and the share of services in GSDP.

States Performance on the Six Broad Pillars



LAND

		Rank
LAND - OVERALL	**14.6**	**21**
Land related stalled projects	49.4	10
Land available for industrial purpose	4.1	16
Industrial parks in state	2.8	15
Digitized land records	2.2	18

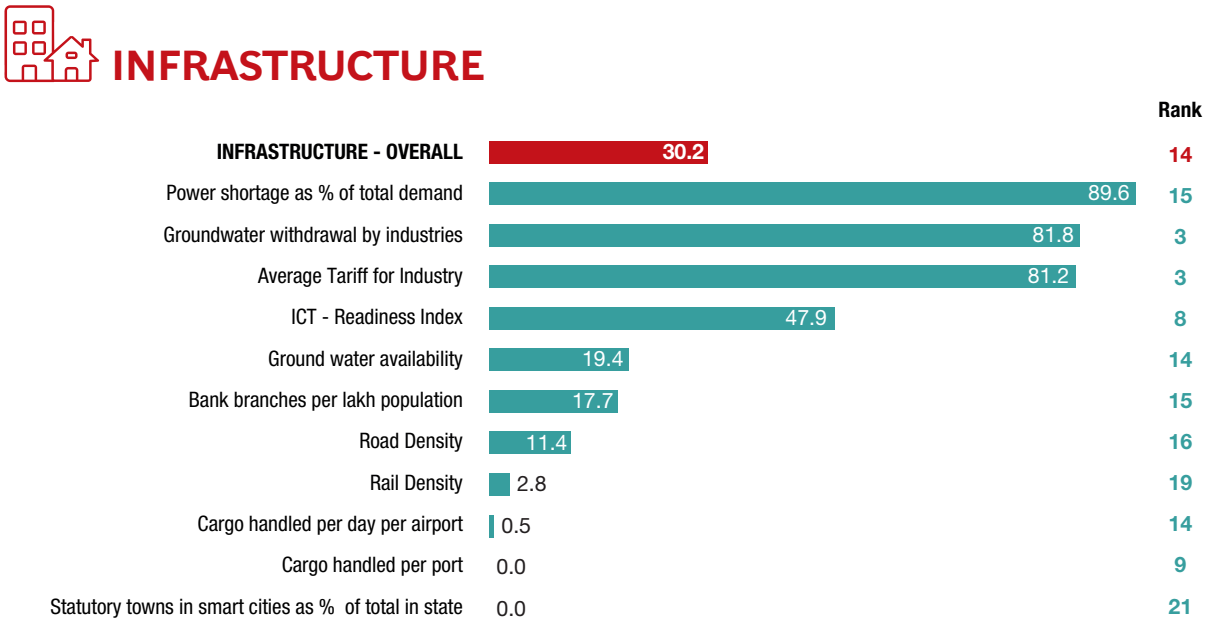
LABOUR

		Rank
LABOUR - OVERALL	**48.8**	**13**
Labour force participation rate	100.0	1
Share of contract workers in total labour force	100.0	1
Average wages of salaried persons	95.5	3
Least mandays lost due to strike	90.2	6
Average wages in manufacturing sector	22.9	20
Percent of workforce having technical education	17.4	15
Share of labour force with secondary education and above	7.1	20
Seating capacity of ITIs	6.4	18
Share of workforce in manufacturing sector	0.0	21

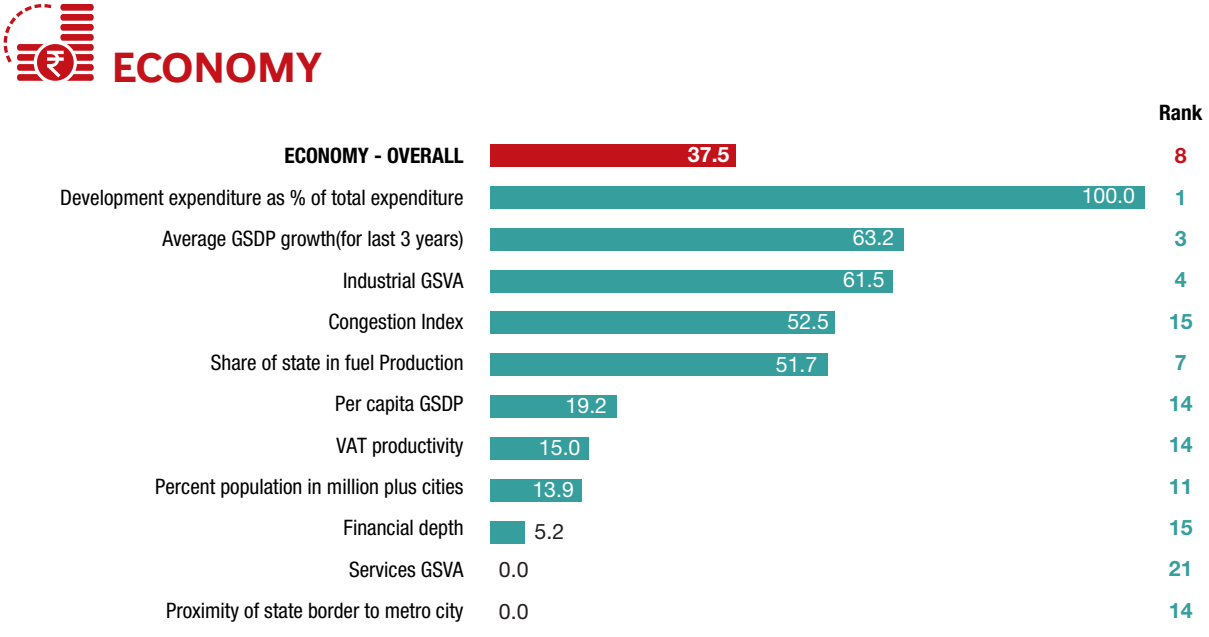
SURVEY

		Rank
SURVEY - OVERALL	**57.5**	**10**
Perception on land	89.6	3
Perception on governance and political stability	55.9	10
Perception on economic conditions	55.0	12
Perception on infrastructure	53.9	14
Perception on labour	46.5	15
Perception on business climate	44.1	13

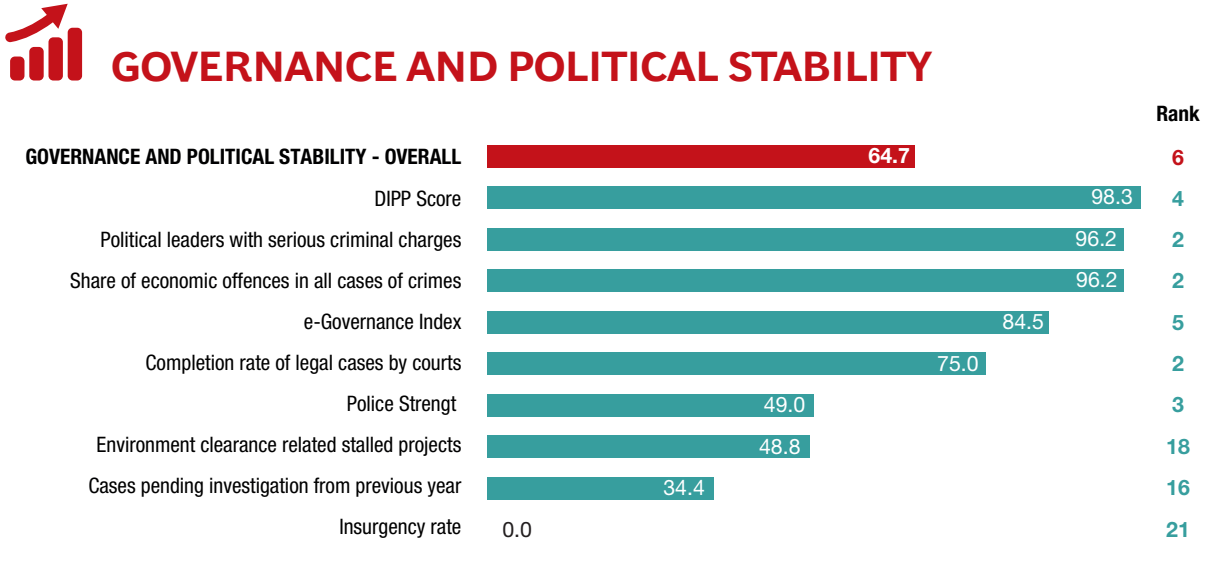
INFRASTRUCTURE



ECONOMY



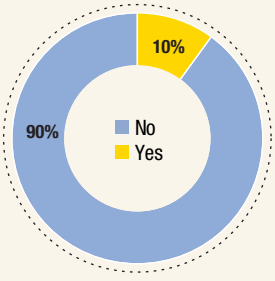
GOVERNANCE AND POLITICAL STABILITY



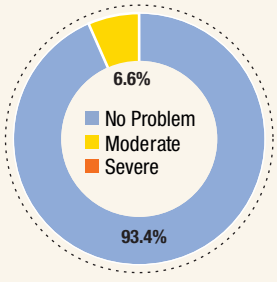
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

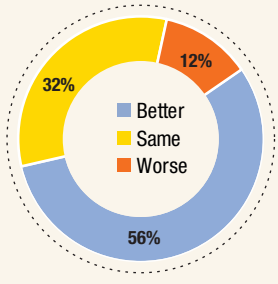


Percentage respondents facing problem in getting approvals for land

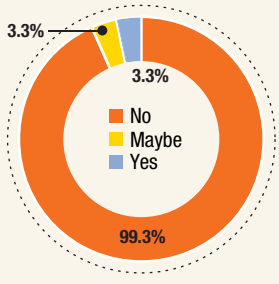


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

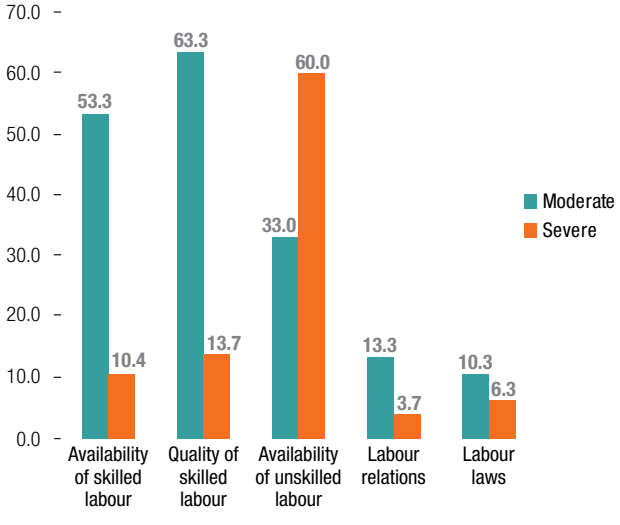


Percetage of respondents planing expansion in next five years



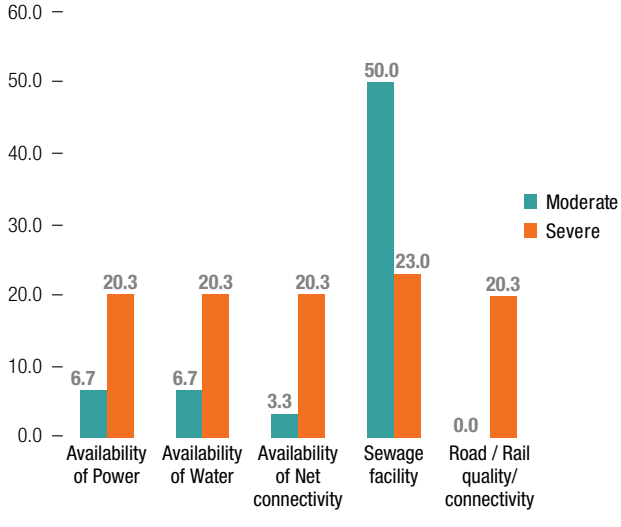
Labour related issues

% respondents finding these a moderate or severe problem



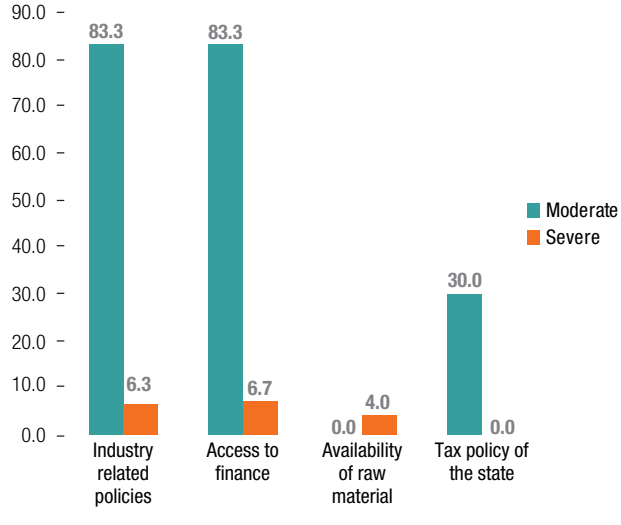
Infrastructure related issues

% respondents finding these a moderate or severe problem



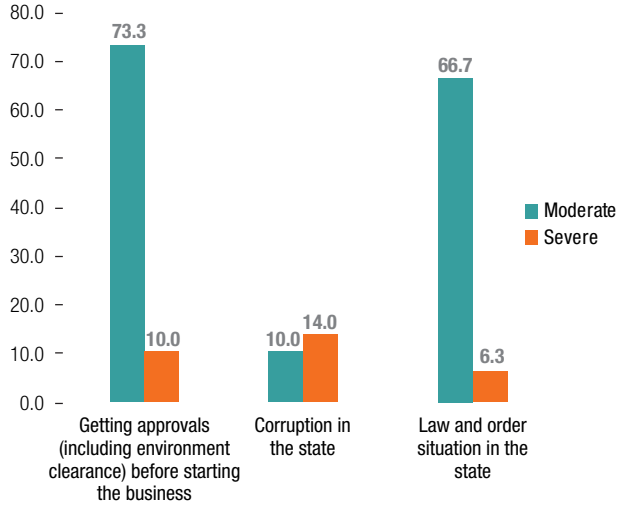
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

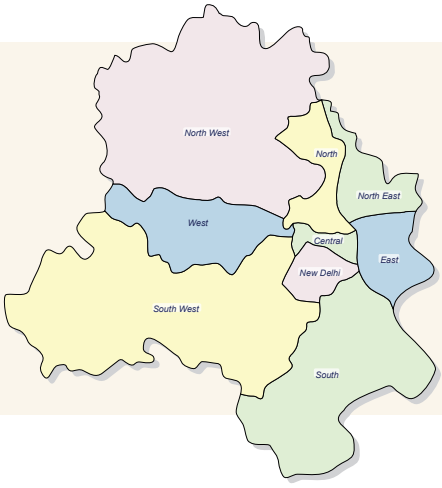
% respondents finding these a moderate or severe problem



Delhi

RANK

2017	2
2016	2



Statistics

Capital	Delhi
Area (sq. km)	1,483
Location	Northern India
Per capita income (Rs.)	2,49,001
Literacy Rate (%)	80.8

State Focus Sectors

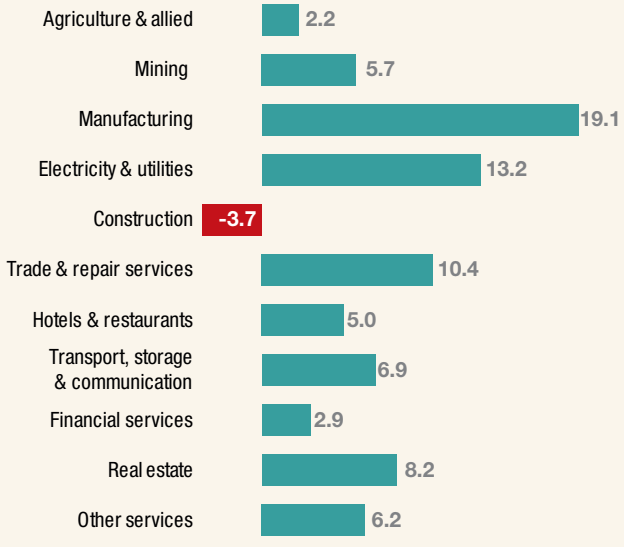
- IT and IT enabled services
- Educational services
- Traditional industries – Khadi, Handloom & Handicraft
- Skill Development
- Business and financial services
- Media
- R&D
- Design
- Biotechnology

Source: Industrial Policy for Delhi, 2010-2021

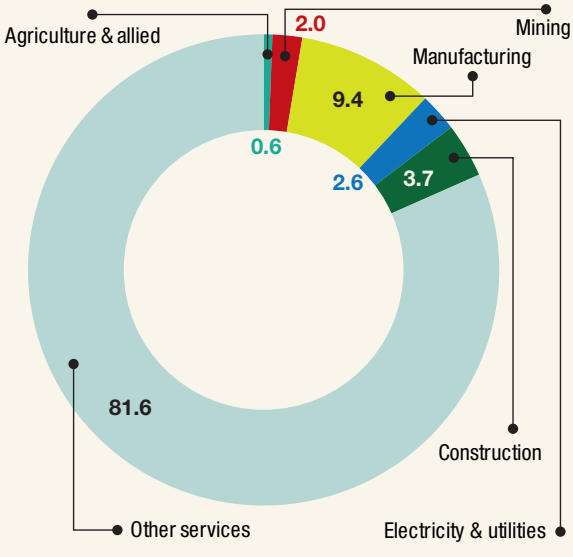
Incentives

- Proposed Land Bank
- Proposed Industrial Development, O&M Fund
- Encouragement to the formation of clusters in industrial estates with the land being allotted to ensure that units from particular sector would be located together.
- Redevelopment of Industrial Area
- Relocation & Phasing out of polluting units
- Industrial Waste Management
- Procedural Simplification – Common Application Form (CAF)
- Business Facilitation Mission
- For more details on the incentives and eligibility of the industrial units, please refer to Industrial Policy for Delhi, 2010-2021

Growth in Gross Value Added, 3 year average ending 2015-16



Sector-wise contribution in Gross Value Added, 2015-16

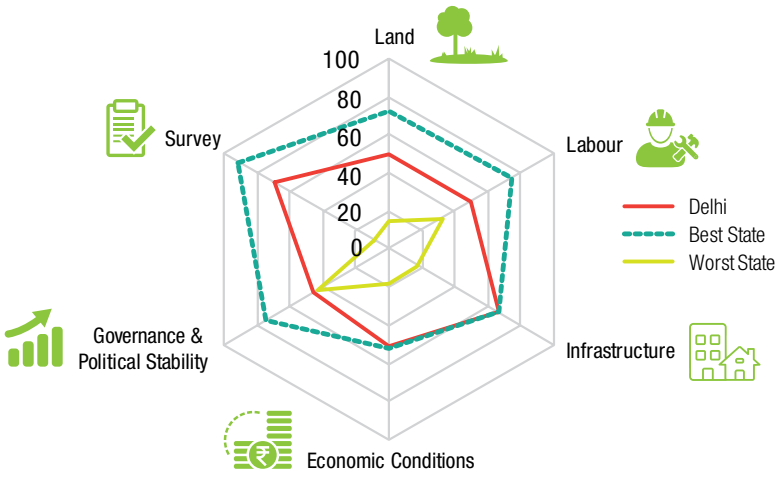


DELHI

RANK 2

Delhi tops the ranking for infrastructure and is ranked number 2 for economic climate, but lags behind in labor and governance.

States Performance on the Six Broad Pillars



Strengths

Delhi tops in computerization of land registration, rail density, cargo handled at airport, share of services in total GSVA, per capita GSDP, and police strength. The national capital has a large proportion of population above secondary education.

Weaknesses

Delhi falls behind in labor force participation, road density and congestion. It also has a large number of contract workers, high economic crime rate and pending corruption cases.

LAND

		Rank
LAND - OVERALL	**49.2**	8
Digitized land records	100.0	1
Land related stalled projects	48.9	11
Land available for industrial purpose	45.2	3
Industrial parks in state	2.8	15

LABOUR

		Rank
LABOUR - OVERALL	**48.5**	14
Share of labour force with secondary education and above	100.0	1
Share of workforce in manufacturing sector	93.9	3
Least mandays lost due to strike	92.1	5
Average wages in manufacturing sector	58.5	16
Percent of workforce having technical education	46.7	11
Share of contract workers in total labour force	40.2	20
Seating capacity of ITIs	4.8	19
Labour force participation rate	0.0	21
Average wages of salaried persons	0.0	21

SURVEY

		Rank
SURVEY - OVERALL	**68.6**	6
Perception on land	84.0	5
Perception on labour	77.2	4
Perception on economic conditions	71.9	7
Perception on governance and political stability	63.1	8
Perception on infrastructure	63.0	12
Perception on business climate	52.1	12

INFRASTRUCTURE

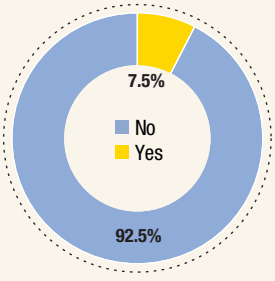
ECONOMY

GOVERNANCE AND POLITICAL STABILITY

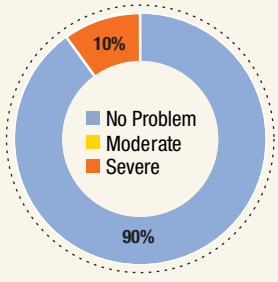
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

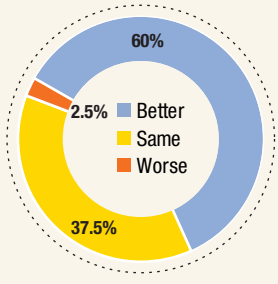


Percentage respondents facing problem in getting approvals for land

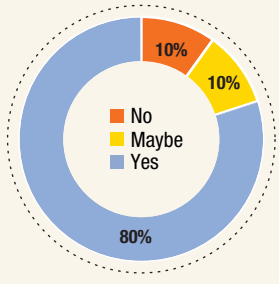


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

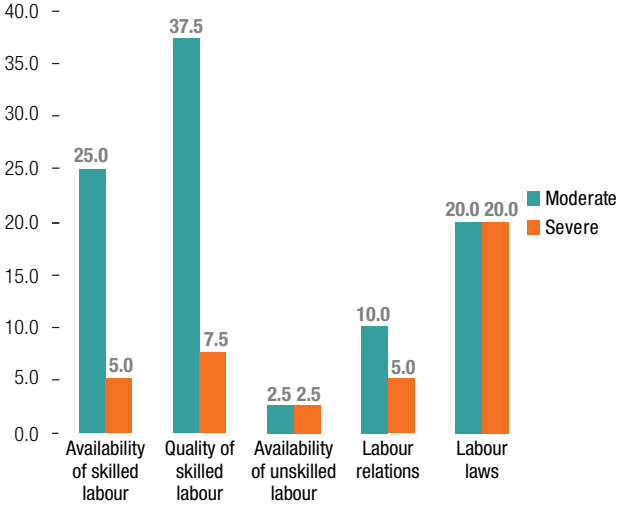


Percetage of respondents planing expansion in next five years



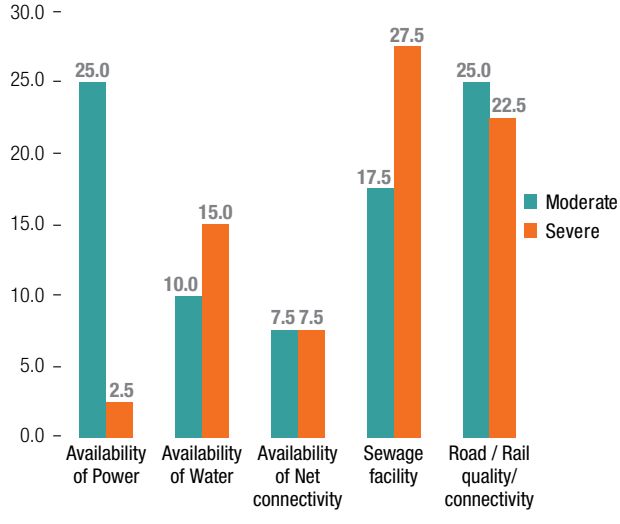
Labour related issues

% respondents finding these a moderate or severe problem



Infrastructure related issues

% respondents finding these a moderate or severe problem



Economy related issues

% respondents finding these a moderate or severe problem

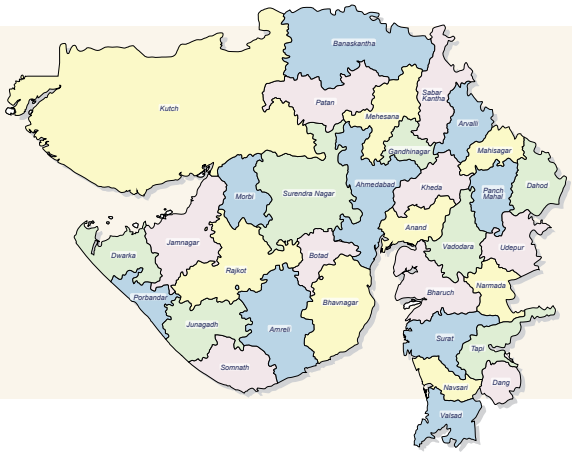
Governance related issues

% respondents finding these a moderate or severe problem

Gujarat

RANK

2017	1
2016	1



Statistics

Capital	Gandhinagar
Area (sq. km)	1,96,244
Location	Western India
Per capita income (Rs.)	1,25,285
Literacy Rate (%)	78.0

State Focus Sectors

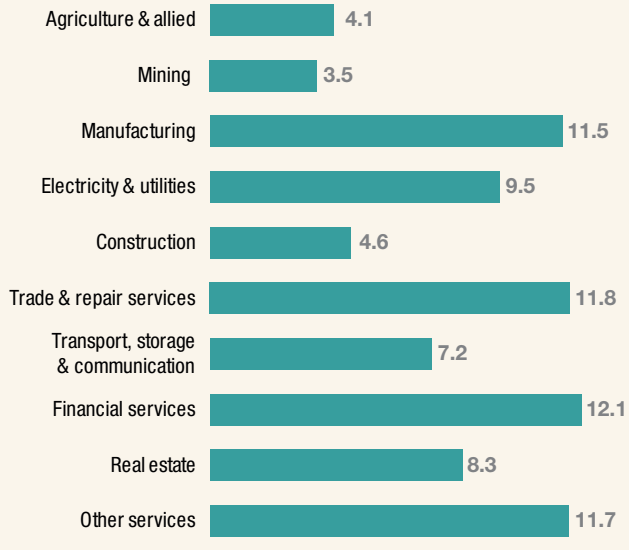
- Healthcare Industry
- Transport
- Ports & Ship Building Industry
- Agri& Food Business
- Manufacturing
- Innovation and R&D
- Renewable Energy
- Micro, Small and Medium Enterprises
- Biotechnology and Nano – Technology
- Mega Projects -Special Investment Region (SIR), Delhi-Mumbai Industrial Corridor (DMIC), Petroleum, Chemicals and Petrochemicals Investment Region (PCPIR), Dholera Special Investment Region (DSIR), Gujarat International Finance Tec-City (GIFT) and Metro-Link Express for Gandhinagar & Ahmedabad (MEGA).

Source: State Industrial and Investment Policy, 2015

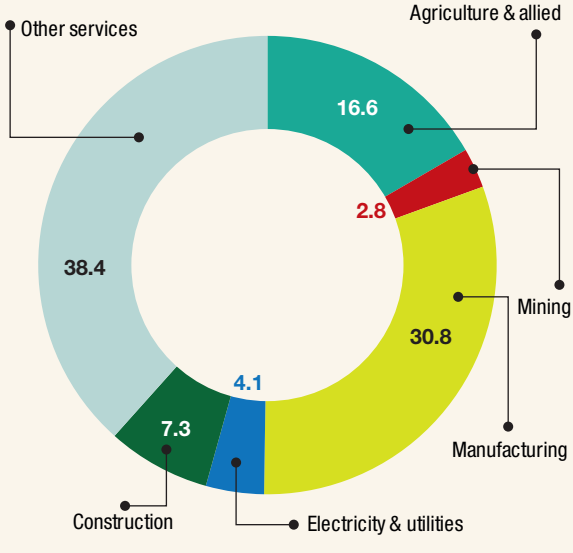
Incentives

- Incentives and assistance for allotment of land, mega IT/ ITeS projects, development of Technology Park, exemption/ concession in registration/stamp duty, lease rentals, electric duty and industrial tariff under the state's new IT Policy
- Incentives for clusters and anchor units, registration and stamp duty concession, uninterrupted availability of power tariff subsidy, VAT/CST incentive, employment generation grant on EPF and single window clearance system under Electronics Policy (2014-19)
- Facilitation of Agro and Food Processing activities like hi-tech agriculture, organic farming, pre-farm gate value addition projects, agro processing and Agri-infrastructure projects by incentivizing research for varietal development and export of fresh fruits, vegetables, flowers, live plants by air and sea route etc.

Growth in Gross Value Added, 3 year average ending 2014-15

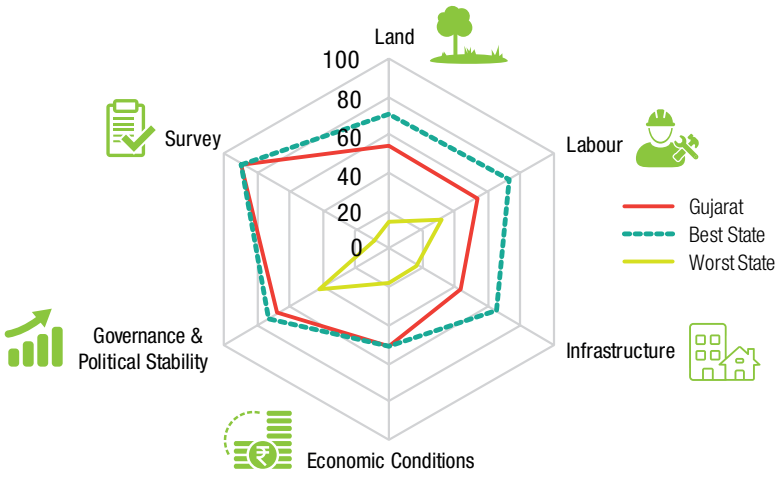


Sector-wise contribution in Gross Value Added, 2014-15



GUJARAT RANK 1

States Performance on the Six Broad Pillars



Mirroring its overall number 1 ranking, Guajrat is positioned among the top five states in almost all pillars, with labor as an exception.

Strengths

Gujarat tops in computerization of land registration, cargo handled per port, lowest power shortage and average output growth. It is ranked at the top in perceptions on labor, infrastructure, economic climate and governance, and ranks two in perception for land.

Weaknesses

The state has slipped 4 places from last year with respect to the labor pillar. One of the driving factors of this trend is the large number of contract workers in the labor force.

LAND

		Rank
LAND - OVERALL	**54.6**	5
Digitized land records	100.0	1
Industrial parks in state	45.8	6
Land related stalled projects	38.9	14
Land available for industrial purpose	33.6	5

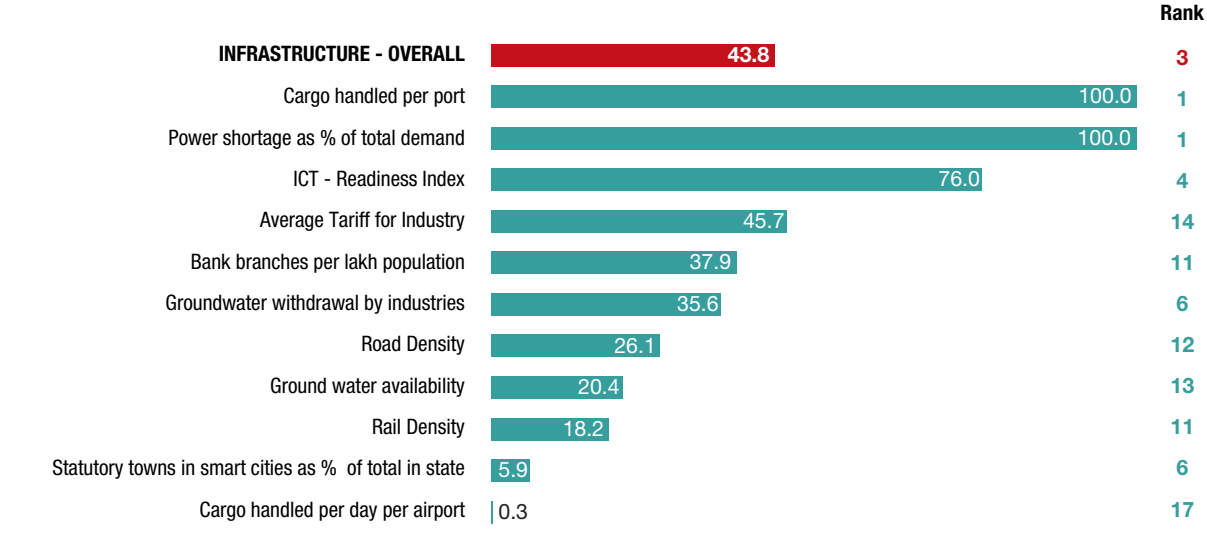
LABOUR

		Rank
LABOUR - OVERALL	**54.5**	8
Average wages of salaried persons	87.6	7
Share of workforce in manufacturing sector	83.7	4
Least mandays lost due to strike	63.2	15
Average wages in manufacturing sector	63.1	11
Percent of workforce having technical education	53.3	10
Share of contract workers in total labour force	44.6	18
Seating capacity of ITIs	36.0	8
Share of labour force with secondary education and above	31.4	11
Labour force participation rate	27.2	13

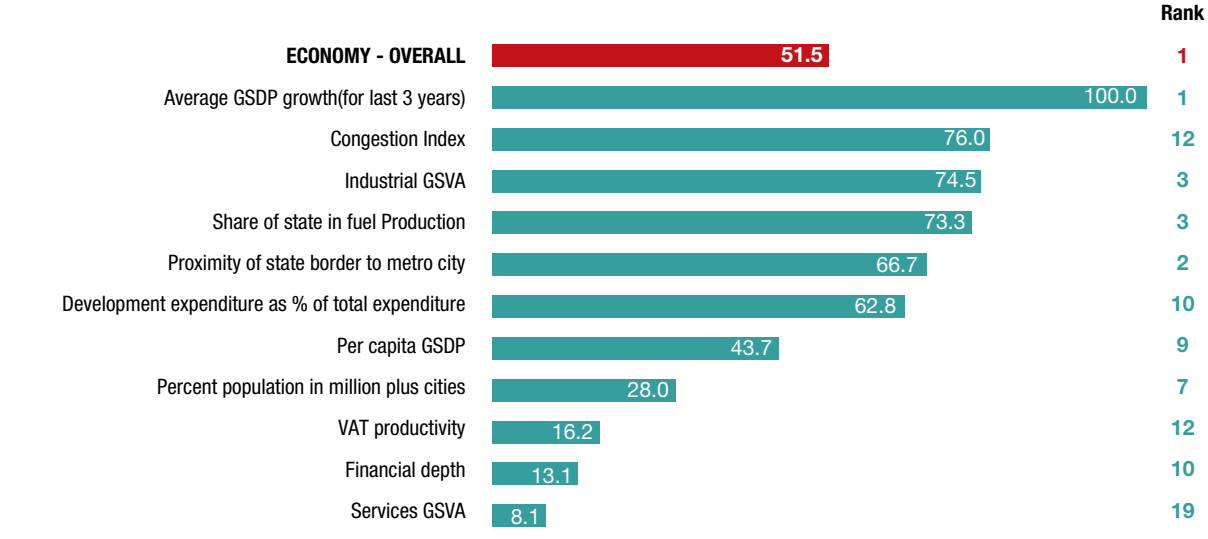
SURVEY

		Rank
SURVEY - OVERALL	**89.9**	1
Perception on labour	100.0	1
Perception on infrastructure	100.0	1
Perception on economic conditions	100.0	1
Perception on governance and political stability	100.0	1
Perception on land	98.2	2
Perception on business climate	40.9	15

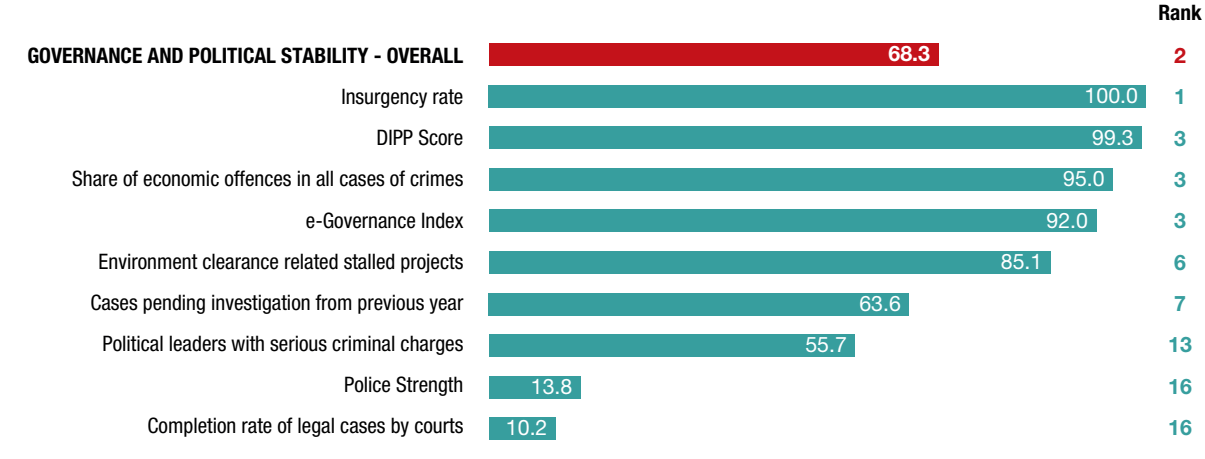
INFRASTRUCTURE



ECONOMY



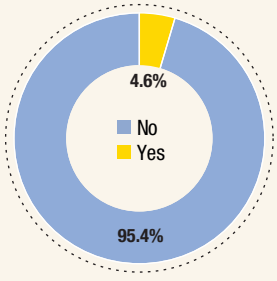
GOVERNANCE AND POLITICAL STABILITY



SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land



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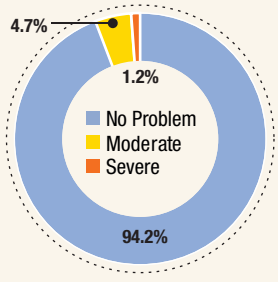
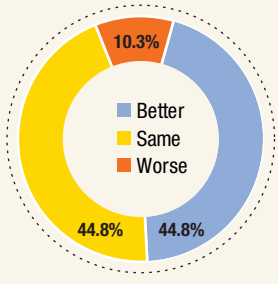
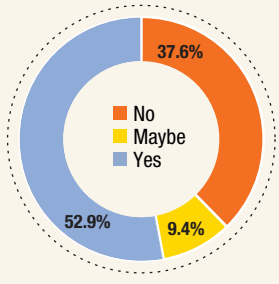


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

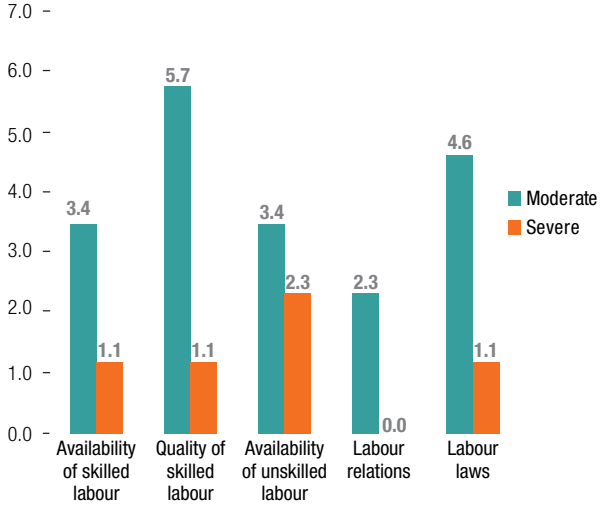


Percetage of respondents planing expansion in next five years



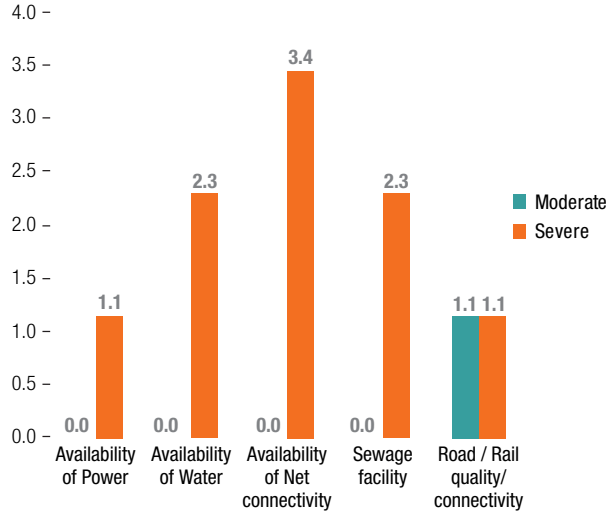
Labour related issues

% respondents finding these a moderate or severe problem



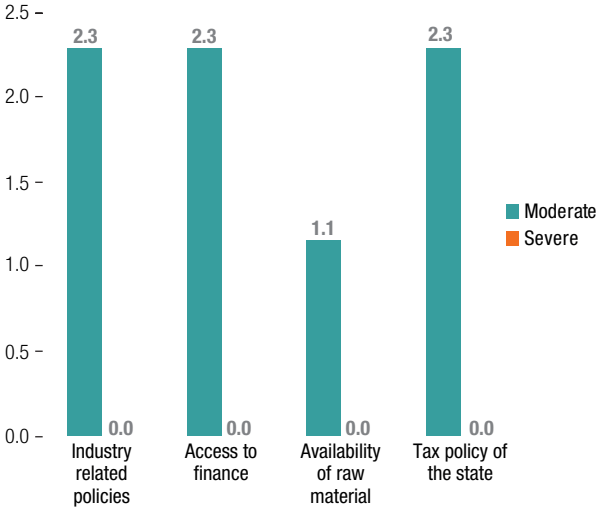
Infrastructure related issues

% respondents finding these a moderate or severe problem



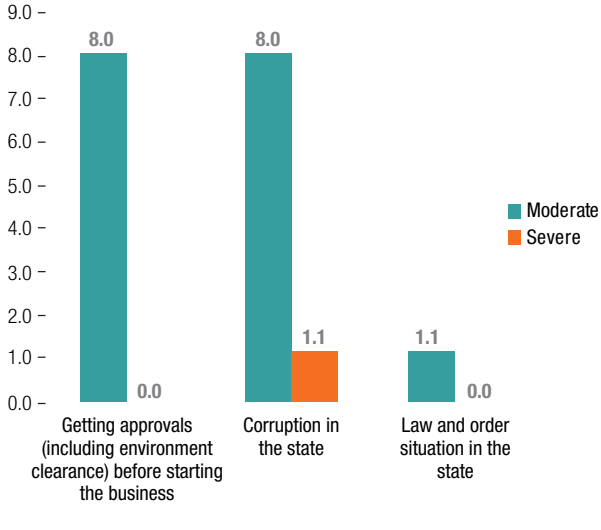
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

% respondents finding these a moderate or severe problem



Haryana

RANK

2017	4
2016	16

Statistics

Capital	Chandigarh
Area (sq. km)	44,212
Location	Northern India
Per capita income (Rs.)	1,37,493
Literacy Rate (%)	75.6

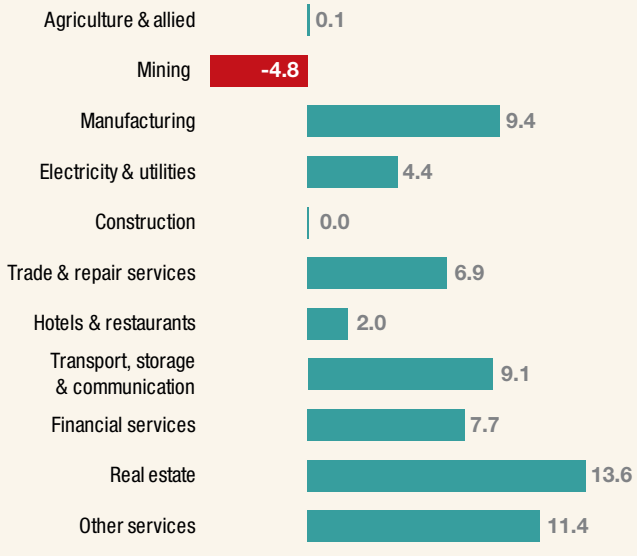
State Focus Sectors

- Auto, Auto Components and Light Engineering
- Agro-based, food processing & allied industry
- Textiles / Apparel / Knitting / Embroidery
- Footwear & Accessories
- Electronics & IT / ITes
- Defence & Aerospace Manufacturing
- Renewable Energy & Solar Parks
- Pharmaceutical & Chemical Industry

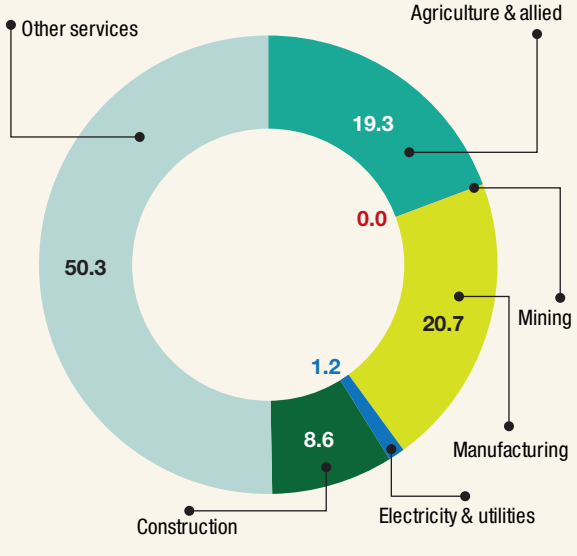
Incentives

- Allotment of land in the industrial estates developed by HSIIDC, Investment Subsidy in lieu of VAT / SGST and freight subsidy to 100% Export-oriented units
- Investment in services sector, investment subsidy in lieu of VAT / CGST net paid @ 50%, electricity duty exemption @50-75% and refund of stamp duty @30-50%
- Ease of doing business – Single window, online clearance and approvals; third party verifications or self-certifications
- For more details on the incentives and eligibility of the industrial units, please refer to the Industrial Policy Document.

Growth in Gross Value Added, 3 year average ending 2014-15



Sector-wise contribution in Gross Value Added, 2014-15



HARYANA

RANK 4

Like last year, Haryana is among the top performing states in terms of governance and political stability, but lags behind on the other pillars.

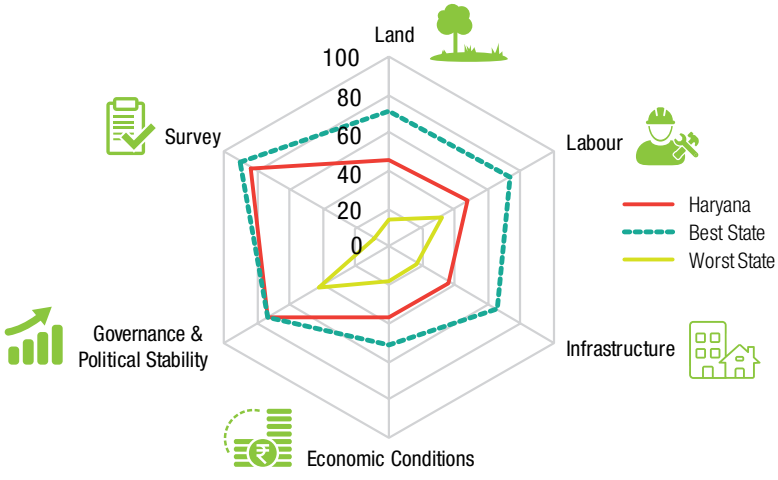
Strengths

Haryana's strengths lies in high per capita GSDP, low power shortage, low shares of MPs and MLAs with serious criminal record and low incidence of insurgency rate. Industry perception for business climate in the state has improved.

Weaknesses

The state has a weak labor pillar with a low share of seating capacity of ITIs, low participation rate, high average wage of salaried persons and large number of contract workers.

States Performance on the Six Broad Pillars



LAND

		Rank
LAND - OVERALL	**45.5**	9
Digitized land records	80.3	14
Industrial parks in state	44.9	7
Land available for industrial purpose	30.1	8
Land related stalled projects	26.8	19

LABOUR

		Rank
LABOUR - OVERALL	**48.0**	15
Least mandays lost due to strike	88.8	9
Average wages in manufacturing sector	66.8	10
Percent of workforce having technical education	66.3	5
Share of contract workers in total labour force	61.6	16
Share of labour force with secondary education and above	49.4	7
Share of workforce in manufacturing sector	43.5	9
Average wages of salaried persons	33.5	19
Seating capacity of ITIs	15.2	15
Labour force participation rate	7.3	19

SURVEY

		Rank
SURVEY - OVERALL	**83.1**	4
Perception on economic conditions	92.1	2
Perception on infrastructure	92.0	3
Perception on labour	90.7	2
Perception on governance and political stability	78.6	3
Perception on land	74.4	7
Perception on business climate	70.8	8

INFRASTRUCTURE

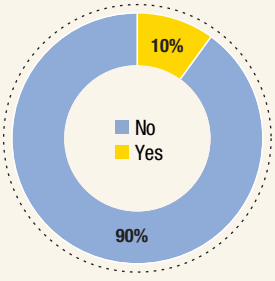
ECONOMY

GOVERNANCE AND POLITICAL STABILITY

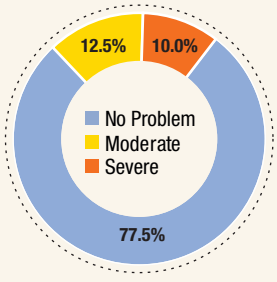
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

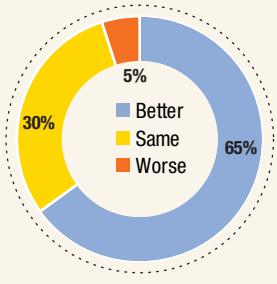


Percentage respondents facing problem in getting approvals for land

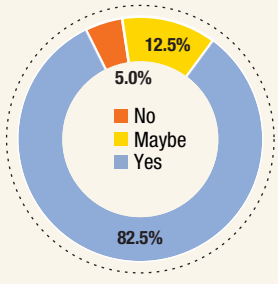


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

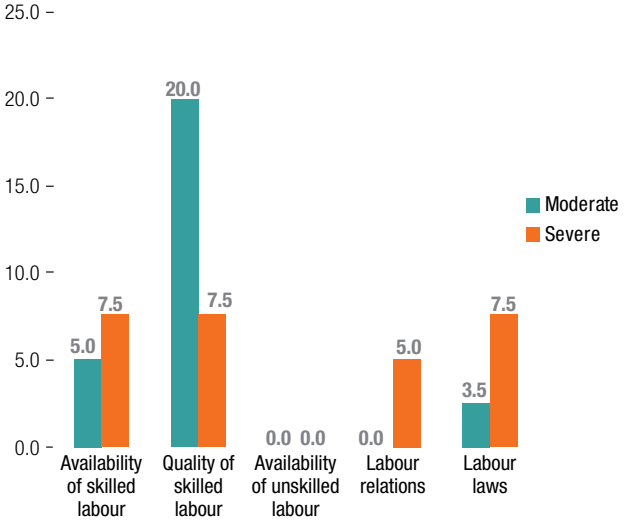


Percetage of respondents planing expansion in next five years



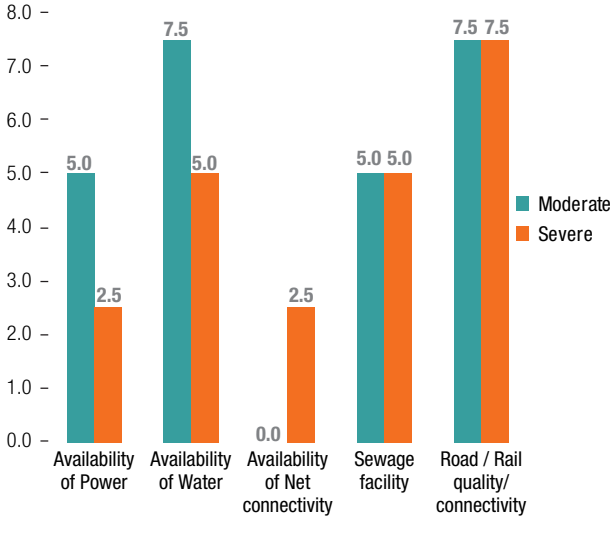
Labour related issues

% respondents finding these a moderate or severe problem



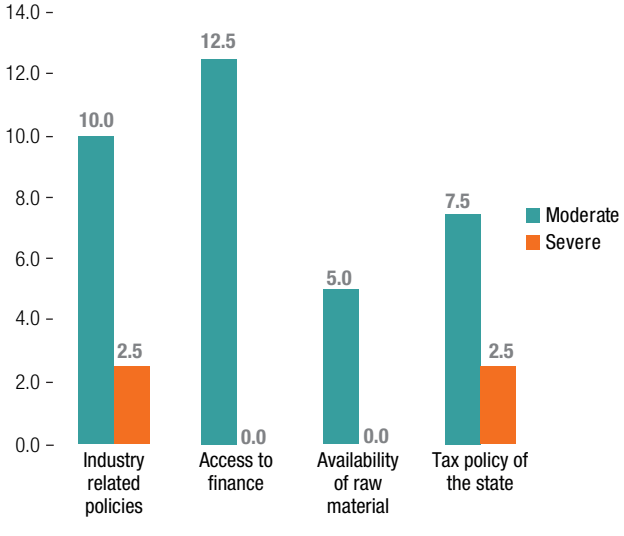
Infrastructure related issues

% respondents finding these a moderate or severe problem



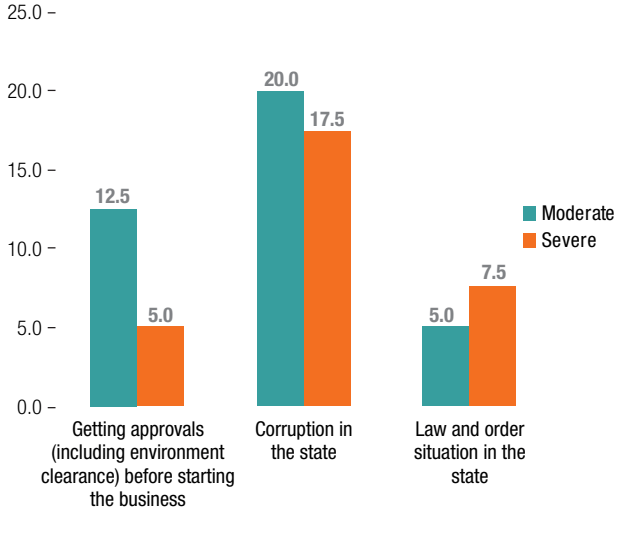
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

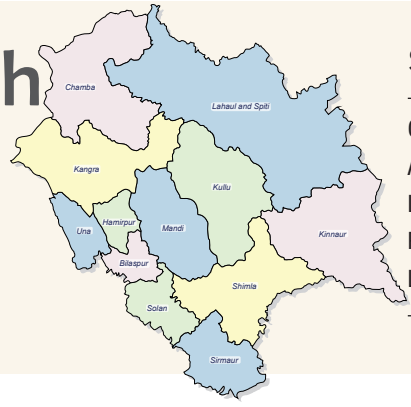
% respondents finding these a moderate or severe problem



Himachal Pradesh

RANK

2017	15
2016	17



Statistics

Capital	Shimla
Area (sq. km)	55,673
Location	Northern India
Per capita income (Rs.)	1,25,680
Literacy Rate (%)	82.8

State Focus Sectors

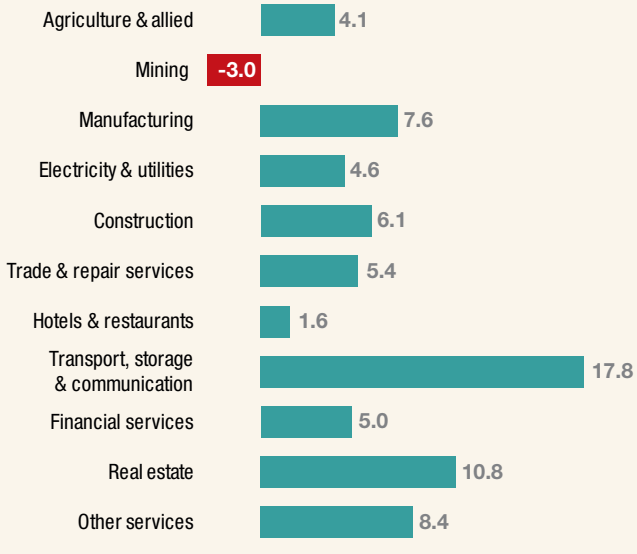
- Handlooms
- Handicrafts
- Sericulture industry
- Agro/ Horticulture/ Animal Husbandry & Aqua-Produce BasedIndustry
- MSME
- Khadi, Textiles and garments industries
- Mineral based industry

Source: Industrial Policy, 2013, Government of Himachal Pradesh

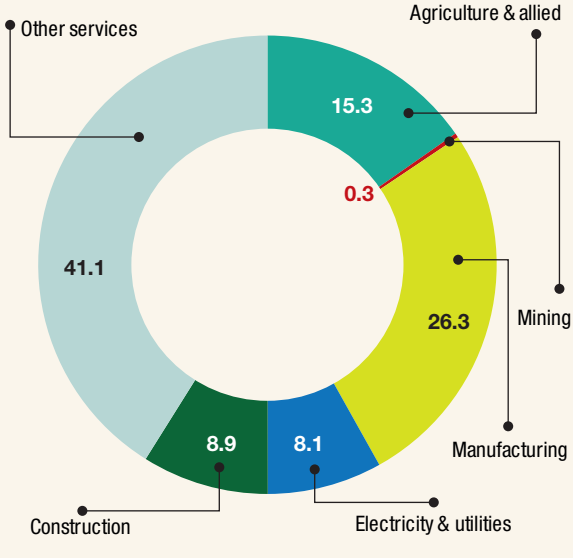
Incentives

- Special incentives for setting up environment friendly industries, fiscal incentives for thrust industries and exemption from payment of VAT for Khadi and Village Industries
- Incentives for improving productivity through technological and process improvements and to patent their innovations
- Streamlined and rationalized State taxes payment, location based tax incentives, timely tax refunds and resolution of the disputes.
- For more details on the incentives and eligibility of the industrial units, please refer to State's Industrial Policy (2013)

Growth in Gross Value Added, 3 year average ending 2014-15



Sector-wise contribution in Gross Value Added, 2014-15



HIMACHAL PRADESH RANK 15

States Performance on the Six Broad Pillars

Himachal Pradesh is one of top five states in the N-SIPI Survey, but lags behind in all the other pillars.

Strengths

The state fares well in computerization of registration and land availability for industrial purpose. The state has a large population with secondary education and technical education, fewer mandays lost due to strikes and competitive tariff rates.

Weaknesses

The state ranks lowest for governance and political stability. The state has the highest proportion of stalled projects due to lack of environmental clearance, and ranks low in E-Governance and DIPP Score.

LAND

		Rank
LAND - OVERALL	**36.1**	14
Digitized land records	100.0	1
Land available for industrial purpose	44.2	4
Land related stalled projects	0.0	20
Industrial parks in state	0.0	19

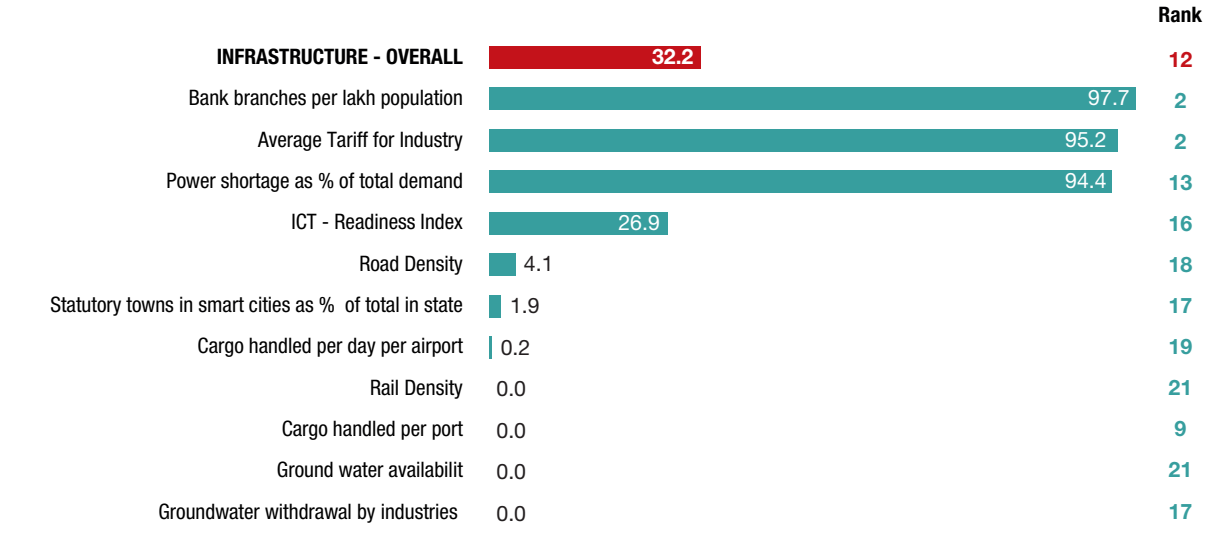
LABOUR

		Rank
LABOUR - OVERALL	**43.7**	18
Least mandays lost due to strike	100.0	1
Percent of workforce having technical education	78.3	4
Share of labour force with secondary education and above	78.0	2
Average wages in manufacturing sector	62.3	13
Average wages of salaried persons	31.2	20
Share of workforce in manufacturing sector	21.8	16
Labour force participation rate	11.9	17
Seating capacity of ITIs	9.6	16
Share of contract workers in total labour force	0.0	21

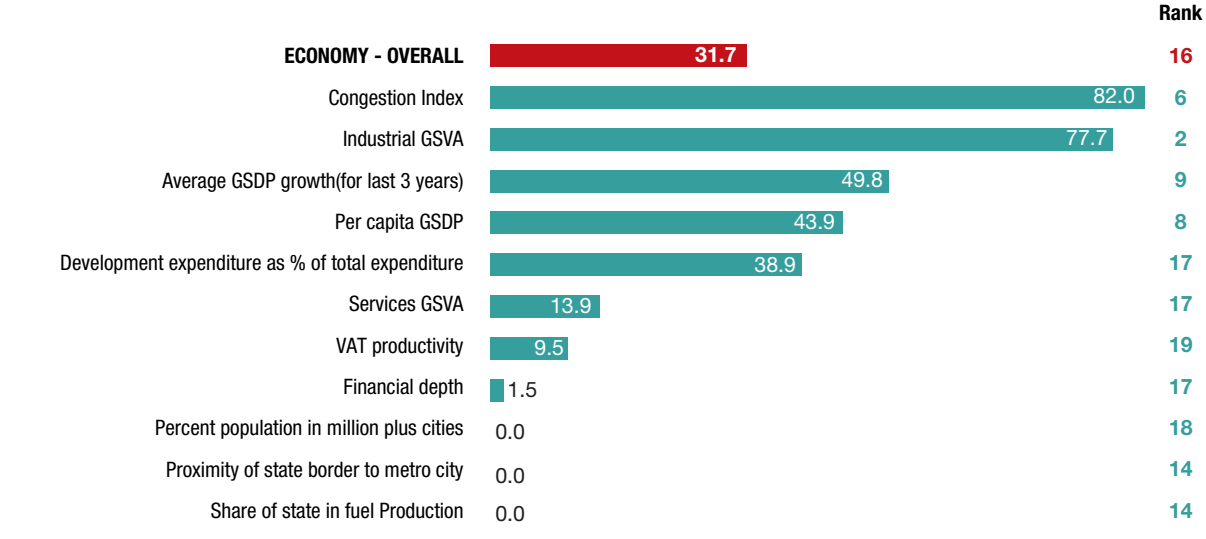
SURVEY

		Rank
SURVEY - OVERALL	**69.5**	5
Perception on business climate	80.3	5
Perception on land	74.1	8
Perception on governance and political stability	68.8	5
Perception on labour	67.2	10
Perception on economic conditions	66.4	9
Perception on infrastructure	60.4	13

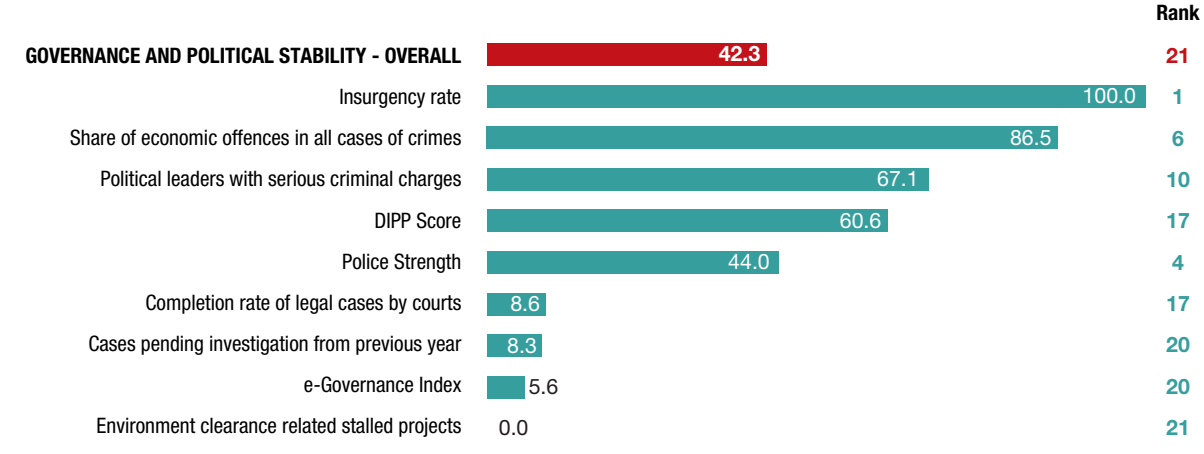
INFRASTRUCTURE



ECONOMY



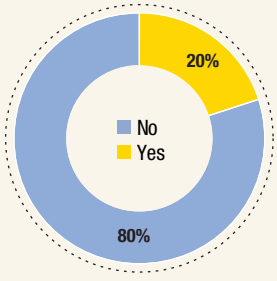
GOVERNANCE AND POLITICAL STABILITY



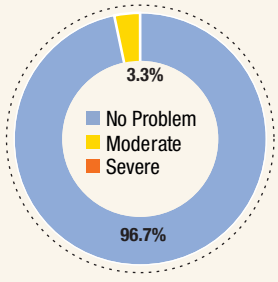
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

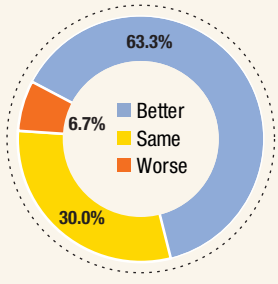


Percentage respondents facing problem in getting approvals for land

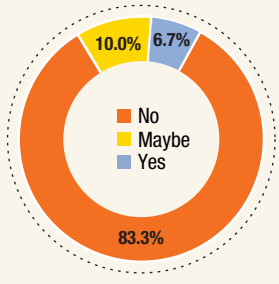


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

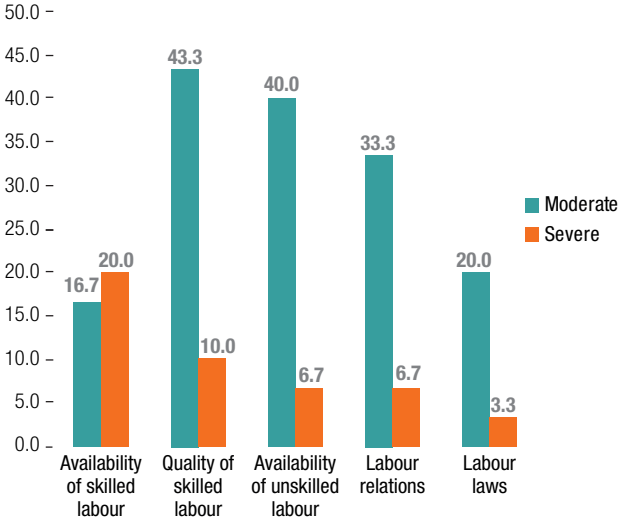


Percetage of respondents planing expansion in next five years



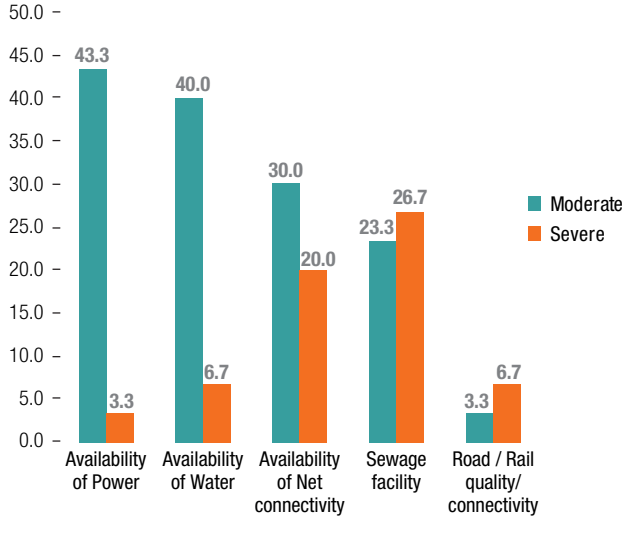
Labour related issues

% respondents finding these a moderate or severe problem



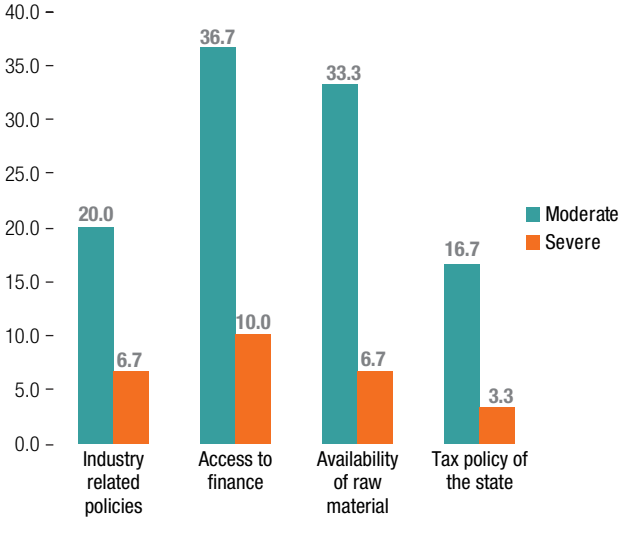
Infrastructure related issues

% respondents finding these a moderate or severe problem



Economy related issues

% respondents finding these a moderate or severe problem



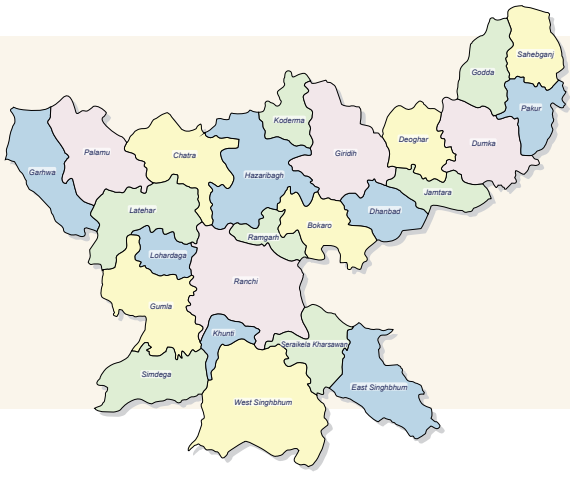
Governance related issues

% respondents finding these a moderate or severe problem

Jharkhand

RANK

2017	18
2016	21



Statistics

Capital	Ranchi
Area (sq. km)	79,716
Location	Central India
Per capita income (Rs.)	58,849
Literacy Rate (%)	66.4

State Focus Sectors

- Power generation and distribution
- Infrastructure development
- Automobile industry
- Mines and mineral based industries
- White goods segment

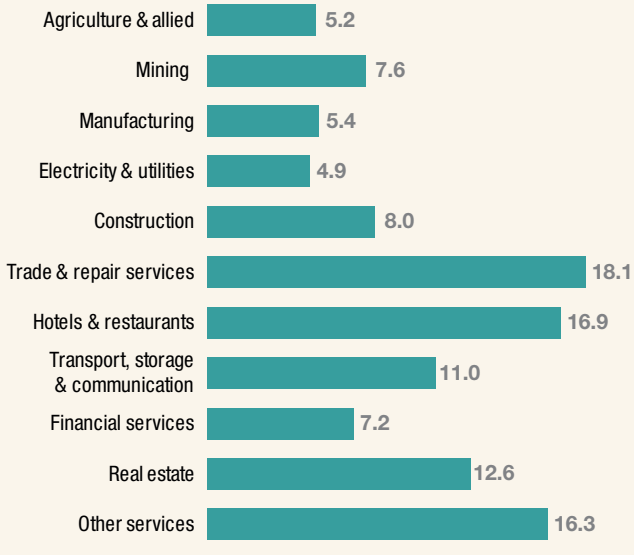
Source: Department of Industry Jharkhand

Incentives

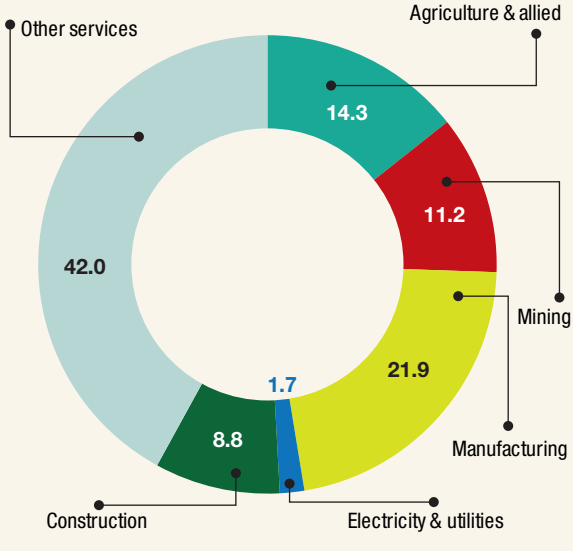
- Single window clearance mechanism for Ease of Doing Business.
- New MSME units will be given incentive of 80% NET VAT payable p.a for five years from the date of Production with a ceiling of maximum 100% of total fixed capital investment made.
- New mega projects will be given incentive of 75% of NET VAT p.a for nine years from the date of Production with a ceiling of maximum 100% of total fixed capital investment made.
- 50% reimbursement of stamp duty and registration fee for manufacturing units with direct employment of 100 persons and of expenditure incurred on patent registration
- Incentives/concessions under Comprehensive Project Investment Subsidy (CPIS), Subsidy / Incentive on VAT such as reimbursement of 60% of Net VAT paid per annum, up to a maximum of 100 % of total fixed capital investment for MSMEs

For more details on the incentives and eligibility of the industrial units, please refer to Jharkhand Industrial Policy 2016

Growth in Gross Value Added, 3 year average ending 2015-16



Sector-wise contribution in Gross Value Added, 2015-16



JHARKHAND RANK 18

Jharkhand has made gains in overall ranking as compared to last year, but falls behind in infrastructure and labour pillars.

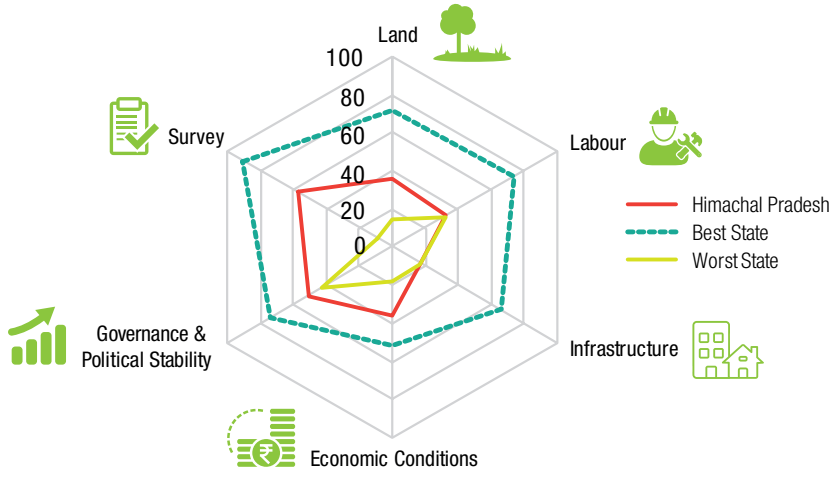
Strengths

Jharkhand is among the top three states for computerized SROs of land, fuel production and resolution of pending cases. Average GSDP of the state also ranks well at four. The state has improved considerably in terms of business perceptions at rank 12 from 20 in previous index.

Weaknesses

The state has limitations in infrastructure especially with respect to ICT readiness and instability in governance due to high rate of insurgency. The state ranks low on the availability of skilled labour.

States Performance on the Six Broad Pillars



LAND

		Rank
LAND - OVERALL	35.5	15
Digitized land records	100.0	1
Land related stalled projects	32.4	17
Land available for industrial purpose	8.7	11
Industrial parks in state	0.9	18

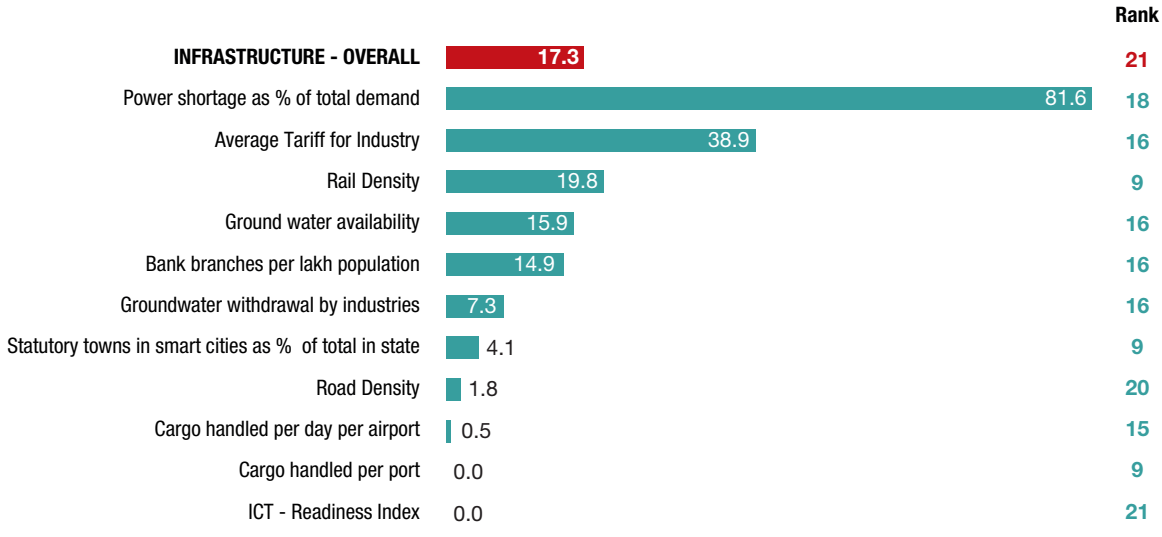
LABOUR

		Rank
LABOUR - OVERALL	32.3	21
Least mandays lost due to strike	89.6	7
Average wages of salaried persons	56.9	15
Share of contract workers in total labour force	53.6	17
Labour force participation rate	34.9	7
Share of workforce in manufacturing sector	27.2	15
Seating capacity of ITIs	16.8	14
Share of labour force with secondary education and above	7.8	19
Percent of workforce having technical education	4.3	19
Average wages in manufacturing sector	0.0	21

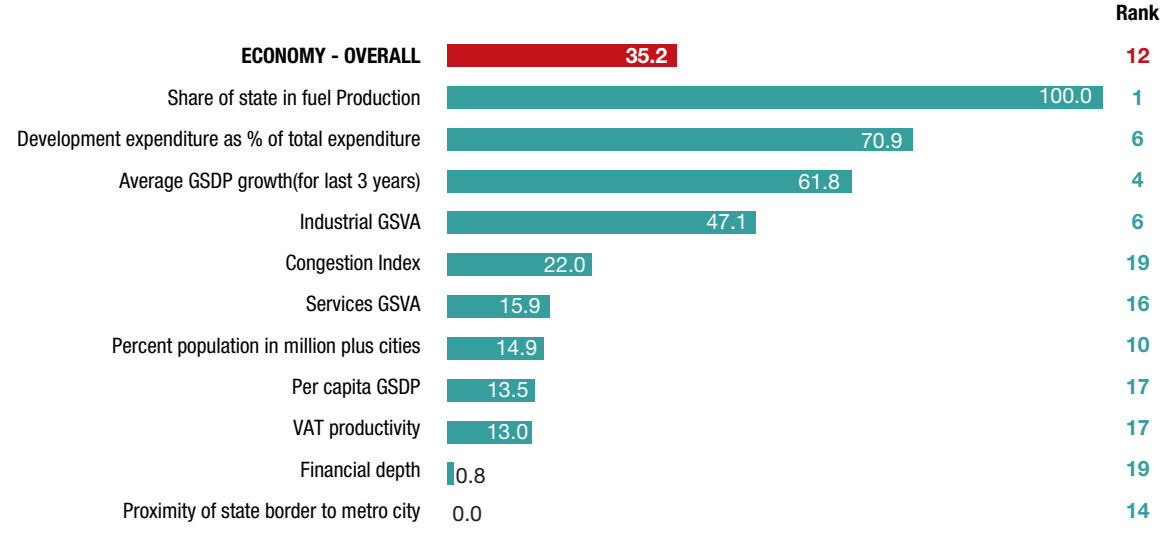
SURVEY

		Rank
SURVEY - OVERALL	56.8	12
Perception on infrastructure	81.0	5
Perception on economic conditions	76.5	4
Perception on labour	75.1	8
Perception on governance and political stability	64.9	6
Perception on business climate	33.2	16
Perception on land	10.0	18

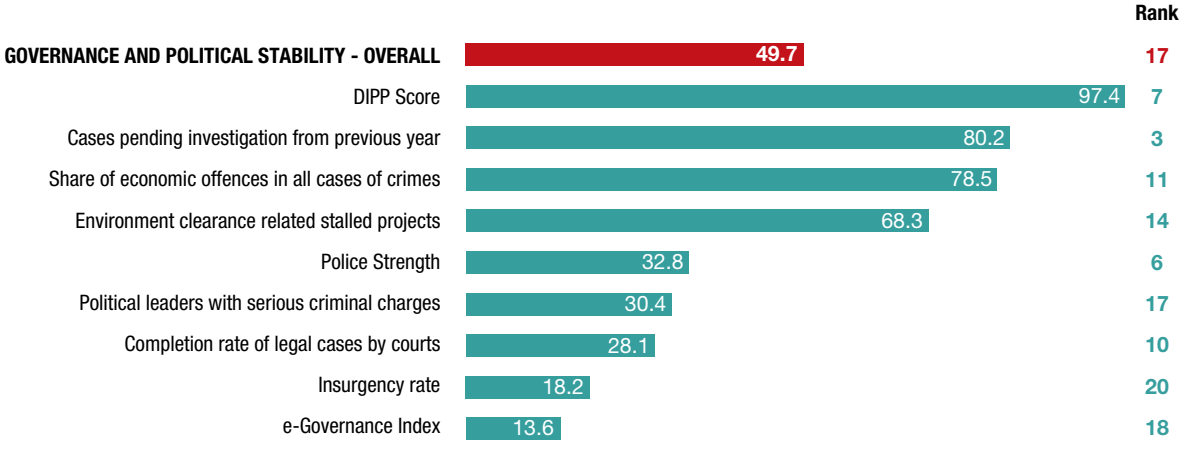
INFRASTRUCTURE



ECONOMY



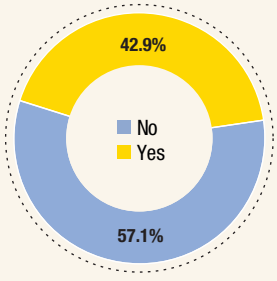
GOVERNANCE AND POLITICAL STABILITY



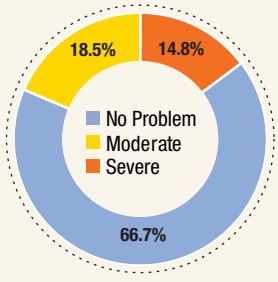
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

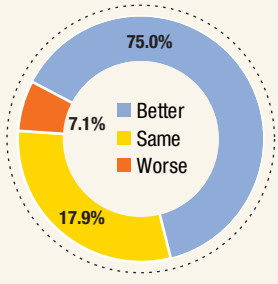


Percentage respondents facing problem in getting approvals for land

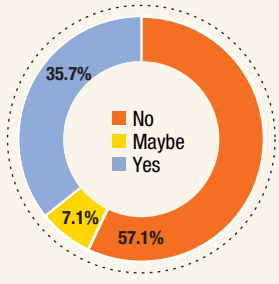


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

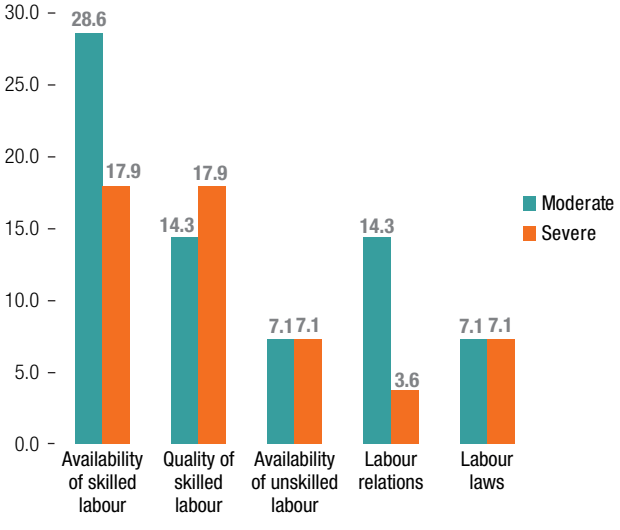


Percetage of respondents planing expansion in next five years



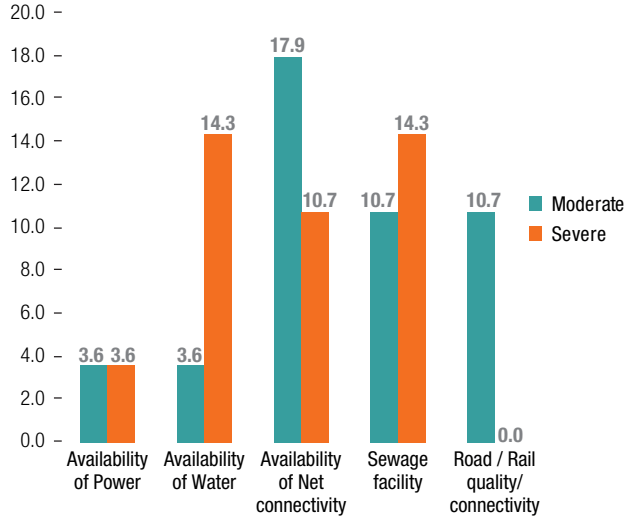
Labour related issues

% respondents finding these a moderate or severe problem



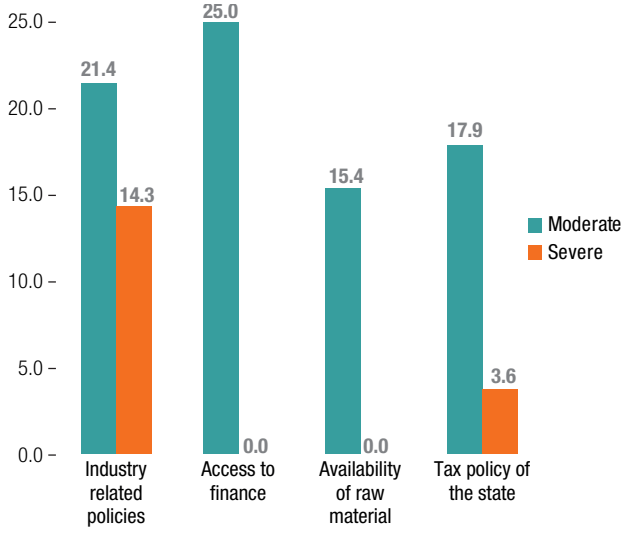
Infrastructure related issues

% respondents finding these a moderate or severe problem



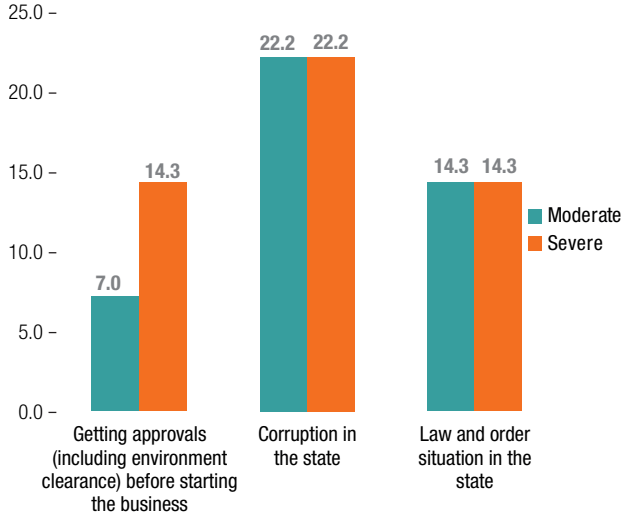
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

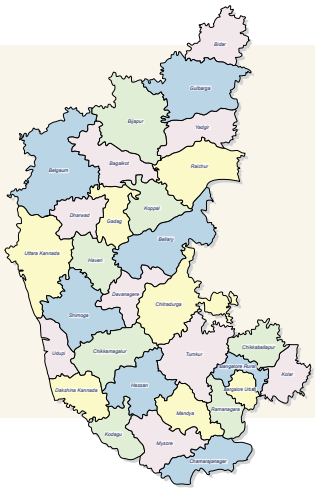
% respondents finding these a moderate or severe problem



Karnataka

RANK

2017	9
2016	6



Statistics

Capital	Bengaluru
Area (sq. km)	1,91,791
Location	Southern India
Per capita income (Rs.)	1,23,877
Literacy Rate (%)	75.4

State Focus Sectors

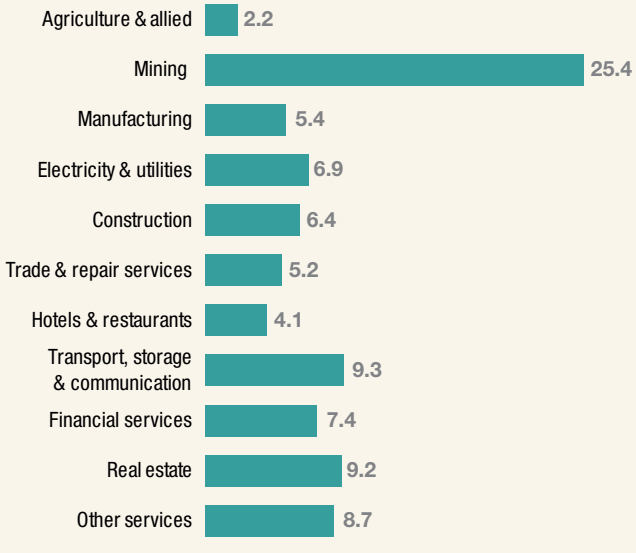
- IT and IT enabled Services
- Agro and food processing (floriculture)
- Biotechnology
- Aerospace
- Engineering
- Animation
- Electronics and telecom
- Electronic hardware
- Automotive
- Tourism
- Textiles and apparel
- Renewable energy

Source: Directorate of Industries and Commerce

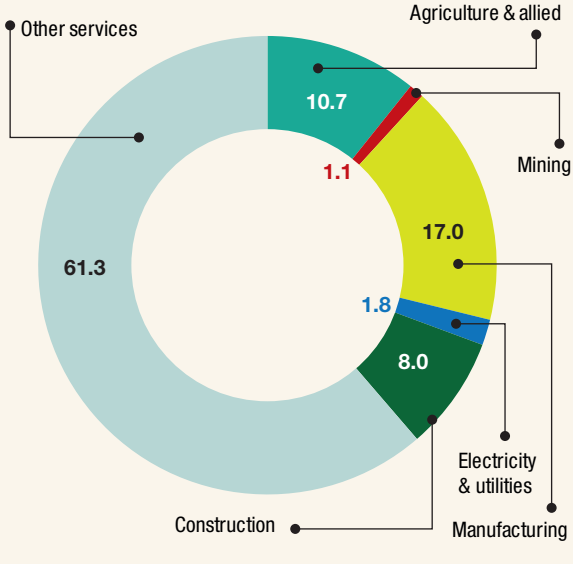
Incentives

- Exemption from entry tax, electricity tariff(for focused ultra-mega and super-mega enterprises.
- Interest free loan and investment subsidies
- Set up industrial corridors to benefit backward areas
- ITIs would be encouraged in each industrial area to meet cluster skill requirement. Sectoral training institutes, on the job training, finishing schools will also be initiated in association with industry houses and trade bodies.
- Single Window clearing mechanism will be made more effective in improving ease of business
- Establishment of new industrial areas through KIADB
- Special Investment Region(SIR) to decongest Bangalore and promote other areas through industrial development

Growth in Gross Value Added, 3 year average ending 2015-16



Sector-wise contribution in Gross Value Added, 2015-16



KARNATAKA RANK 9

Karnataka is one of the top five states for the labour pillar but lags behind in the availability of power and land.

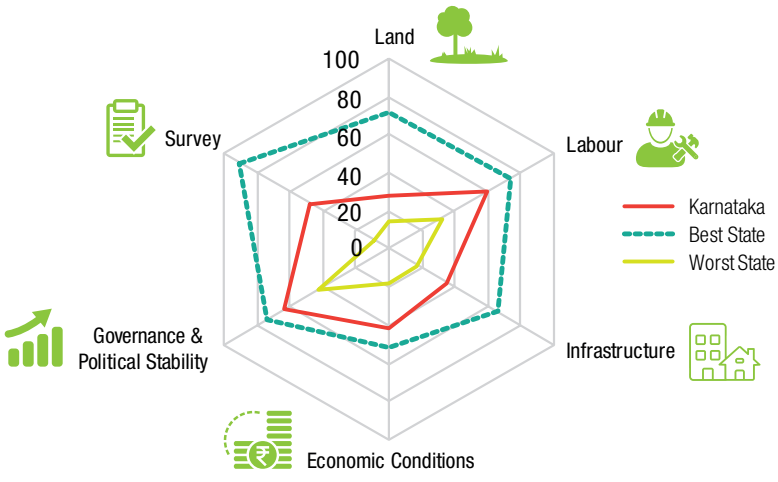
Strengths

Karnataka is one of the top performing states for e-governance and average state GSDP growth. It also ranks favourably for number of industrial parks and business expectations. The seating capacity in ITIs and the labour force participation rate is also among the top five states.

Weaknesses

The state is lagging behind mostly in business perceptions for land. The state also falls short on rail density, availability of water and power and police strength.

States Performance on the Six Broad Pillars



LAND

		Rank
LAND - OVERALL	**27.6**	**16**
Industrial parks in state	59.8	3
Land related stalled projects	50.5	9
Land available for industrial purpose	0.3	20
Digitized land records	0.0	20

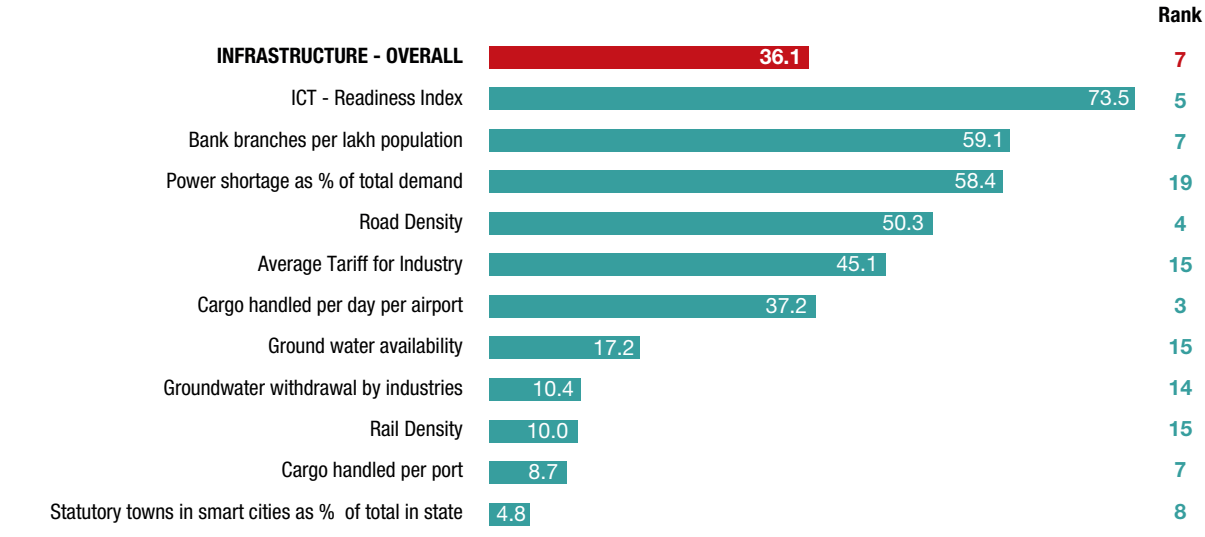
LABOUR

		Rank
LABOUR - OVERALL	**60.2**	**5**
Share of contract workers in total labour force	92.9	6
Average wages of salaried persons	69.0	11
Seating capacity of ITIs	60.0	4
Percent of workforce having technical education	58.7	9
Least mandays lost due to strike	55.7	17
Share of workforce in manufacturing sector	55.1	6
Average wages in manufacturing sector	54.1	17
Labour force participation rate	52.5	5
Share of labour force with secondary education and above	43.5	10

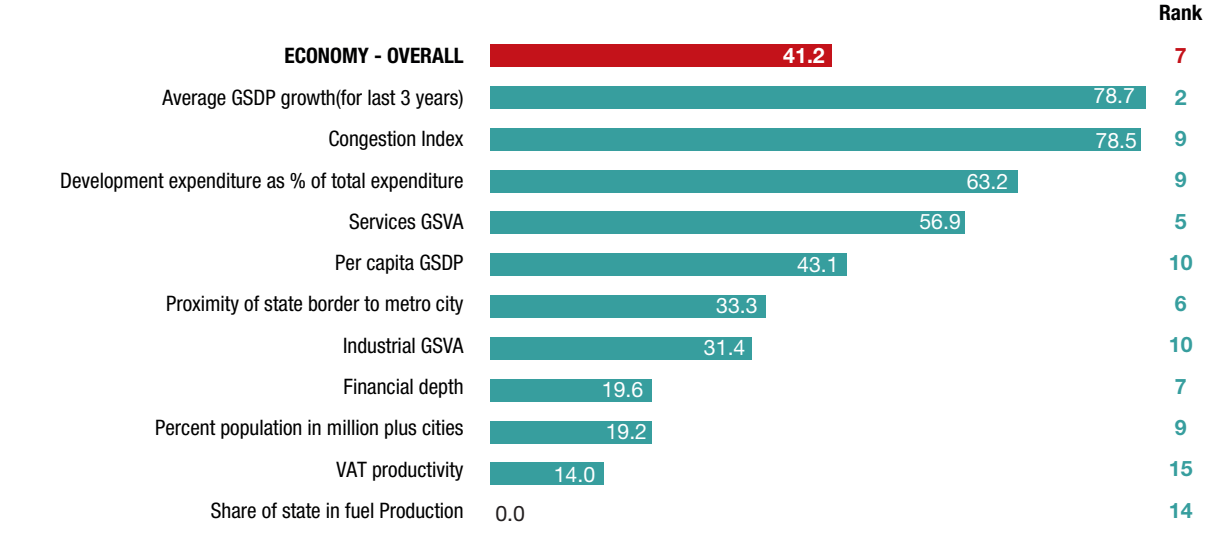
SURVEY

		Rank
SURVEY - OVERALL	**47.1**	**15**
Perception on business climate	80.9	4
Perception on infrastructure	75.5	6
Perception on economic conditions	42.9	17
Perception on governance and political stability	39.4	15
Perception on labour	37.7	19
Perception on land	6.2	19

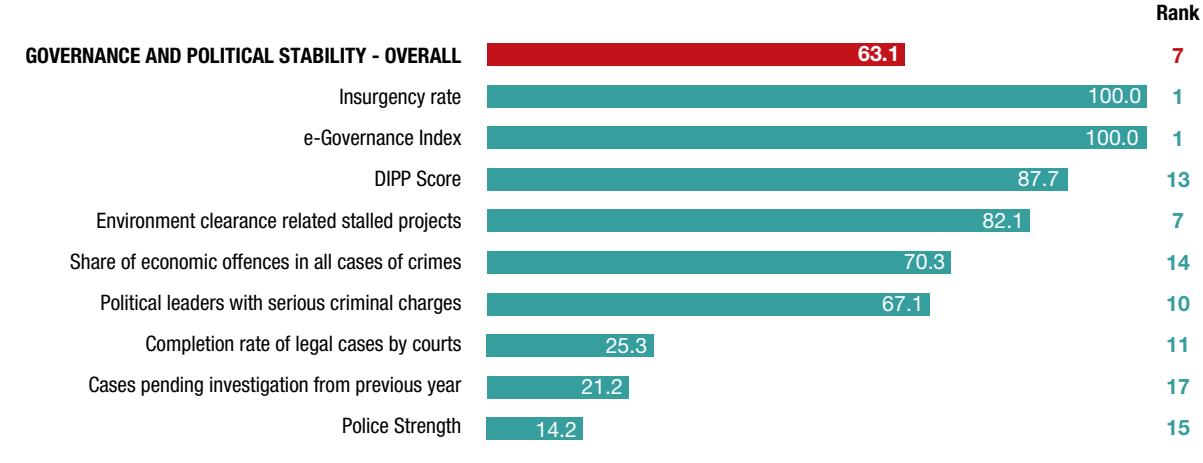
INFRASTRUCTURE



ECONOMY



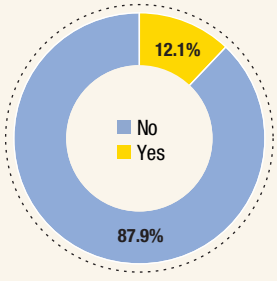
GOVERNANCE AND POLITICAL STABILITY



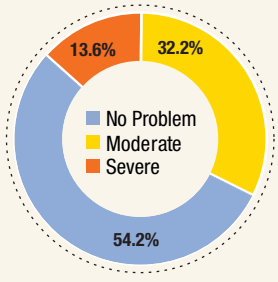
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

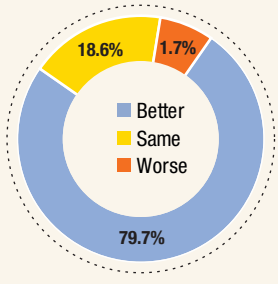


Percentage respondents facing problem in getting approvals for land

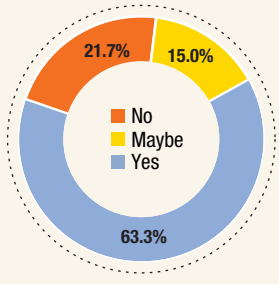


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

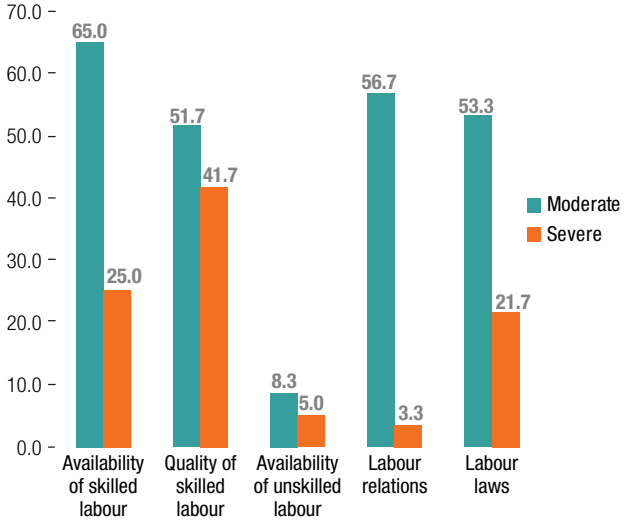


Percetage of respondents planing expansion in next five years



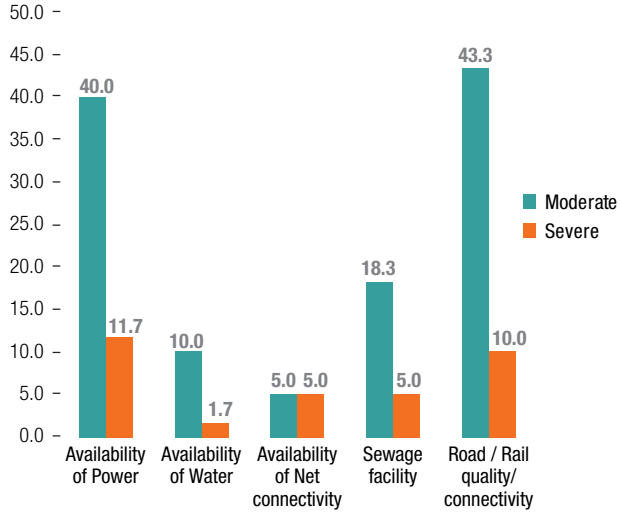
Labour related issues

% respondents finding these a moderate or severe problem



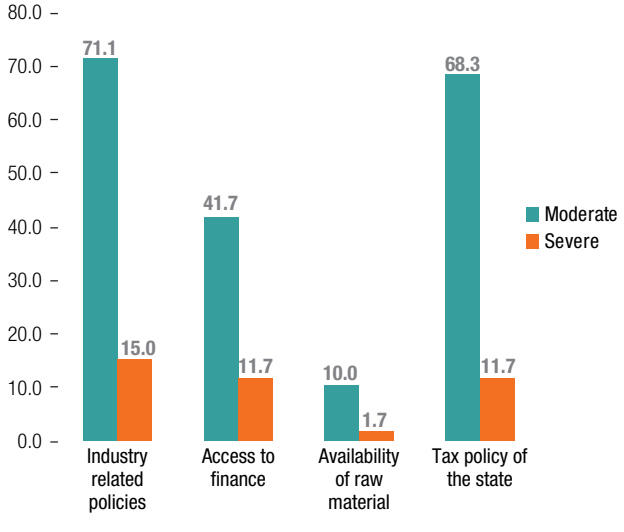
Infrastructure related issues

% respondents finding these a moderate or severe problem



Economy related issues

% respondents finding these a moderate or severe problem



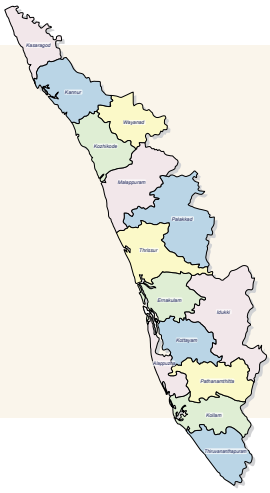
Governance related issues

% respondents finding these a moderate or severe problem

Kerala

RANK

2017	7
2016	10



Statistics

Capital	Thiruvananthapuram
Area (sq. km)	38,852
Location	Southern India
Per capita income (Rs.)	1,27,375
Literacy Rate (%)	94.0

State Focus Sectors

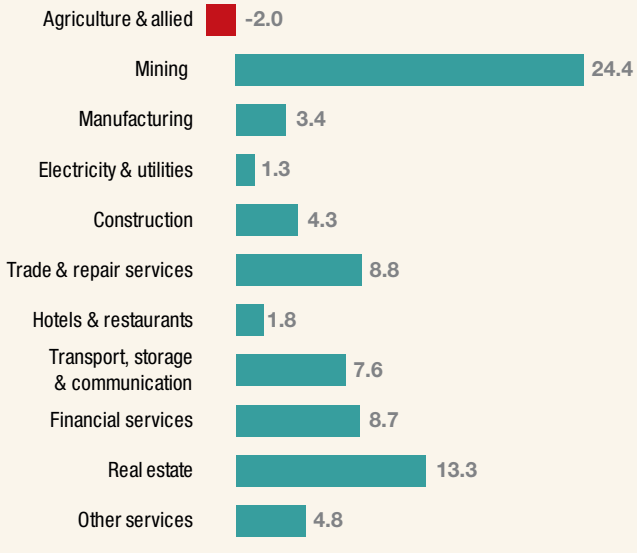
- Food Processing
- Biotechnology and Nanotechnology
- Furniture sector
- Garments
- Rubber basedIndustries
- Ayurvedic medicines
- Marine products
- Light Engineering
- 100% Export Oriented Units

Source: Kerala Industrial & Commercial Policy Amended - 2015

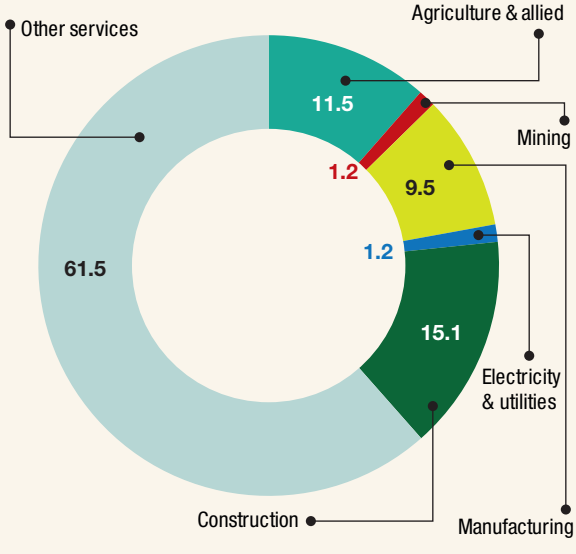
Incentives

- Common infrastructure like common Effluent Treatment Plants for relocating relatively polluting industries in the industrial clusters and up to 25% of capital investment in Effluent Treatment Plants
- Proposed 'Green Financing scheme' with a cost of Rs. 100 Crore to attract and channelize substantive investments in green and clean industries into the State.
- 20 per cent capital subsidy for new manufacturing units and deferment of VAT for a period of 5 years for investments of Rs. 10 Crore or more in Electronic System Design & Manufacturing (ESDM) sector
- For more details on the incentives and eligibility of the industrial units, please refer to Kerala Industrial & Commercial Policy Amended – 2015

Growth in Gross Value Added, 3 year average ending 2014-15



Sector-wise contribution in Gross Value Added, 2014-15



KERALA RANK 7

Kerala is one of the top five states for the main pillar of infrastructure but lags behind on economic conditions, governance and land.

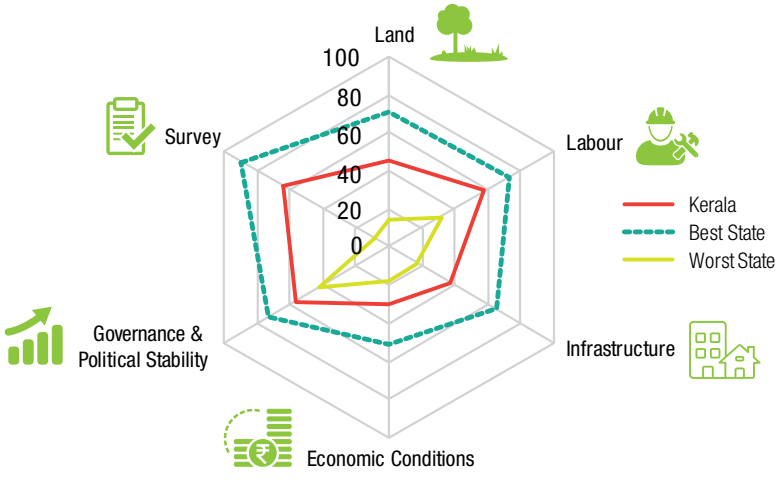
Strengths

Kerala is the topmost state in terms of the number of persons in technical courses and lowest congestion factor. The state also ranks high on cargo handled at airport, the number of bank branches in the state and perceptions on the ease of acquiring land.

Weaknesses

The state falls short on development expenditure and DIPP score. It is also facing high withdrawal of ground water by industries and ranks low on perception of economic climate and governance.

States Performance on the Six Broad Pillars



LAND

		Rank
LAND - OVERALL	**45.3**	**10**
Digitized land records	100.0	1
Land related stalled projects	48.5	12
Industrial parks in state	26.2	9
Land available for industrial purpose	6.5	12

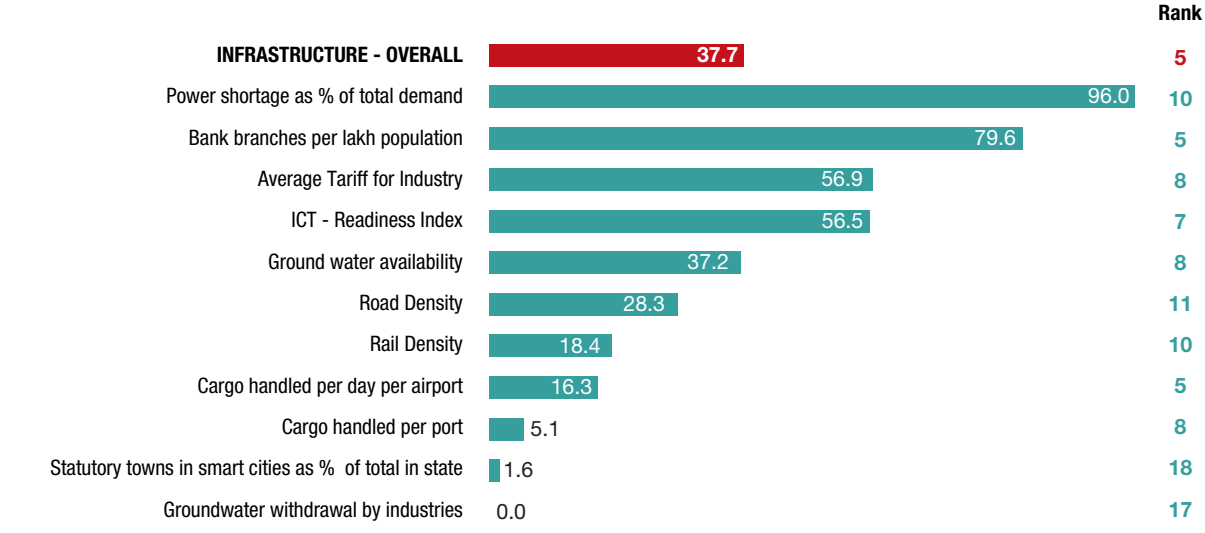
LABOUR

		Rank
LABOUR - OVERALL	**58.5**	**6**
Percent of workforce having technical education	100.0	1
Share of contract workers in total labour force	84.8	11
Share of labour force with secondary education and above	70.5	3
Average wages in manufacturing sector	69.1	7
Average wages of salaried persons	59.2	14
Share of workforce in manufacturing sector	54.4	7
Labour force participation rate	31.4	9
Seating capacity of ITIs	30.4	12
Least mandays lost due to strike	27.0	20

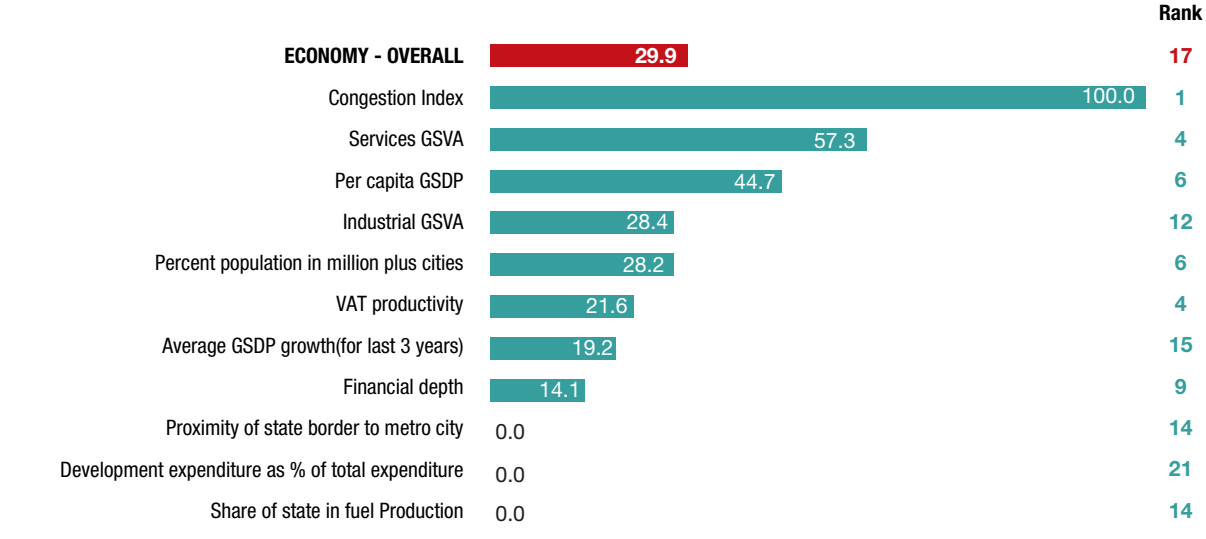
SURVEY

		Rank
SURVEY - OVERALL	**64.9**	**7**
Perception on land	88.8	4
Perception on business climate	77.4	7
Perception on infrastructure	69.8	9
Perception on labour	61.8	12
Perception on economic conditions	51.9	14
Perception on governance and political stability	40.0	14

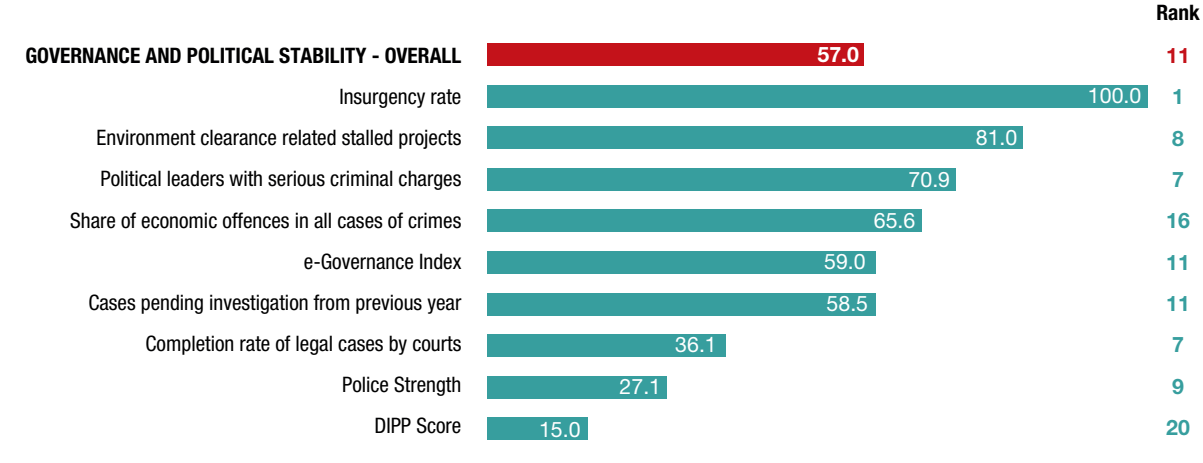
INFRASTRUCTURE



ECONOMY



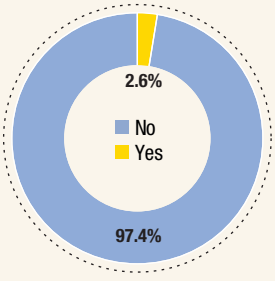
GOVERNANCE AND POLITICAL STABILITY



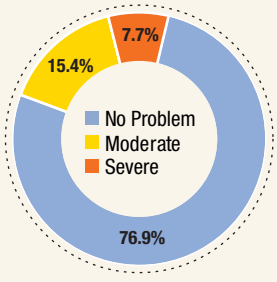
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

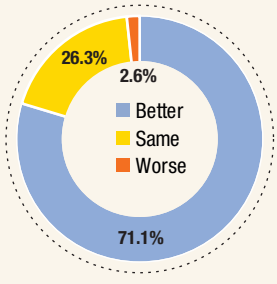


Percentage respondents facing problem in getting approvals for land

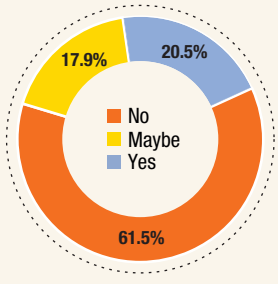


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

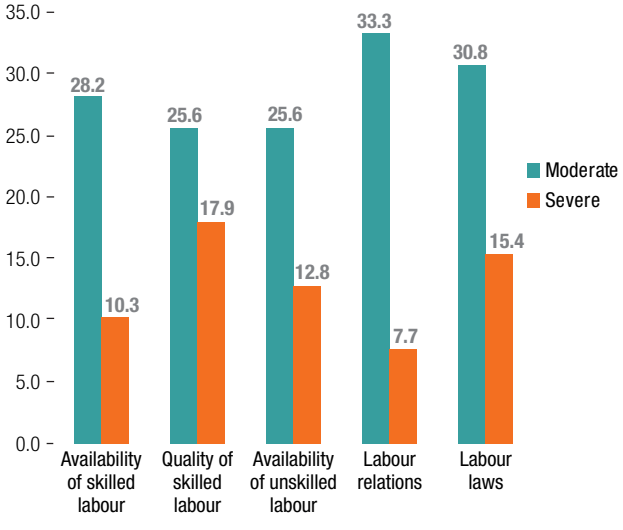


Percetage of respondents planing expansion in next five years



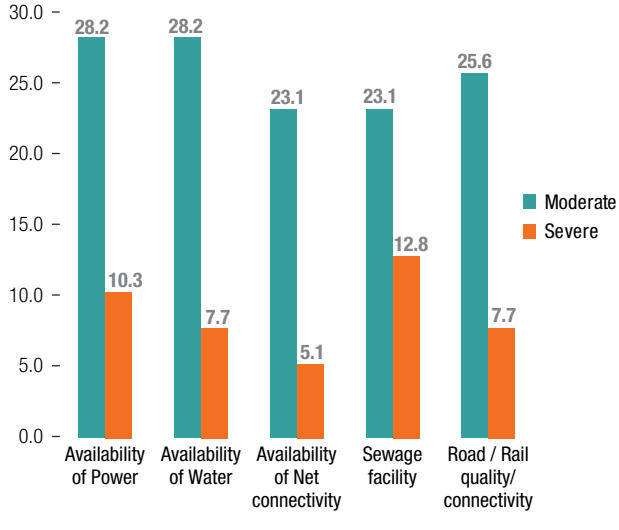
Labour related issues

% respondents finding these a moderate or severe problem



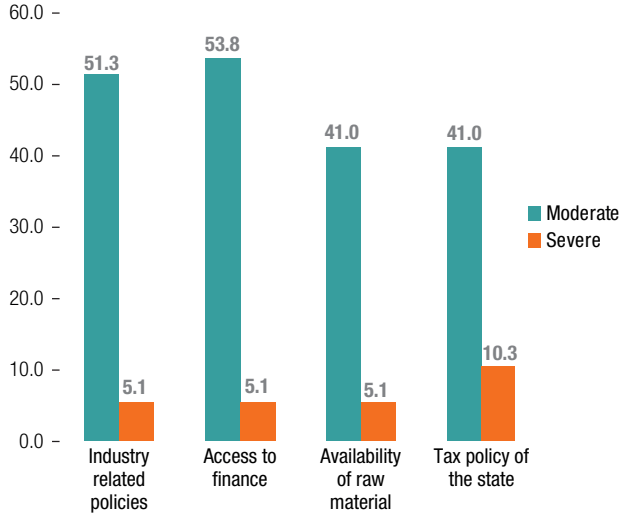
Infrastructure related issues

% respondents finding these a moderate or severe problem



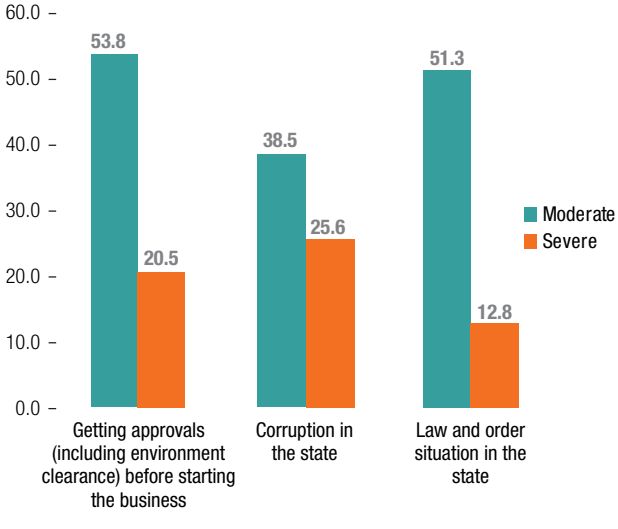
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

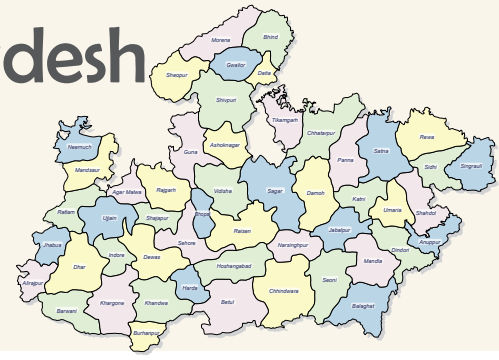
% respondents finding these a moderate or severe problem



Madhya Pradesh

RANK

2017	10
2016	12



Statistics

Capital	Bhopal
Area (sq. km)	3,08,252
Location	Central India
Per capita income (Rs.)	54,190
Literacy Rate (%)	69.3

State Focus Sectors

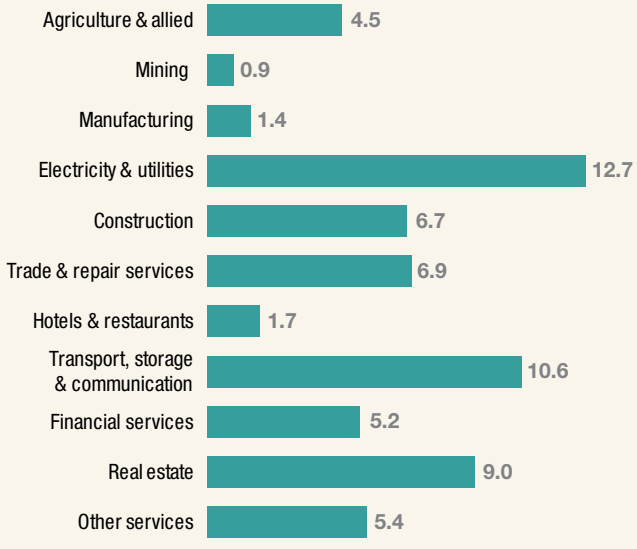
- Agribusiness and Food Processing
- Automobile and Enggineering
- Defence
- IT/ITes& ESDM
- Renewable Energy
- Pharmaceutical
- Textiles
- Tourism
- Urban Development

Source: Invest MP, Global Investors Summit, DIPP, Govt of India, Madhya Pradesh

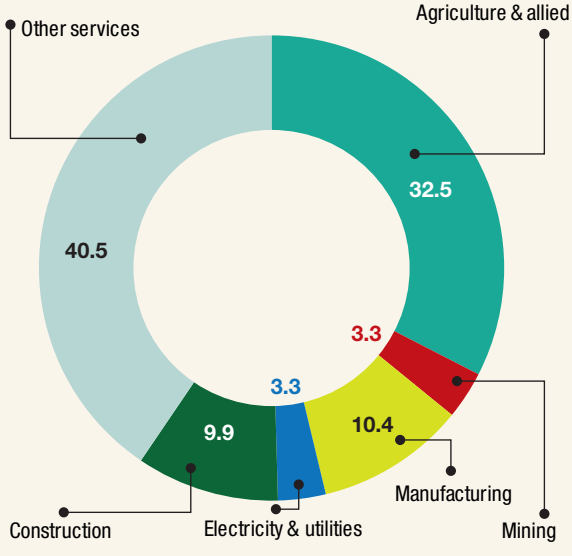
Incentives

- Capital subsidy, entry tax exemption
- Rebate in VAT & CST @75 % for large & mega scale industries and @ 50% for micro and small enterprises along with marketing assistance and other special incentives for MSMEs
- Cabinet Committee on Investment Promotion which has full powers to sanction a customized package of assistance beyond what is provided under existing policies.
- For more details on the incentives and eligibility of the industrial units, please refer to state Industrial Promotion Policy 2014 and Action Plan document

Growth in Gross Value Added, 3 year average ending 2015-16



Sector-wise contribution in Gross Value Added, 2015-16

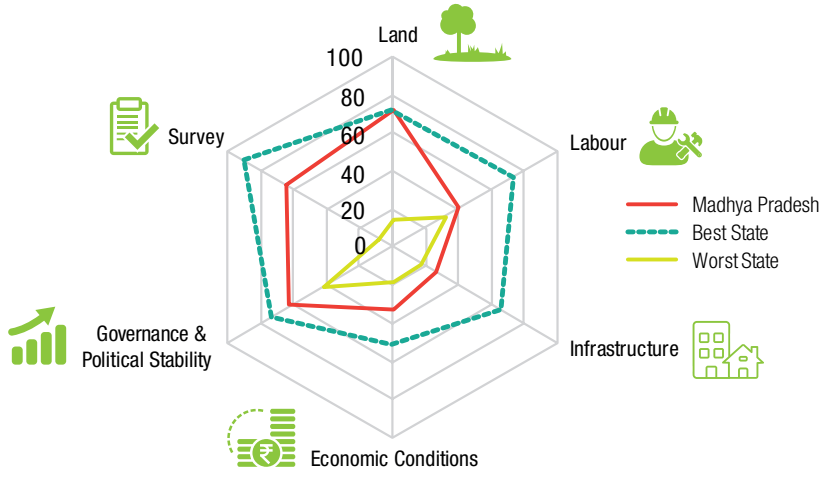


MADHYA PRADESH

RANK 10

Madhya Pradesh has improved its ranking and is now among the top ten states for investment. The state is ranked at the top for land but lags behind in labour and infrastructure.

States Performance on the Six Broad Pillars



Strengths

The state has the highest rank for industrial parks and overall score for the land pillar. The state also has the lowest number of economic offenses and fares extremely well on power availability.

Weaknesses

The state lags behind in overall labour conditions, loss of man-days due to strikes and ICT-readiness. It also falls behind on per capita GSDP, police strength, and bank branches in the state.

LAND

		Rank
LAND - OVERALL	**71.7**	1
Digitized land records	100.0	1
Industrial parks in state	100.0	1
Land related stalled projects	82.0	2
Land available for industrial purpose	4.8	13

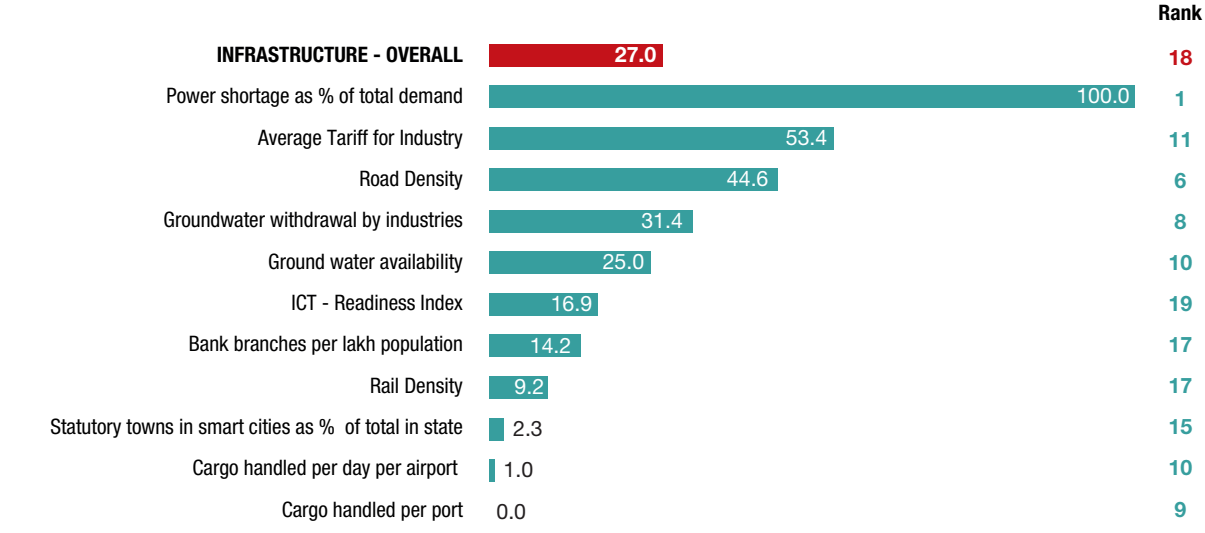
LABOUR

		Rank
LABOUR - OVERALL	**39.8**	20
Average wages of salaried persons	100.0	1
Share of contract workers in total labour force	92.9	6
Average wages in manufacturing sector	68.5	8
Seating capacity of ITIs	32.8	9
Percent of workforce having technical education	22.8	14
Share of workforce in manufacturing sector	17.0	18
Labour force participation rate	14.9	16
Share of labour force with secondary education and above	9.0	18
Least mandays lost due to strike	0.0	21

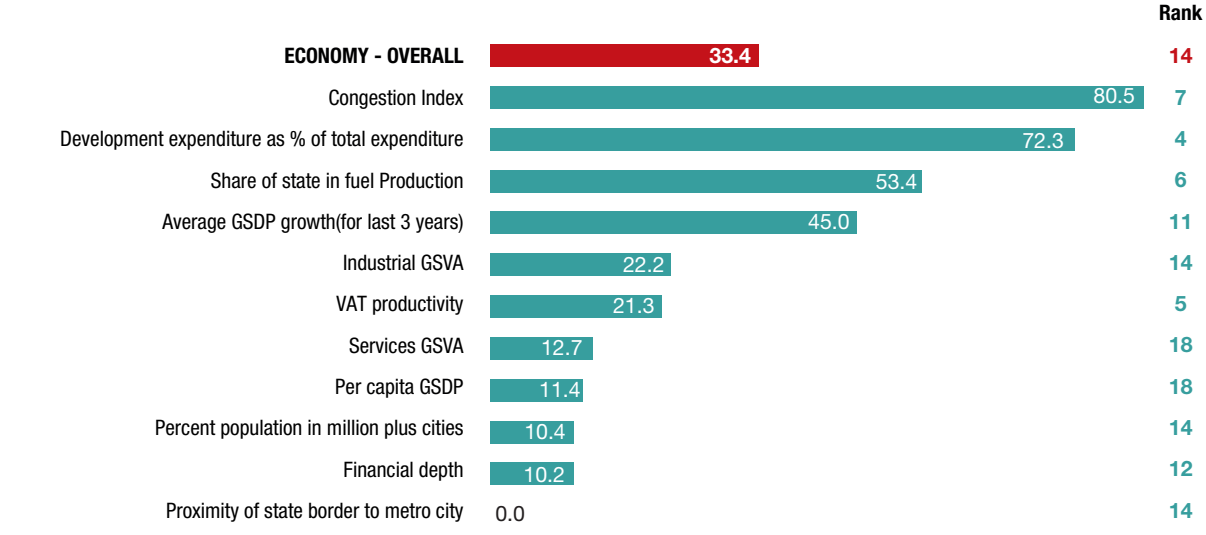
SURVEY

		Rank
SURVEY - OVERALL	**63.9**	8
Perception on infrastructure	72.1	8
Perception on business climate	69.1	9
Perception on labour	66.1	11
Perception on land	63.0	10
Perception on economic conditions	59.0	11
Perception on governance and political stability	54.2	11

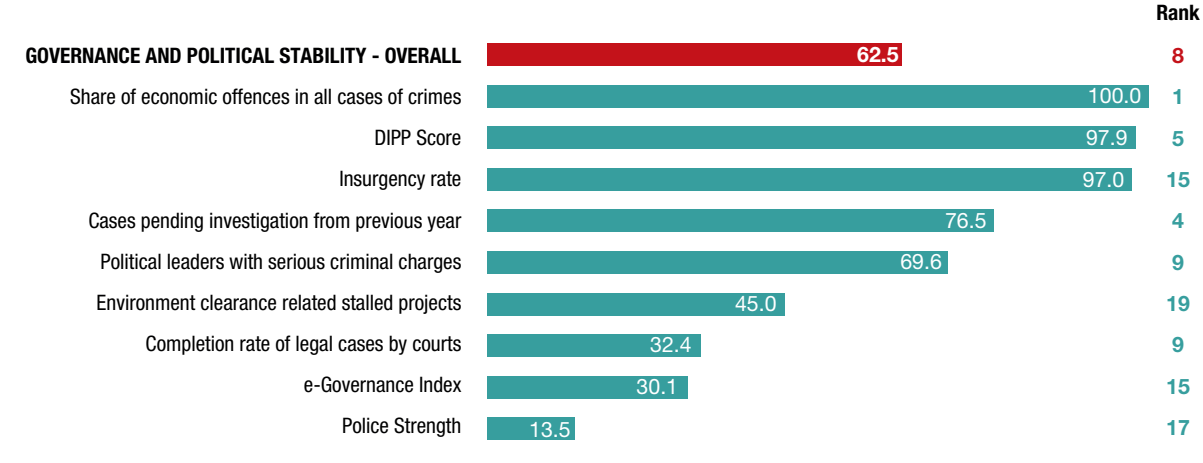
INFRASTRUCTURE



ECONOMY



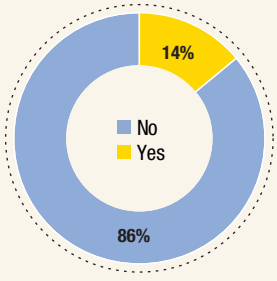
GOVERNANCE AND POLITICAL STABILITY



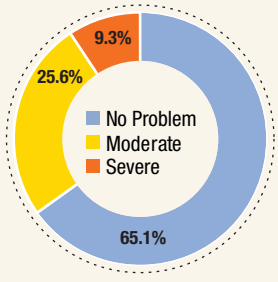
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

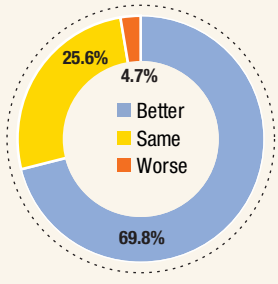


Percentage respondents facing problem in getting approvals for land

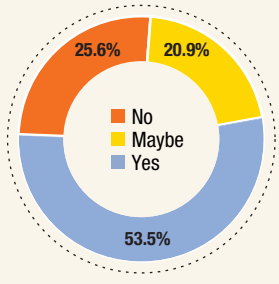


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

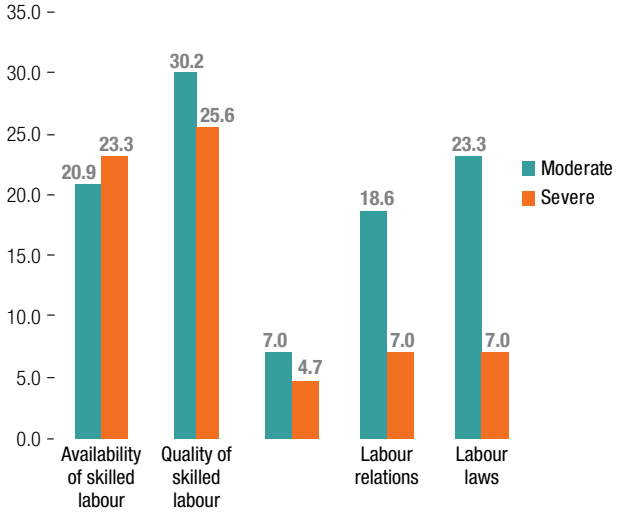


Percetage of respondents planing expansion in next five years



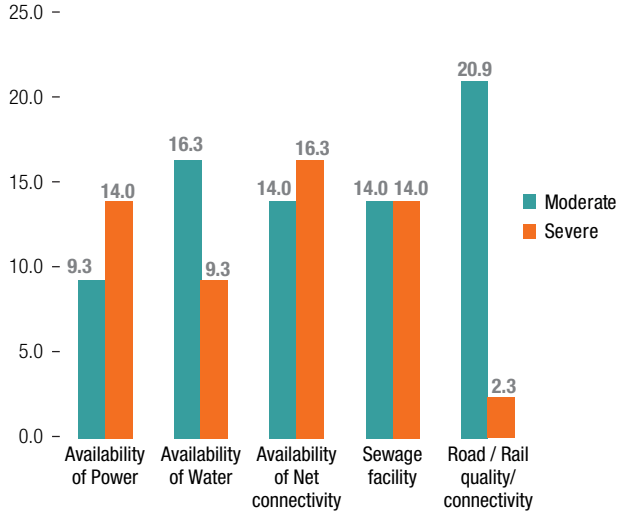
Labour related issues

% respondents finding these a moderate or severe problem



Infrastructure related issues

% respondents finding these a moderate or severe problem



Economy related issues

% respondents finding these a moderate or severe problem

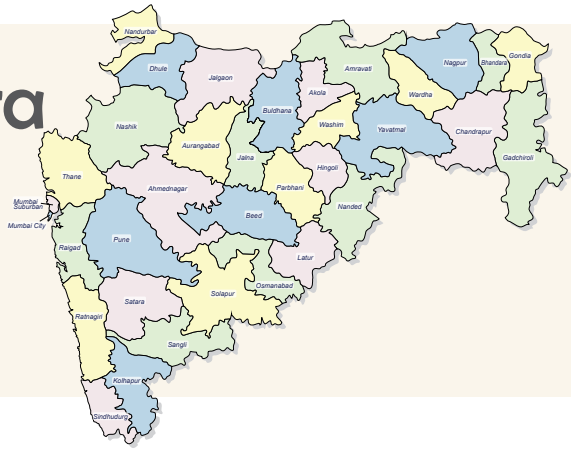
Governance related issues

% respondents finding these a moderate or severe problem

Maharashtra

RANK

2017	8
2016	5



Statistics

Capital	Mumbai (Summer), Nagpur (Winter)
Area (sq. km)	3,07,713
Location	Western India
Per capita income (Rs.)	1,30,056
Literacy Rate (%)	82.3

State Focus Sectors

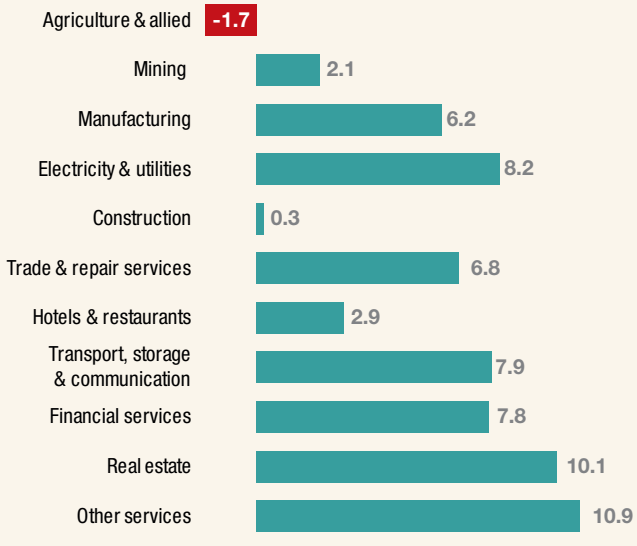
- Auto Industry
- Biotechnology
- Bioinformatics
- Infrastructure Support Institutions
- Floriculture
- Food Processing Industry
- Information Technology (IT) and ITeS
- Infrastructure
- Leather Industry

Source: India in Business web portal of Ministry of External Affairs, GoI

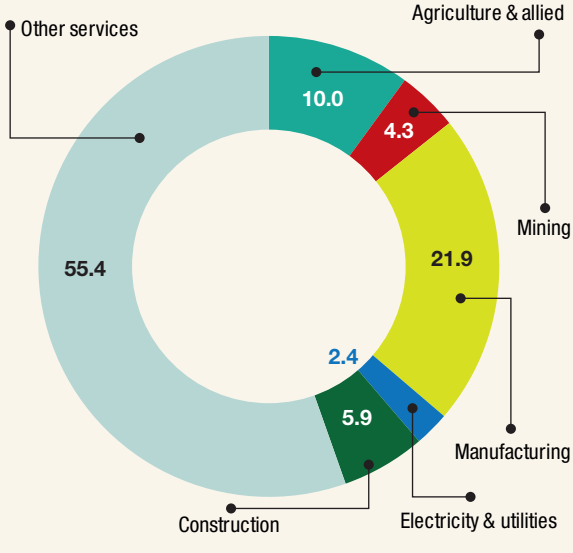
Incentives

- Reimbursement of cost of water audit and energy audit
- Stamp duty exemption to eligible large IT and BT units in IT and BT parks; Exemption from electricity duty
- Multiple incentives such as VAT and CST subsidies, power tariff subsidy, interest subsidy etc.
- For more details on the incentives and eligibility of the industrial units, please refer to Industrial Policy of Maharashtra 2013.

Growth in Gross Value Added, 3 year average ending 2014-15

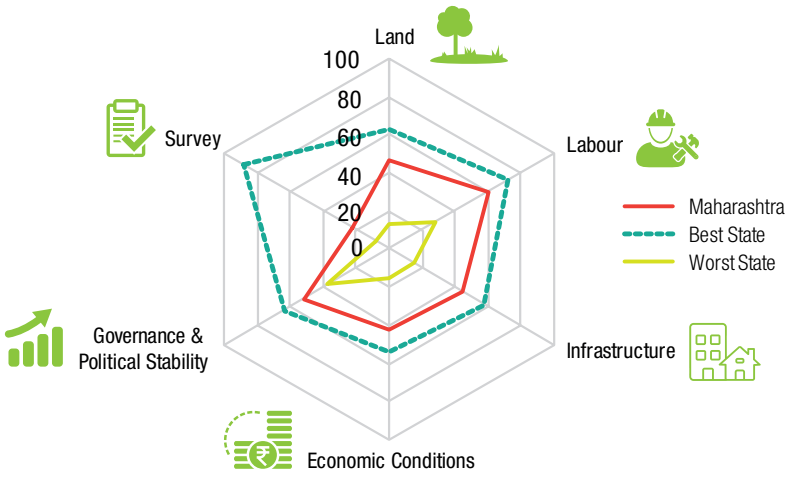


Sector-wise contribution in Gross Value Added, 2014-15



MAHARASHTRA RANK 8

States Performance on the Six Broad Pillars



Maharashta is in the top five in the labour and infrastructure pillars, but has slipped from an overall number five to number eight ranking, primarily on account of its much poorer showing in the survey.

Strengths

Maharashtra strengths are in infrastructure, (road density, cargo handled and competitive power tariff), high labour force participation rate, share of population in technical courses and share of seats in ITIs.

Weaknesses

Maharashtra's biggest weakness seems to be the poor perception of the state at the ground level. It also falls short on completion of cases under IPC and SLL and average GSDP growth.

LAND

		Rank
LAND - OVERALL	**52.7**	**7**
Digitized land records	96.8	11
Land related stalled projects	65.4	7
Land available for industrial purpose	32.7	6
Industrial parks in state	15.9	11

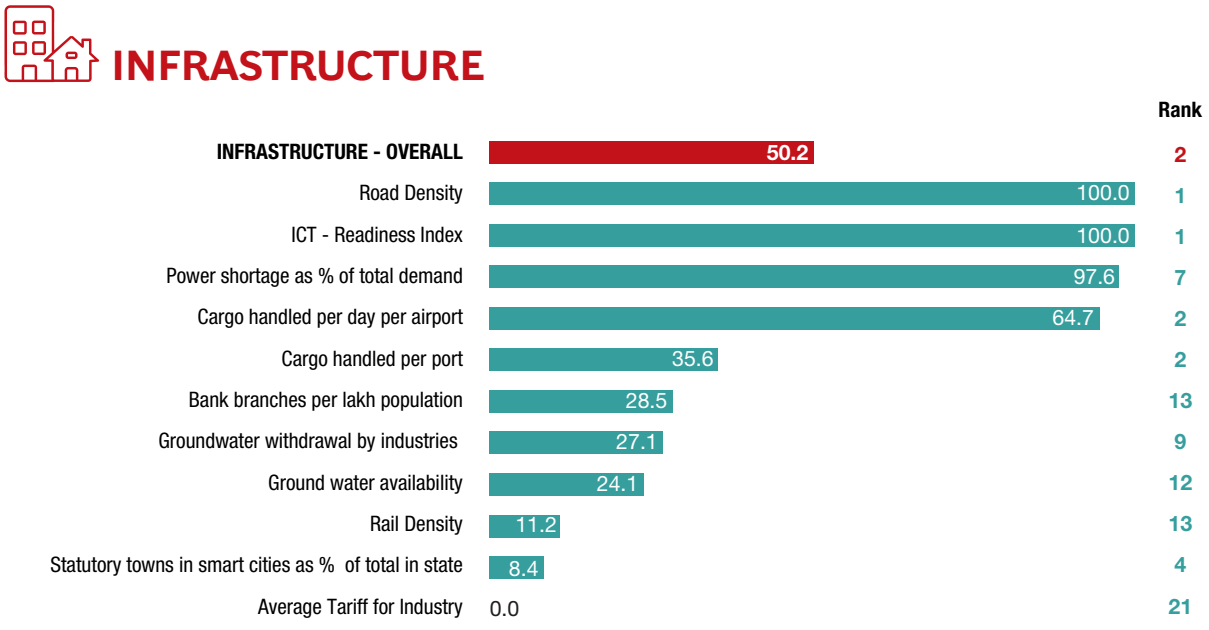
LABOUR

		Rank
LABOUR - OVERALL	**60.8**	**4**
Share of contract workers in total labour force	82.1	12
Least mandays lost due to strike	81.0	13
Average wages of salaried persons	77.9	10
Seating capacity of ITIs	73.6	3
Percent of workforce having technical education	66.3	5
Share of labour force with secondary education and above	53.7	6
Labour force participation rate	41.8	6
Average wages in manufacturing sector	40.4	19
Share of workforce in manufacturing sector	30.6	14

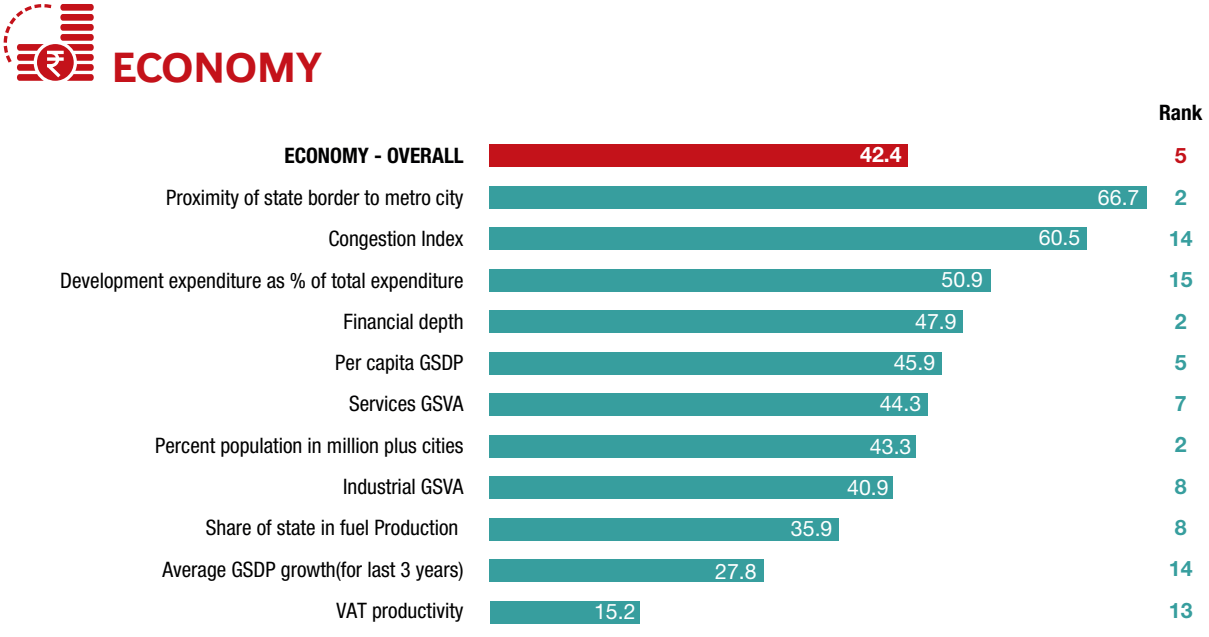
SURVEY

		Rank
SURVEY - OVERALL	**25.8**	**20**
Perception on governance and political stability	62.1	9
Perception on labour	39.5	18
Perception on land	26.1	16
Perception on infrastructure	22.9	20
Perception on economic conditions	2.7	20
Perception on business climate	1.7	20

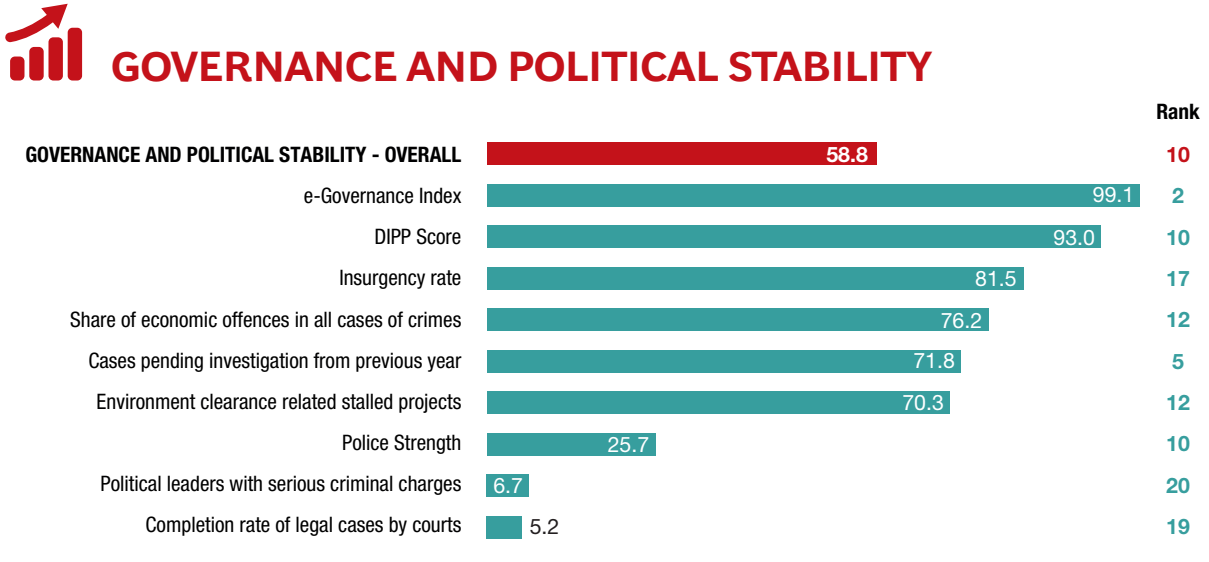
INFRASTRUCTURE



ECONOMY



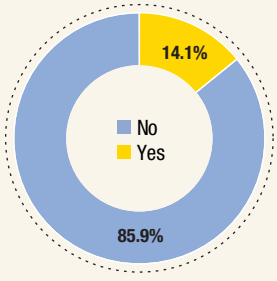
GOVERNANCE AND POLITICAL STABILITY



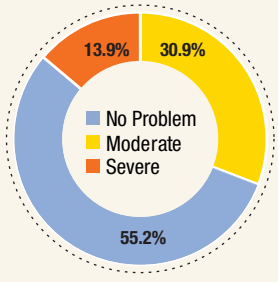
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

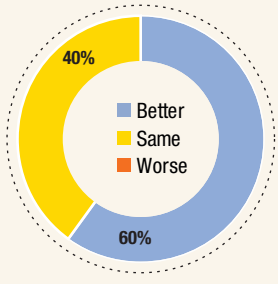


Percentage respondents facing problem in getting approvals for land

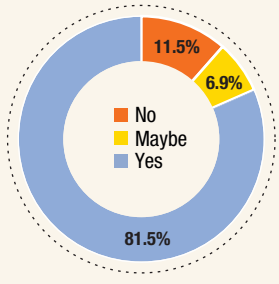


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

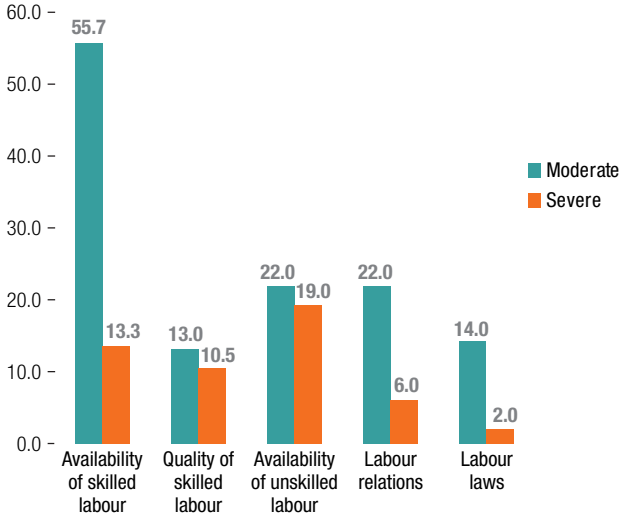


Percetage of respondents planing expansion in next five years



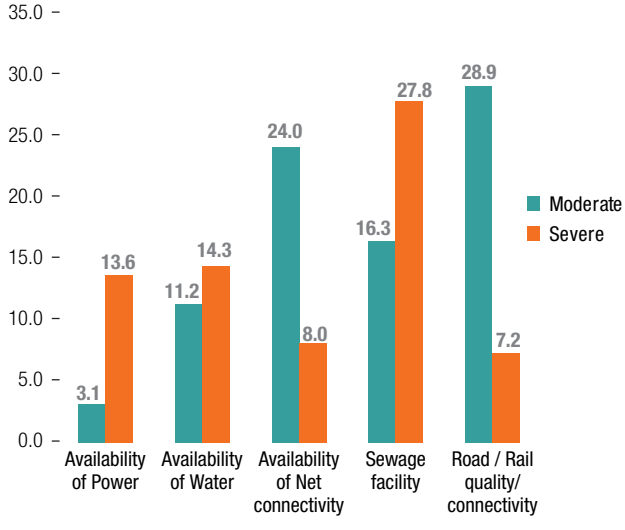
Labour related issues

% respondents finding these a moderate or severe problem



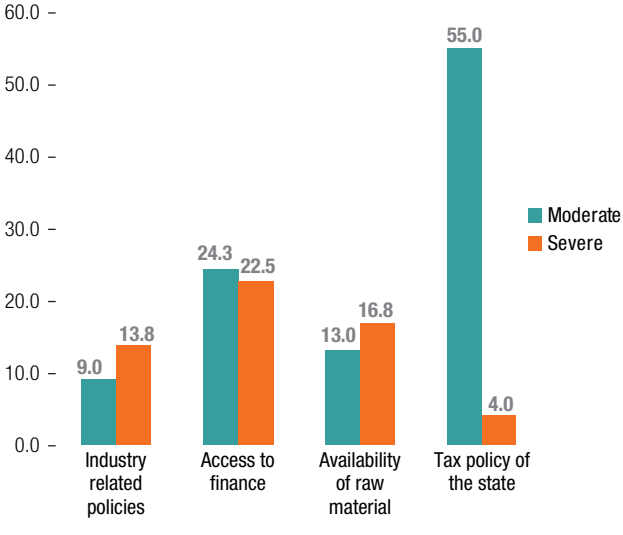
Infrastructure related issues

% respondents finding these a moderate or severe problem



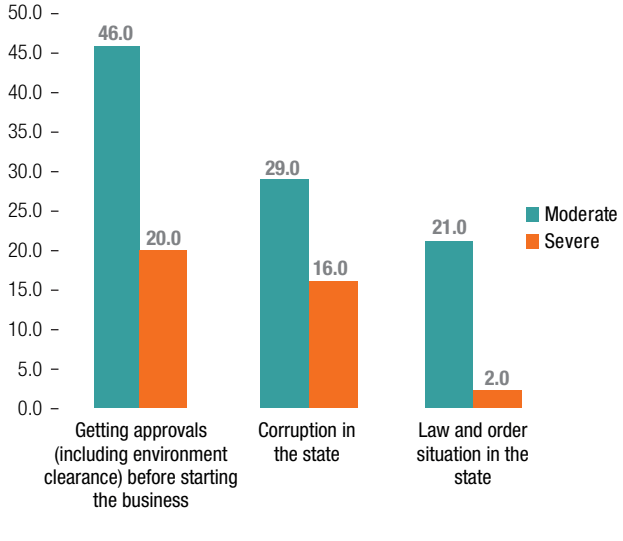
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

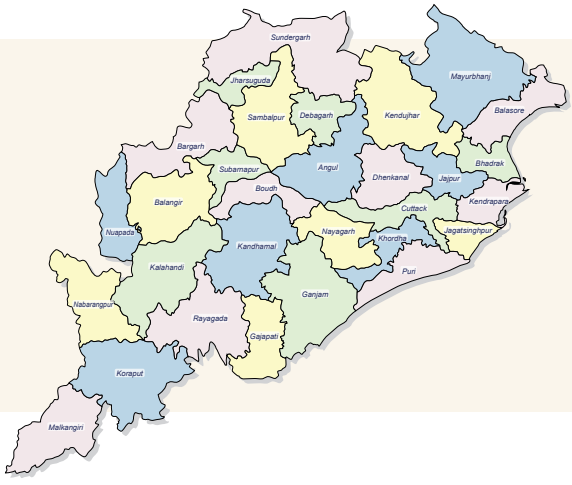
% respondents finding these a moderate or severe problem



Odisha

RANK

2017	11
2016	11



Statistics

Capital	Bhubaneswar
Area (sq. km)	1,55,707
Location	Central India
Per capita income (Rs.)	62,655
Literacy Rate (%)	72.9

State Focus Sectors

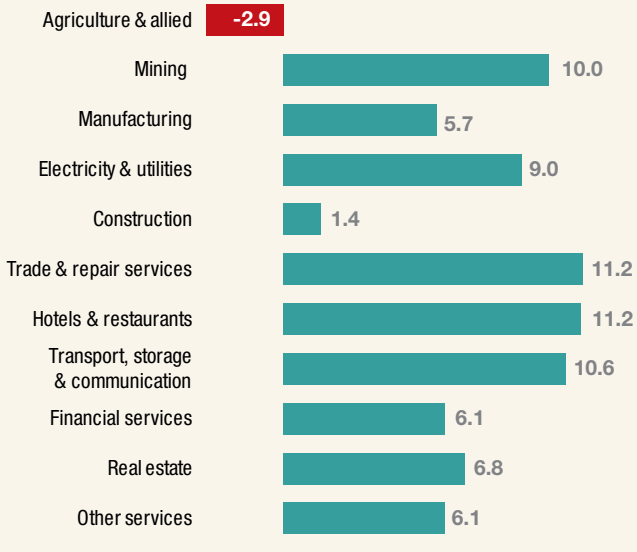
- Information technology,
- Biotechnology
- Agro, marine and food processing
- Tourism
- Textile
- Automotive industries

Source: Odisha State Industrial Policy 2016

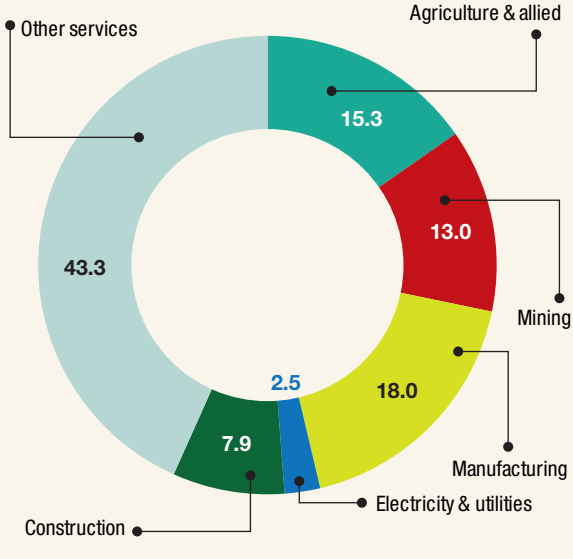
Incentives

- Capital investment subsidy
- Capital Grant to support quality infrastructure
- Green category industries to be approved within 15 days
- Approvals for other projects within 30 days.
- 42 listed services applicable for industrial development under Right to Public Services Act.

Growth in Gross Value Added, 3 year average ending 2015-16



Sector-wise contribution in Gross Value Added, 2015-16



ODISHA RANK 11

Odisha's overall rank is unchanged at 11. It is a 'middling' state on almost all pillars save economy, where it ranks 15.

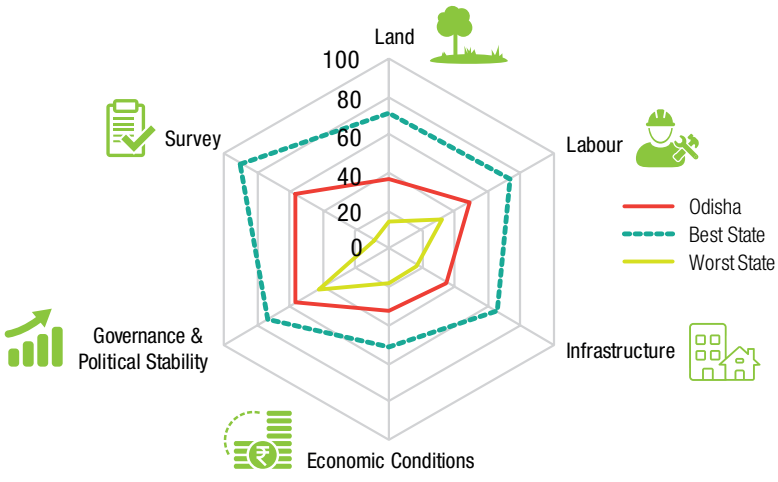
Strengths

Odisha ranks among the top five states in land available for industry, cargo handled per port and competitive power tariff rates. It also does well on least mandays lost due to strikes and seating capacity of ITIs.

Weakness

Odisha falls behind on labour quality, labour force participation and an educated population. The state has a relatively higher number of contract workers, lower financial inclusion and high insurgency incidence.

States Performance on the Six Broad Pillars



LAND

		Rank
LAND - OVERALL	**36.6**	**13**
Land available for industrial purpose	100.0	1
Land related stalled projects	34.5	16
Industrial parks in state	11.2	13
Digitized land records	0.5	19

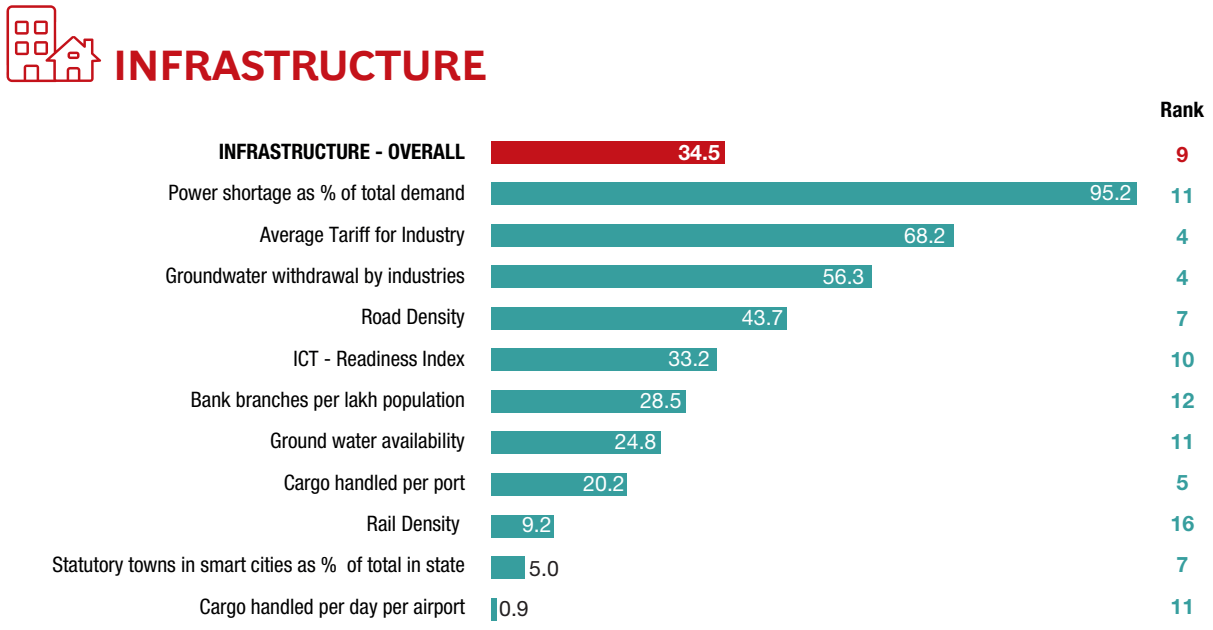
LABOUR

		Rank
LABOUR - OVERALL	**48.9**	**12**
Least mandays lost due to strike	97.5	2
Average wages of salaried persons	82.4	9
Share of contract workers in total labour force	75.9	14
Seating capacity of ITIs	52.0	5
Average wages in manufacturing sector	43.2	18
Percent of workforce having technical education	29.3	12
Labour force participation rate	29.1	10
Share of workforce in manufacturing sector	21.1	17
Share of labour force with secondary education and above	9.9	16

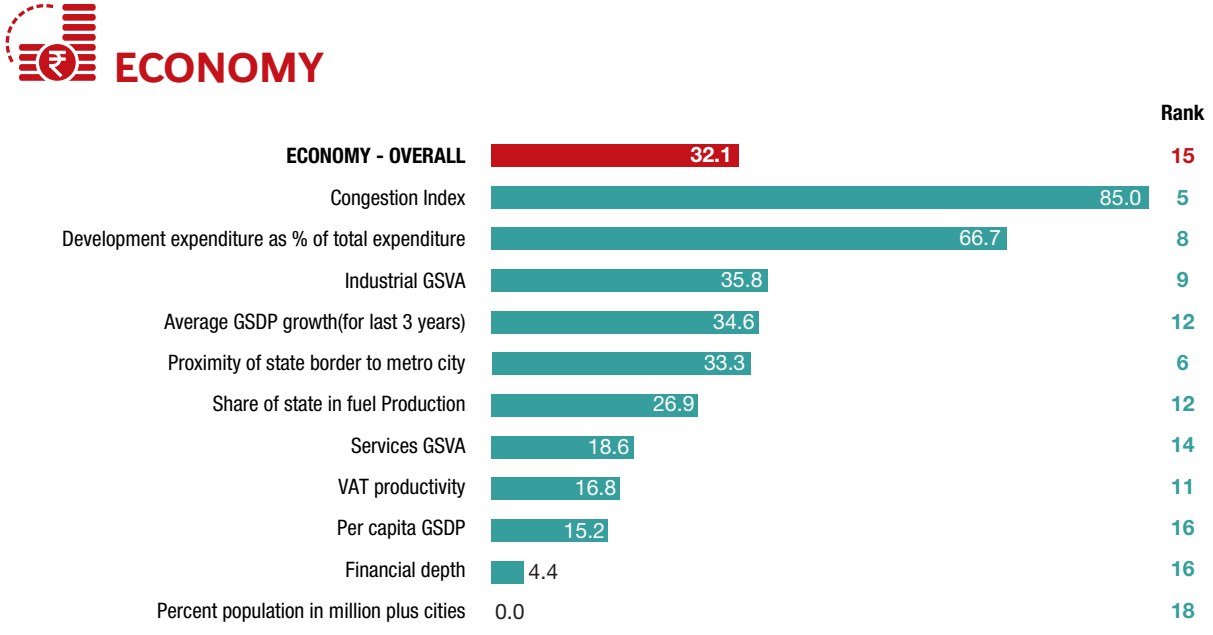
SURVEY

		Rank
SURVEY - OVERALL	**56.9**	**11**
Perception on infrastructure	73.5	7
Perception on labour	73.4	9
Perception on governance and political stability	63.4	7
Perception on economic conditions	59.4	10
Perception on business climate	42.8	14
Perception on land	29.0	14

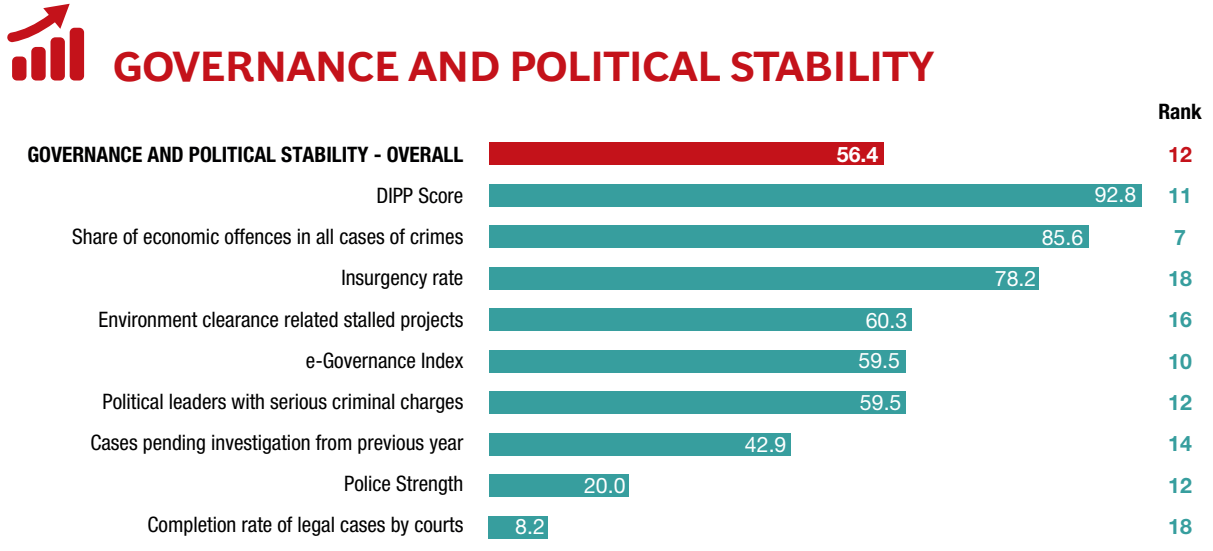
INFRASTRUCTURE



ECONOMY



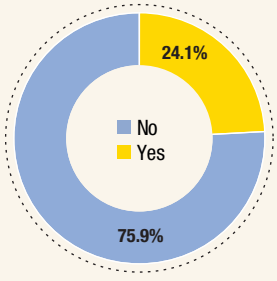
GOVERNANCE AND POLITICAL STABILITY



SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land



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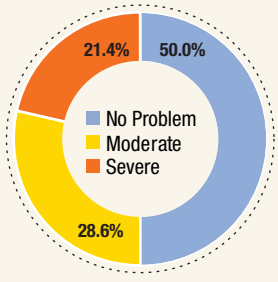
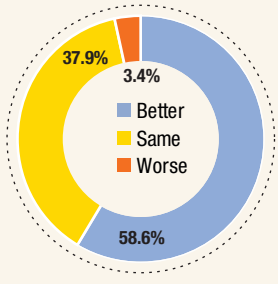
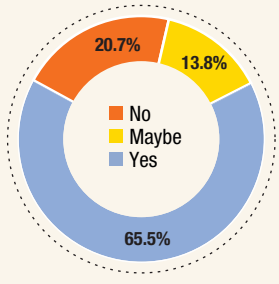


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

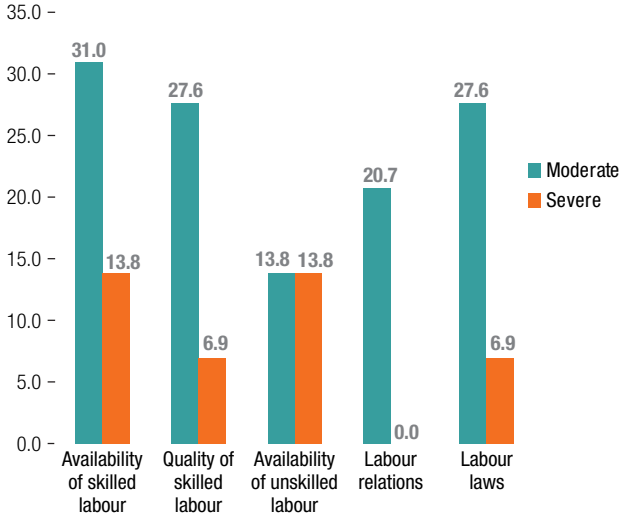


Percetage of respondents planing expansion in next five years



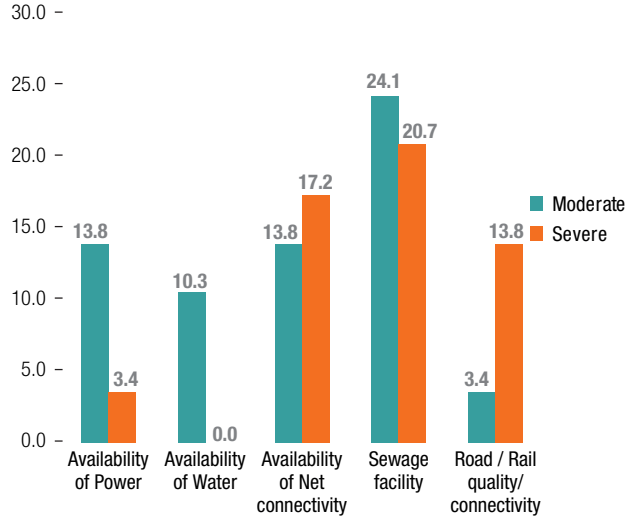
Labour related issues

% respondents finding these a moderate or severe problem



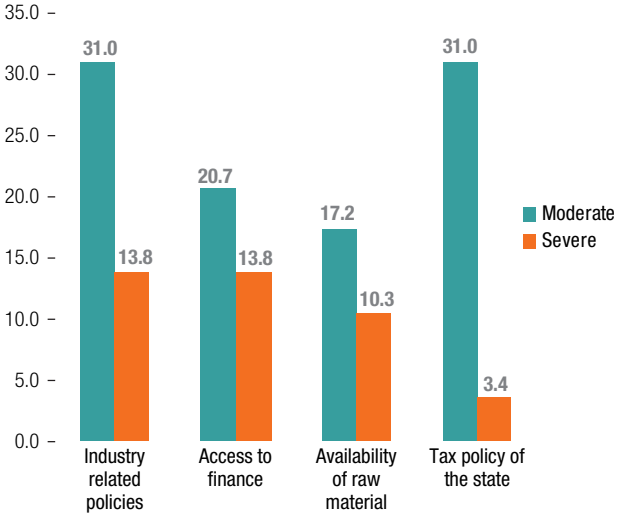
Infrastructure related issues

% respondents finding these a moderate or severe problem



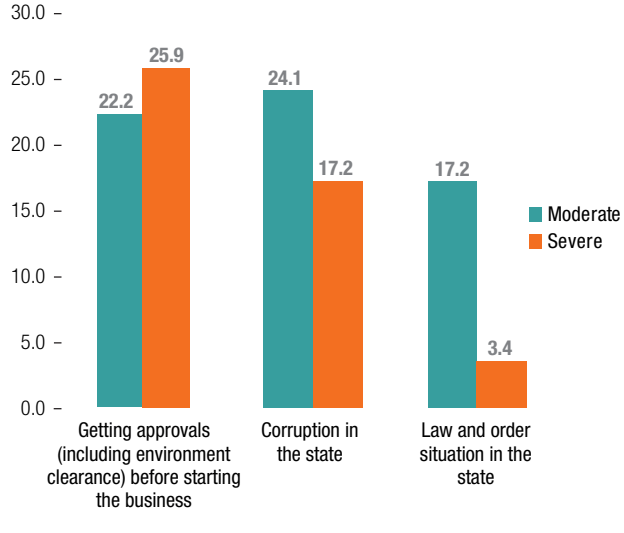
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

% respondents finding these a moderate or severe problem



Punjab

RANK

2017	16
2016	18

Statistics

Capital	Chandigarh
Area (sq. km)	50,362
Location	Northern India
Per capita income (Rs.)	1,07,776
Literacy Rate (%)	75.8

State Focus Sectors

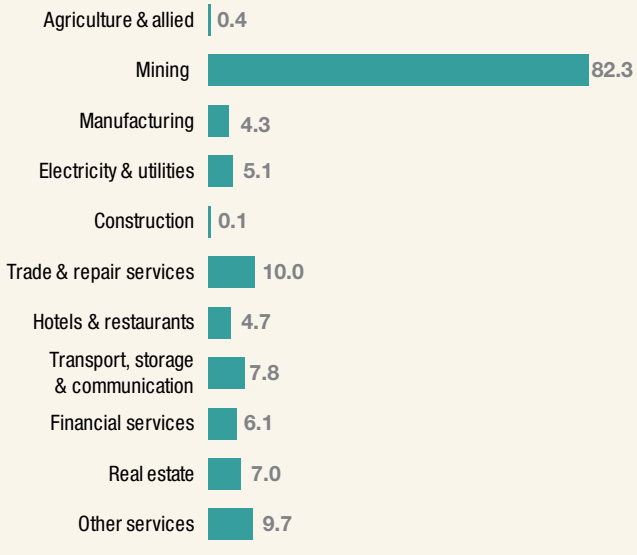
- Food Processing
- Auto parts
- Light Engineering
- Biotechnology(Source:State RC in Delhi)
- Manufacturing
- Textiles
- Electronic Hardware & IT sector
- Agro Industries
- Tourism
- Health Services

Source: Fiscal Incentives for Industrial Promotion 2013

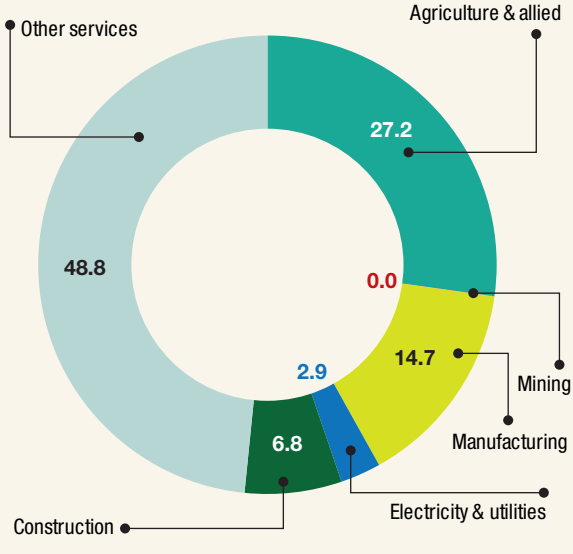
Incentives

- Concessions provided on VAT, CST, stamp duty, electricity duty and property tax
- Stamp duty exemption on purchase / lease of land and electricity duty exemption for food parks, textile parks, industrial parks, etc.
- VAT / CST, stamp duty incentives provided for Agro Industries and Food Processing, Electronic Hardware and IT, manufacturing and textiles sector, tourism and Health Services sector, etc.
- For more details on the incentives and eligibility of the industrial units, please refer toFiscal Incentives for Industrial Promotion 2013, Government of Punjab

Growth in Gross Value Added, 3 year average ending 2014-15



Sector-wise contribution in Gross Value Added, 2014-15



PUNJAB RANK 16

Punjab's overall rank has improved from 18 to 16 in N-SIPI 2017, despite falling behind under the land and labour pillar.

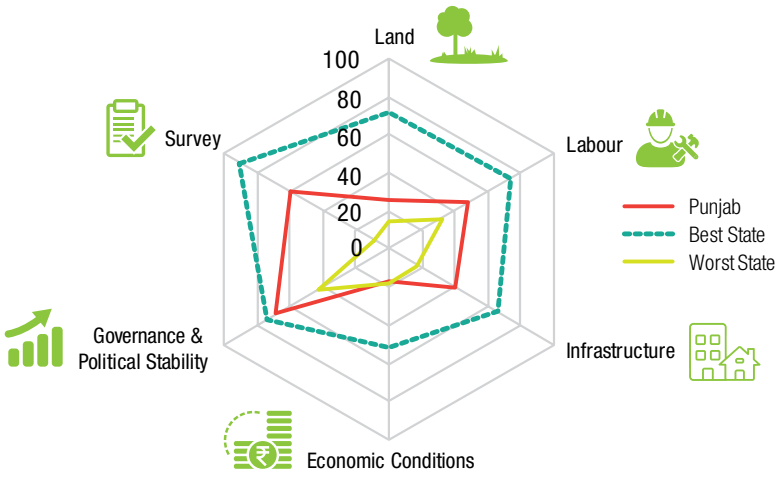
Strengths

Punjab has high rate of land acquisition for industrial purpose. The state has large number of bank branches, fares well in terms of rail density and tops in availability of power.

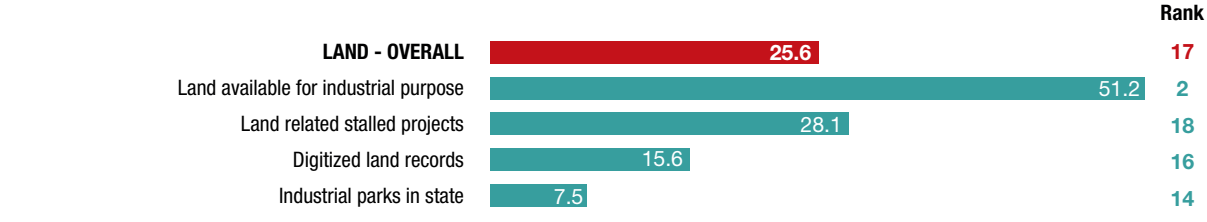
Weakness

Punjab's poor performance on the 'economy' pillar is a cause of concern, given the State's inherent advantages in terms of soil-climatic conditions and relative proximity to the national capital. The state ranks low on average GSDP growth and perception of a favourable business climate.

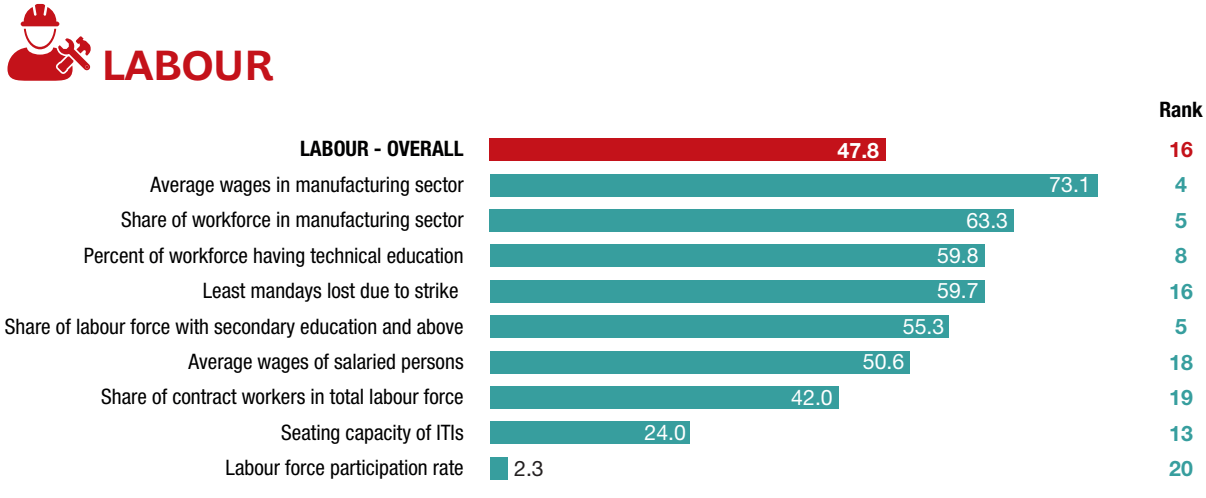
States Performance on the Six Broad Pillars



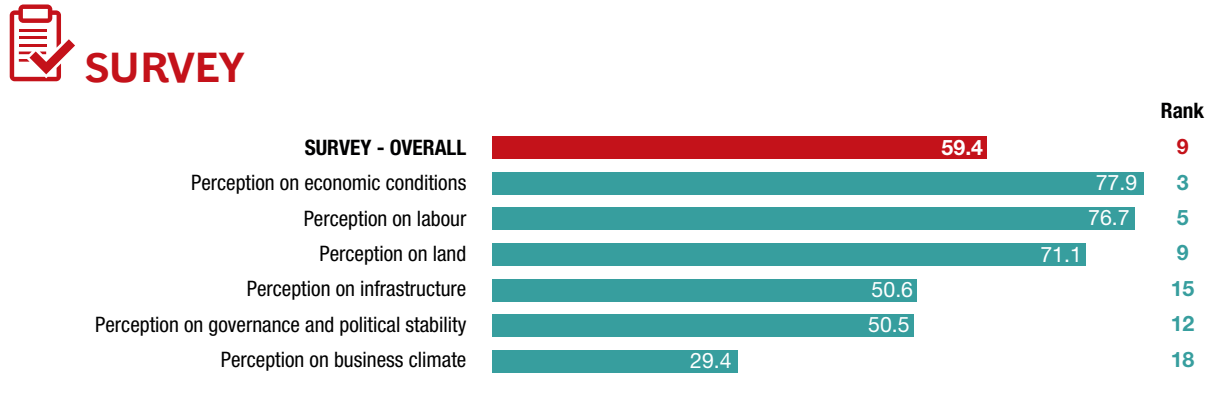
LAND



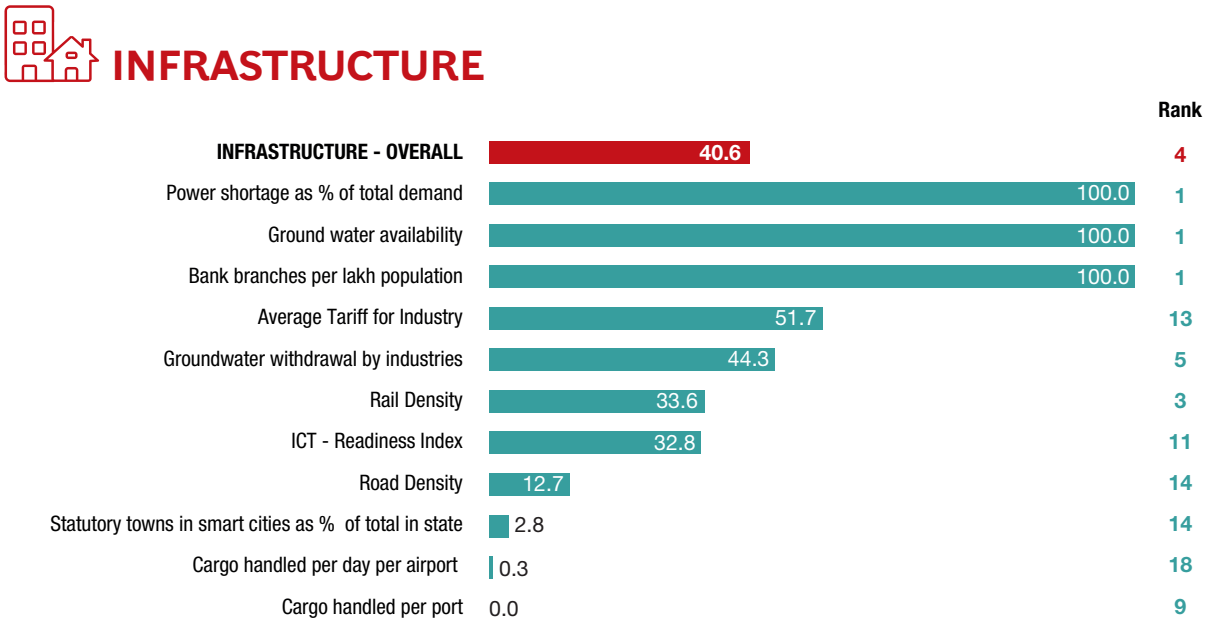
LABOUR



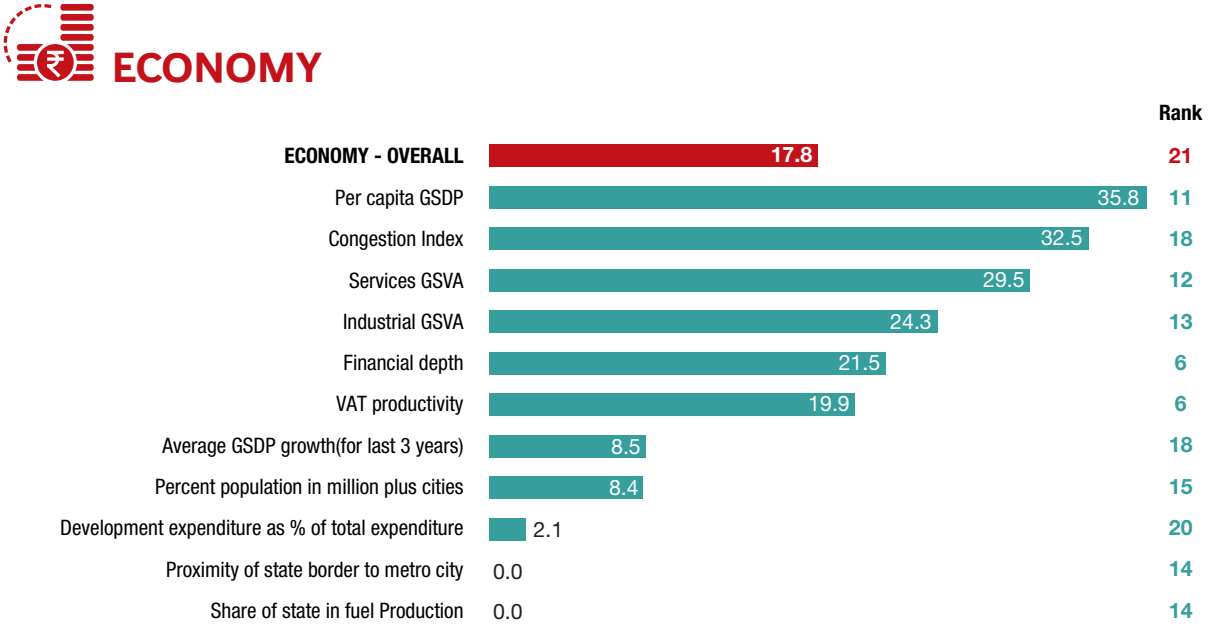
SURVEY



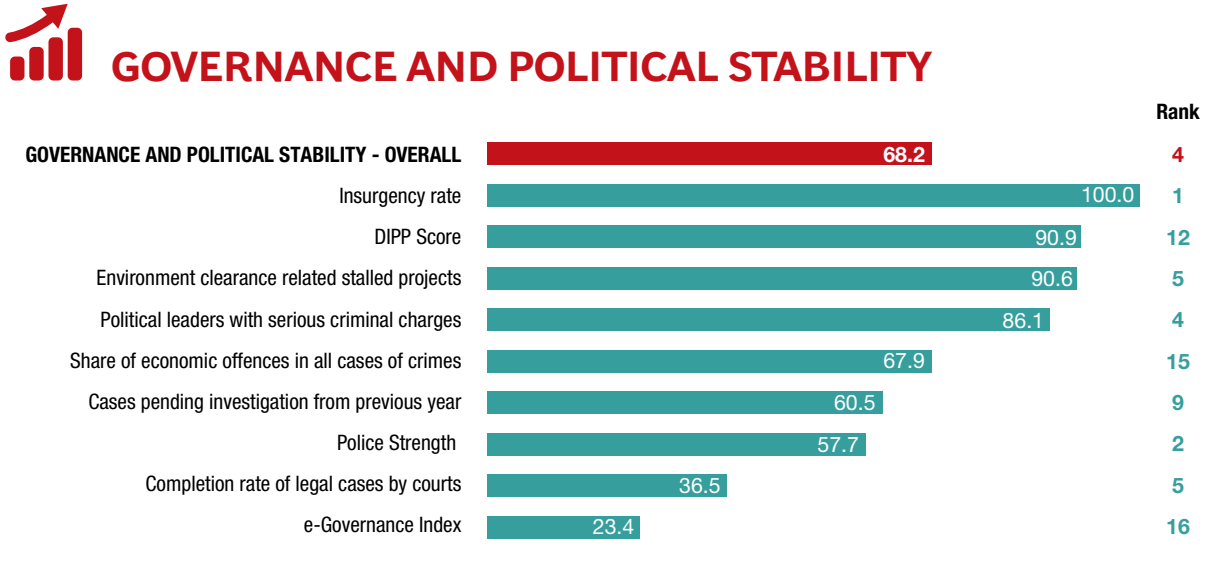
INFRASTRUCTURE



ECONOMY



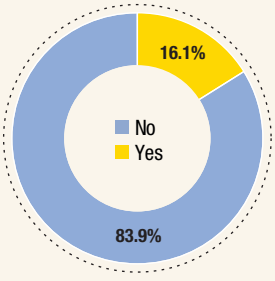
GOVERNANCE AND POLITICAL STABILITY



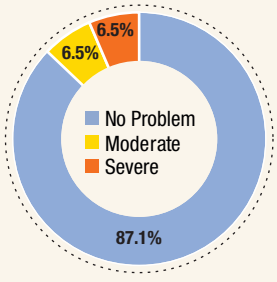
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

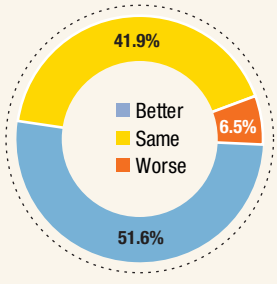


Percentage respondents facing problem in getting approvals for land

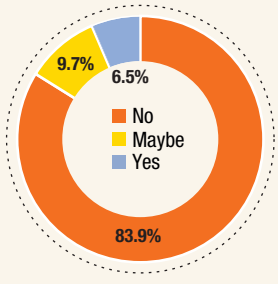


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

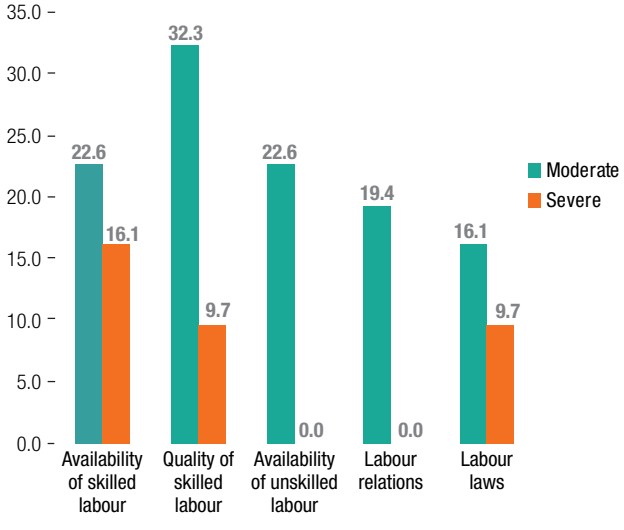


Percetage of respondents planing expansion in next five years



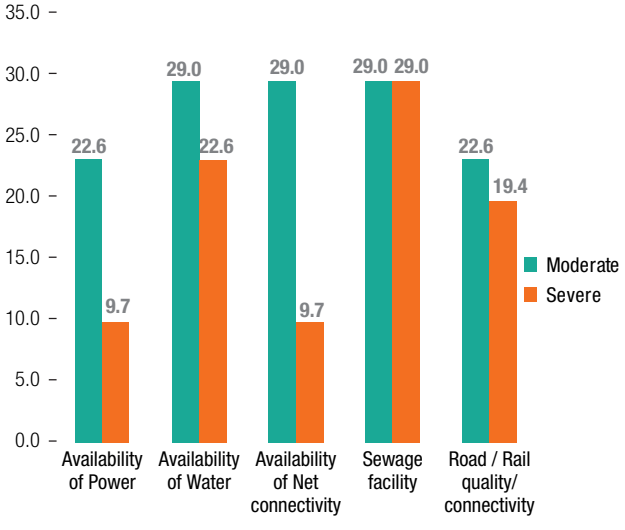
Labour related issues

% respondents finding these a moderate or severe problem



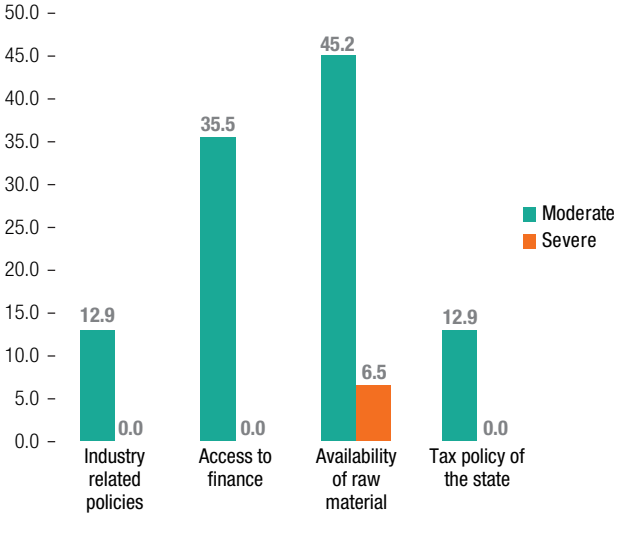
Infrastructure related issues

% respondents finding these a moderate or severe problem



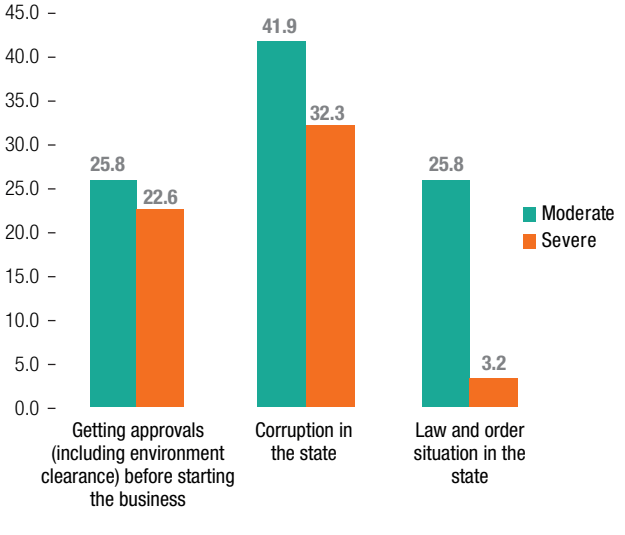
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

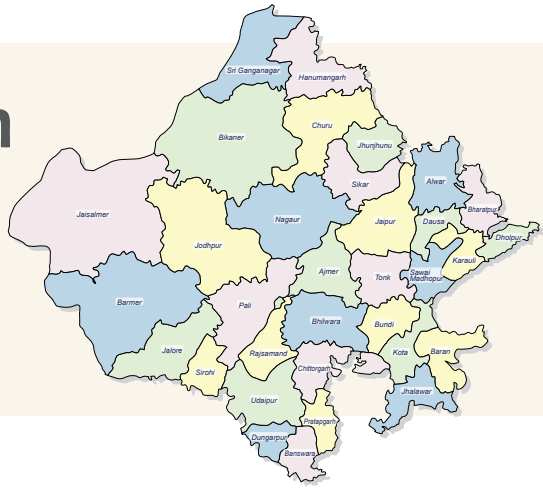
% respondents finding these a moderate or severe problem



Rajasthan

RANK

2017	13
2016	9



Statistics

Capital	Jaipur
Area (sq. km)	3,42,239
Location	Central India
Per capita income (Rs.)	70,966
Literacy Rate (%)	66.1

State Focus Sectors

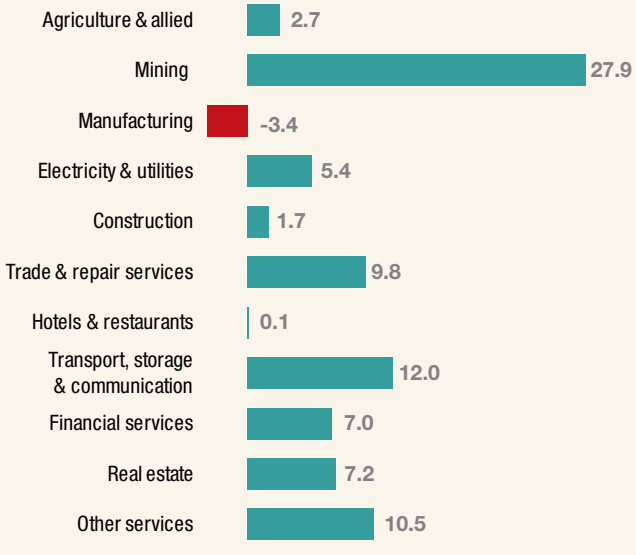
- Garments and Knitwear,
- Gems and Jewellery,
- Textiles,
- Electronics and Telecommunications,
- Information Technology,
- Automobiles and components,
- Footwear and Leather goods,
- Dimensional stones,
- Cement,
- Glass and Ceramics,
- Agro processing

Incentives

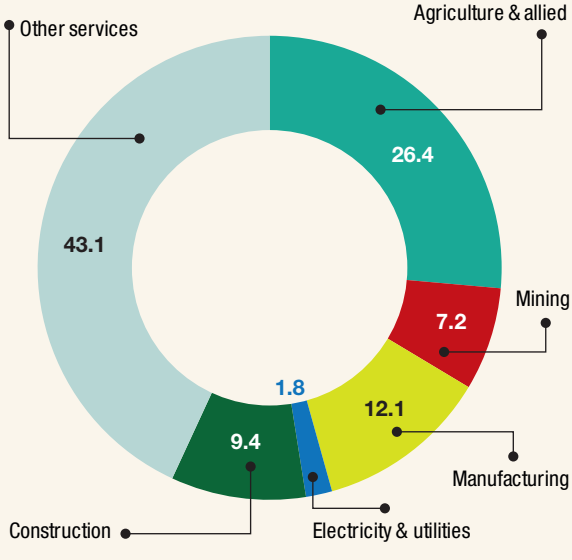
- Employment generation subsidy to manufacturing enterprises
- Exemption from power tariff, land tax
- Exemption from entry tax

Source: State Industrial Development Policy 2015

Growth in Gross Value Added, 3 year average ending 2014-15

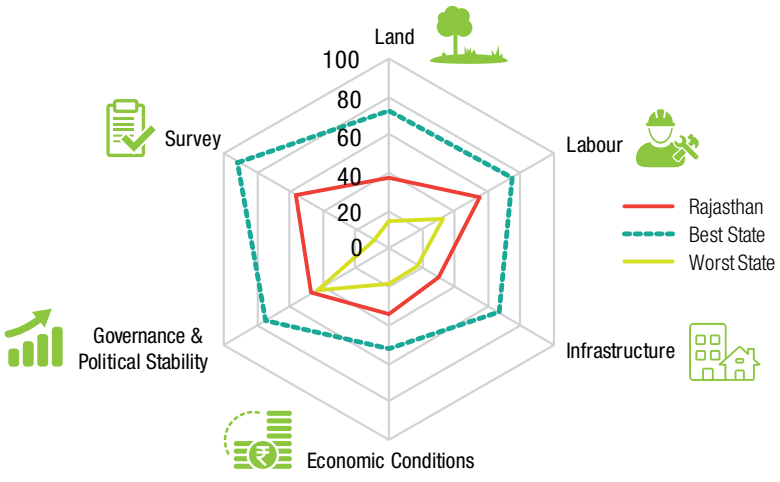


Sector-wise contribution in Gross Value Added, 2014-15



RAJASTHAN RANK 13

States Performance on the Six Broad Pillars



Rajasthan has slipped from nine to 13, primarily on account of losing ground on the economy, governance and the survey pillars.

Strengths

The state is among the top 3 in terms of the proximity of the state border to metro cities and the share of the state in fuel production. The state ranks in the top ten in the labour pillar.

Weakness

The state falls behind in average GSDP growth, mandays lost due to strikes and high economic crime rate. Grassroot perceptions regarding the business climate seem to have worsened with a rank at 13, down from two in N-SIPI-2016.

LAND

		Rank
LAND - OVERALL	**37.4**	**12**
Land related stalled projects	81.7	3
Digitized land records	33.6	15
Land available for industrial purpose	22.4	10
Industrial parks in state	12.1	12

LABOUR

		Rank
LABOUR - OVERALL	**54.1**	**9**
Seating capacity of ITIs	97.6	2
Share of contract workers in total labour force	94.6	4
Average wages of salaried persons	83.5	8
Average wages in manufacturing sector	62.0	14
Least mandays lost due to strike	51.3	18
Share of workforce in manufacturing sector	34.7	11
Labour force participation rate	27.6	12
Percent of workforce having technical education	26.1	13
Share of labour force with secondary education and above	9.6	17

SURVEY

		Rank
SURVEY - OVERALL	**55.8**	**13**
Perception on economic conditions	67.3	8
Perception on labour	57.6	13
Perception on land	56.2	12
Perception on business climate	56.0	11
Perception on infrastructure	50.0	17
Perception on governance and political stability	47.8	13

INFRASTRUCTURE

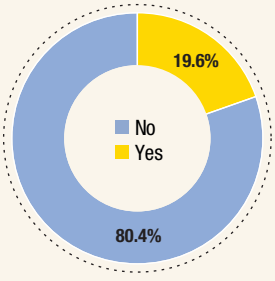
ECONOMY

GOVERNANCE AND POLITICAL STABILITY

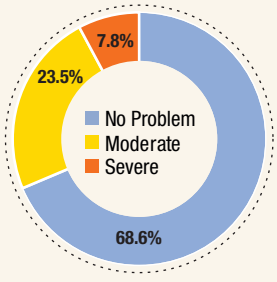
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

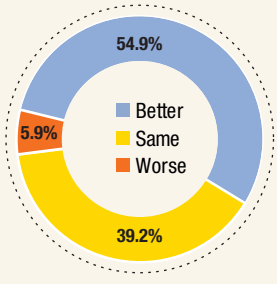


Percentage respondents facing problem in getting approvals for land

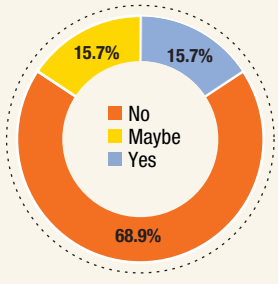


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

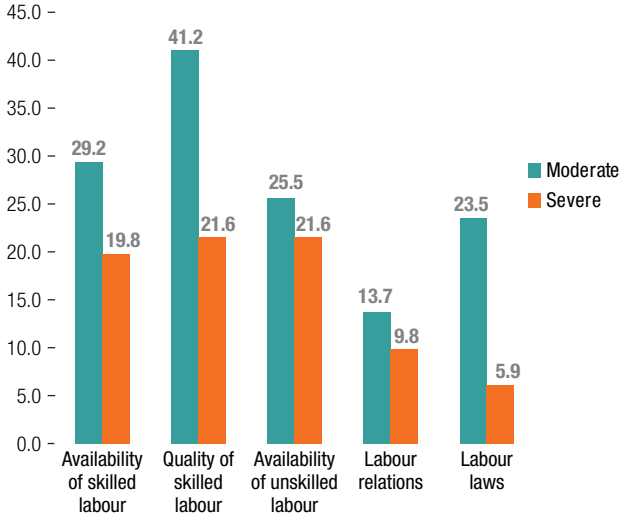


Percetage of respondents planing expansion in next five years



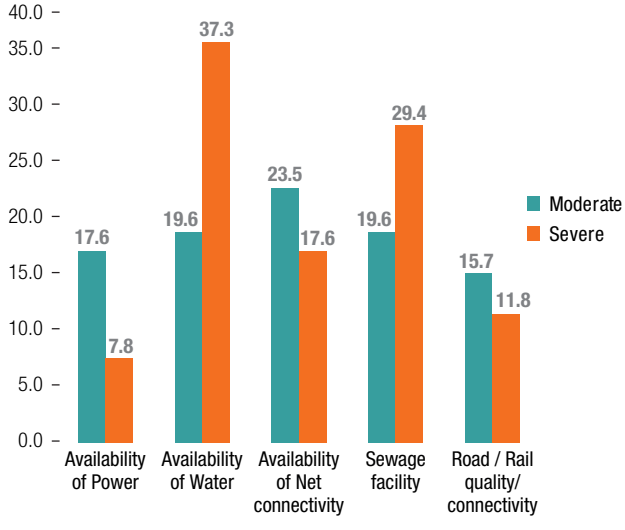
Labour related issues

% respondents finding these a moderate or severe problem



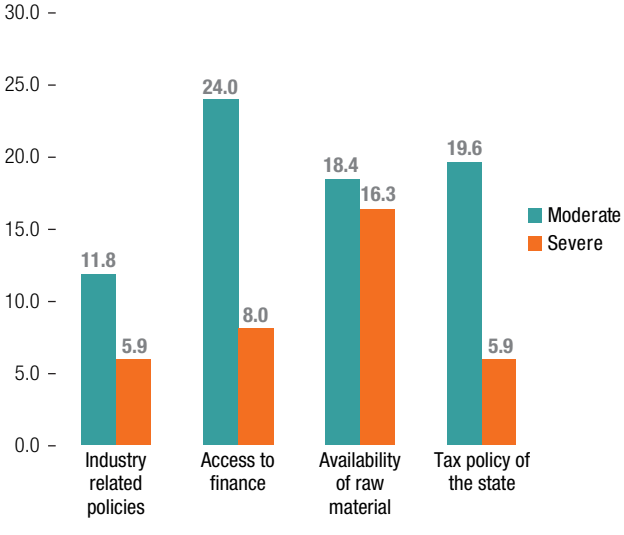
Infrastructure related issues

% respondents finding these a moderate or severe problem



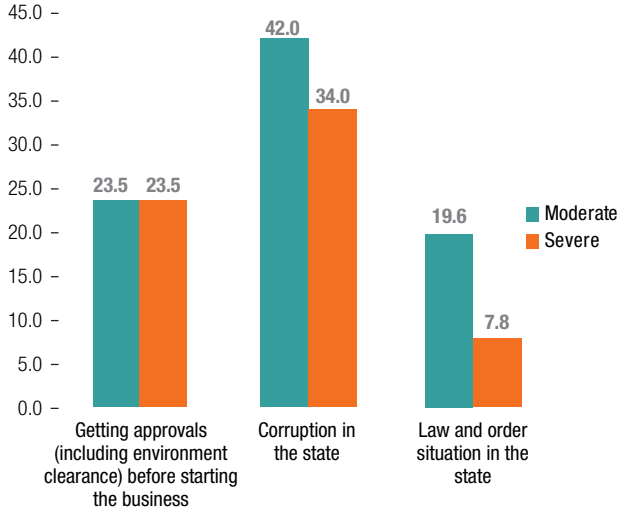
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

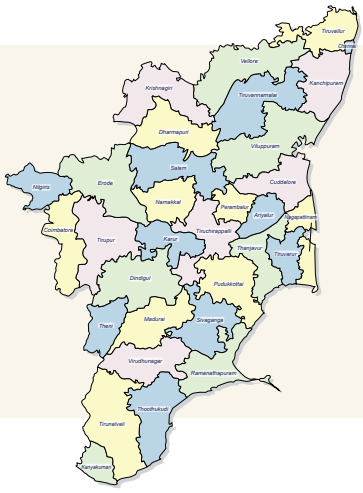
% respondents finding these a moderate or severe problem



Tamil Nadu

RANK

2017	6
2016	3



Statistics

Capital	Chennai
Area (sq. km)	1,30,060
Location	Southern India
Per capita income (Rs.)	1,30,175
Literacy Rate (%)	80.1

State Focus Sectors

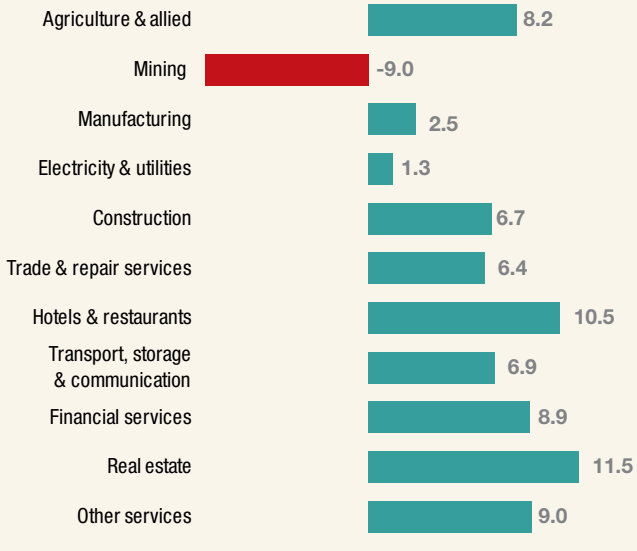
- Aerospace Sector
- Automobile Sector
- Electronic Hardware Sector
- Heavy Engineering Sector
- Infrastructure Sector
- Pharmaceuticals & Biotechnology Sector
- Renewable Energy Sector
- Skill Development Sector
- Textiles & Apparels Sector
- Agro and Food Processing
- IT ITeS Sector

Source: Tamil Nadu Industrial Guidance & Export Promotion Bureau, Industries Department, Government of Tamil Nadu

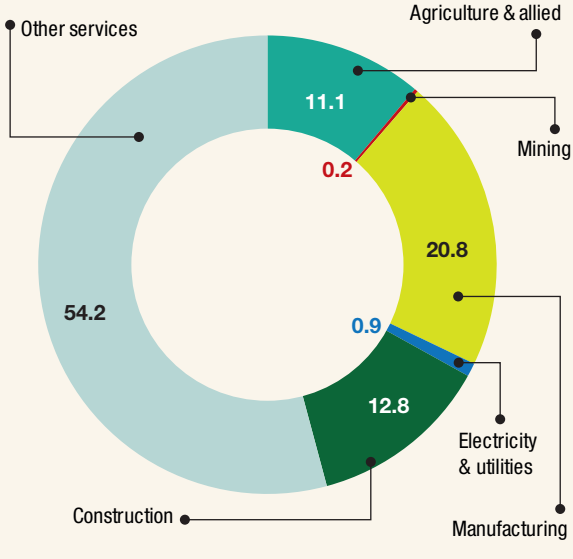
Incentives

- Capital subsidy, environmental protection infrastructure subsidy
- Exemption from electricity tax, stamp duty on lease or sale of land meant for industrial use
- Incentives available for additional employment generation and SEZ-Developer/Units
- For more details on the incentives and eligibility of the industrial units, please refer toTamil Nadu Industrial Policy, 2014

Growth in Gross Value Added, 3 year average ending 2015-16



Sector-wise contribution in Gross Value Added, 2015-16

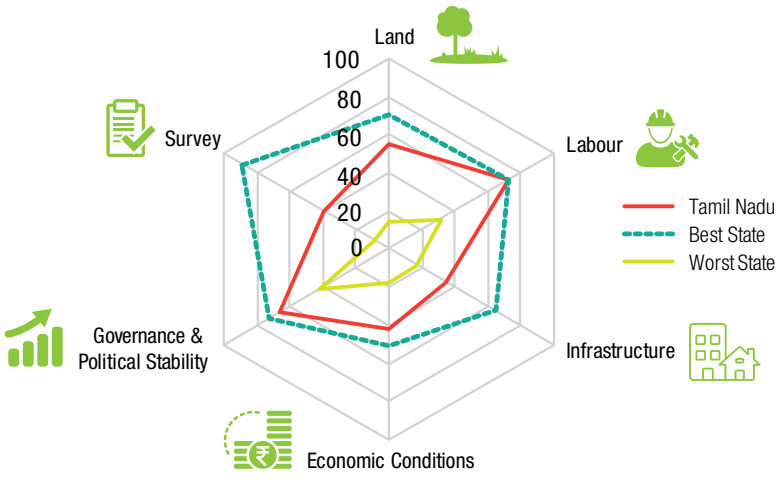


TAMIL NADU

RANK 6

Tamil Nadu has lost its position among the top three states in overall ranking, slipping from number three to six, primarily on account of falling short on the survey.

States Performance on the Six Broad Pillars



Strengths

Tamil Nadu's strengths are industrial parks, technically educated workforce and per capita GSDP. The state also does well in low insurgency rates and high completion rate of legal cases.

Weaknesses

As with the other industrially-advanced state, Maharashtra, Tamil Nadu's achilles heel seems to be the poor perception of the State among investors. This perception seems to have worsened with the State slipping from nine to 17 in the Survey rankings.

LAND

		Rank
LAND - OVERALL	**55.6**	3
Digitized land records	81.1	13
Land related stalled projects	71.6	6
Industrial parks in state	67.3	2
Land available for industrial purpose	2.4	18

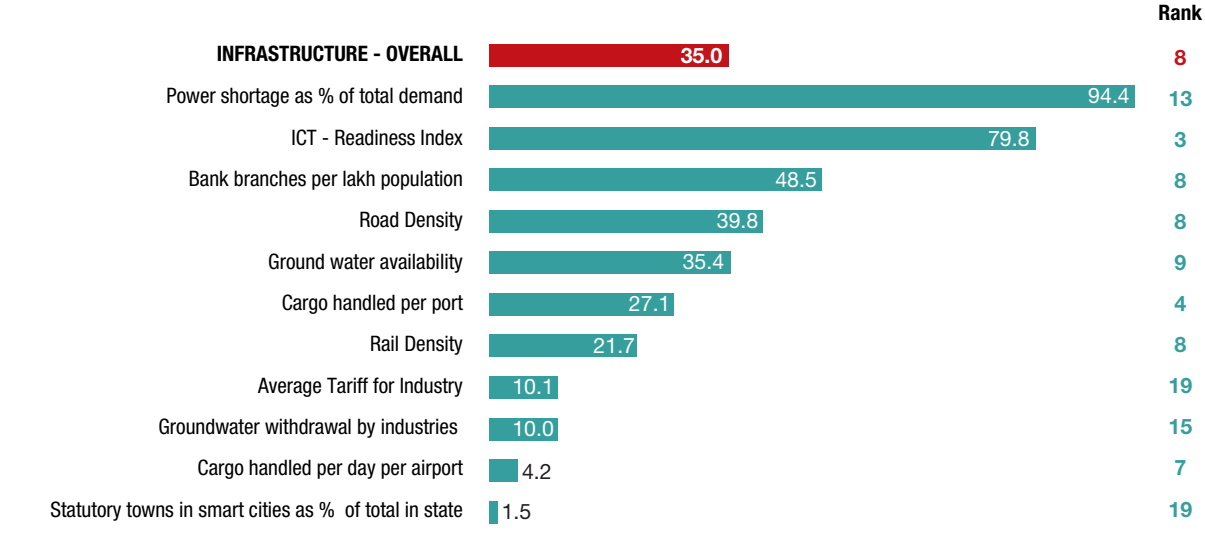
LABOUR

		Rank
LABOUR - OVERALL	**73.8**	1
Percent of workforce having technical education	98.9	2
Share of workforce in manufacturing sector	94.6	2
Average wages of salaried persons	92.2	6
Share of contract workers in total labour force	87.5	9
Least mandays lost due to strike	75.0	14
Average wages in manufacturing sector	69.5	6
Labour force participation rate	59.0	4
Share of labour force with secondary education and above	47.2	8
Seating capacity of ITIs	40.0	7

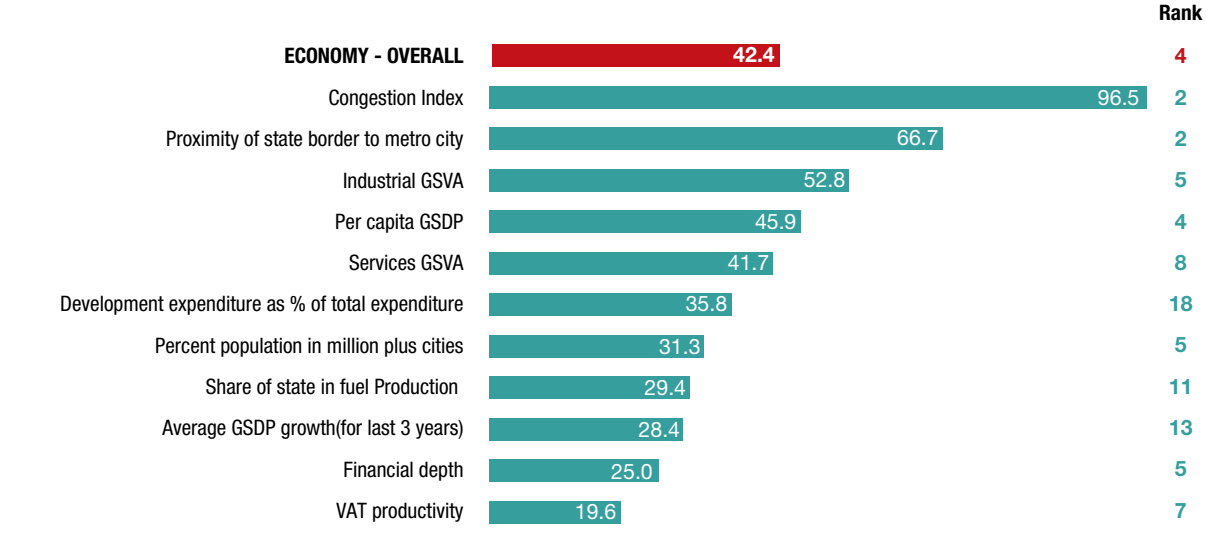
SURVEY

		Rank
SURVEY - OVERALL	**39.7**	17
Perception on infrastructure	67.6	10
Perception on labour	44.6	16
Perception on economic conditions	38.1	18
Perception on business climate	31.2	17
Perception on governance and political stability	29.0	19
Perception on land	27.6	15

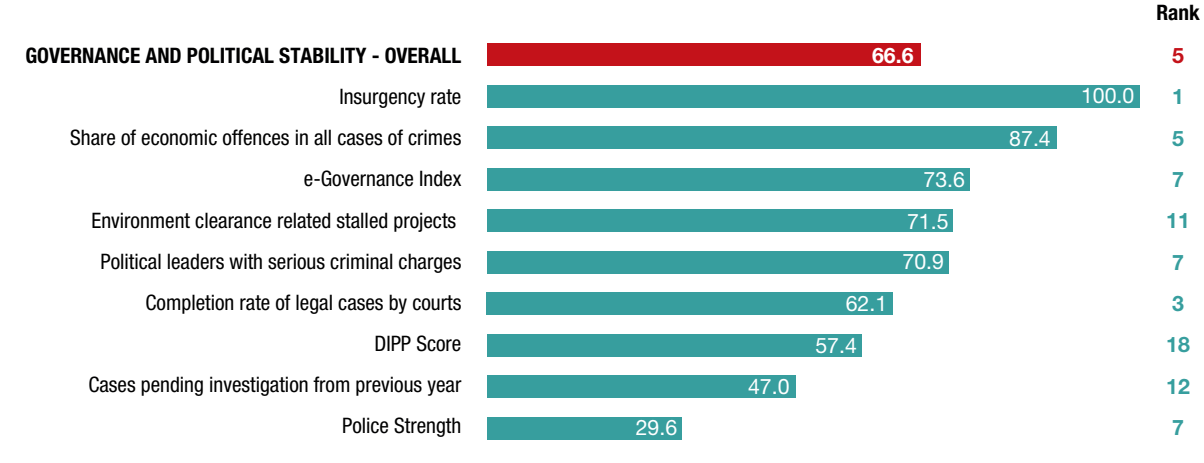
INFRASTRUCTURE



ECONOMY



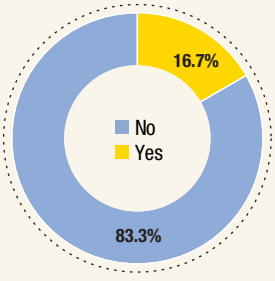
GOVERNANCE AND POLITICAL STABILITY



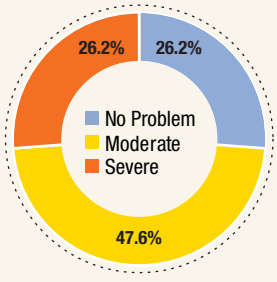
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

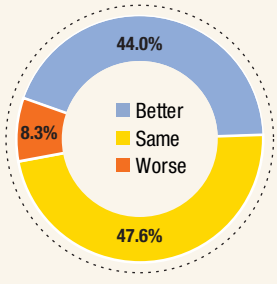


Percentage respondents facing problem in getting approvals for land

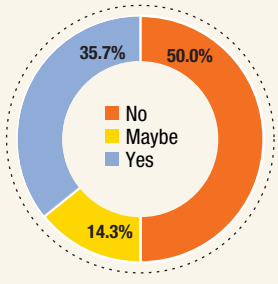


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

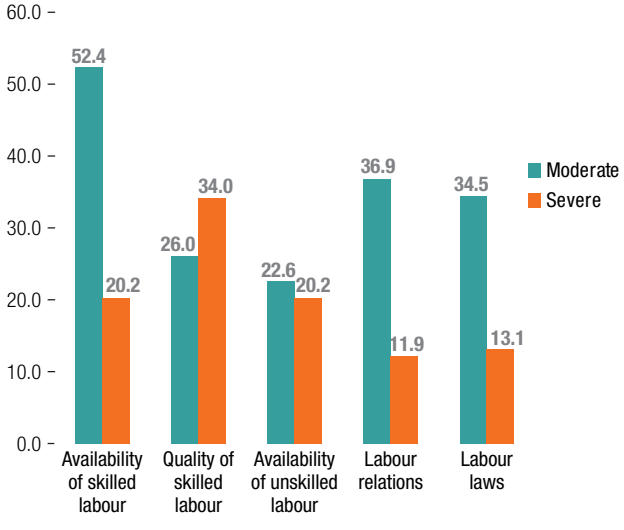


Percetage of respondents planing expansion in next five years



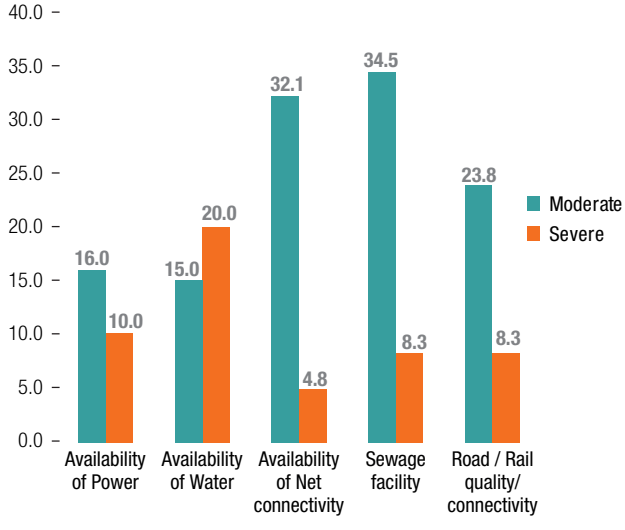
Labour related issues

% respondents finding these a moderate or severe problem



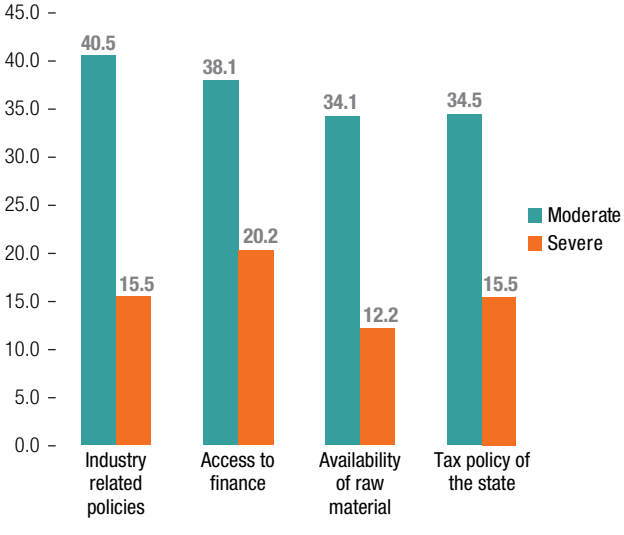
Infrastructure related issues

% respondents finding these a moderate or severe problem



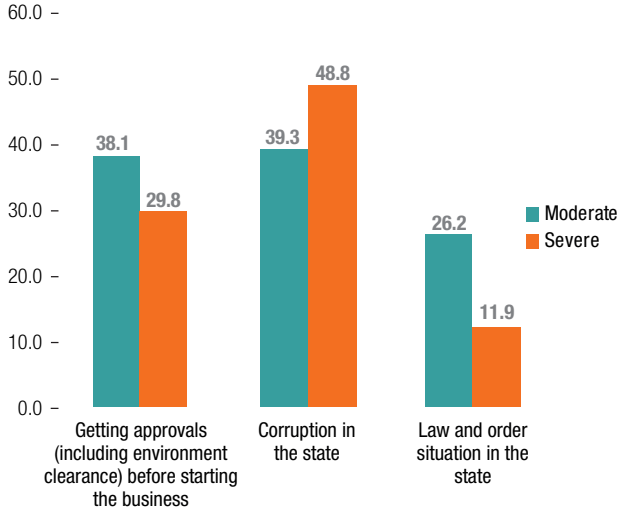
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

% respondents finding these a moderate or severe problem



Telangana

RANK

2017	5
2016	13

Statistics

Capital	Hyderabad
Area (sq. km)	1,14,840
Location	Southern India
Per capita income (Rs.)	1,26,207
Literacy Rate (%)	67.0

State Focus Sectors

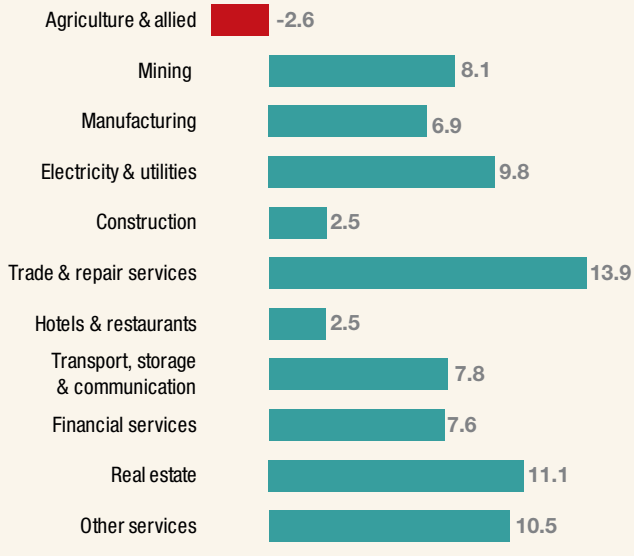
- Pharma / Biotech R&D
- Food Processing
- Gems & Jewellery
- Electrical power generation equipment

Source: Resident Commissioner, Government of Telangana

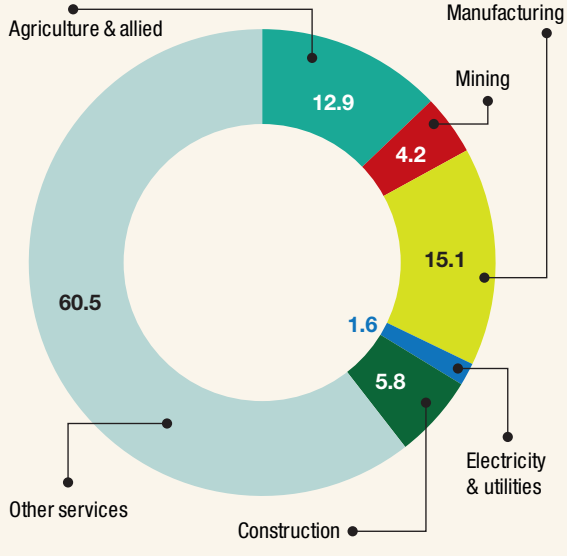
Incentives

- Reimbursement of stamp duty, power cost, VAT, training & skill development cost, infrastructure development costs
- Investment subsidy, interest subsidy; land cost rebate, land conversion cost; seed capital for 1st generation entrepreneur is also available
- Industrial parks and the required infrastructure like roads, water supply, industrial power and common effluent treatment facilities to be developed
- For more details on the incentives and eligibility of the industrial units, please refer toIndustrial Policy Framework for the State of Telangana 2014

Growth in Gross Value Added, 3 year average ending 2015-16



Sector-wise contribution in Gross Value Added, 2015-16



TELANGANA

RANK 5

Telangana's ranking has improved significantly with the State moving up from 13 in N-SIPI 2016 to five in N-SIPI 2017. It does well on the land, labour and Survey pillars.

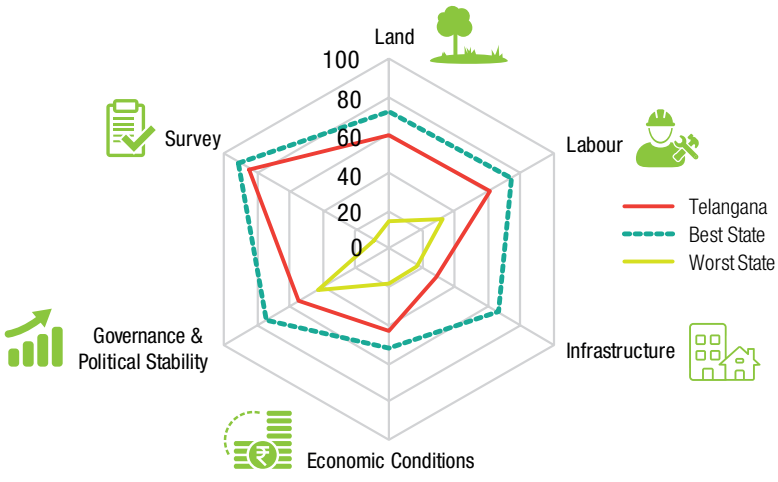
Strengths

Telengana's strenths are digitalised land records, high labour force participation rates and competitive wages in manufacturing. The state is ranked among the top five in population in million-plus cities and perception of a favourable business climate.

Weaknesses

Poor infrastructure and surprisingly for a new State, poor governance, are the two main weaknesses. The state also falls short on road and rail density and ground water availability.

States Performance on the Six Broad Pillars



LAND

		Rank
LAND - OVERALL	**58.9**	2
Digitized land records	100.0	1
Land related stalled projects	73.0	5
Industrial parks in state	57.9	4
Land available for industrial purpose	4.7	14

LABOUR

		Rank
LABOUR - OVERALL	**60.8**	3
Share of contract workers in total labour force	88.4	8
Least mandays lost due to strike	83.8	11
Average wages in manufacturing sector	80.2	3
Labour force participation rate	61.3	3
Percent of workforce having technical education	60.9	7
Average wages of salaried persons	53.8	16
Share of labour force with secondary education and above	47.2	8
Share of workforce in manufacturing sector	39.5	10
Seating capacity of ITIs	32.4	10

SURVEY

		Rank
SURVEY - OVERALL	**83.2**	3
Perception on business climate	100.0	1
Perception on infrastructure	86.1	4
Perception on governance and political stability	82.2	2
Perception on land	81.5	6
Perception on labour	75.1	7
Perception on economic conditions	74.1	5

INFRASTRUCTURE

		Rank
INFRASTRUCTURE - OVERALL	**28.8**	**16**
Power shortage as % of total demand	95.2	11
Average Tariff for Industry	65.8	5
Bank branches per lakh population	47.0	9
ICT - Readiness Index	28.0	14
Ground water availability	15.0	17
Cargo handled per day per airport	14.0	6
Road Density	11.8	15
Statutory towns in smart cities as % of total in state	11.1	3
Rail Density	7.8	18
Cargo handled per port	0.0	9
Groundwater withdrawal by industries	0.0	17

ECONOMY

		Rank
ECONOMY - OVERALL	**42.1**	**6**
Congestion Index	88.5	4
Development expenditure as % of total expenditure	82.8	2
Services GSVA	55.1	6
Per capita GSDP	44.1	7
Proximity of state border to metro city	33.3	6
Percent population in million plus cities	31.5	4
Financial depth	31.2	4
Share of state in fuel Production	30.6	9
VAT productivity	23.8	2
Industrial GSVA	19.0	17
Average GSDP growth(for last 3 years)	13.1	16

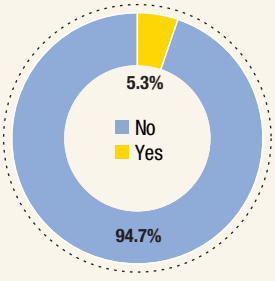
GOVERNANCE AND POLITICAL STABILITY

		Rank
GOVERNANCE AND POLITICAL STABILITY - OVERALL	**53.2**	**15**
DIPP Score	100.0	1
Insurgency rate	98.2	14
Environment clearance related stalled projects	93.6	3
Cases pending investigation from previous year	58.7	10
e-Governance Index	39.3	12
Share of economic offences in all cases of crimes	37.6	19
Completion rate of legal cases by courts	22.3	12
Police Strength	19.9	13
Political leaders with serious criminal charges	8.9	19

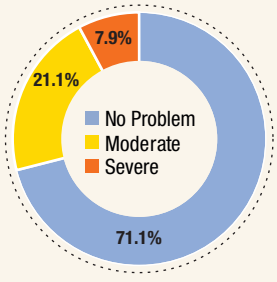
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

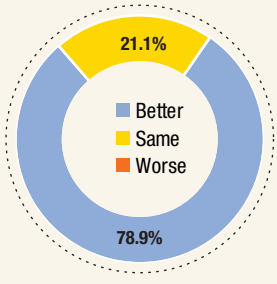


Percentage respondents facing problem in getting approvals for land

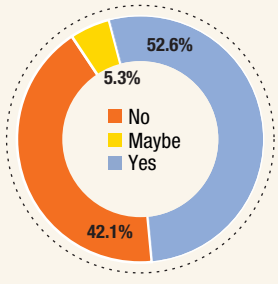


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

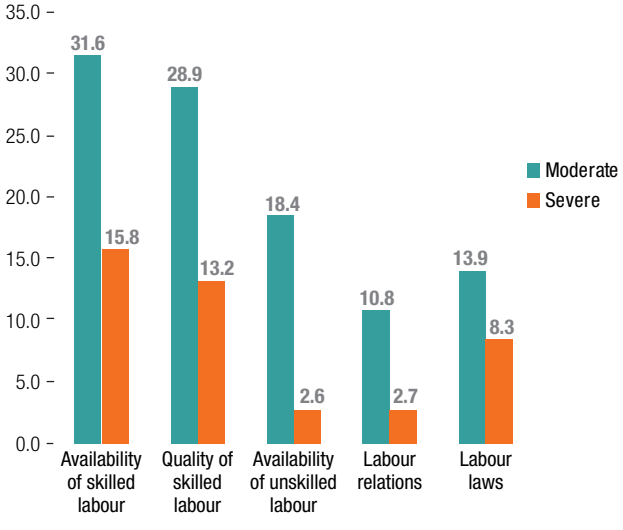


Percetage of respondents planing expansion in next five years



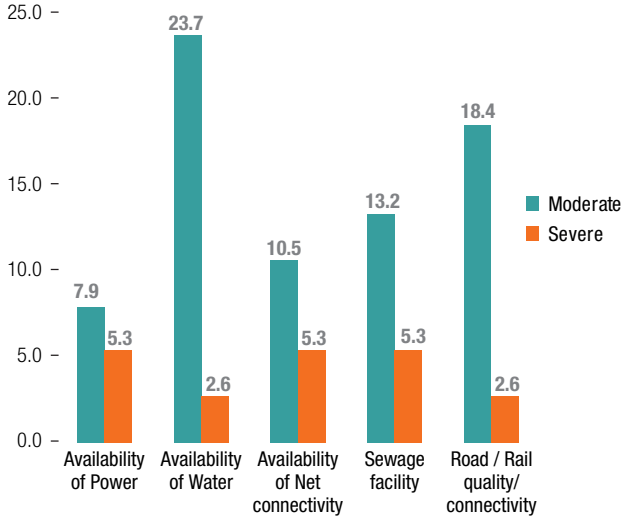
Labour related issues

% respondents finding these a moderate or severe problem



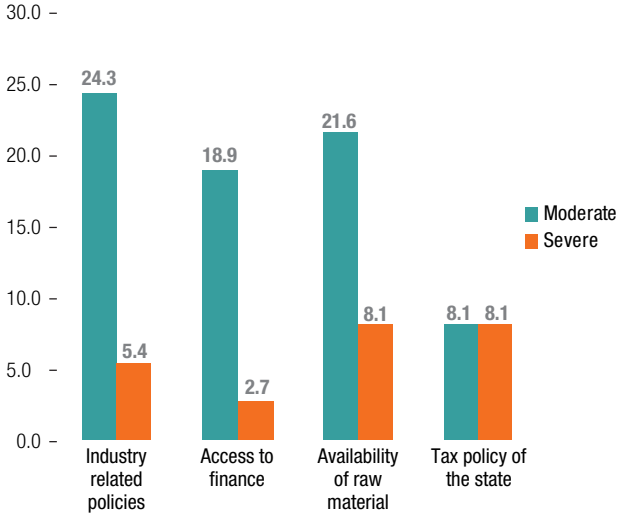
Infrastructure related issues

% respondents finding these a moderate or severe problem



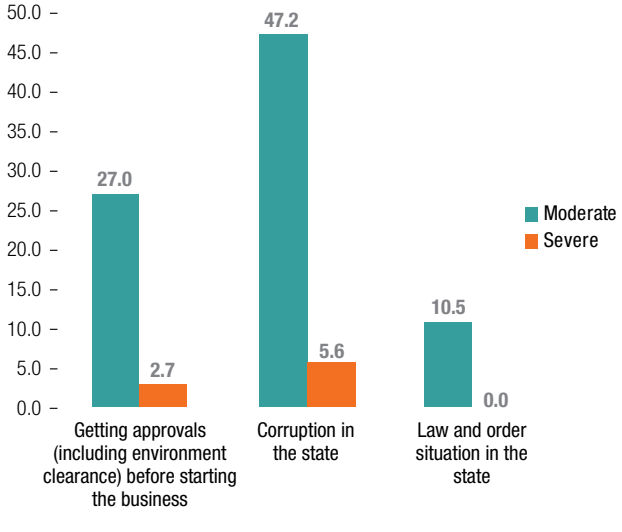
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

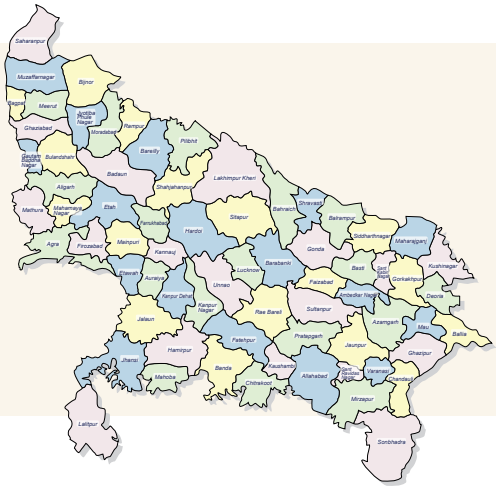
% respondents finding these a moderate or severe problem



Uttar Pradesh

RANK

2017	20
2016	20



Statistics

Capital	Lucknow
Area (sq. km)	2,40,928
Location	Northern Central India
Per capita income (Rs.)	43334
Literacy Rate (%)	67.7

State Focus Sectors

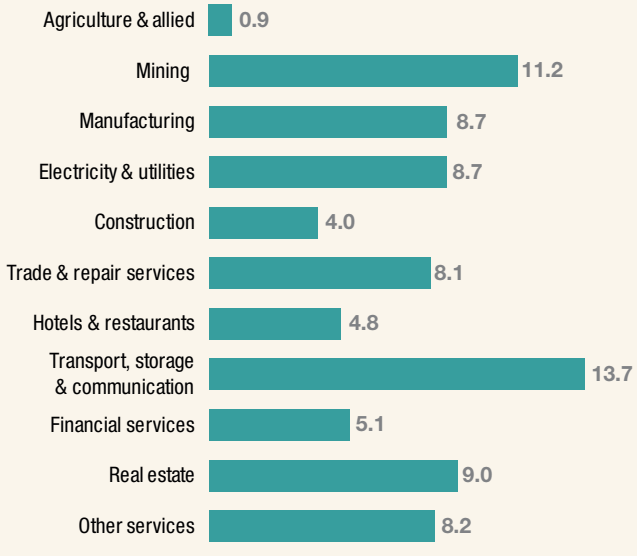
- Handloom Industry
- Khadi &Gramodyog Industry
- Information Technology Industry
- Bio-technology industry
- Food Processing Industry
- Tourism Industry
- Sugar Industry

Source: Infrastructure and Industrial Investment Policy UP, 2012

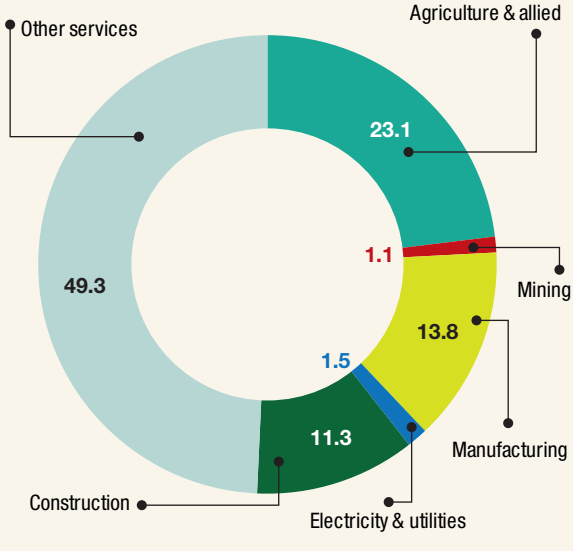
Incentives

- Electricity produced by captive power plant for self-use exempted from Electricity Duty; new units for 10 years and pioneer units for 15 years.
- Interest free loan for new eligible industrial units to be set up in certain areas
- Reimbursement of amount paid as interest for new eligible industrial units to be set up in certain areas
- For more details on the incentives and eligibility of the industrial units, please refer toInfrastructure and Industrial Investment Policy, 2012, Uttar Pradesh

Growth in Gross Value Added, 3 year average ending 2015-16

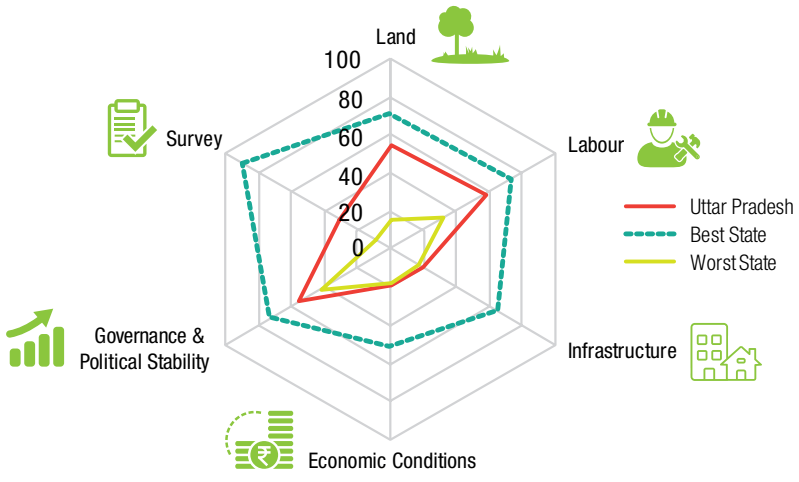


Sector-wise contribution in Gross Value Added, 2015-16



UTTAR PRADESH RANK 20

States Performance on the Six Broad Pillars



Uttar Pradesh is in the top five in the land pillar and top ten in the labour pillar, but falls short in economic conditions, governance and Survey pillars.

Strengths

Uttar Pradesh tops in share of seats in ITIs and is ranked amongst the top in road and rail density. The state has a competitive manufacturing sector wage rate, a low economic crime rate and perception of a favourable business climate.

Weaknesses

Uttar Pradesh falls behind in workforce with technical education, power shortage, ICT-Readiness, and low GSDP. It also falls short on perception by industry on the availability of land and labour.

LAND

		Rank
LAND - OVERALL	**55.1**	4
Digitized land records	86.5	12
Land related stalled projects	74.8	4
Industrial parks in state	36.4	8
Land available for industrial purpose	22.6	9

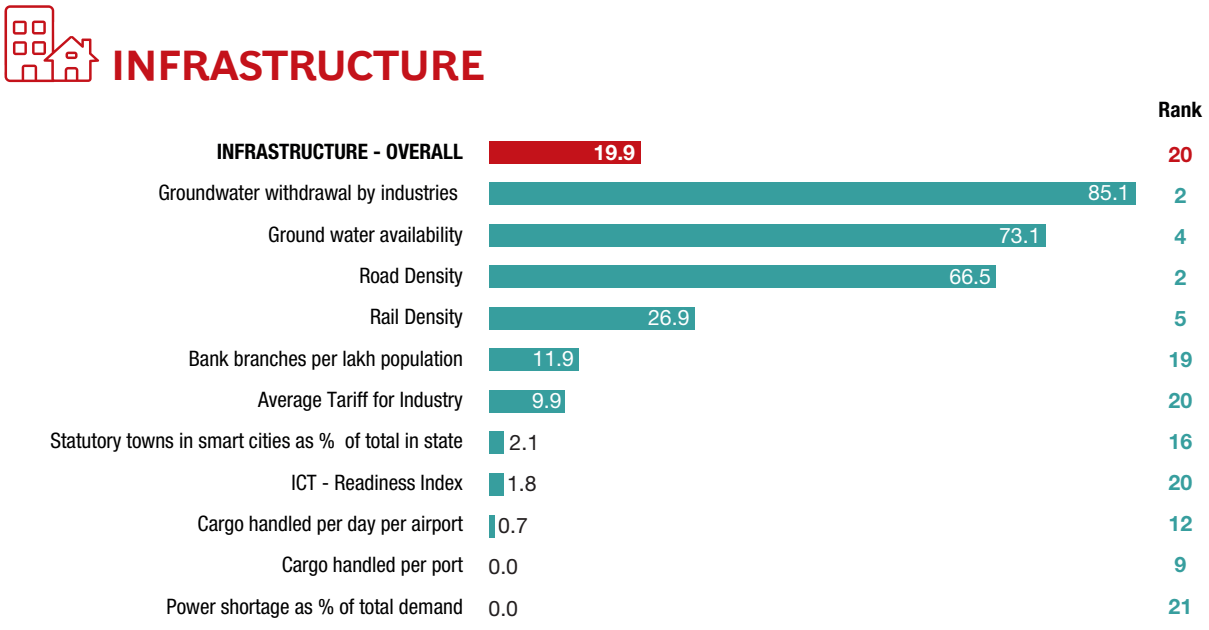
LABOUR

		Rank
LABOUR - OVERALL	**58.4**	7
Seating capacity of ITIs	100.0	1
Average wages of salaried persons	94.1	5
Least mandays lost due to strike	86.7	10
Share of contract workers in total labour force	85.7	10
Average wages in manufacturing sector	70.8	5
Share of workforce in manufacturing sector	51.7	8
Share of labour force with secondary education and above	16.5	14
Labour force participation rate	11.5	18
Percent of workforce having technical education	8.7	17

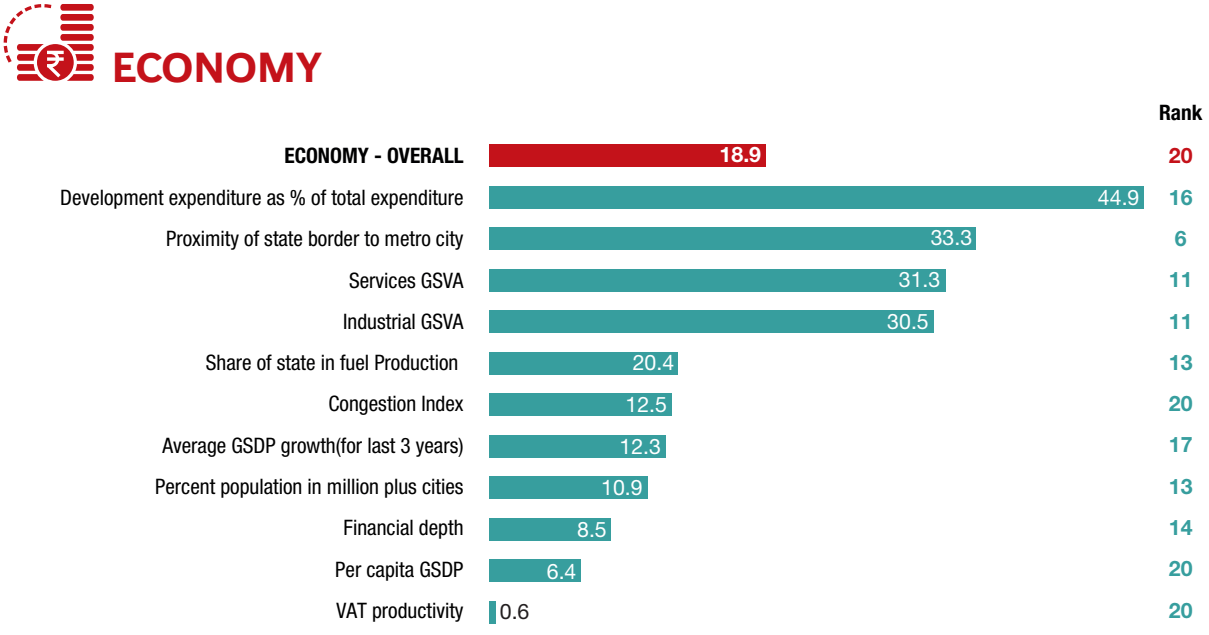
SURVEY

		Rank
SURVEY - OVERALL	**30.9**	19
Perception on business climate	83.6	3
Perception on labour	37.0	20
Perception on infrastructure	35.5	19
Perception on economic conditions	18.7	20
Perception on governance and political stability	8.9	19
Perception on land	1.5	20

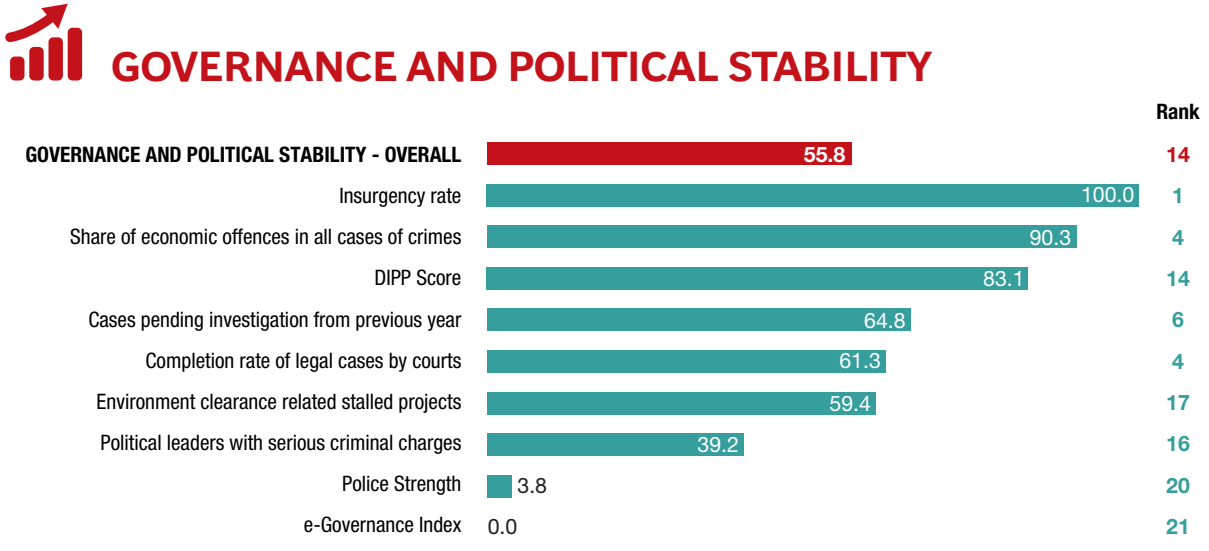
INFRASTRUCTURE



ECONOMY



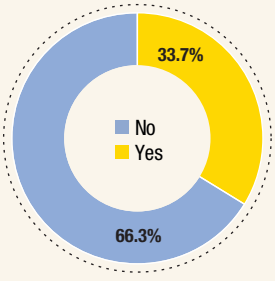
GOVERNANCE AND POLITICAL STABILITY



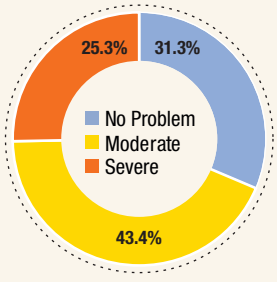
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

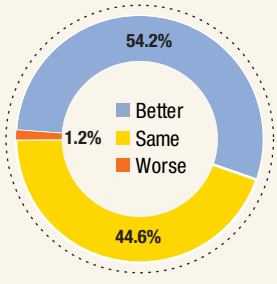


Percentage respondents facing problem in getting approvals for land

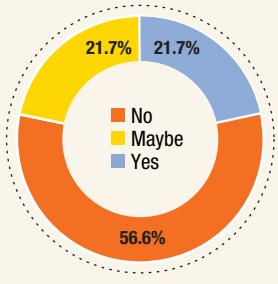


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

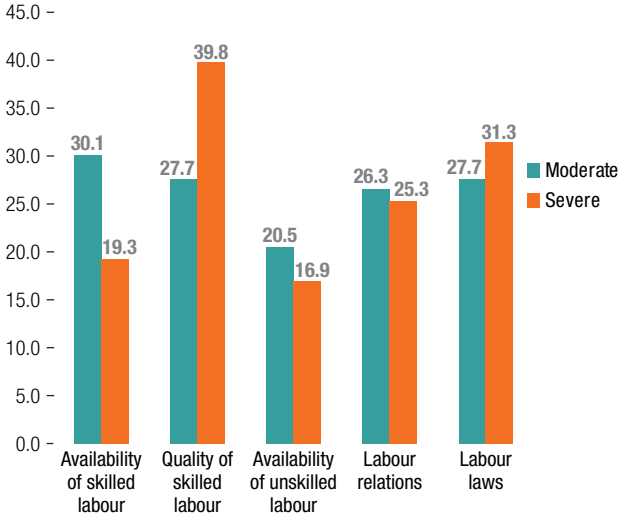


Percetage of respondents planing expansion in next five years



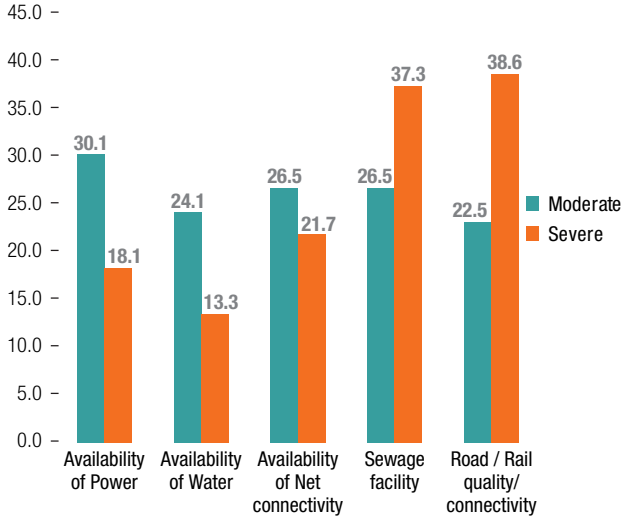
Labour related issues

% respondents finding these a moderate or severe problem



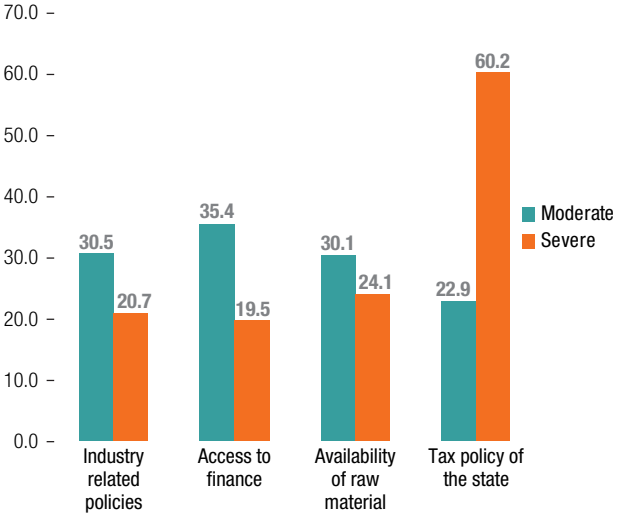
Infrastructure related issues

% respondents finding these a moderate or severe problem



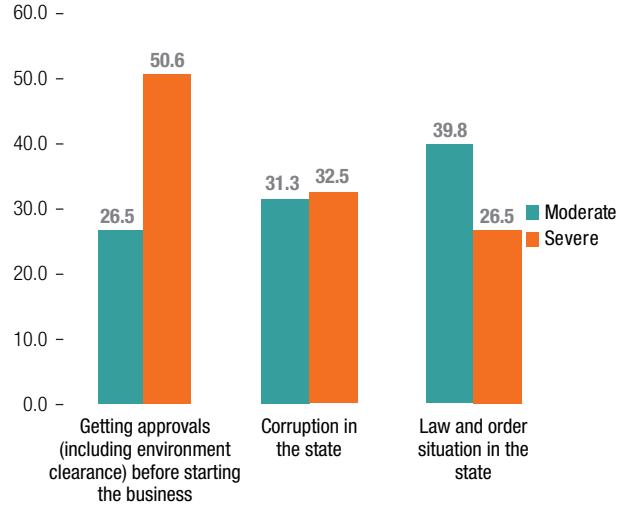
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

% respondents finding these a moderate or severe problem



Uttarakhand

RANK

2017	12
2016	8

Statistics

Capital	Dehradun
Area (sq. km)	53,483
Location	Northern India
Per capita income (Rs.)	1,42,709
Literacy Rate (%)	78.8

State Focus Sectors

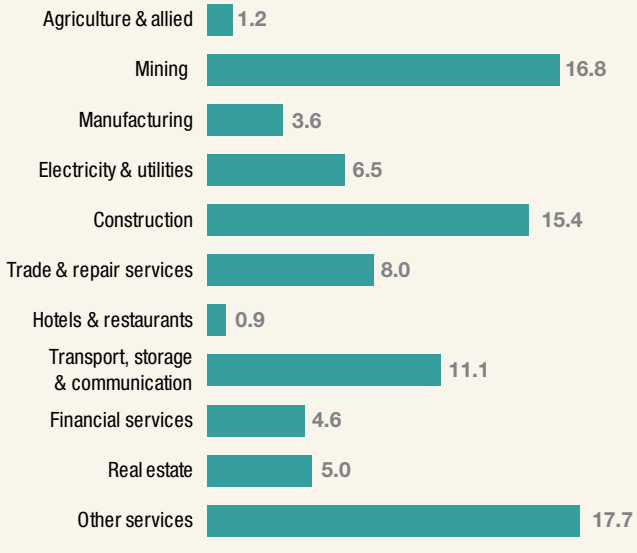
- Floriculture & horticulture
- Agro & food processing
- Biotechnology
- Information & Communication Technology
- Forest Products (herbs, spices, medicines)
- Tourism
- Handlooms & Handicrafts
- Tea
- Wool
- Bottling plants, wineries, breweries & mineral water

Source: State Industrial Policy 2003

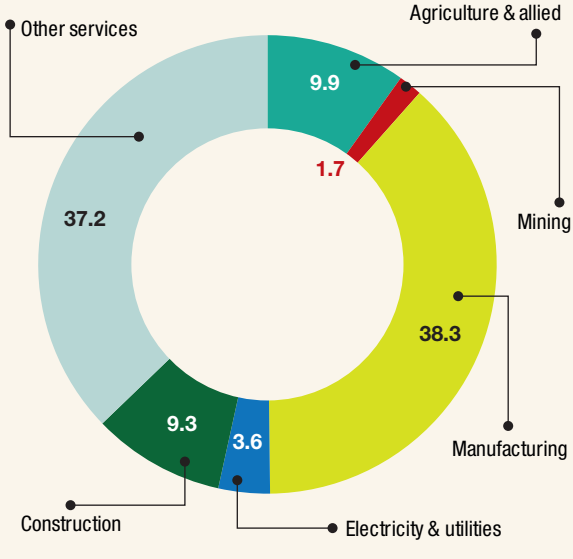
Incentives

- Exemption from central excise tax, income tax, entertainment tax, stamp duty etc.
- Several others schemes that offer lower CST, subsidy on capital investment, interest incentive, freight subsidy, stamp duty exemption, special state transport subsidy, infrastructure development grant , electricity bill reimbursement, vat reimbursement on manufacturing enterprises
- Reimbursement of 50-75% of the expense incurred on obtaining national/ internationally approved quality marks, installing pollution control equipment, registering their patents etc. to entrepreneurs
- For more details on the incentives and eligibility of the industrial units, please refer toIndustrial Policy, 2003, Uttarakhand

Growth in Gross Value Added, 3 year average ending 2015-16

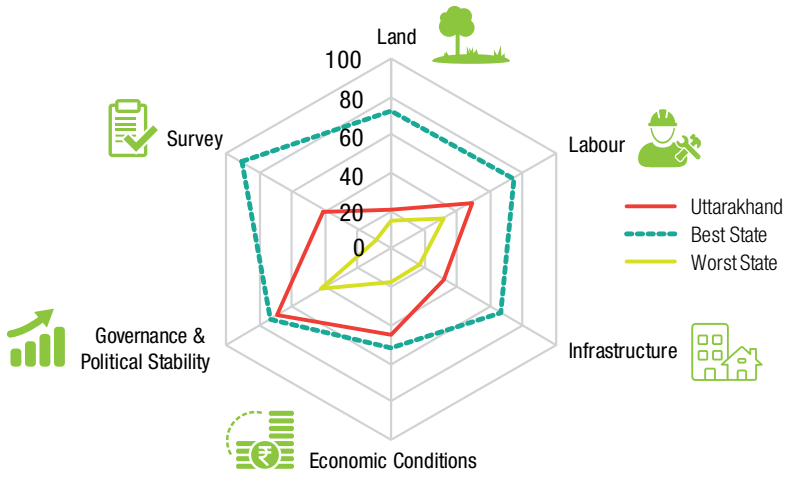


Sector-wise contribution in Gross Value Added, 2015-16



UTTARAKHAND RANK 12

States Performance on the Six Broad Pillars



Uttarakhand has slipped overall, from eight in N-SIPI 2016 to 12 in the 2017 update. It is among the top three in economy and governance pillars, but lags in land and Survey pillars.

Strengths

Uttarakhand does well on having fewer workers on contract and a good labour climate (least mandays lost and few contract workers). It is amongst the top in competitive tariff rates, per capita GSDP and bank branches in the state.

Weakness

The state lags behind in road and rail density, power shortages, and ground water availability. It also falls short on e-governance and business perceptions on land and governance.

LAND

		Rank
LAND - OVERALL	**21.5**	**20**
Land related stalled projects	41.3	13
Land available for industrial purpose	32.4	7
Digitized land records	10.5	17
Industrial parks in state	1.9	17

LABOUR

		Rank
LABOUR - OVERALL	**49.0**	**11**
Share of contract workers in total labour force	95.5	3
Least mandays lost due to strike	94.5	4
Average wages of salaried persons	68.3	12
Average wages in manufacturing sector	68.3	9
Share of labour force with secondary education and above	57.1	4
Share of workforce in manufacturing sector	32.7	12
Labour force participation rate	15.7	15
Percent of workforce having technical education	5.7	18
Seating capacity of ITIs	3.2	20

SURVEY

		Rank
SURVEY - OVERALL	**40.0**	**16**
Perception on business climate	61.3	10
Perception on labour	52.2	14
Perception on infrastructure	50.6	16
Perception on economic conditions	45.1	16
Perception on governance and political stability	31.0	17
Perception on land	0.0	21

INFRASTRUCTURE

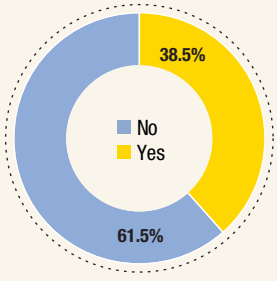
ECONOMY

GOVERNANCE AND POLITICAL STABILITY

SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land



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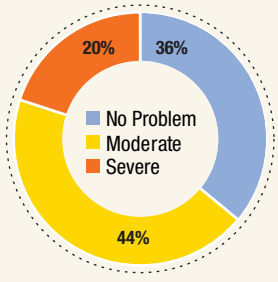
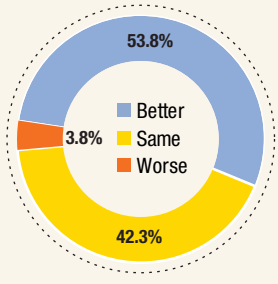
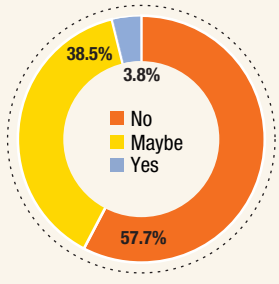


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

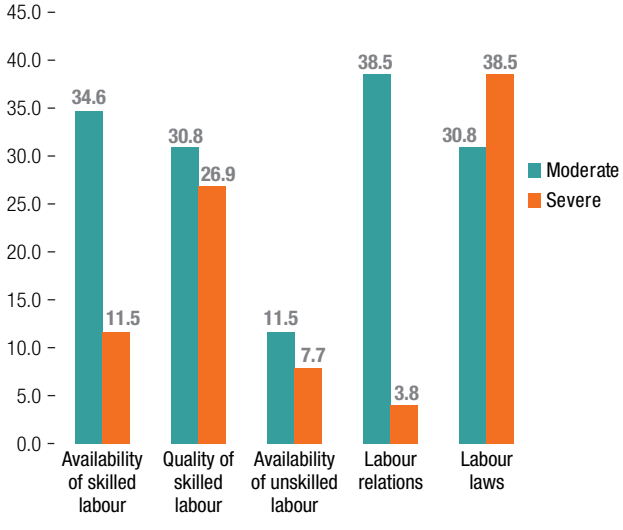


Percetage of respondents planing expansion in next five years



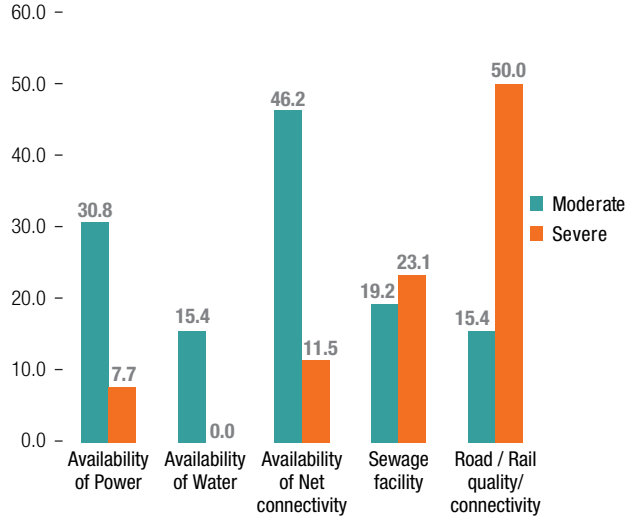
Labour related issues

% respondents finding these a moderate or severe problem



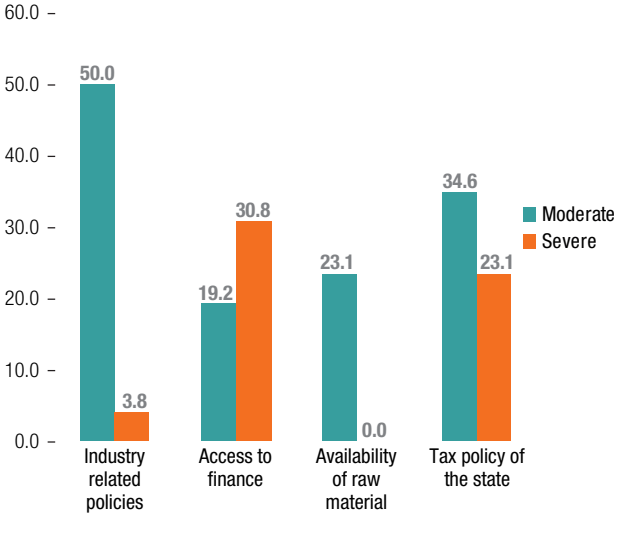
Infrastructure related issues

% respondents finding these a moderate or severe problem



Economy related issues

% respondents finding these a moderate or severe problem



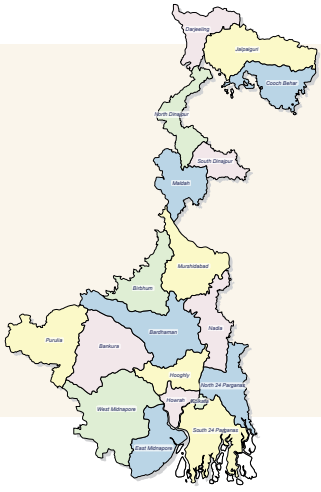
Governance related issues

% respondents finding these a moderate or severe problem

West Bengal

RANK

2017	21
2016	15



Statistics

Capital	Kolkata
Area (sq. km)	88,752
Location	Northern Central India
Per capita income (Rs.)	81714
Literacy Rate (%)	76.3

State Focus Sectors

- Urban Infrastructure and Housing
- Transport
- Food processing, horticulture & floriculture
- MSME and Textiles
- IT Software and Hardware
- Manufacturing
- Healthcare
- Education and Skills
- Energy and Infrastructure
- Hospitality & Tourism and Entertainment
- Financial Services

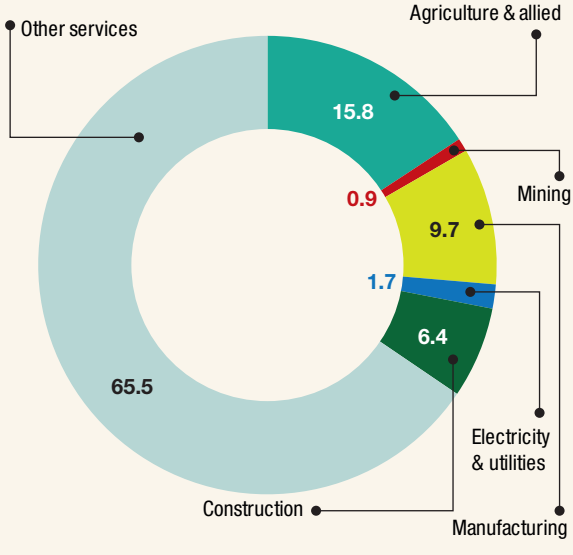
Source: State Industrial and Investment Policy, 2013

Incentives

- Fiscal incentives package for large-scale units to be set up in the state
- Attractive incentive packages for MSME in terms of State capital investment subsidy, interest subsidy on term loan, power subsidy, refund of VAT and CST
- The state government has also launched Scheme of Approved Industrial Park (SAIP), whereby any private player can establish an industrial park under the clause Special Purpose Vehicle within any part of the state .
- For more details on the incentives and eligibility of the industrial units, please refer to West Bengal Incentive Scheme 2013 for Micro, Small and Medium Enterprises and WBIDC website on incentive schemes for WBSISS

Growth in Gross Domestic Product, 3 year average ending 2014-15

Sector-wise contribution in Gross Domestic Product, 2014-15



WEST BENGAL

RANK 21

West Bengal is among the top ten in infrastructure, economy and governance pillars, but falls short in the labour and Survey pillars.

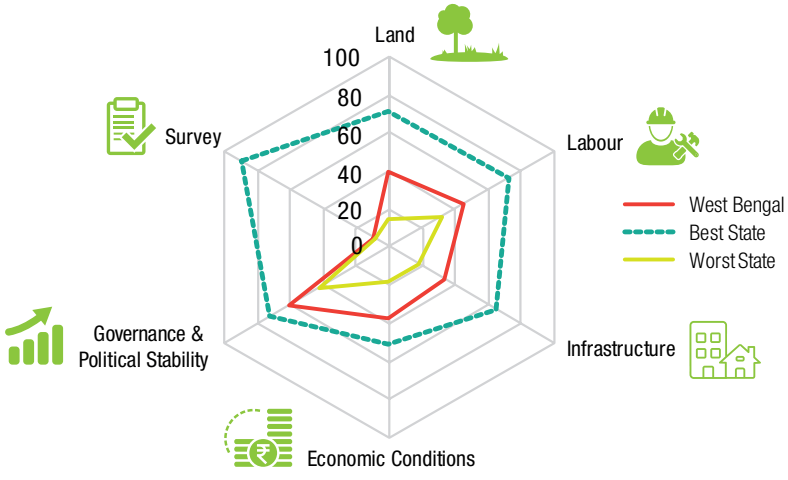
Strengths

The state's strengths are in digitized land records, high road and rail density and ground water availability. The state also does well on share of services in its state domestic product (GSDP) and high ratio of credit to GSDP (financial depth).

Weaknesses

The state's lags in technically educated workforce and a poor labour climate (high man days lost and more contract workers). It also lags in police strength and poor perceptions on labour and infrastructure.

States Performance on the Six Broad Pillars



LAND

		Rank
LAND - OVERALL	**39.4**	**11**
Digitized land records	100.0	1
Land related stalled projects	36.6	15
Industrial parks in state	20.6	10
Land available for industrial purpose	0.4	19

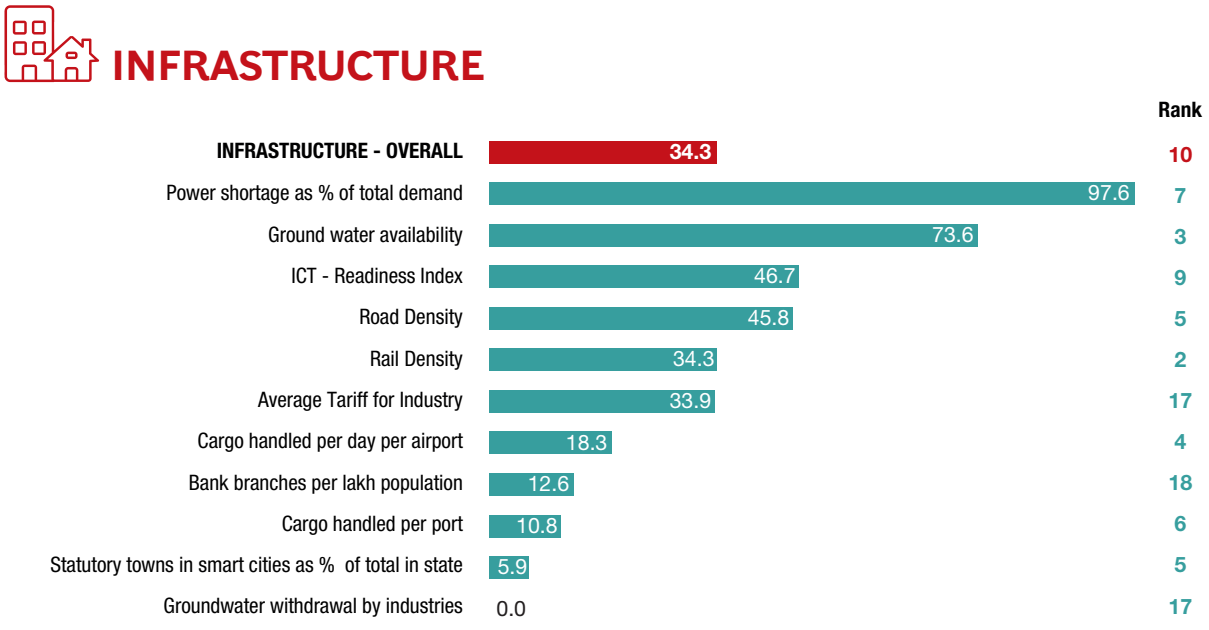
LABOUR

		Rank
LABOUR - OVERALL	**45.8**	**17**
Share of workforce in manufacturing sector	100.0	1
Share of contract workers in total labour force	70.5	15
Average wages of salaried persons	64.1	13
Average wages in manufacturing sector	62.4	12
Least mandays lost due to strike	45.3	19
Labour force participation rate	34.5	8
Share of labour force with secondary education and above	16.1	15
Percent of workforce having technical education	12.0	16
Seating capacity of ITIs	7.2	17

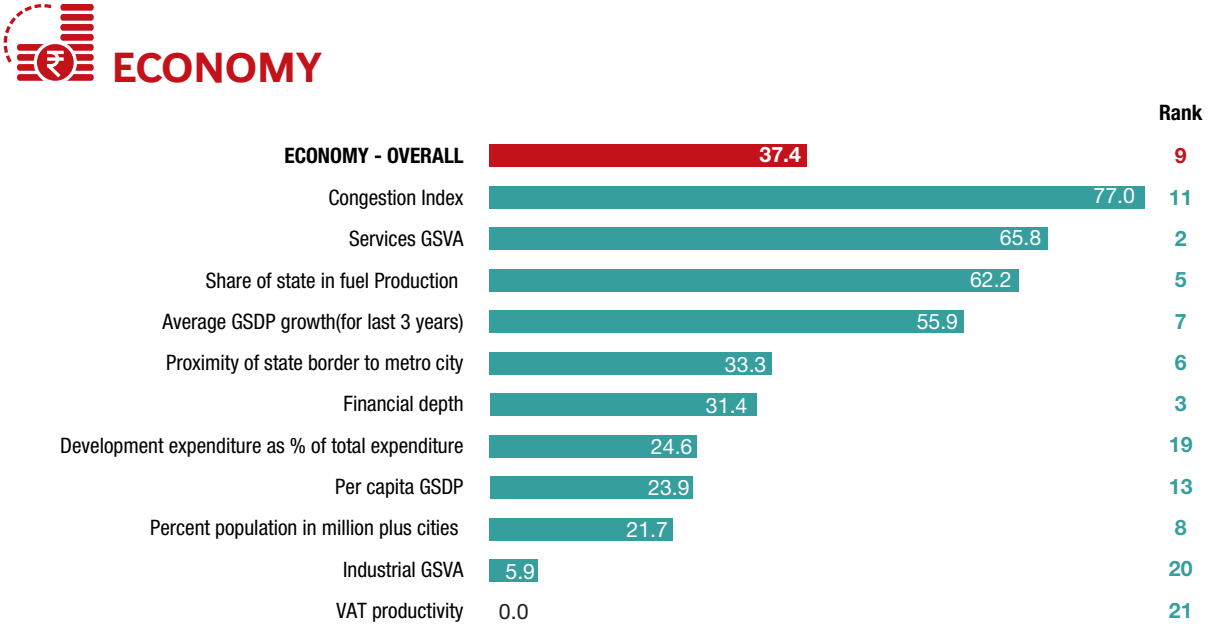
SURVEY

		Rank
SURVEY - OVERALL	**8.7**	**21**
Perception on land	29.8	13
Perception on business climate	22.6	19
Perception on labour	0.0	21
Perception on infrastructure	0.0	21
Perception on economic conditions	0.0	21
Perception on governance and political stability	0.0	21

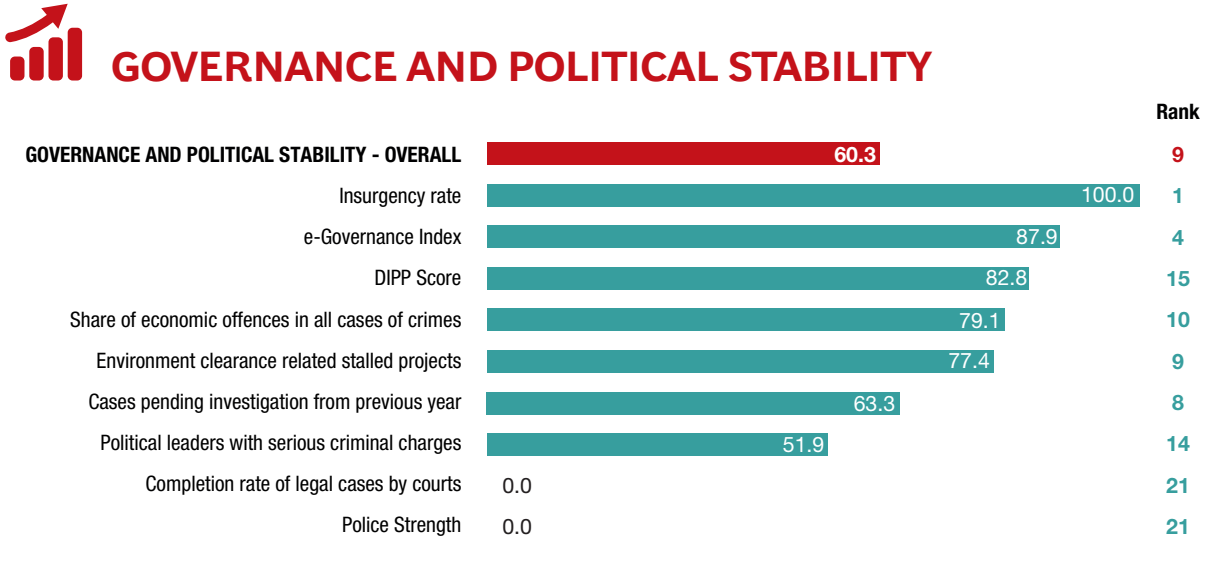
INFRASTRUCTURE



ECONOMY



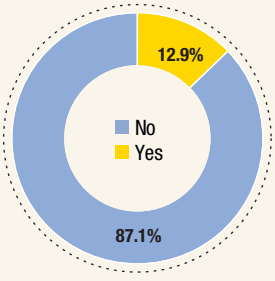
GOVERNANCE AND POLITICAL STABILITY



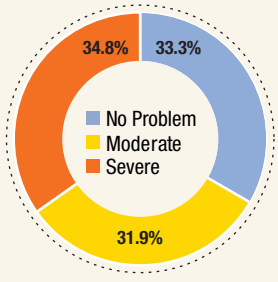
SURVEY RESULTS

Perceptions on land

Percentage respondents facing a problem in acquiring land

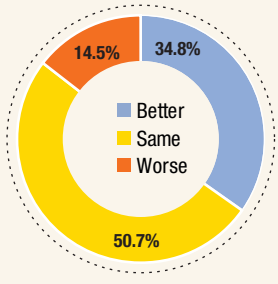


Percentage respondents facing problem in getting approvals for land

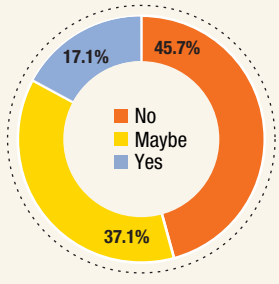


Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead

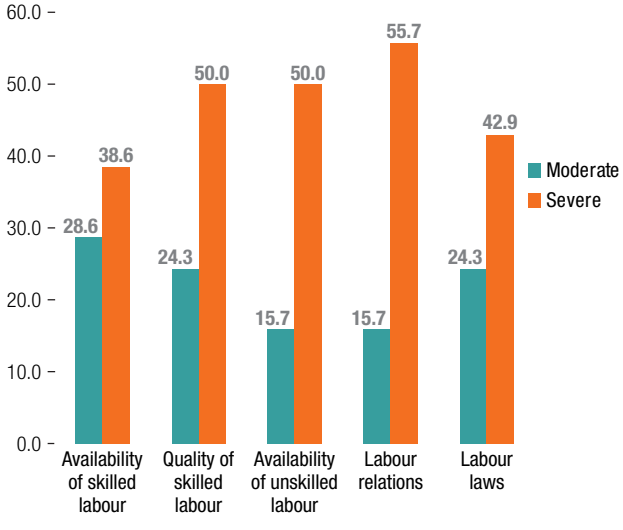


Percetage of respondents planing expansion in next five years



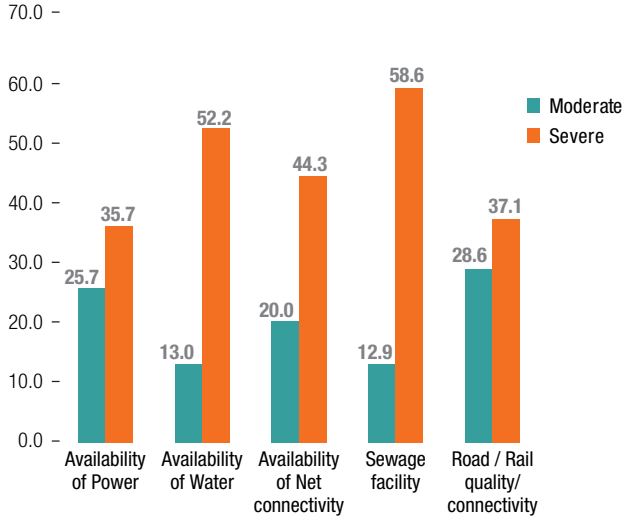
Labour related issues

% respondents finding these a moderate or severe problem



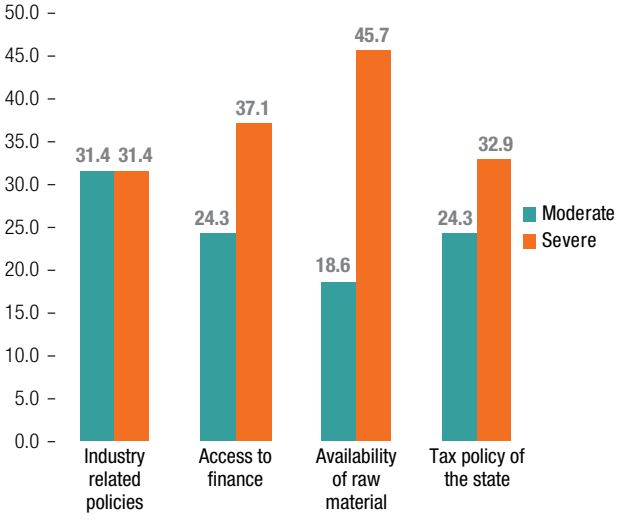
Infrastructure related issues

% respondents finding these a moderate or severe problem



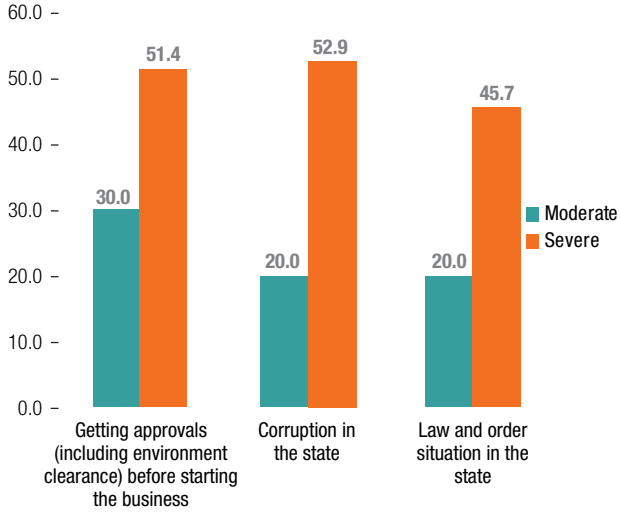
Economy related issues

% respondents finding these a moderate or severe problem



Governance related issues

% respondents finding these a moderate or severe problem



Appendix A
Methodology, Data and Indicators

A.1 OVERALL METHODOLOGY

The NCAER's State Investment Potential Index (N-SIPI) is constructed under six broad pillars that incorporate measures of labour, infrastructure, economic climate, the political and governance conditions, and perceptions of industrial climate using survey based data. Under each pillar there are a number of sub-indicators. The sub-indicators under each pillar are aggregated and the pillars are then put together to give a single composite investment score which is designed to give a holistic sense of how a state is positioned to encourage and attract investment. Details of the aggregation method, the pillars, and the sub-indicators under each pillar are described in the sections below.

Standardizing the data

The N-SIPI first makes the raw data comparable across states by using a reference point which is usually the All-India average or population. The indicators are then normalized or transformed into a unit-less index lying between 0 and 100 by using the Min-Max Transformation. The Min-Max transformation is applied as it preserves order and relative distance. The "distance to the frontier" in this transformation takes on an intuitive maximum value. This methodology is similar to the Global Competitiveness Index (GCI) published by the Global Economic Forum.

The Index $\left(S_{ij}^{k}\right)$ for each of the sub-indicators (variables) across 21 states for each of the six pillars is:

$$S_{ij}^{k} = \frac{X_{ij}^{k} - \min(X_{1j}^{k}, X_{2j}^{k}, \ldots . X_{30j}^{k})}{\max(X_{1j}^{k}, X_{2j}^{k}, \ldots . X_{30j}^{k}) - \min(X_{1j}^{k}, X_{2j}^{k}, \ldots . X_{30j}^{k}}$$

where i=1,2,…,21 represents the number of states, j=1,2,…,n represents the number of sub -indicators in each pillar, and k=1,2,…,6 represents the six pillars. Higher values of S_ij^k reflect better performance. For some indicators where higher values represent worse performance (for instance crime), the numerator has been adjusted to reflect the distance of the observed value from the maximum value using the following Index:

$$S_{ij}^{k} = \frac{\max\left(X_{1j}^{k}, X_{2j}^{k}, \ldots . X_{30j}^{k}\right) - X_{ij}^{k}}{\max(X_{1j}^{k}, X_{2j}^{k}, \ldots . X_{30j}^{k}) - \min(X_{1j}^{k}, X_{2j}^{k}, \ldots . X_{30j}^{k})}$$

Weighting

There are six broad pillars under which the N-SIPI is constructed. Of these, five broad pillars (labour, infrastructure, economic conditions, governance and political stability, and survey) are given equal weight, and the sixth pillar (land) is given one half the weight. The land pillar is a new addition in N-SIPI 2017, and, given the challenges in getting comparable and reliable state-wide data, has fewer sub-indicators compared to the other pillars. Within each of the six pillars, equal weights are given to each of the sub-indicators. Some sub-indicators have two or more components. In this case, the sub-indicator weight is evenly distributed into its further components. The weighted arithmetic mean is used to aggregate the sub-indicators under each of the six pillars for each of the 'i' states.

$$P_{i}^{k} = \frac{\sum_{j=1}^{n} w_{j} S_{ij}^{k}}{n}$$

where w_j represents the weight for each sub-indicator, k=1,2,…,6 represents the six pillars and n is the number of sub-indicators under each pillar

The weighted geometric mean is used to aggregate the scores across the six pillars to get the final Composite Index (CI_i) for each state i. The geometric mean is used as it reduces the level of substitutability between the six broad pillars and at the same time ensures that a 1 percent decline in one pillar, say, labour, has the same impact on the overall Index as a 1 percent decline in the infrastructure or economic index. Thus, as a basis for comparisons of potential, this method helps smooth the intrinsic differences across the pillars better than the simple average.

$$CI_{i} = \exp\left[\frac{\sum_{k=1}^{6} w_{k} \ln P_{i}^{k}}{\sum_{k=1}^{6} w_{k}}\right]$$

where k=1,2,…,6 represents the P pillars and w_k represents the weight for each of the six pillars.

1 This method is similar to the United Nations Human Development Index (HDI) which has been using the geometric mean to aggregate across its three main dimensions – income, education and health (life expectancy) - since 2010.

The Rankings

The industry survey was conducted in 21 states. Among the seven North-Eastern states, , only Assam was covered. Other states not covered by surveys include Goa, Jammu and Kashmir and Sikkim. The Index is called N-SIPI 21 as it covers 21 states .

A.2 THE SIX PILLARS AND SUB-INDICATORS

The table below shows the six broad pillars, along with the list of sub-indicators under each pillar. The table also provides the year of data availability and source of data. This is followed by detailed definition for each of the variables and the reason for incorporating the respective sub-indicator in the index.

Table A.1 N-SIPI 21: List of sub-indicators with source and year

Pillars	Importance	Code	Sub-Pillars	Status	Source	Year
Land	Government effectiveness	LN1	Digitized Land Registration		Department of Land Resources, Minstry of Rural Development, GOI	2017
		LN2	Share of land stalled projects (as a percentage of total stalled projects in that state)		Capex database, Centre for Monitoring Indian Economy Pvt. Ltd. (CMIE)	2017
	Availability	LN3	Land availability/ land acquired for Industrial purpose		State Industrial Development Corporations; Directorates; Ministry of Micro, Small and Medium Enterprises	2015
	Government policy	LN4	Industrial parks (SEZs and NIMZs)		Ministry of Commerce and Industry	2015
Labour	Availability	L1	Labour force Participation Rate (per 1000) for persons of age 15-59 years		Employment-Unemployment Survey 2015-16	2015-16
	Quality	L2	Percent of population with above secondary level education		NSS, 71st round, Education	2015-16
		L3	Number of persons in technical courses as a percent of total population			2015-16
		L4	Seating capacity of ITI as a percent of total ITI seating capacity in India		DGT, Ministry of Skill Development and Enterprise	2014
	Competitiveness	L5	Average wages of Wage Salaried persons aged 15 years and above		Employment-Unemployment Survey, 2015-16	2015-16
		L6	Average wages in Manufacturing sector, ASI in rupees thousand		Annual Survey of Industries	2014-15
		L7	Share of workforce in Manufacturing in percent, workers aged 15 years and above and Industry classification NIC 2008		Employment-Unemployment Survey, 2015-16	2015-16
	Labour Climate	L8	Mandays lost due to strike, normalized by total number of mandays in 21 states		PIB	2013
		L9	Share of contract workers (aged 15 years and above) in total Labour force		Employment-Unemployment Survey, 2015-16	2015-16

2 In the first edition of N-SIPI in 2016, two rankings were reported. N-SIPI 21 covered the same 21 states as in this report and was based on five pillars. The other ranking, N-SIPI 30, covered 30 states and was based on four pillars. The fifth pillar based on surveys was not included in the rankings. For more details, see "NCAER State Investment Potential Index", March 2016.

Pillars	Importance	Code	Sub-Pillars	Status	Source	Year
Infrastructure	Connectivity	I1	Rail Density (length per 1000 sq km)		Ministry of Railways, Govt. of India	2015
		I2	Road Density (length per 1000 sq km) -Note : This is Total roads (not surfaced only)		Ministry of Road Transport and Highways, Govt. of India	2015
		I3	Cargo handled per day per airport (tonnes) as percent of total cargo handled in 21 states		Airports Authority of India	2015-16
		I4	Cargo handled (million tonnes) per port as percent of total cargo handled in 21 states		Ministry of Shipping, Road Transport & Highways, Govt. of India	2014-15
	Competitiveness	I5	Average Tariff for Industry (Rs/KwH)		Annual report of state power utilities and Electricity	2013-14
		I6	Power shortage (as % to Total Demand)		Ministry of Power, Govt of India	2015-16
	Access	I7a	Net Annual Ground Water Availability (in mcm) per 1000 Hc as % of 21 states		Ground Water Yearbook 2010-11, Table 3	2011-12
		I7b	Groundwater withdrawal by industries as % of 21 states		Lok Sabha Unstarred Question No. 137, dated on 02.02.2017	2012-15
		I8	ICT - Readiness Index		NCAER	2013
		I9	Bank branches per lakh population		Reserve Bank of India	2015
	Growth potential	I10	Number of Statutory Towns in Smart cities as % to Total statutory towns in state		Ministry of Urban Development; Census of India, 2011	2015
Economy	Macro fundamentals	E1	Industry sector GSVA as % of total GSVA		Ministry of Statistics and Programme Implememntation	2014-15
		E2	Services sector GSVA as % of total GSVA		Ministry of Statistics and Programme Implememntation	2014-15
		E3	Per capita GSDP		Ministry of Statistics and Programme Implememntation	2014-15
		E4	Average GSVA growth (for latest 3 years)		Ministry of Statistics and Programme Implememntation	2015-16
	Market Demand	E5	Share of million plus cities in state's population		Census	2011
		E6	Proximity of state border to metro city		Google Maps	2015
		E7	Congestion Index		Central Pollution Control Boaed	2016
	Government Policies	E8	Development expenditure as % of State's total expenditure		RBI State Finances	2014-15
		E9	VAT productivity		RBI (VAT), GSVA (MOSPI).	2014-15
	Natural Resources	E10	Share of state in fuel production		Indian Bureau of Mines	2012-13
	Finance Resources	E11	Financial Depth		RBI (Credit), MOSPI(GSDP)	2014-15

Colour Key

Updated with definition/source change

Updated with latest available figures

New series

No change

Pillars	Importance	Code	Sub-Pillars	Status	Source	Year
Governance	Crime	G1	Number of economic offences per lakh population in each state		National Crime Records Bureau (NCRB)	2015
	Corruption	G2	Cases pending investigation from previous year cases in total cases of investigation under prevention of corruption and related acts		National Crime Records Bureau (NCRB)	2015
	Judiciary	G3	Weighted average of completion rate of cases under IPC and SLL by courts		National Crime Records Bureau (NCRB)	2015
	Political Equity	G4	Ratio of winner candidates with serious criminal charges (Assembly and Lok Sabha average)		Association of Democratic reforms, Election Watch,Lok Sabha & State Assemblies	2017
	Law & order	G5	Police Strength (per lakh population)		Bureau of Police Research & Development (BPR&D)	2016
		G6	Share of state in total number of incidences of LWE or insurgency in the country		Ministry of Home Affairs, GOI	2014
	Government Efficiency	G7	Share of environment related projects (as a percentage of total stalled projects in that state)		Capex database, Centre for Monitoring Indian Economy Pvt. Ltd. (CMIE)	2017
		G8	E-Governance Index		NCAER	2011
		G9	DIPP Score		DIPP, Government of India	2016
Survey	Industry Perception	S1	Land		NCAER Survey	2017
		S2	Labour			2017
		S3	Infrastructure			2017
		S4	Economic conditions			2017
		S5	Governance & Political stability			2017
		S6	Business climate			2017

A.3 DEFINITION AND SIGNIFICANCE OF SUB-INDICATORS

This section discusses the sub-indicators listed above in greater detail, along with identifying reasons for incorporating these indicators in the respective pillars. The sub pillars are categorized as positive (+) and negative (-) indicators, based on the possible perception by the industry. Positive indicator indicates an advantage to the industry whereas a negative indicator exhibits a limitation/disadvantage to the industry.

This section discusses the sub-indicators listed above in greater detail, along with identifying reasons for incorporating these indicators in the respective pillars. The sub pillars are categorized as positive (+) and negative (-) indicators, based on the possible perception by the industry. Positive indicator indicates an advantage to the industry whereas a negative indicator exhibits a limitation/disadvantage to the industry. .

LN LAND

LN1 (+) Digitization of Land/Property Registration

Digitization of registration entails information on the number of Sub Registrar Offices (SROs) in state that have digitised the process of registration, as a percentage of total SROs in the state.

Significance: Modernization and digitization of land registries is expected to enhance third party access to the information thereby limiting the possibility of land related disputes and increasing the volume of land transactions. This is expected to reduce the rigidities in the land market that otherwise prove to be a roadblock for investment projects, domestic and foreign both.

LN2 (-) Ratio of Land related stalled projects

The number of projects stalled due to land acquisition problem was calculated as a percentage of total stalled projects.

Significance: Indicates the degree to which land acquisition problems could potentially obstruct projects.

LN3 (+) Land availability/ land acquired for Industrial purpose

Land acquired by the Government for industrial purpose as a percent of non-agricultural land in the same state. Non-agricultural land is defined as total geographical area less agricultural land/cultivable land/ arable land in the state.

Significance: Land is an important factor of production and the availability of government acquired land facilitates ease of doing business and is attractive for making investment decisions.

LN4 (+) Industrial parks (SEZs and NIMZs)

Industrial parks include Special Economic Zones (SEZs) and National Investment and Manufacturing Zones (NIMZs).

This indicator is defined as the number of industrial parks in a state as a percent of industrial parks in all 21 states.
Significance: Government initiatives to promote FDI investment and investment in manufacturing industries will generate additional economic activities, create more employment opportunities among both skilled and unskilled workers as well as spur the development of infrastructure facilities.

L LABOUR

L1 (+) Labor force Participation Rate

The labour force participation rate (per 1000) is the ratio between the labour force and the overall size of the working age population, i.e. persons in the age group of 15 years.
Significance: The labour force participation rate provides a snapshot of the section of the population that is economically active and can be tapped into for productive activities.

L2 (+) Population with above secondary level education

Percentage of population with at least secondary level of education is reported here using NSSO 71st round on Education in 2015-16.
Significance: Educated workforce expands economic opportunity for the residents of a state and improves employment opportunities through the supply of skilled labour force.

L3 (+) Number of persons in technical courses

Information on whether the household member is receiving or has received technical training is collected from NSSO 71st round on Education, and the percentage of individuals who received technical training out of total population
Significance: Workforce with technical training adds to the pool of skilled labour force increasing chances of employability and value creation in the industry.

L4 (+) Seating capacity of ITIs

Total seating capacity at Industrial Training Institutes (ITIs) within each state is divided by the total seating capacity in India with data provided by Ministry of Labour and Employment, Government of India.
Significance: Total seating capacity at ITI within a state signifies availability of technically trained workforce for related industries, aiding recruitment of technical staff for businesses.

L5 (-) Average wages of Wage Salaried persons

Average wage of wage salaried persons aged 15 years and above is estimated using Employment-Unemployment Survey of 2015-16 by averaging the number of workers in each wage bracket.
Significance: Data related to wage rate of educated workforce helps in identifying variation in wage cost of skilled labour for businesses across different states

L6 (-) Average wages in the Manufacturing sector

Average wage of labour working in the Manufacturing sector is sourced from the annual report of Annual Survey of Industries, 2014-15.
Significance: Wage rate in the manufacturing industry is used to analyze variations in labour cost across states.

L7 (+) Share of workforce in manufacturing sector

Share of workforce in Manufacturing in percent, workers aged 15 years and above and Industry classification NIC 2008 is sourced from Employment Unemployment survey of 2015-16.
Significance: The ratio reflects the variations in the rate of labour force absorption in the manufacturing sector across different states.

L8 (-) Man-days lost in strikes and lockouts

Data on Mandays lost due to strike, normalized by total number of mandays, is obtained from Press Information Bureau article, 2013.
Significance: This indicator is helpful in observing labour climate and industrial relations in a state.

L9 (-) Number of contract workers

Contract workers aged 15 years and above in Labour force in percent are obtained from Employment-Unemployment Survey of 2015-16
Significance: Indicator of labour climate and flexibility in labour laws in each state.

I INFRASTRUCTURE

I1 (+) Rail Density

Rail density (route km per population) is expressed in terms of route kilometers per population.
Significance: Rail density indicates the ease of movement of goods and passengers for economic activity.

I2 (+) Road Density

Road Length per 1000 square km of geographical area.
Significance: Higher road density paves the way for greater connectivity for trade and other economic activity.

I3 (+) Cargo handled per day per airport (in tonnes)

Cargo is the goods or produce transported generally for commercial gain by ship or any other mode of transport.

Significance: Cargo handled at airport reflects the capacity of the airport to handle cargo load and the nature of airport activity in terms of trade.

I4 (+) Cargo handled per port (in million tonnes)
Cargo handled at the port comprises of cargo loaded, cargo unloaded and Trans-shipment.
Significance: Cargo handled at a port indicates ease of connectivity by sea and the capacity of a port for handling economic and trade related activities.

I5 (-) Average electricity tariff for Industry (Rs/KwH)
The average tariff represents the tariff charged for sale of electricity per unit of electricity sold by the utilities to various industries.
Significance: Average tariff reflects the cost of electricity, which is an important input for production of goods and services.

I6 (-) Power shortage (as percentage of Total Demand)
Actual power supply position in terms of Energy Requirement vis-à-vis Energy Availability of various States/ Systems during the year 2014-15.
Significance: Indicator helps in observing states' capability to handle power availability for a new establishment.

I7 (+) (a) Net Annual Ground Water Availability (in mcm) per 1000 Hc
Ground water levels are measured four times a year by Central Ground Water Board, Ministry of Water Resources. Information on ground water levels and chemical quality are collected through representative sampling method across the country.
Significance: Water availability (a stock) is crucial for many industries. Hence, availability of ground water indicates conducive environment for businesses to operate.

I7 (+) (b) Ground Water Withdrawal (as percentage of All-India)
Total withdrawal of ground water for 3 years (FY2012 to FY2015) by industries after obtaining the No Objection Certificate (NOC) for 3 years covering FY2012 to FY2015
Significance: Withdrawal of ground water (a flow concept) indicates both the level of industrial activity as well as the actual use and availability of water by industries.

I8 (+) ICT-Readiness Index
This is a composite index prepared by NCAER consisting of two components: readiness to use and readiness to produce. The former includes basic literacy, access to telephones, computers, and internet, while the latter takes into account education, specifically technical education at the higher level that would capture the potential to enhance ICT in business. The index was estimated using Principal Component Analysis, using data from primary surveys.
Significance: The index is an indicator for the ability to pursue value creation opportunities for inclusive economic development facilitated by ICT.

I9 (+) Bank branches
Number of bank branches per lakh population.
Significance: Indicates access to banking and payment system.

I10 (+) Statutory Towns in Smart cities as percentage of total in a state
As number of statutory towns has used by the Government as a criterion for identifying Smart Cities, we have used the information for number of statutory towns being covered under the Smart Cities project and the total number of statutory towns in the state . A 'smart city' is defined as an urban region that is highly advanced in terms of overall infrastructure, sustainable real estate, communications, and market viability. It is a city where information technology is the principal infrastructure and economic development and activity is sustainable and driven by market forces of supply and demand.
Significance: The indicator has been incorporated in order to reflect potential access to markets for business and investment purposes.

E ECONOMIC CONDITIONS

E1 (+) Industrial GSVA (Gross State Value Added)
Percentage share of state's Industrial GSVA in state's overall GSVA.
Significance: Indicates contribution of the industrial sector towards state economic activity measured by state GSVA.

E2 (+) Services GSDP
Percentage share of state's Service GSVA to state's overall GSVA.
Significance: Indicates contribution of the service sector towards the state GSVA.

E3 (+) Per capita GSDP
GSDP per population
Significance: Indicates state economic activity during the year after taking care of the size (population) of the state.

3 Refer India: E-readiness Assessment Report 2011-12 For States and Union Territories

This is done to offset variation in GSDP caused by size and population of the state.

E4 (+) Average GSDP growth (for last 3 years)

Average of growth rate of GSDP during the previous five years.

Significance: Indicates how the GSDP has grown over time, in terms of direction and magnitude of change.

E5 (+) Share of million plus cities in State's population

This is defined as the proportion of million plus cities population in a state over total state's population. There are 53 urban agglomerations in India with a population of 1 million or more as of 2011.

Significance: These cities are important demand centers for the states and also essential for stimulation of economic efficiencies.

E6 (+) Proximity of state border to metro city:

This indicator was prepared by estimating whether each state had any town, village, or city lying within 200 kilometres of metro cities. For each metro city lying within the area, the state got a score of 1. The metro cities taken in the computation of this indicator are New Delhi, Kolkata, Chennai, Bangalore, Hyderabad and Mumbai.

Significance: The indicator reflects proximity of state border to a metro city, thus indicating access to market for conducting economic activities.

E7 (-) Congestion Index:

To estimate congestion, level of air pollution was chosen as the proxy indicator. Level of PM10 or particulate matter up to 10 micro meter in size was taken as the indicator for air pollution. As prescribed by Central Pollution Control Board, 60ug/m3 of PM10 was made the threshold level for air pollution. Anything above 60ug/m3 is harmful for the atmosphere. After taking deviations of values of PM10 for each state from this threshold level, min-max approach was employed to normalize the values.

Significance: Higher level of congestion could potentially be deterrent for further economic activity.

E8 (+) Development Expenditure

Defined as state development expenditure as percentage of total state expenditures. State expenditure on social and economic services constitute development expenditure, comprising of expenditure on education, sports, art and culture, food storage and warehousing, relief on account of natural calamities, and rural development.

Significance: Indicates state welfare activities and efforts of the state government in promoting sustainable economic development across all strata of the society.

E9 (+) VAT Productivity:

The VAT productivity ratio, also called the "efficiency ratio", indicates the percentage yield for each one percentage point of the VAT rate.

The ratio was calculated in the following steps:

1. The VAT/Sales Tax revenue figures for each state were divided by commercial GSVA figures.
2. The above ratio was then divided by the standard VAT rate for each state to obtain the VAT Efficiency Ratio.
3. The commercial GSVA series for each state were computed by subtracting from GSVA the Agriculture and Allied GSVA figures for the respective states.

Significance: Lower VAT productivity indicates both design (difference in rates, exemptions, and zero-rating) and administrative inefficiencies. A higher number indicates a more efficient VAT with fewer exemptions.

E10 (+) Financial Depth:

The ratio is computed by dividing the outstanding credit of scheduled commercial banks in a year by the Gross State Domestic Product (GSDP) in current prices for the respective year for each Indian state.

Significance: Credit-GSDP ratio measures financial depth, capturing the size of financial sector relative to the economy.

G GOVERNANCE AND POLITICAL STABIITY

GI (-) Economic Crime Rate under IPC (Indian Penal Code) – Incidence of economic crime per 1, 00,000 Population:

Indian Penal Code is the main criminal code of India. Economic offences cover tax evasion, evasion of excise duty, bank frauds, insurance frauds, credit cards, fraud, etc.

Signif icance: Higher economic offenses indicate weak enforcement mechanisms and lack of effective regulatory structures, eventually creating an environment that is less conducive for exploring further investment opportunities.

4 As per the Smart City Guidelines issued by the Government, the 100 Smart Cities have been distributed among the States and UTs on the basis of an equitable criterion. The formula gives equal weightage (50:50) to urban population of the State/UT and the number of statutory towns in the State/UT.

5 In most cases, the cities chosen under the 'Smart Cities' project cover a single statutory town comprising of one Municipal Corporation. Some exceptions to this rule are Vishakhapatnam, Guwahati, Aizawl, Kohima, and Raurkela.

G2 (-) Cases pending investigation from previous year as per cent of total cases of investigation under prevention of corruption and related acts:

The data has been taken from 'Statement of Cognizable Crimes Registered & Their Disposal by Anti-corruption and Vigilance Departments of States & UTs under Total offences under Prevention of Corruption Act 1988 during 2014' . Cognizable crimes refer to heinous acts of violence where the police can take cognizance of the offense on its own and permission of the court to the police to investigate the crime is implicit.

Significance: Indicates the efficacy of the judiciary system in handling serious criminal offenses. A higher number of pending cases is a deterrent for both social and economic activity.

G3 (+) Completion rate of legal cases by courts

Completion Rate during 2014 for each category is defined as the ratio of cases in which trial was completed during the year to total number of cases for trial during the year . A weighted average of crimes under IPC (Indian Penal Code) and SLL (Special and Local Laws) is considered with weights reflecting the proportion of total number of cases for trial in each category.

Significance: Indicates the efficacy of the judiciary system.

G4 (-) Political leaders with serious criminal charges

Number of winner candidates with serious criminal charges is taken as percentage of total winner candidates for Assembly and Lok Sabha elections.

Significance: Enterprises base their investment decisions on their perceived view of the investment climate, quality of legislature, and the government's performance. A higher ratio would bring into question the credibility of the respective government(s) in ensuring stability in terms of law and order situation in a state including protection of property rights.

G5 (+) Police Strength

Police strength is defined as total number of police personnel per one lakh of population.

Significance: A higher figure could potentially indicate better enforcement mechanism with more personnel readily available for maintaining law and order stability within the state.

G6 (-) Insurgency rate

Percentage share of total number of incidences of LWE and insurgency in the state compared to all such cases reported across the country.

Significance: Increase in such activities can indicate disruptive environment for businesses, and threats to property rights.

G7 (-) Ratio of Environment related stalled projects

The number of projects stalled due to lack of clearance was calculated as a percentage of total stalled projects .

Significance: Indicates the degree to which environment clearance problems could potentially thwart projects.

G8 (+) E-Governance index

The NCAER E-Governance index relates to readiness through websites, government-to-citizen relationship, degree of decentralization, e-services, and e-Governance. The index has been constructed using Principal Component Analysis. The index was estimated using Principal Component Analysis, using data from primary survey .

Significance: The index captures the ability to skillfully use technology at the level of various state and local governments.

G9 (+) DIPP Score

The DIPP (Department of Industrial Policy and Promotion) score ranks states based on an assessment that was conducted during the first half of 2015 to take stock of reforms implemented by states based on an agreement between DIPP and State and Union Territory governments on December 29, 2014. The ranking covered parameters related to the ease of setting up of business, allotment of land, labour reforms, and procedure for environmental clearance.

Significance: The score provides a pathway for improving the business environment in the respective state and for creating employment opportunities for the labour force.

A.4 SURVEY METHODOLOGY

Coverage of the survey

The sample survey covered 21 States including the union territory of Delhi. The survey focused only on manufacturing and service sectors. The survey was carried out between April and May 2017

The alphabetical list of states covered is as follows: Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana,

6 The Prevention of Corruption Act, 1988, is an Act of the Parliament of India enacted to combat corruption in government agencies and public sector businesses in India.

7 Cases in which trial was completed = Cases Convicted + Cases Acquitted or Discharged

Total no. of cases for trial during the year = Cases pending trial from the previous year + Cases sent for trial during the year - No. of cases withdrawn by the Govt. - No. of cases disposed by plea bargaining.

Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, NCT of Delhi Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand, West Bengal

Sampling Frame

Manufacturing industries having at least 10 crore of turnover and service industries having at least 5 crore of turnover were selected as sampling units. These cut offs were a major consideration while deciding the sampling frame. The CMIE Prowess was taken as the source for the sampling frame in this survey. The companies qualifying in the above cut-off criteria were included in the frame. CMIE was also used for the N-SIPI survey in 2016.

Sample Design

The sampling design used in the survey was a stratified two-stage sampling with the states as strata, districts as Primary Sampling Units (PSUs) and industries/companies as Secondary Sampling Units (SSUs). However, the estimate for each state is developed separately for ranking purposes. The distribution of industries in terms of number of industries in each state is highly skewed. Most of the industries were found to be concentrated in a few (2 to 4) districts in most of the states. Therefore, on practical considerations, largest two districts were selected at the first stage of selection. Allocated number of industries/companies were selected by circular systematic sampling in the second stage of selection.

Sample Size

Total sample size of Industries/Companies was taken as 1030. The sample size was chosen based on cost considerations and previous years' experience. This sample was allocated to different states in proportion to state GDPs with a constraint that each state should get an allocation of at least 30 sampling units. As already described, two districts with largest number of industries/companies were chosen for further selection of industries/companies. Sample size for each district was determined in proportion to the number of companies in the district.

Slight adjustments were needed in smaller States like Jharkhand and Uttarakhand, where more than two districts had to be included to meet the criterion of having a sample size of at least 30 companies in each state.

The distribution of sample size for all states is given in a table at the end of this note.

Selection of SSUs (industries/companies) in selected districts

Within each district, all companies are arranged according to zip-codes. This amounts to geographical clustering of companies according to zip-code. Within zip-codes, companies are then alternately sorted into ascending and descending order of sales. From this sorted list, companies are then selected following circular systematic sampling. The sorting of companies as described above, followed by circular systematic sampling amounts to implicit stratification, which brings in the advantages of cost as well as variance efficiency for the sampling design.

Parameters to be estimated

In the present survey, parameters to be estimated are mostly in the form of ratio and proportions. The responses to each question are categorical in nature. For example, in the case of questions relating to land, the responses are either in the form of Yes/No, or in the form of categories for levels of difficulty. For questions relating to labour, infrastructure, economy and governance, all the questions have responses belonging to one of the alternatives ranging from none, little, medium, high to severe. Similarly, each of the responses pertaining to business environment also belong to one of the several alternative categories. Statistically, for estimation purposes, the problem is to estimate the proportion of responses falling in individual categories. Further for interpretation purposes, one may be interested in pooling some of these categories. In N-SIPI 2017, the categories were pooled into three, viz no problem, moderate problem and severe problem.

Estimation procedure

According to the present sampling design, within each State, samples are selected in two stages. First, two districts are selected and then in each district allocated number of sampling units of industries/companies are selected with equal probability following circular systematic sampling.

Since two largest districts are selected purposively, random sampling is followed only in the selected districts. Estimates for individual districts are developed on the basis of random systematic samples and results are the pooled for the two selected districts for the State.

In the tth selected district, consider a population of size N^t, partitioned into k categories of sizes

$$N_i^t, i = 1, \ldots k$$

8 Refer India: E-readiness Assessment Report 2011-12 For States and Union Territories

The proportions $P_i^t = {}^{N_i^t}/_{N}$ are to be estimated.

Let the sample in the t[th] district be of size n[t], with n_i^t tunits belonging to i[th] category. Define the sample proportion $p_i^t = {}^{n_i^t}/_{N}$. Since, a circular systematic sample is an equal probability selection method (EPSEM), the sample proportion p_i^t is an approximate pooled unbiased estimator of p_i^t.

Since the $N_i's$ for the two selected districts are not necessarily known, an estimate for the proportion for the two districts (which is an estimate for the State) based on the pooled sample is

$$\hat{P}_i = \frac{n_i^1 + n_i^2}{n^1 + n^2}$$

Estimation of standard errors: A simpler and approximate expression of the estimator for variance for estimator $\tilde{P}_i$ is given as follows:

$$V\left(\tilde{P}_i\right) = \frac{1}{4}\left(\frac{P_i^1 Q_i^1}{n^{(1)}} + \frac{P_i^2 Q_i^2}{n^{(2)}}\right)$$

where $P_i^1 = \frac{N_i^1}{N_i}$; $\quad Q_i^1 = 1 - P_i^1$

and $P_i^2 = \frac{N_i^2}{N_i}$; $\quad Q_i^2 = 1 - P_i^2$

An estimator of $V\left(\tilde{P}_i\right)$ is given by using corresponding estimators of P_i^1, Q_i^1 and P_i^2, Q_i^2 i.e.

$$\hat{V}\left(\tilde{P}_i\right) = \frac{1}{4}\left(\frac{p_i^1 q_i^1}{n^{(1)}} + \frac{p_i^2 q_i^2}{n^{(2)}}\right)$$

Estimates of Standard Error of $\tilde{P}_i$ is given by

$$\widehat{SE}\left(\tilde{P}_i\right) = \sqrt{\left(\hat{V}\left(\tilde{P}_i\right)\right.}$$

And relative standard errors (%) are given by

$$\%\ \widehat{RSE}\left(\tilde{P}_i\right) = \frac{\widehat{SE}\left(\tilde{P}_i\right)}{\tilde{P}_i} x100$$

Weighting of responses for scoring in the N-SIPI perception survey

When it comes to combining the responses for scoring purposes, it is pertinent to consider how to weigh the responses for obtaining the scores to be used for ranking purposes. In the 2016 survey, the "severe" category was given the weight "1" while the others were given the weight zero. In general, if wi is the weight and yi is the corresponding binary response for the ith category, then the corresponding score is $\sum_i w_i y_i$.

One view is that all the categories should be provided non- zero weights in order to provide representation for all the responses. This would amount to taking weights of 0.16, 0.33, 0.5. Another approach is that there should be a flip side with a considered view for the cut- off point. For example, if there are three categories, the weights could be zero, 0.25 and 0.75. Hence, if the weighted percentage of respondents falling into the moderate or severe problem category is combined into a single composite score for ranking purpose, then one minus this score will give the percentage of respondents who did not perceive that particular constraint to be a problem. In any case, any system of assigning weights is considered subjectively and based on experience. In N-SIPI 2017, the weights as zero, 0.25 and 0.75, and this is considered to be an improvement on the previous year criterion.

State-wise sampling distribution

	States and districts	Sample Size
1	**Andhra Pradesh**	**45**
	Visakhapatnam	26
	Guntur	19
2	**Assam**	**30**
	Kamrup	25
	Tinsukia	5
3	**Bihar**	**34**
	Patna	33
	Muzaffarpur	1
4	**Chhattisgarh**	**30**
	Raipur	26
	Durg	4
5	**Gujarat**	**71**
	Ahmedabad	55
	Vadodara	16
6	**Haryana**	**39**
	Gurgaon	30
	Faridabad	9
7	**Himachal Pradesh**	**30**
	Solan	24
	Shimla	6
8	**Jharkhand**	**30**
	East Singhbhum	18
	Ranchi	9
	Bokaro Steel City	2
	Purbi Singhbhum	1
9	**Karnataka**	**60**
	Bengaluru	58
	Mysore	2
10	**Kerala**	**38**
	Ernakulam	29
	Thiruvananthapuram	9

	States and districts	Sample Size
11	**Madhya Pradesh**	**43**
	Indore	29
	Bhopal	14
12	**Maharashtra**	**122**
	Mumbai	109
	Pune	13
13	**NCT of Delhi**	**41**
	New Delhi	32
	South Delhi	9
14	**Odisha**	**30**
	Khorda	21
	Sundargarh	9
15	**Punjab**	**31**
	Ludhiana	26
	Jalandhar	5
16	**Rajasthan**	**51**
	Jaipur	41
	Bhilwara	10
17	**Tamil Nadu**	**84**
	Chennai	67
	Coimbatore	17
18	**Telangana**	**38**
	Hyderabad	37
	Rangareddi	1
19	**Uttar Pradesh**	**83**
	Kanpur Nagar	63
	Lucknow	20
20	**Uttarakhand**	**30**
	Udham Singh Nagar	12
	Dehradun	12
	Hardwar	6
21	**West Bengal**	**70**
	Kolkata + Howrah	69
	North 24 Parganas	1
TOTAL (all 21 states)	**1030**	

A.5 SURVEY QUESTIONS

The following questions were asked to the survey respondents across 21 states in order to assess the industrial climate in those states. Respondents were asked to rate a set of general constraints (as mentioned below) faced while operating business on a scale of 'severe', 'moderate' or 'no problem'.

S1. Land

Three land related questions are given below:

S1.1. Is there any problem in acquiring land?

S1.2 What kind of industry gets land more easily? Service industry, non-service or both?

S1.3. How difficult do you find it to get permission/ approvals from various government departments before starting business (for land related issues)?

S2. Labour

Five labour related questions covered in the survey are given below:

S2.1. Availability of skilled labour

S2.2. Quality of skilled labour

S2.3. Availability of unskilled labour

S2.4. Labour relations

S2.5. Labour laws

S3. Infrastructure

Five infrastructure related covered in the survey questions are as follows:

S3.1. Availability of Power

S3.2. Availability of Water

S3.3. Availability of Net connectivity

S3.4. Sewage facility

S3.5. Road/ Rail connectivity

S.4. Economic Conditions

Four economic related questions covered in the survey are as follows:

Industry related policies

S4.1. Industry related policies

S4.2 Availability of raw material

S4.2. Access to finance

S4.3. Tax Policy of the state

S5. Governance and Political Stability

Three governance & political stability related questions are given below:

S5.1. Getting approvals (including environmental clearance) before starting your business

S5.2. Corruption in the state

S5.3. Law and order situation in the state

S6. Business climate

Four business climate related questions are given below:

S6.1. One year from now, do you think business conditions will be better, same or worse

S6.2. Do you think your firm's own financial position over the next six months will be will be better, same or worse?

S6.3. How do you rate present investment climate as compared with six months ago? Better, same or worse

S6.4. How do you rate the current level of operation of your firm relative to its optimal capacity utilization? (Responses were recorded in the form of 'less', 'equal' or 'more')

Appendix B
State Ranking

Indicator	Description
LN1	Digitized Land Registation
LN2	Share of land stalled projects
LN3	Land availability/ acquired for Industrial purpose
LN4	Industrial parks (SEZs and NIMZs)
L1	Labourforce Participation Rate
L2	Percent population with above secondary level education
L3	Percent population with technical courses
L4	Seating capacity of ITI
L5	Average wages of salaried workers
L6	Average wages in manufacturing sector
L7	Share of workforce in Manufacturing
L8	Mandays lost due to strike
L9	Share of contract workers in total labour force
I1	“Rail Density “
I2	“Road Density “
I3	Cargo handled per day per airport
I4	Cargo handled per port
I5	“Average Tariff for Industry “
I6	Power shortage as % of total demand
I7	Net Annual Ground Water Availability
I8	Groundwater withdrawal by industries
I9	ICT - Readiness Index
I10	Percent statutory towns in smart cities
I11	Bank branches per lakh population
E1	Share of industry sector GSVA
E2	Share of services sector GSVA

Indicator	Description
E3	Per capita GSDP
E4	Average GSVA growth (for latest 3 years)
E5	Percent population in million plus cities
E6	Proximity of state border to metro city
E7	Congestion Index
E8	Share of development expenditure in total
E9	VAT productivity
E10	Share of state in fuel production
E11	Financial Depth
G1	Economic offences per lakh population
G2	Cases pending investigation from previous year cases
G3	Completion rate of cases under IPC and SLL by courts
G4	Political leaders with serious criminal charges
G5	Police Strength
G6	Insurgency rate
G7	Percent share of environment clearance related stalled projects
G8	E-Governance Index
G9	DIPP Score
S1	Perception on land
S2	Perception on labour
S3	Perception on infrastructure
S4	Perception on economic conditions
S5	Perception on governance and political stabilitty
S6	Perception on business climate

Table B.1.a N-SIPI 21: Scores of states under SIX BROAD PILLARS

State	SCORE													
	Land		Labour		Infrastructure		Economic		Governance & Political Staibility		Survey		**Overall**	
	2016	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**
Andhra Pradesh	-	54.1	47.5	65.7	30.0	33.8	46.0	36.1	56.3	56.3	69.8	83.5	**48.1**	**52.1**
Assam	-	25.0	33.6	43.5	31.5	28.2	33.4	28.3	43.9	50.2	63.6	53.9	**39.7**	**37.7**
Bihar	-	25.1	27.8	51.8	26.0	24.1	26.8	25.4	33.3	46.7	52.4	38.5	**32.1**	**34.5**
Chhattisgarh	-	14.6	42.2	48.8	27.2	30.2	36.3	37.5	64.7	64.7	78.6	57.5	**46.2**	**41.4**
Delhi	-	49.2	31.9	48.5	71.1	65.6	52.2	50.5	54.9	44.9	58.6	68.6	**52.0**	**54.3**
Gujarat	-	54.6	49.3	54.5	41.9	43.8	44.4	51.5	67.7	68.3	91.5	89.9	**56.3**	**59.2**
Haryana	-	45.5	22.1	48.0	36.9	36.8	34.2	36.3	61.6	73.0	54.3	83.1	**39.3**	**51.6**
Himachal Pradesh	-	36.1	38.0	43.7	34.3	32.0	27.4	31.7	41.3	42.3	62.3	69.5	**39.2**	**41.4**
Jharkhand	-	35.5	32.5	32.3	17.7	17.3	32.1	35.2	40.1	49.7	34.0	56.8	**30.2**	**35.4**
Karnataka	-	27.6	50.8	60.2	33.8	36.1	38.4	41.2	59.9	63.1	54.6	47.1	**46.4**	**46.0**
Kerala	-	45.3	63.9	58.5	40.6	37.7	32.0	29.9	48.8	57.0	43.7	64.9	**44.6**	**47.4**
Madhya Pradesh	-	71.7	34.9	39.8	25.8	27.0	34.0	33.4	66.2	62.5	68.7	63.9	**42.5**	**44.8**
Maharashtra	-	52.7	43.3	60.8	37.1	50.2	44.8	42.4	54.8	58.8	58.8	25.8	**47.1**	**46.2**
Odisha	-	36.6	48.2	48.9	30.1	34.5	34.7	32.1	55.0	56.4	63.5	56.9	**44.6**	**43.7**
Punjab	-	25.6	39.3	47.8	42.2	40.6	26.6	17.8	56.8	68.2	28.9	59.4	**37.3**	**40.7**
Rajasthan	-	37.4	44.2	54.1	23.7	29.4	36.6	34.0	53.7	46.3	88.8	55.8	**44.9**	**42.1**
Tamil Nadu	-	55.6	59.7	73.8	35.9	35.0	41.1	42.4	67.6	66.6	62.5	39.7	**51.8**	**49.8**
Telangana	-	58.9	47.5	60.8	29.2	28.8	42.9	42.1	42.4	53.2	52.0	83.2	**42.0**	**51.1**
Uttar Pradesh	-	55.1	47.8	58.4	14.3	19.9	22.9	18.9	53.0	55.8	40.0	30.9	**31.9**	**34.4**
Uttarakhand	-	21.5	33.2	49.0	41.3	31.3	35.3	44.0	59.4	68.3	73.3	40.0	**46.2**	**42.1**
West Bengal	-	39.4	46.6	45.8	40.0	34.3	25.3	37.4	48.9	60.3	40.8	8.7	**39.3**	**32.1**

Table B.1.b N-SIPI 21: Ranks of states under SIX BROAD PILLARS														
State	RANK													
	Land		Labour		Infrastructure		Economic		Governance & Political Staibility		Survey		**Overall**	
	2016	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**
Andhra Pradesh	-	6	7	2	14	11	2	11	9	13	5	2	4	3
Assam	-	19	16	19	12	17	14	18	17	16	7	14	14	17
Bihar	-	18	20	10	17	19	18	19	21	18	15	18	19	19
Chhattisgarh	-	21	12	13	16	14	9	8	4	6	3	10	7	14
Delhi	-	8	19	14	1	1	1	2	11	20	12	6	2	2
Gujarat	-	5	4	8	3	3	4	1	1	2	1	1	1	1
Haryana	-	9	21	15	8	6	12	10	5	1	14	4	16	4
Himachal Pradesh	-	14	14	18	10	12	17	16	19	21	10	5	17	15
Jharkhand	-	15	18	21	20	21	15	12	20	17	20	12	21	18
Karnataka	-	16	3	5	11	7	7	7	6	7	13	15	6	9
Kerala	-	10	1	6	5	5	16	17	16	11	17	7	10	7
Madhya Pradesh	-	1	15	20	18	18	13	14	3	8	6	8	12	10
Maharashtra	-	7	11	4	7	2	3	5	12	10	11	20	5	8
Odisha	-	13	5	12	13	9	11	15	10	12	8	11	11	11
Punjab	-	17	13	16	2	4	19	21	8	4	21	9	18	16
Rajasthan	-	12	10	9	19	15	8	13	13	19	2	13	9	13
Tamil Nadu	-	3	2	1	9	8	6	4	2	5	9	17	3	6
Telangana	-	2	7	3	15	16	5	6	18	15	16	3	13	5
Uttar Pradesh	-	4	6	7	21	20	21	20	14	14	19	19	20	20
Uttarakhand	-	20	17	11	4	13	10	3	7	3	4	16	8	12
West Bengal	-	11	9	17	6	10	20	9	15	9	18	21	15	21

Table B.2.a N-SIPI 21: Scores of states under LAND indicators

State	SCORE			
	LN1	LN2	LN3	LN4
Andhra Pradesh	100.0	63.3	4.7	48.6
Assam	0.0	100.0	0.0	0.0
Bihar	97.6	0.0	2.8	0.0
Chhattisgarh	2.2	49.4	4.1	2.8
Delhi	100.0	48.9	45.2	2.8
Gujarat	100.0	38.9	33.6	45.8
Haryana	80.3	26.8	30.1	44.9
Himachal Pradesh	100.0	0.0	44.2	0.0
Jharkhand	100.0	32.4	8.7	0.9
Karnataka	0.0	50.5	0.3	59.8
Kerala	100.0	48.5	6.5	26.2
Madhya Pradesh	100.0	82.0	4.8	100.0
Maharashtra	96.8	65.4	32.7	15.9
Odisha	0.5	34.5	100.0	11.2
Punjab	15.6	28.1	51.2	7.5
Rajasthan	33.6	81.7	22.4	12.1
Tamil Nadu	81.1	71.6	2.4	67.3
Telangana	100.0	73.0	4.7	57.9
Uttar Pradesh	86.5	74.8	22.6	36.4
Uttarakhand	10.5	41.3	32.4	1.9
West Bengal	100.0	36.6	0.4	20.6

Table B.2.b N-SIPI 21: Ranks of states under LAND indicators

State	RANK			
	LN1	LN2	LN3	LN4
Andhra Pradesh	1	8	14	5
Assam	20	1	21	19
Bihar	10	20	17	19
Chhattisgarh	18	10	16	15
Delhi	1	11	3	15
Gujarat	1	14	5	6
Haryana	14	19	8	7
Himachal Pradesh	1	20	4	19
Jharkhand	1	17	11	18
Karnataka	20	9	20	3
Kerala	1	12	12	9
Madhya Pradesh	1	2	13	1
Maharashtra	11	7	6	11
Odisha	19	16	1	13
Punjab	16	18	2	14
Rajasthan	15	3	10	12
Tamil Nadu	13	6	18	2
Telangana	1	5	14	4
Uttar Pradesh	12	4	9	8
Uttarakhand	17	13	7	17
West Bengal	1	15	19	10

LN1: Digitized Land Registation

LN2: Share of land stalled projects

LN3: Land availability/ acquired for Industrial purpose

LN4: Industrial parks (SEZs and NIMZs)

Table B.3.a N-SIPI 21: Scores of states under LABOUR PILLAR indicators									
State	SCORE								
	L1	L2	L3	L4	L5	L6	L7	L8	L9
Andhra Pradesh	79.3	25.2	91.3	32.4	94.6	59.3	32.0	83.8	93.8
Assam	28.0	18.6	0.0	0.0	51.7	93.7	6.8	95.5	97.3
Bihar	25.7	0.0	4.3	51.2	96.5	100.0	17.0	89.6	82.1
Chhattisgarh	100.0	7.1	17.4	6.4	95.5	22.9	0.0	90.2	100.0
Delhi	0.0	100.0	46.7	4.8	0.0	58.5	93.9	92.1	40.2
Gujarat	27.2	31.4	53.3	36.0	87.6	63.1	83.7	63.2	44.6
Haryana	7.3	49.4	66.3	15.2	33.5	66.8	43.5	88.8	61.6
Himachal Pradesh	11.9	78.0	78.3	9.6	31.2	62.3	21.8	100.0	0.0
Jharkhand	34.9	7.8	4.3	16.8	56.9	0.0	27.2	89.6	53.6
Karnataka	52.5	43.5	58.7	60.0	69.0	54.1	55.1	55.7	92.9
Kerala	31.4	70.5	100.0	30.4	59.2	69.1	54.4	27.0	84.8
Madhya Pradesh	14.9	9.0	22.8	32.8	100.0	68.5	17.0	0.0	92.9
Maharashtra	41.8	53.7	66.3	73.6	77.9	40.4	30.6	81.0	82.1
Odisha	29.1	9.9	29.3	52.0	82.4	43.2	21.1	97.5	75.9
Punjab	2.3	55.3	59.8	24.0	50.6	73.1	63.3	59.7	42.0
Rajasthan	27.6	9.6	26.1	97.6	83.5	62.0	34.7	51.3	94.6
Tamil Nadu	59.0	47.2	98.9	40.0	92.2	69.5	94.6	75.0	87.5
Telangana	61.3	47.2	60.9	32.4	53.8	80.2	39.5	83.8	88.4
Uttar Pradesh	11.5	16.5	8.7	100.0	94.1	70.8	51.7	86.7	85.7
Uttarakhand	15.7	57.1	5.4	3.2	68.3	68.3	32.7	94.5	95.5
West Bengal	34.5	16.1	12.0	7.2	64.1	62.4	100.0	45.3	70.5

L1: Labourforce Participation Rate

L2: Percent population with above secondary level education

L3: Percent population with technical courses

L4: Seating capacity of ITI

L5: Average wages of salaried workers

L6: Average wages in manufacturing sector

L7: Share of workforce in Manufacturing

L8: Mandays lost due to strike

L9: Share of contract workers in total labour force

Table B.3.b N-SIPI 21: Ranks of states under LABOUR PILLAR indicators									
State	RANK								
	L1	L2	L3	L4	L5	L6	L7	L8	L9
Andhra Pradesh	2	12	3	10	4	15	13	11	5
Assam	11	13	21	21	17	2	20	3	2
Bihar	14	21	19	6	2	1	18	7	12
Chhattisgarh	1	20	15	18	3	20	21	6	1
Delhi	21	1	11	19	21	16	3	5	20
Gujarat	13	11	10	8	7	11	4	15	18
Haryana	19	7	5	15	19	10	9	9	16
Himachal Pradesh	17	2	4	16	20	13	16	1	21
Jharkhand	7	19	19	14	15	21	15	7	17
Karnataka	5	10	9	4	11	17	6	17	6
Kerala	9	3	1	12	14	7	7	20	11
Madhya Pradesh	16	18	14	9	1	8	18	21	6
Maharashtra	6	6	5	3	10	19	14	13	12
Odisha	10	16	12	5	9	18	17	2	14
Punjab	20	5	8	13	18	4	5	16	19
Rajasthan	12	17	13	2	8	14	11	18	4
Tamil Nadu	4	8	2	7	6	6	2	14	9
Telangana	3	8	7	10	16	3	10	11	8
Uttar Pradesh	18	14	17	1	5	5	8	10	10
Uttarakhand	15	4	18	20	12	9	12	4	3
West Bengal	8	15	16	17	13	12	1	19	15

L1: Labourforce Participation Rate

L2: Percent population with above secondary level education

L3: Percent population with technical courses

L4: Seating capacity of ITI

L5: Average wages of salaried workers

L6: Average wages in manufacturing sector

L7: Share of workforce in Manufacturing

L8: Mandays lost due to strike

L9: Share of contract workers in total labour force

Table B.4.a N-SIPI 21: Scores of states under INFRASTRUCTURE PILLAR indicators											
State	SCORE										
	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11
Andhra Pradesh	14.8	25.5	0.4	33.0	65.8	99.2	15.0	18.9	28.0	11.3	42.7
Assam	22.1	51.1	2.1	0.0	65.5	55.2	81.0	12.1	30.9	3.4	4.5
Bihar	28.3	30.2	0.5	0.0	28.1	89.6	70.0	15.6	18.6	3.0	0.0
Chhattisgarh	2.8	11.4	0.5	0.0	81.2	89.6	19.4	81.8	47.9	0.0	17.7
Delhi	100.0	0.0	100.0	0.0	55.5	99.2	46.8	0.0	85.7	100.0	92.6
Gujarat	18.2	26.1	0.3	100.0	45.7	100.0	20.4	35.6	76.0	5.9	37.9
Haryana	26.7	2.5	0.2	0.0	55.5	99.2	53.8	33.0	64.5	4.1	72.2
Himachal Pradesh	0.0	4.1	0.2	0.0	95.2	94.4	0.0	0.0	26.9	1.9	97.7
Jharkhand	19.8	1.8	0.5	0.0	38.9	81.6	15.9	7.3	0.0	4.1	14.9
Karnataka	10.0	50.3	37.2	8.7	45.1	58.4	17.2	10.4	73.5	4.8	59.1
Kerala	18.4	28.3	16.3	5.1	56.9	96.0	37.2	0.0	56.5	1.6	79.6
Madhya Pradesh	9.2	44.6	1.0	0.0	53.4	100.0	25.0	31.4	16.9	2.3	14.2
Maharashtra	11.2	100.0	94.7	35.6	0.0	97.6	24.1	27.1	100.0	8.4	28.5
Odisha	9.2	43.7	0.9	20.2	68.2	95.2	24.8	56.3	33.2	5.0	28.5
Punjab	33.6	12.7	0.3	0.0	51.7	100.0	100.0	44.3	32.8	2.8	100.0
Rajasthan	10.1	37.5	1.2	0.0	52.9	97.6	5.6	100.0	17.6	3.0	21.3
Tamil Nadu	21.7	39.8	4.2	27.1	10.1	94.4	35.4	10.0	79.8	1.5	48.5
Telangana	7.8	11.8	14.0	0.0	65.8	95.2	15.0	0.0	28.0	11.1	47.0
Uttar Pradesh	26.9	66.5	0.7	0.0	9.9	0.0	73.1	85.1	1.8	2.1	11.9
Uttarakhand	1.0	5.4	0.0	0.0	100.0	86.4	7.0	12.7	29.0	0.5	81.3
West Bengal	34.3	45.8	18.3	10.8	33.9	97.6	73.6	0.0	46.7	5.9	12.6

I1: Rail Density

I2: Road Density

I3: Cargo handled per day per airport

I4: Cargo handled per port

I5: Average Tariff for Industry

I6: Power shortage as % of total demand

I7: Net Annual Ground Water Availability

I8: Groundwater withdrawal by industries

I9: ICT - Readiness Index

I10: Percent statutory towns in smart cities

I11: Bank branches per lakh population

Table B.4.b N-SIPI 21: Ranks of states under INFRASTRUCTURE PILLAR indicators											
State	RANK										
	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11
Andhra Pradesh	12	13	16	3	5	4	17	10	14	2	10
Assam	7	3	8	9	7	20	2	13	12	11	20
Bihar	4	10	13	9	18	15	5	11	17	13	21
Chhattisgarh	19	16	14	9	3	15	14	3	8	21	15
Delhi	1	21	1	9	9	4	7	17	2	1	3
Gujarat	11	12	17	1	14	1	13	6	4	6	11
Haryana	6	19	19	9	9	4	6	7	6	9	6
Himachal Pradesh	21	18	19	9	2	13	21	17	16	17	2
Jharkhand	9	20	15	9	16	18	16	16	21	9	16
Karnataka	15	4	3	7	15	19	15	14	5	8	7
Kerala	10	11	5	8	8	10	8	17	7	18	5
Madhya Pradesh	17	6	10	9	11	1	10	8	19	15	17
Maharashtra	13	1	2	2	21	7	12	9	1	4	13
Odisha	16	7	11	5	4	11	11	4	10	7	12
Punjab	3	14	18	9	13	1	1	5	11	14	1
Rajasthan	14	9	9	9	12	7	20	1	18	12	14
Tamil Nadu	8	8	7	4	19	13	9	15	3	19	8
Telangana	18	15	6	9	5	11	17	17	14	3	9
Uttar Pradesh	5	2	12	9	20	21	4	2	20	16	19
Uttarakhand	20	17	21	9	1	17	19	12	13	20	4
West Bengal	2	5	4	6	17	7	3	17	9	5	18

I1: Rail Density

I2: Road Density

I3: Cargo handled per day per airport

I4: Cargo handled per port

I5: Average Tariff for Industry

I6: Power shortage as % of total demand

I7: Net Annual Ground Water Availability

I8: Groundwater withdrawal by industries

I9: ICT - Readiness Index

I10: Percent statutory towns in smart cities

I11: Bank branches per lakh population

Table B.5.a N-SIPI 21: Scores of states under ECONOMIC CLIMATE PILLAR indicators											
State	SCORE										
	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11
Andhra Pradesh	21.3	25.7	31.2	1.1	37.7	100.0	89.5	56.8	30.6	23.8	12.4
Assam	17.8	31.4	9.9	0.0	0.0	0.0	80.5	60.0	66.1	17.1	0.0
Bihar	8.5	58.7	0.0	59.2	3.2	0.0	39.0	71.9	0.0	13.5	1.4
Chhattisgarh	61.5	0.0	19.2	63.2	13.9	0.0	52.5	100.0	51.7	15.0	5.2
Delhi	0.0	100.0	100.0	54.7	100.0	33.3	0.0	70.2	0.0	13.0	100.0
Gujarat	74.5	8.1	43.7	100.0	28.0	66.7	76.0	62.8	73.3	16.2	13.1
Haryana	41.4	33.4	49.3	56.4	6.5	33.3	78.0	52.3	0.0	17.5	15.2
Himachal Pradesh	77.7	13.9	43.9	49.8	0.0	0.0	82.0	38.9	0.0	9.5	1.5
Jharkhand	47.1	15.9	13.5	61.8	14.9	0.0	22.0	70.9	100.0	13.0	0.8
Karnataka	31.4	56.9	43.1	78.7	19.2	33.3	78.5	63.2	0.0	14.0	19.6
Kerala	28.4	57.3	44.7	19.2	28.2	0.0	100.0	0.0	0.0	21.6	14.1
Madhya Pradesh	22.2	12.7	11.4	45.0	10.4	0.0	80.5	72.3	53.4	21.3	10.2
Maharashtra	40.9	44.3	45.9	27.8	43.3	66.7	60.5	50.9	35.5	15.2	47.9
Odisha	35.8	18.6	15.2	34.6	0.0	33.3	85.0	66.7	26.9	16.8	4.4
Punjab	24.3	29.5	35.8	8.5	8.4	0.0	32.5	2.1	0.0	19.9	21.5
Rajasthan	21.3	18.2	19.0	7.1	13.2	66.7	38.5	73.7	93.7	18.1	10.0
Tamil Nadu	52.8	41.7	45.9	28.4	31.3	66.7	96.5	35.8	29.4	19.6	25.0
Telangana	19.0	55.1	44.1	13.1	31.5	33.3	88.5	82.8	30.6	23.8	31.2
Uttar Pradesh	30.5	31.3	6.4	12.3	10.9	33.3	12.5	44.9	20.4	0.6	8.5
Uttarakhand	100.0	5.7	51.6	45.4	0.0	33.3	64.0	56.8	0.0	100.0	0.2
West Bengal	5.9	65.8	23.9	55.9	21.7	33.3	77.0	24.6	62.2	0.0	31.4

E1: Share of industry sector GSVA

E2: Share of services sector GSVA

E3: Per capita GSDP

E4: Average GSVA growth (for latest 3 years)

E5: Percent population in million plus cities

E6: Proximity of state border to metro city

E7: Congestion Index

E8: Share of development expenditure in total

E9: VAT productivity

E10: Share of state in fuel production

E11: Financial Depth

Table B.5.b N-SIPI 21: Ranks of states under ECONOMIC CLIMATE PILLAR indicators											
State	RANK										
	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11
Andhra Pradesh	16	13	12	20	3	1	3	12	9	2	11
Assam	18	10	19	21	18	14	7	11	4	10	21
Bihar	19	3	21	5	17	14	16	5	14	16	18
Chhattisgarh	4	21	14	3	11	14	15	1	7	14	15
Delhi	21	1	1	8	1	6	21	7	14	18	1
Gujarat	3	19	9	1	7	2	12	10	3	12	10
Haryana	7	9	3	6	16	6	10	14	14	9	8
Himachal Pradesh	2	17	8	9	18	14	6	17	14	19	17
Jharkhand	6	16	17	4	10	14	19	6	1	17	19
Karnataka	10	5	10	2	9	6	9	9	14	15	7
Kerala	12	4	6	15	6	14	1	21	14	4	9
Madhya Pradesh	14	18	18	11	14	14	7	4	6	5	12
Maharashtra	8	7	5	14	2	2	14	15	8	13	2
Odisha	9	14	16	12	18	6	5	8	12	11	16
Punjab	13	12	11	18	15	14	18	20	14	6	6
Rajasthan	15	15	15	19	12	2	17	3	2	8	13
Tamil Nadu	5	8	4	13	5	2	2	18	11	7	5
Telangana	17	6	7	16	4	6	4	2	9	2	4
Uttar Pradesh	11	11	20	17	13	6	20	16	13	20	14
Uttarakhand	1	20	2	10	18	6	13	12	14	1	20
West Bengal	20	2	13	7	8	6	11	19	5	21	3

E1: Share of industry sector GSVA

E2: Share of services sector GSVA

E3: Per capita GSDP

E4: Average GSVA growth (for latest 3 years)

E5: Percent population in million plus cities

E6: Proximity of state border to metro city

E7: Congestion Index

E8: Share of development expenditure in total expenditure

E9: VAT productivity

E10: Share of state in fuel production

E11: Financial Depth

Table B.6.a N-SIPI 21: Scores of states under GOVERNANCE & POLITICAL STABILITY PILLAR indicators									
State	SCORE								
	G1	G2	G3	G4	G5	G6	G7	G8	G9
Andhra Pradesh	71.8	46.0	36.4	40.5	7.9	95.7	68.9	39.3	100.0
Assam	48.5	8.8	18.3	79.7	23.4	100.0	100.0	73.1	0.0
Bihar	84.4	36.2	2.6	0.0	6.2	67.3	75.0	75.5	72.8
Chhattisgarh	96.2	34.4	75.0	96.2	49.0	0.0	48.8	84.5	98.3
Delhi	9.4	0.0	11.8	10.1	100.0	100.0	100.0	33.0	39.4
Gujarat	95.0	63.6	10.2	55.7	13.8	100.0	85.1	92.0	99.3
Haryana	55.3	80.5	32.8	100.0	28.4	100.0	91.5	70.3	97.8
Himachal Pradesh	86.5	8.3	8.6	67.1	44.0	100.0	0.0	5.6	60.6
Jharkhand	78.5	80.2	28.1	30.4	32.8	18.2	68.3	13.6	97.4
Karnataka	70.3	21.2	25.3	67.1	14.2	100.0	82.1	100.0	87.7
Kerala	65.6	58.5	36.1	70.9	27.1	100.0	81.0	59.0	15.0
Madhya Pradesh	100.0	76.5	32.4	69.6	13.5	97.0	45.0	30.1	97.9
Maharashtra	76.2	71.8	5.2	6.3	25.7	81.5	70.3	99.1	93.0
Odisha	85.6	42.9	8.2	59.5	20.0	78.2	60.3	59.5	92.8
Punjab	67.9	60.5	36.5	86.1	57.7	100.0	90.6	23.4	90.9
Rajasthan	0.0	12.8	22.3	88.6	17.3	100.0	60.3	17.8	97.2
Tamil Nadu	87.4	47.0	62.1	70.9	29.6	100.0	71.5	73.6	57.4
Telangana	37.6	58.7	22.3	8.9	19.9	98.2	93.6	39.3	100.0
Uttar Pradesh	90.3	64.8	61.3	39.2	3.8	100.0	59.4	0.0	83.1
Uttarakhand	80.3	100.0	100.0	82.3	40.0	100.0	4.8	10.0	96.9
West Bengal	79.1	63.3	0.0	51.9	0.0	100.0	77.4	87.9	82.8

G1: Economic offences per lakh population

G2: Cases pending investigation from previous year cases

G3: Completion rate of cases under IPC and SLL by courts

G4: Political leaders with serious criminal charges

G5: Police Strength

G6: Insurgency rate

G7: Percent share of environment clearance related stalled projects

G8: E-Governance Index

G9: DIPP Score

Table B.6.b N-SIPI 21: Ranks of states under GOVERNANCE & POLITICAL STABILITY PILLAR indicators									
State	RANK								
	G1	G2	G3	G4	G5	G6	G7	G8	G9
Andhra Pradesh	13	13	6	15	18	16	13	12	1
Assam	18	19	14	6	11	1	1	8	21
Bihar	8	15	20	21	19	19	10	6	16
Chhattisgarh	2	16	2	2	3	21	18	5	4
Delhi	20	21	15	18	1	1	1	14	19
Gujarat	3	7	16	13	16	1	6	3	3
Haryana	17	2	8	1	8	1	4	9	6
Himachal Pradesh	6	20	17	10	4	1	21	20	17
Jharkhand	11	3	10	17	6	20	14	18	7
Karnataka	14	17	11	10	15	1	7	1	13
Kerala	16	11	7	7	9	1	8	11	20
Madhya Pradesh	1	4	9	9	17	15	19	15	5
Maharashtra	12	5	19	20	10	17	12	2	10
Odisha	7	14	18	12	12	18	16	10	11
Punjab	15	9	5	4	2	1	5	16	12
Rajasthan	21	18	13	3	14	1	15	17	8
Tamil Nadu	5	12	3	7	7	1	11	7	18
Telangana	19	10	12	19	13	14	3	12	1
Uttar Pradesh	4	6	4	16	20	1	17	21	14
Uttarakhand	9	1	1	5	5	1	20	19	9
West Bengal	10	8	21	14	21	1	9	4	15

G1: Economic offences per lakh population

G2: Cases pending investigation from previous year cases

G3: Completion rate of cases under IPC and SLL by courts

G4: Political leaders with serious criminal charges

G5: Police Strength

G6: Insurgency rate

G7: Percent share of environment clearance related stalled projects

G8: E-Governance Index

G9: DIPP Score

Table B.7.a N-SIPI 21: Scores of states under SURVEY PILLAR indicators						
State	SCORE					
	S1	S2	S3	S4	S5	S6
Andhra Pradesh	100.0	80.6	92.2	73.8	75.2	79.2
Assam	57.1	44.4	48.3	52.3	35.8	85.7
Bihar	12.4	75.1	63.6	50.2	29.8	0.0
Chhattisgarh	89.6	46.5	53.9	55.0	55.9	44.1
Delhi	84.0	77.2	63.0	71.9	63.1	52.1
Gujarat	98.2	100.0	100.0	100.0	100.0	40.9
Haryana	74.4	90.7	92.0	92.1	78.6	70.8
Himachal Pradesh	74.1	67.2	60.4	66.4	68.8	80.3
Jharkhand	10.0	75.1	81.0	76.5	64.9	33.2
Karnataka	6.2	37.7	75.5	42.9	39.4	80.9
Kerala	88.8	61.8	69.8	51.9	40.0	77.4
Madhya Pradesh	63.0	66.1	72.1	59.0	54.2	69.1
Maharashtra	26.1	39.5	22.9	2.7	62.1	1.7
Odisha	29.0	73.4	73.5	59.4	63.4	42.8
Punjab	71.1	76.7	50.6	77.9	50.5	29.4
Rajasthan	56.2	57.6	50.0	67.3	47.8	56.0
Tamil Nadu	27.6	44.6	67.6	38.1	29.0	31.2
Telangana	81.5	75.1	86.1	74.1	82.2	100.0
Uttar Pradesh	1.5	37.0	35.5	8.9	18.7	83.6
Uttarakhand	0.0	52.2	50.6	45.1	31.0	61.3
West Bengal	29.8	0.0	0.0	0.0	0.0	22.6

S1 Perception on land

S2 Perception on labour

S3 Perception on infrastructure

S4 Perception on economic conditions

S5 Perception on governance and political stability

S6 Perception on business climate

Table B.7.b N-SIPI 21: Ranks of states under SURVEY PILLAR indicators						
State	RANK					
	S1	S2	S3	S4	S5	S6
Andhra Pradesh	1	3	2	6	4	6
Assam	11	17	18	13	16	2
Bihar	17	6	11	15	18	21
Chhattisgarh	3	15	14	12	10	13
Delhi	5	4	12	7	8	12
Gujarat	2	1	1	1	1	15
Haryana	7	2	3	2	3	8
Himachal Pradesh	8	10	13	9	5	5
Jharkhand	18	8	5	4	6	16
Karnataka	19	19	6	17	15	4
Kerala	4	12	9	14	14	7
Madhya Pradesh	10	11	8	11	11	9
Maharashtra	16	18	20	20	9	20
Odisha	14	9	7	10	7	14
Punjab	9	5	15	3	12	18
Rajasthan	12	13	17	8	13	11
Tamil Nadu	15	16	10	18	19	17
Telangana	6	7	4	5	2	1
Uttar Pradesh	20	20	19	19	20	3
Uttarakhand	21	14	16	16	17	10
West Bengal	13	21	21	21	21	19

S1 Perception on land

S2 Perception on labour

S3 Perception on infrastructure

S4 Perception on economic conditions

S5 Perception on governance and political stability

S6 Perception on business climate

Appendix C
Survey Results

Table C.1 Survey Ranks

State	OVERALL		Land		Labour		Infrastrucutre		Economy		Governanace		Business Environment	
	2016	**2017**	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Andhra Pradesh	**5**	**2**	3	1	7	3	5	2	4	6	11	4	19	6
Assam	**7**	**14**	9	11	9	17	8	18	10	13	10	16	13	2
Bihar	**15**	**18**	7	17	11	6	16	11	15	15	9	18	21	21
Chhattisgarh	**3**	**10**	8	3	3	15	4	14	1	12	2	10	20	13
Delhi	**12**	**6**	11	5	13	4	7	12	16	7	17	8	6	12
Gujarat	**1**	**1**	1	2	2	1	1	1	2	1	4	1	2	15
Haryana	**14**	**4**	19	7	10	2	15	3	7	2	14	3	7	8
Himachal Pradesh	**10**	**5**	4	8	20	10	20	13	5	9	1	5	11	5
Jharkhand	**20**	**12**	20	18	15	8	21	5	17	4	15	6	16	16
Karnataka	**13**	**15**	10	19	17	19	13	6	14	17	12	15	8	4
Kerala	**17**	**7**	15	4	19	12	17	9	20	14	13	14	5	7
Madhya Pradesh	**6**	**8**	17	10	4	11	6	8	6	11	7	11	12	9
Maharashtra	**11**	**20**	16	16	14	18	10	20	12	20	8	9	14	20
Odisha	**8**	**11**	18	14	6	9	9	7	8	10	6	7	10	14
Punjab	**21**	**9**	14	9	21	5	14	15	21	3	20	12	9	18
Rajasthan	**2**	**13**	4	12	1	13	2	17	3	8	3	13	4	11
Tamil Nadu	**9**	**17**	13	15	8	16	19	10	11	18	18	19	1	17
Telangana	**16**	**3**	2	6	18	7	12	4	13	5	16	2	18	1
Uttar Pradesh	**19**	**19**	12	20	16	20	18	19	18	19	19	20	17	3
Uttarakhand	**4**	**16**	6	21	11	14	11	16	9	16	5	17	3	10
West Bengal	**18**	**21**	21	13	5	21	3	21	19	21	21	21	15	19

S. No.	Survey Pillar	Description	Appendix Table#
1	Land	Problem in acquiring Land for the factory or service unit	Table C.2
2		Problem in getting permissions/ approvals for land from government departments before starting business	Table C.3
3	Labour	Problem related to availability of skilled labour	Table C.4
4		Problem related to quality of skilled labour	Table C.5
5		Problem related to availability of unskilled labour	Table C.6
6		Problem related to labour relations	Table C.7
7		Problem related to labour laws	Table C.8
8	Infrastructure	Problem related to availability of power	Table C.9
9		Problem related to availability of water	Table C.12
10		Problem related to availability of net connectivity	Table C.11
11		Problem related to availability of sewage facility	Table C.12
12		Problem related to road / rail quality/ connectivity	Table C.13
13	Economy	Problem related to industry policies	Table C.14
14		Problem in access to finance	Table C.15
15		Problem related to availability of raw material	Table C.16
16		Problem related to tax policy of the state	Table C.17
17	Governance	Problem in getting approvals before starting business	Table C.18
18		Problem related to corruption in the state	Table C.19
19		Problem related to law and order situation in the state	Table C.20
20	Business Environment	Perception on business conditions one year ahead	Table C.21
21		Perception on firm's own financial position one year ahead	Table C.22
22		Perception on present investment climate as compared with a year ago	Table C.23
23		Current level of operation of the firm relative to installed capacity	Table C.24

Table C.2 Problem in acquiring Land for the factory or service unit		
State	Yes	No
Andhra Pradesh	0.0	100.0
Assam	0.0	100.0
Bihar	40.0	60.0
Chhattisgarh	10.0	90.0
Delhi	7.5	92.5
Gujarat	4.6	95.4
Haryana	10.0	90.0
Himachal Pradesh	20.0	80.0
Jharkhand	42.9	57.1
Karnataka	12.1	87.9
Kerala	2.6	97.4
Madhya Pradesh	14.0	86.0
Maharashtra	14.1	85.9
Odisha	24.1	75.9
Punjab	16.1	83.9
Rajasthan	19.6	80.4
Tamil Nadu	16.7	83.3
Telangana	5.3	94.7
Uttar Pradesh	33.7	66.3
Uttarakhand	38.5	61.5
West Bengal	12.9	87.1
Total	15.9	84.1

Table C.3 Problem in getting approvals for land before starting business			
State	No problem	Moderate	Severe
Andhra Pradesh	77.8	22.2	0.0
Assam	36.7	33.3	30.0
Bihar	65.7	17.1	17.1
Chhattisgarh	93.4	6.6	0.0
Delhi	90.0	0.0	10.0
Gujarat	94.2	4.7	1.2
Haryana	77.5	12.5	10.0
Himachal Pradesh	96.7	3.3	0.0
Jharkhand	66.7	18.5	14.8
Karnataka	13.6	32.2	54.2
Kerala	76.9	15.4	7.7
Madhya Pradesh	65.1	25.6	9.3
Maharashtra	30.9	55.3	13.9
Odisha	50.0	28.6	21.4
Punjab	87.1	6.5	6.5
Rajasthan	68.6	23.5	7.8
Tamil Nadu	26.2	47.6	26.2
Telangana	71.1	21.1	7.9
Uttar Pradesh	31.3	43.4	25.3
Uttarakhand	36.0	44.0	20.0
West Bengal	33.3	31.9	34.8
Total	55.2	28.0	16.8

Table C.4 Problem related to availability of skilled labour			
State	No problem	Moderate	Severe
Andhra Pradesh	71.1	26.7	2.2
Assam	31.0	37.9	31.0
Bihar	57.1	25.7	17.1
Chhattisgarh	36.3	53.3	10.4
Delhi	70.0	25.0	5.0
Gujarat	95.4	3.4	1.1
Haryana	87.5	5.0	7.5
Himachal Pradesh	63.3	16.7	20.0
Jharkhand	53.6	28.6	17.9
Karnataka	10.0	65.0	25.0
Kerala	61.5	28.2	10.3
Madhya Pradesh	55.8	20.9	23.3
Maharashtra	31.0	55.7	13.3
Odisha	55.2	31.0	13.8
Punjab	61.3	22.6	16.1
Rajasthan	51.0	29.4	19.6
Tamil Nadu	27.4	52.4	20.2
Telangana	52.6	31.6	15.8
Uttar Pradesh	50.6	30.1	19.3
Uttarakhand	53.8	34.6	11.5
West Bengal	32.9	28.6	38.6
Total	49.9	33.6	16.5

Table C.5 Problem related to quality of skilled labour			
State	No problem	Moderate	Severe
Andhra Pradesh	68.9	26.7	4.4
Assam	31.0	48.3	20.7
Bihar	65.7	14.3	20.0
Chhattisgarh	23.0	63.3	13.7
Delhi	55.0	37.5	7.5
Gujarat	93.1	5.7	1.1
Haryana	72.5	20.0	7.5
Himachal Pradesh	46.7	43.3	10.0
Jharkhand	67.9	14.3	17.9
Karnataka	6.7	51.7	41.7
Kerala	56.4	25.6	17.9
Madhya Pradesh	44.2	30.2	25.6
Maharashtra	76.5	13.0	10.5
Odisha	65.5	27.6	6.9
Punjab	58.1	32.3	9.7
Rajasthan	37.3	41.2	21.6
Tamil Nadu	40.0	26.0	34.0
Telangana	57.9	28.9	13.2
Uttar Pradesh	32.5	27.7	39.8
Uttarakhand	42.3	30.8	26.9
West Bengal	25.7	24.3	50.0
Total	51.3	27.8	20.9

Table C.6 Problem related to availability of unskilled labour			
State	No problem	Moderate	Severe
Andhra Pradesh	75.6	17.8	6.7
Assam	69.0	17.2	13.8
Bihar	82.9	11.4	5.7
Chhattisgarh	7.0	33.0	60.0
Delhi	95.0	2.5	2.5
Gujarat	94.3	3.4	2.3
Haryana	100.0	0.0	0.0
Himachal Pradesh	53.3	40.0	6.7
Jharkhand	85.7	7.1	7.1
Karnataka	86.7	8.3	5.0
Kerala	61.5	25.6	12.8
Madhya Pradesh	88.4	7.0	4.7
Maharashtra	59.0	22.0	19.0
Odisha	72.4	13.8	13.8
Punjab	77.4	22.6	0.0
Rajasthan	52.9	25.5	21.6
Tamil Nadu	57.1	22.6	20.2
Telangana	78.9	18.4	2.6
Uttar Pradesh	62.7	20.5	16.9
Uttarakhand	80.8	11.5	7.7
West Bengal	34.3	15.7	50.0
Total	68.7	16.6	14.7

Table C.7 Problem related to labour relations			
State	No problem	Moderate	Severe
Andhra Pradesh	71.1	24.4	4.4
Assam	58.6	13.8	27.6
Bihar	85.7	11.4	2.9
Chhattisgarh	83.0	13.3	3.7
Delhi	85.0	10.0	5.0
Gujarat	97.7	2.3	0.0
Haryana	95.0	0.0	5.0
Himachal Pradesh	60.0	33.3	6.7
Jharkhand	82.1	14.3	3.6
Karnataka	40.0	56.7	3.3
Kerala	59.0	33.3	7.7
Madhya Pradesh	74.4	18.6	7.0
Maharashtra	72.0	22.0	6.0
Odisha	79.3	20.7	0.0
Punjab	80.6	19.4	0.0
Rajasthan	76.5	13.7	9.8
Tamil Nadu	51.2	36.9	11.9
Telangana	86.5	10.8	2.7
Uttar Pradesh	48.2	26.5	25.3
Uttarakhand	57.7	38.5	3.8
West Bengal	28.6	15.7	55.7
Total	67.5	21.7	10.9

Table C.8 Problem related to labour laws			
State	No problem	Moderate	Severe
Andhra Pradesh	68.9	26.7	4.4
Assam	72.4	3.4	24.1
Bihar	85.7	5.7	8.6
Chhattisgarh	83.3	10.3	6.3
Delhi	60.0	20.0	20.0
Gujarat	94.3	4.6	1.1
Haryana	90.0	2.5	7.5
Himachal Pradesh	76.7	20.0	3.3
Jharkhand	85.7	7.1	7.1
Karnataka	25.0	53.3	21.7
Kerala	53.8	30.8	15.4
Madhya Pradesh	69.8	23.3	7.0
Maharashtra	84.0	14.0	2.0
Odisha	65.5	27.6	6.9
Punjab	74.2	16.1	9.7
Rajasthan	70.6	23.5	5.9
Tamil Nadu	52.4	34.5	13.1
Telangana	77.8	13.9	8.3
Uttar Pradesh	41.0	27.7	31.3
Uttarakhand	30.8	30.8	38.5
West Bengal	32.9	24.3	42.9
Total	64.9	21.2	13.9

Table C.9 Problem related to availability of power			
State	No problem	Moderate	Severe
Andhra Pradesh	88.9	6.7	4.4
Assam	65.5	10.3	24.1
Bihar	71.4	17.1	11.4
Chhattisgarh	73.0	6.7	20.3
Delhi	72.5	25.0	2.5
Gujarat	98.9	0.0	1.1
Haryana	92.5	5.0	2.5
Himachal Pradesh	53.3	43.3	3.3
Jharkhand	92.9	3.6	3.6
Karnataka	48.3	40.0	11.7
Kerala	61.5	28.2	10.3
Madhya Pradesh	76.7	9.3	14.0
Maharashtra	83.4	3.1	13.6
Odisha	82.8	13.8	3.4
Punjab	67.7	22.6	9.7
Rajasthan	74.5	17.6	7.8
Tamil Nadu	74.0	16.0	10.0
Telangana	86.8	7.9	5.3
Uttar Pradesh	51.8	30.1	18.1
Uttarakhand	61.5	30.8	7.7
West Bengal	38.6	25.7	35.7
Total	71.9	16.6	11.5

Table C.10 Problem related to availability of water			
State	No problem	Moderate	Severe
Andhra Pradesh	86.7	8.9	4.4
Assam	72.4	17.2	10.3
Bihar	88.6	2.9	8.6
Chhattisgarh	73.0	6.7	20.3
Delhi	75.0	10.0	15.0
Gujarat	97.7	0.0	2.3
Haryana	87.5	7.5	5.0
Himachal Pradesh	53.3	40.0	6.7
Jharkhand	82.1	3.6	14.3
Karnataka	88.3	10.0	1.7
Kerala	64.1	28.2	7.7
Madhya Pradesh	74.4	16.3	9.3
Maharashtra	74.5	11.2	14.3
Odisha	89.7	10.3	0.0
Punjab	48.4	29.0	22.6
Rajasthan	43.1	19.6	37.3
Tamil Nadu	65.0	15.0	20.0
Telangana	73.7	23.7	2.6
Uttar Pradesh	62.7	24.1	13.3
Uttarakhand	84.6	15.4	0.0
West Bengal	34.8	13.0	52.2
Total	71.5	14.3	14.3

Table C.11 Problem related to availability of net connectivity			
State	No problem	Moderate	Severe
Andhra Pradesh	88.9	8.9	2.2
Assam	55.2	27.6	17.2
Bihar	65.7	22.9	11.4
Chhattisgarh	76.3	3.3	20.3
Delhi	85.0	7.5	7.5
Gujarat	96.6	0.0	3.4
Haryana	97.5	0.0	2.5
Himachal Pradesh	50.0	30.0	20.0
Jharkhand	71.4	17.9	10.7
Karnataka	90.0	5.0	5.0
Kerala	71.8	23.1	5.1
Madhya Pradesh	69.8	14.0	16.3
Maharashtra	66.0	24.0	8.0
Odisha	69.0	13.8	17.2
Punjab	61.3	29.0	9.7
Rajasthan	58.8	23.5	17.6
Tamil Nadu	63.1	32.1	4.8
Telangana	84.2	10.5	5.3
Uttar Pradesh	51.8	26.5	21.7
Uttarakhand	42.3	46.2	11.5
West Bengal	35.7	20.0	44.3
Total	68.8	18.6	12.6

Table C.12 Problem related to availability of sewage facility			
State	No problem	Moderate	Severe
Andhra Pradesh	88.9	6.7	4.4
Assam	48.3	20.7	31.0
Bihar	42.9	25.7	31.4
Chhattisgarh	27.0	50.0	23.0
Delhi	55.0	17.5	27.5
Gujarat	97.7	0.0	2.3
Haryana	90.0	5.0	5.0
Himachal Pradesh	50.0	23.3	26.7
Jharkhand	75.0	10.7	14.3
Karnataka	76.7	18.3	5.0
Kerala	64.1	23.1	12.8
Madhya Pradesh	72.1	14.0	14.0
Maharashtra	55.9	16.3	27.8
Odisha	55.2	24.1	20.7
Punjab	41.9	29.0	29.0
Rajasthan	51.0	19.6	29.4
Tamil Nadu	57.1	34.5	8.3
Telangana	81.6	13.2	5.3
Uttar Pradesh	36.1	26.5	37.3
Uttarakhand	57.7	19.2	23.1
West Bengal	28.6	12.9	58.6
Total	59.5	18.9	21.6

Table C.13 Problem related to road / rail quality/ connectivity			
State	No problem	Moderate	Severe
Andhra Pradesh	91.1	6.7	2.2
Assam	51.7	24.1	24.1
Bihar	68.6	22.9	8.6
Chhattisgarh	80.0	0.0	20.0
Delhi	52.5	25.0	22.5
Gujarat	97.7	1.1	1.1
Haryana	85.0	7.5	7.5
Himachal Pradesh	90.0	3.3	6.7
Jharkhand	89.3	10.7	0.0
Karnataka	46.7	43.3	10.0
Kerala	66.7	25.6	7.7
Madhya Pradesh	76.7	20.9	2.3
Maharashtra	63.9	28.9	7.2
Odisha	82.8	3.4	13.8
Punjab	58.1	22.6	19.4
Rajasthan	72.5	15.7	11.8
Tamil Nadu	67.9	23.8	8.3
Telangana	78.9	18.4	2.6
Uttar Pradesh	38.6	22.9	38.6
Uttarakhand	34.6	15.4	50.0
West Bengal	34.3	28.6	37.1
Total	64.6	19.7	15.7

Table C.14 Problem related to industry policies			
State	No problem	Moderate	Severe
Andhra Pradesh	68.9	28.9	2.2
Assam	65.5	20.7	13.8
Bihar	51.4	28.6	20.0
Chhattisgarh	10.3	83.3	6.3
Delhi	72.5	15.0	12.5
Gujarat	97.7	2.3	0.0
Haryana	87.5	10.0	2.5
Himachal Pradesh	73.3	20.0	6.7
Jharkhand	64.3	21.4	14.3
Karnataka	13.3	71.7	15.0
Kerala	43.6	51.3	5.1
Madhya Pradesh	63.4	22.0	14.6
Maharashtra	77.3	9.0	13.8
Odisha	55.2	31.0	13.8
Punjab	87.1	12.9	0.0
Rajasthan	82.4	11.8	5.9
Tamil Nadu	44.0	40.5	15.5
Telangana	70.3	24.3	5.4
Uttar Pradesh	48.8	30.5	20.7
Uttarakhand	46.2	50.0	3.8
West Bengal	37.1	31.4	31.4
Total	60.3	27.7	11.9

Table C.15 Problem in access to finance			
State	No problem	Moderate	Severe
Andhra Pradesh	73.3	24.4	2.2
Assam	65.5	27.6	6.9
Bihar	71.4	11.4	17.1
Chhattisgarh	10.0	83.3	6.7
Delhi	87.5	10.0	2.5
Gujarat	97.7	2.3	0.0
Haryana	87.5	12.5	0.0
Himachal Pradesh	53.3	36.7	10.0
Jharkhand	75.0	25.0	0.0
Karnataka	46.7	41.7	11.7
Kerala	41.0	53.8	5.1
Madhya Pradesh	78.0	22.0	0.0
Maharashtra	53.3	24.3	22.5
Odisha	65.5	20.7	13.8
Punjab	64.5	35.5	0.0
Rajasthan	68.0	24.0	8.0
Tamil Nadu	41.7	38.1	20.2
Telangana	78.4	18.9	2.7
Uttar Pradesh	45.1	35.4	19.5
Uttarakhand	50.0	19.2	30.8
West Bengal	38.6	24.3	37.1
Total	60.0	27.4	12.5

Table C.16 Problem related to availability of raw material			
State	No problem	Moderate	Severe
Andhra Pradesh	70.5	27.3	2.3
Assam	53.6	25.0	21.4
Bihar	75.9	6.9	17.2
Chhattisgarh	96.0	0.0	4.0
Delhi	82.5	15.0	2.5
Gujarat	98.9	1.1	0.0
Haryana	95.0	5.0	0.0
Himachal Pradesh	60.0	33.3	6.7
Jharkhand	84.6	15.4	0.0
Karnataka	88.3	10.0	1.7
Kerala	53.8	41.0	5.1
Madhya Pradesh	78.6	9.5	11.9
Maharashtra	70.2	13.0	16.8
Odisha	72.4	17.2	10.3
Punjab	48.4	45.2	6.5
Rajasthan	65.3	18.4	16.3
Tamil Nadu	53.7	34.1	12.2
Telangana	70.3	21.6	8.1
Uttar Pradesh	45.8	30.1	24.1
Uttarakhand	76.9	23.1	0.0
West Bengal	35.7	18.6	45.7
Total	68.7	19.2	12.1

Table C.17 Problem related to tax policy of the state			
State	No problem	Moderate	Severe
Andhra Pradesh	62.2	33.3	4.4
Assam	58.6	31.0	10.3
Bihar	60.0	28.6	11.4
Chhattisgarh	70.0	30.0	0.0
Delhi	55.0	35.0	10.0
Gujarat	97.7	2.3	0.0
Haryana	90.0	7.5	2.5
Himachal Pradesh	80.0	16.7	3.3
Jharkhand	78.6	17.9	3.6
Karnataka	20.0	68.3	11.7
Kerala	48.7	41.0	10.3
Madhya Pradesh	54.8	21.4	23.8
Maharashtra	41.0	55.0	4.0
Odisha	65.5	31.0	3.4
Punjab	87.1	12.9	0.0
Rajasthan	74.5	19.6	5.9
Tamil Nadu	50.0	34.5	15.5
Telangana	83.8	8.1	8.1
Uttar Pradesh	16.9	22.9	60.2
Uttarakhand	42.3	34.6	23.1
West Bengal	42.9	24.3	32.9
Total	56.4	29.8	13.8

Table C.18 Problem in getting approvals before starting business			
State	No problem	Moderate	Severe
Andhra Pradesh	68.9	26.7	4.4
Assam	58.6	17.2	24.1
Bihar	62.9	14.3	22.9
Chhattisgarh	16.7	73.3	10.0
Delhi	75.0	12.5	12.5
Gujarat	92.0	8.0	0.0
Haryana	82.5	12.5	5.0
Himachal Pradesh	63.3	33.3	3.3
Jharkhand	78.6	7.1	14.3
Karnataka	20.0	48.3	31.7
Kerala	25.6	53.8	20.5
Madhya Pradesh	50.0	28.6	21.4
Maharashtra	34.0	46.0	20.0
Odisha	51.9	22.2	25.9
Punjab	51.6	25.8	22.6
Rajasthan	52.9	23.5	23.5
Tamil Nadu	32.1	38.1	29.8
Telangana	70.3	27.0	2.7
Uttar Pradesh	22.9	26.5	50.6
Uttarakhand	19.2	57.7	23.1
West Bengal	18.6	30.0	51.4
Total	46.6	31.0	22.4

Table C.19 Problem related to corruption in the state			
State	No problem	Moderate	Severe
Andhra Pradesh	51.1	35.6	13.3
Assam	27.6	41.4	31.0
Bihar	28.6	28.6	42.9
Chhattisgarh	76.0	10.0	14.0
Delhi	45.0	30.0	25.0
Gujarat	90.8	8.0	1.1
Haryana	62.5	20.0	17.5
Himachal Pradesh	30.0	56.7	13.3
Jharkhand	55.6	22.2	22.2
Karnataka	25.0	48.3	26.7
Kerala	35.9	38.5	25.6
Madhya Pradesh	52.5	27.5	20.0
Maharashtra	55.0	29.0	16.0
Odisha	58.6	24.1	17.2
Punjab	25.8	41.9	32.3
Rajasthan	24.0	42.0	34.0
Tamil Nadu	11.9	39.3	48.8
Telangana	47.2	47.2	5.6
Uttar Pradesh	36.1	31.3	32.5
Uttarakhand	60.0	12.0	28.0
West Bengal	27.1	20.0	52.9
Total	43.5	30.8	25.7

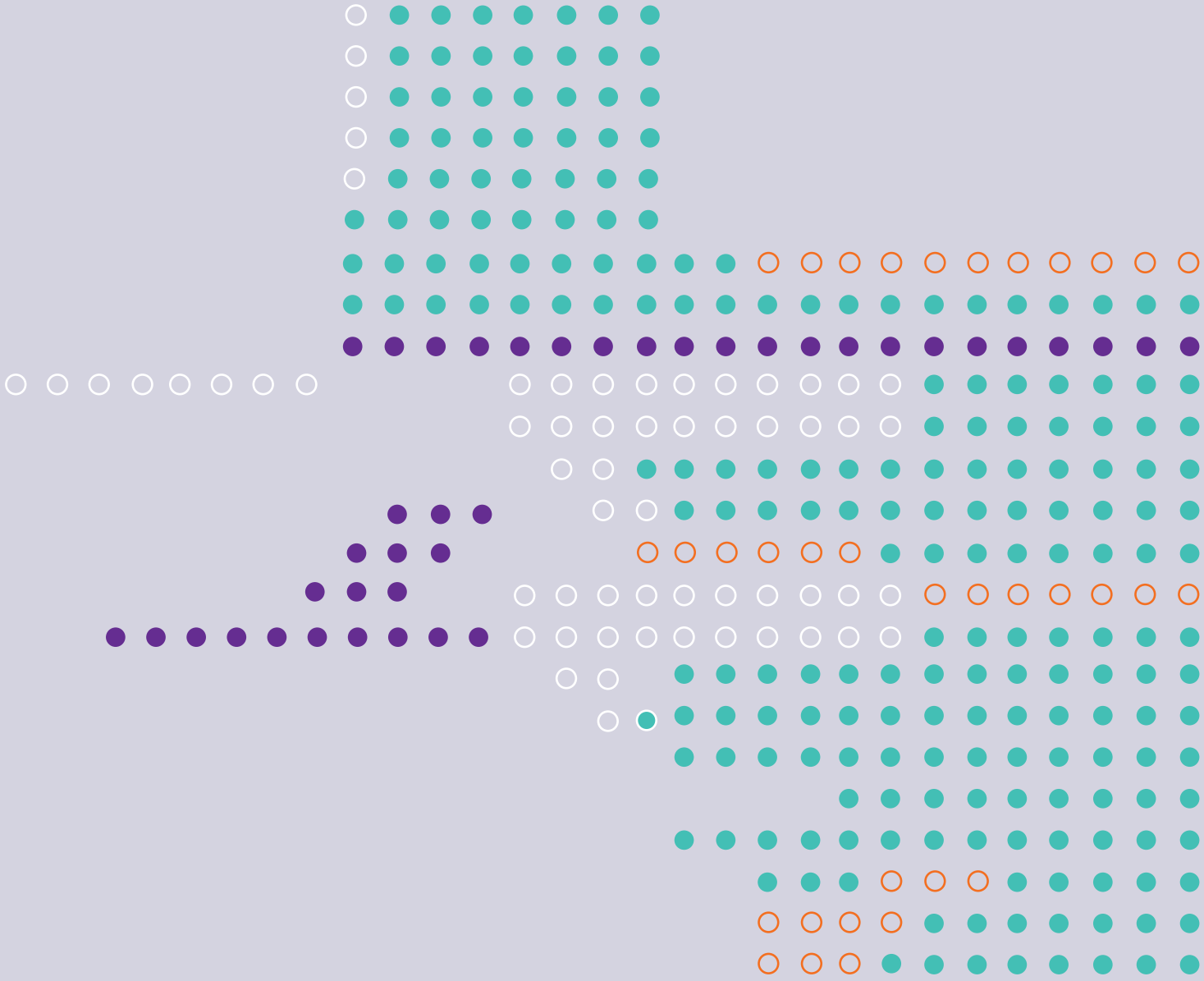
Table C.20 Problem related to law and order situation in the state			
State	No problem	Moderate	Severe
Andhra Pradesh	80.0	15.6	4.4
Assam	37.9	34.5	27.6
Bihar	31.4	37.1	31.4
Chhattisgarh	27.0	66.7	6.3
Delhi	65.0	27.5	7.5
Gujarat	98.9	1.1	0.0
Haryana	87.5	5.0	7.5
Himachal Pradesh	76.7	16.7	6.7
Jharkhand	71.4	14.3	14.3
Karnataka	58.3	36.7	5.0
Kerala	35.9	51.3	12.8
Madhya Pradesh	64.3	19.0	16.7
Maharashtra	77.0	21.0	2.0
Odisha	79.3	17.2	3.4
Punjab	71.0	25.8	3.2
Rajasthan	72.5	19.6	7.8
Tamil Nadu	61.9	26.2	11.9
Telangana	89.5	10.5	0.0
Uttar Pradesh	33.7	39.8	26.5
Uttarakhand	26.9	38.5	34.6
West Bengal	34.3	20.0	45.7
Total	62.2	24.9	12.9

Table C.21 Perception on business conditions one year ahead			
State	Better	Same	Worse
Andhra Pradesh	75.6	22.2	2.2
Assam	82.8	13.8	3.4
Bihar	65.7	28.6	5.7
Chhattisgarh	56.0	32.0	12.0
Delhi	60.0	37.5	2.5
Gujarat	44.8	44.8	10.3
Haryana	65.0	30.0	5.0
Himachal Pradesh	63.3	30.0	6.7
Jharkhand	75.0	17.9	7.1
Karnataka	79.7	18.6	1.7
Kerala	71.1	26.3	2.6
Madhya Pradesh	69.8	25.6	4.7
Maharashtra	60.0	40.0	0.0
Odisha	58.6	37.9	3.4
Punjab	51.6	41.9	6.5
Rajasthan	54.9	39.2	5.9
Tamil Nadu	44.0	47.6	8.3
Telangana	78.9	21.1	0.0
Uttar Pradesh	54.2	44.6	1.2
Uttarakhand	53.8	42.3	3.8
West Bengal	34.8	50.7	14.5
Total	59.5	35.5	5.0

Table C.22 Perception on firm's own financial position one year ahead			
State	**Better**	**Same**	**Worse**
Andhra Pradesh	75.6	24.4	0.0
Assam	86.2	10.3	3.4
Bihar	77.1	20.0	2.9
Chhattisgarh	84.0	3.0	13.0
Delhi	60.0	40.0	0.0
Gujarat	67.8	31.0	1.1
Haryana	67.5	30.0	2.5
Himachal Pradesh	55.2	44.8	0.0
Jharkhand	74.1	22.2	3.7
Karnataka	85.0	15.0	0.0
Kerala	76.9	20.5	2.6
Madhya Pradesh	69.8	23.3	7.0
Maharashtra	82.0	18.0	0.0
Odisha	65.5	34.5	0.0
Punjab	45.2	41.9	12.9
Rajasthan	56.9	39.2	3.9
Tamil Nadu	58.3	38.1	3.6
Telangana	84.2	15.8	0.0
Uttar Pradesh	67.5	30.1	2.4
Uttarakhand	53.8	38.5	7.7
West Bengal	40.6	52.2	7.2
Total	68.3	28.7	3.0

Table C.23 Perception on present investment climate as compared with a year ago			
State	**Better**	**Same**	**Worse**
Andhra Pradesh	68.9	28.9	2.2
Assam	62.1	31.0	6.9
Bihar	14.3	48.6	37.1
Chhattisgarh	62.0	7.0	31.0
Delhi	37.5	50.0	12.5
Gujarat	49.4	47.1	3.4
Haryana	52.5	42.5	5.0
Himachal Pradesh	70.0	26.7	3.3
Jharkhand	33.3	51.9	14.8
Karnataka	61.0	30.5	8.5
Kerala	66.7	25.6	7.7
Madhya Pradesh	69.8	20.9	9.3
Maharashtra	31.3	34.4	34.4
Odisha	58.6	34.5	6.9
Punjab	38.7	41.9	19.4
Rajasthan	51.0	39.2	9.8
Tamil Nadu	36.9	45.2	17.9
Telangana	57.9	42.1	0.0
Uttar Pradesh	56.6	39.8	3.6
Uttarakhand	57.7	38.5	3.8
West Bengal	37.7	50.7	11.6
Total	49.0	38.0	13.0

Table C.24 Current level of operation of the firm relative to installed capacity			
State	**Less**	**Equal**	**More**
Andhra Pradesh	17.8	68.9	13.3
Assam	10.7	64.3	25.0
Bihar	51.7	44.8	3.4
Chhattisgarh	0.0	100.0	0.0
Delhi	12.5	77.5	10.0
Gujarat	30.2	60.5	9.3
Haryana	10.0	65.0	25.0
Himachal Pradesh	0.0	76.7	23.3
Jharkhand	36.0	64.0	0.0
Karnataka	10.0	81.7	8.3
Kerala	10.3	74.4	15.4
Madhya Pradesh	14.3	64.3	21.4
Maharashtra	16.2	59.6	24.2
Odisha	48.3	31.0	20.7
Punjab	12.9	71.0	16.1
Rajasthan	9.8	70.6	19.6
Tamil Nadu	22.6	58.3	19.0
Telangana	2.6	65.8	31.6
Uttar Pradesh	6.0	44.6	49.4
Uttarakhand	11.5	61.5	26.9
West Bengal	12.9	78.6	8.6
Total	16.2	64.8	19.0



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