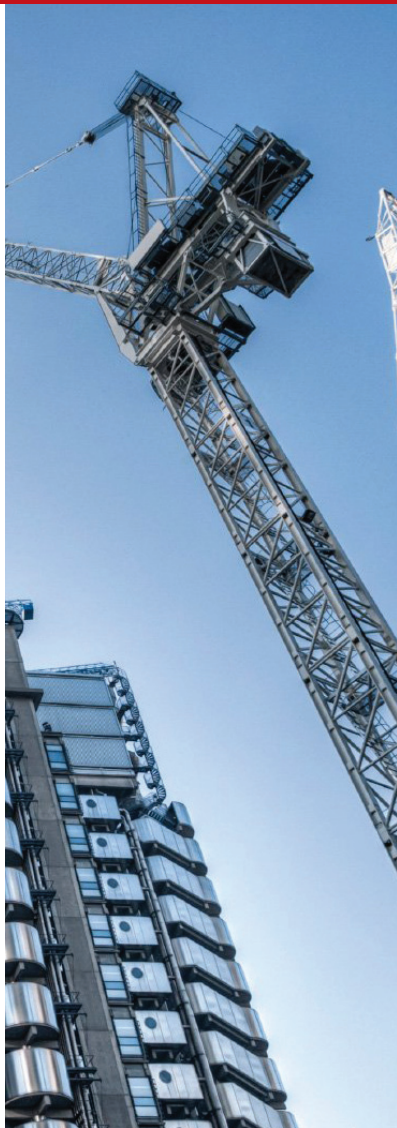


# The NCAER State Investment Potential Index

Third Edition  
2018



# The NCAER State Investment Potential Index

N-SIPI 2018

Third Edition  
August 2018

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

**NCAER | QUALITY . RELEVANCE . IMPACT**

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***Published by***

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# Foreword

Global growth trends are beginning to look optimistic in 2018. Both the advanced and emerging market economies are showing signs of the revival of GDP growth. With a GDP growth rate of 7.3 per cent that is projected to rise to 7.5 per cent in 2019 and 2020, India continues to remain the world's fastest growing economy. For this and other reasons, India remains a highly desirable investment destination. The 2018 A. T. Kearney Foreign Direct Investment Confidence Index ranks India 11th in the world, above Singapore, Netherlands, and Sweden: it is the only lower middle-income country in the top 25 countries ranked by the Index. The World Economic Forum's 2017-18 Global Competitiveness Index ranks India third in the market-size pillar after China and the United States.

NCAER launched a research initiative in 2015 to measure each state's investment climate and potential and to track it over time. NCAER presented the first N-SIPI in March 2016. The 2018 NCAER State Investment Potential Index (N-SIPI) is now in its third successful year. The idea behind N-SIPI is to provide a single composite investment rating of how the Indian states and the Union Territory of Delhi are positioned to encourage and attract investment. It remains a pioneering effort to provide metrics of economic governance, competitiveness, and growth opportunities at the state level. The Index is designed to provide a systematic and reliable "go-to" reference for potential investors.

Building on the success of N-SIPI 2016 and 2017, N-SIPI 2018 takes cognizance of the 2017 introduction of GST, an important new consideration for any investor. Desirable as it was, the one-stroke, complete overhaul of India's indirect tax system created uncertainty as many businesses were not yet ready for the change. This is widely believed to have caused a temporary slowdown in business activity. Businesses seem to have mostly recovered from the initial shock caused by the GST. A key pillar of N-SIPI is

a perception-based ranking of the business climate in each state built on firm surveys. To factor in the GST, N-SIPI 2018 has expanded its survey questionnaire by including GST-specific questions.

The results of the industry survey shed interesting light on the pace of business reforms and government policy changes at the state level. Besides being of obvious value to both domestic and overseas investors, we believe the N-SIPI 2018 results will be of considerable value to the leadership of India's states as they continue to improve their investment climate. We look forward to working closely with interested individual state leaderships to probe deeper into their N-SIPI Index and to explore ways of improving their investment climate in focussed and effective ways.

I sincerely thank both the state and industry representatives who responded enthusiastically to our survey teams and spared their valuable time in sharing their perceptions of the pace of economic reforms in their state. I am grateful to Mr Ramesh Abhishek, Secretary, Department of Industrial Policy and Promotion in the Ministry of Commerce and Industry for his constant support for the N-SIPI, which complements his own Department's extensive work on the Ease of Doing Business at the Central and state levels. Finally, I would like to thank NCAER Senior Fellow Dr Anushree Sinha and her entire N-SIPI team, members of which are recognised in her Acknowledgements, who did a tremendous job under great time pressure in bringing out the 2018 N-SIPI Index.



New Delhi  
July 30, 2018

**Shekhar Shah**  
*Director-General*  
NCAER





# Acknowledgements

The N-SIPI research project greatly benefited from the guidance and support received from various stakeholders during all the stages of this report. I specifically wish to thank all the responding units during the course of field work carried out during May–June, 2018.

In continuation of N-SIPI 2017, the study team benefited from the support it received from different Departments and Ministries at the state and Central levels. Among them, we particularly thank Sri Solomon Arokiaraj, IAS, Secretary, Department of Industry of Andhra Pradesh, for his unstinting support to the study team during field visits. We also wish to acknowledge the specific support we received from the Industry departments of Punjab and Odisha. Further, I wish to extend our sincere gratitude to all the state Chief Secretaries for their valued support in conducting the survey in their respective states that helped us in building N-SIPI 2018 within a consistent and reliable framework.

At NCAER, I am grateful to Dr Rajesh Chadha, Senior Research Counsellor, for offering valuable inputs for this study. I would also like to thank Dr Anjali Tandon for providing critical support to the team in compiling the report. The overall support and intense engagement in N-SIPI 2018 by Dr Saurabh Bandyopadhyay and Dr Prerna Prabhakar need special mention, and I am very grateful to them. I am also thankful to Dr Tarujyoti Buragohain for her valuable support in completing the report. In addition, I would like to thank Dr Anusha for

her useful inputs in our survey design and methodology; and Mr Asrar Alam and Mr Prabir Kumar Ghosh for their help in coordination with the survey agencies during the initial stage of the project. I also would like to express my gratitude to Mr K. A. Siddiqui for facilitating the survey work through CAPI. I would be amiss if I do not mention the support extended by Dr Astha Sen and Mr Siddharth Verma in the preparation of this report.

Moreover, I am thankful to Ms Sudesh Bala, Ms Sangita Chaudhary and Mr Dhruv Pratap Singh for their organisational support. Further, I would like to thank Ms Prachi Mittal who worked assiduously throughout the study. Ms Poonam Dhawan deserves special thanks for ably looking after the administrative aspects of the study and ensuring adherence to deadlines. I would like to express my appreciation for Ms Anupma Mehta for editing the report under a very tight schedule. Mr J. S. Punia needs a special mention for painstakingly looking into all the aspects related to printing of this report under a most challenging time frame. In conclusion, I am very grateful to Dr Shekhar Shah, Director-General of NCAER, for the original idea of starting the NCAER State Investment Potential Index in 2016, his overall guidance and support in continuing the N-SIPI work, and for ensuring that the 2018 team received the resources that it needed.

July 2018

Anushree Sinha



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# Abbreviations and Acronyms

|         |   |
|---------|---|
| 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<br>Promotion          |
| EME     | Emerging Market Economy                                   |
| EU      | Employment and Unemployment                               |
| FDI     | Foreign Direct Investment                                 |
| FICCI   | Federation of Indian Chambers of Commerce<br>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 Programme<br>Implementation    |
| MSME    | Micro Small and Medium Enterprises                        |
| NCAER   | National Council of Applied Economic<br>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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| Kerala  | 63        |   |            |
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# Executive Summary

With its economy growing at 7.7 per cent in the final quarter of Fiscal Year 2017–18, India has retained its tag of being the fastest growing major economy in the world. This growth has been complemented by the high inflows of foreign direct investment, control of inflation to keep it in the 4–5 per cent range, and reforms that have made the regulatory environment more business-friendly. Moreover, the strong fundamentals of the economy have boosted the investment potential of the country, as reflected in the global rankings. India's rank in the last two years has gone up 16 spots, from 55th in 2016 to 40th in 2018 in the World Economic Forum's Global Competitiveness Index. Similarly, the Economic Policy Uncertainty index shows India in a more positive light as compared to the rest of the world. In the World Bank's latest "Doing Business 2018" report too, India's rank has moved up from 130th among 190 countries in 2017 to 100<sup>th</sup> in 2018.

One of the most significant economic reforms in recent times has been the introduction of the Goods and Services Tax (GST), signifying the transition of the economy to a uniform value added tax at both the Central and state levels. Although the implementation of GST is still 'work in progress' and its long-term impact would be seen only in the coming years, it is already being perceived as a path-breaking reform for the Indian economy. The cumulative effects of low-cost labour, favourable demographics and expanding market size also place India in an advantageous position for attracting global investment. It is in the backdrop of these seminal economic developments that the National Council of Applied Economic Research (NCAER) launched the third edition of its State Investment Potential Index (N-SIPI) in 2018 to assess the 'ease of doing business' parameters of various states and to help investors counter asymmetries of information by providing a single composite investment score across states. A unique feature of N-SIPI 2018 is the inclusion of questions on GST in the perceptions survey to examine the impact of the new tax policy on businesses and its implications for investment in different sectors of the economy.

N-SIPI 2018 has its antecedents in N-SIPI 2016, when NCAER rolled out the first of its kind ranking of states (The NCAER State Investment Potential Index, March 2016), a pioneering effort aimed at providing a systematic,

consistent and reliable "go-to" Index for potential investors by offering them a holistic sense of how the states in this Index are positioned to encourage and attract investment. By furnishing comprehensive information on location-specific costs and benefits associated with business investment, N-SIPI 2018 also effectively complements the reports of the Department of Industrial Policy and Promotion (DIPP) and the World Bank on the ease of doing business following the implementation of various reforms concerning regulatory processes, policies and practices across the country.

N-SIPI 2018 has been constructed on the basis of six pillars that can be classified under the following four broad categories: factor-driven (land and labour), efficiency-driven (infrastructure), growth-driven (economic climate, and political stability and governance), and perceptions-driven (responses to the surveys). Each of the pillars is, in turn, based on a number of sub-pillars, ranging from 4 in the case of land to 11 in the case of infrastructure.

N-SIPI 2018 also incorporates the results of an extensive survey conducted during May and June 2018, covering 1049 industrial units across 20 major states and the Union Territory of Delhi. The respondents were usually senior officials representing the units surveyed. The data was collected on the basis of responses to structured questionnaires and face-to-face interviews conducted by the field staff engaged by NCAER.

Interestingly, the rankings of states in N-SIPI 2018 have shown some churn as compared to the corresponding rankings in N-SIPI 2017. Hence, while Gujarat and Delhi, in that order, retain their top rankings in N-SIPI 2018, Delhi has outperformed Gujarat, moving up to the top of the table. Tamil Nadu has also moved up significantly, and is placed at number three in the overall rankings, even as the erstwhile number three, Andhra Pradesh, has slipped to the number seven position. At the other end, Bihar and Uttar Pradesh continue to be placed at the bottom of the league tables in positions they consistently occupied in N-SIPI 2016 and 2017 as well. However, Uttar Pradesh has improved its overall ranking by two places to attain the 18th rank in N-SIPI 2018. While Jharkhand and Assam are among the bottom three states in N-SIPI 2018, West Bengal has shown tremendous improvement, moving up from rank 21 in

N-SIPI 2017 to rank 10 in N-SIPI-2018. Other states that have improved their rankings over the year include Punjab, up from the 16th to the 12th position, and Tamil Nadu, up from the 6th to the 2nd position. In contrast, Odisha and Andhra Pradesh have slipped six and four places, to be placed at ranks 17 and 7, respectively, in N-SIPI 2018.

A disaggregated assessment of the individual pillars of N-SIPI 2018 shows that Telangana leads under the 'land' pillar, which was introduced in N-SIPI 2017, with Madhya Pradesh and Tamil Nadu following at positions two and three, respectively. Chhattisgarh, Odisha and Uttarakhand occupy the bottom 3 positions on the league tables whereas Assam and Kerala have shown significant improvement, moving up the rankings by 7 and 6 places, respectively.

Tamil Nadu and Andhra Pradesh have retained the 1st and 2nd spots, respectively, on the labour pillar, wherein Karnataka has displaced Telangana from the 3rd spot in N-SIPI 2018. On the other hand, Assam has been relegated to the 19th spot, followed by Madhya Pradesh and Jharkhand, in that order. While Uttar Pradesh and Karnataka have moved up 3 and 2 places, respectively, Odisha and Telangana have moved down 4 places each.

The 'infrastructure' pillar, however, reflects a mixed scenario among the top three states, with Punjab improving its position from the 4th to the 2nd, displacing Gujarat, which has slipped from the 3rd place in 2017 to the 8th in 2018. Following the trend of N-SIPI 2017, the states at the bottom with respect to this pillar are again Uttar Pradesh, Jharkhand and Bihar, following the trend of 2017, though Bihar has moved further down by two places to be placed at the bottom of the league table in 2018.

As regards the pillar on 'economic climate', both Delhi and Gujarat have retained their positions among the top three states, whereas Telangana has moved up 4 places to gain the 2nd spot in N-SIPI 2018. While Uttarakhand has slipped 15 places from the 3rd position in N-SIPI 2017 to the 18th in N-SIPI 2018, Rajasthan and Andhra Pradesh have moved up 6 and 5 places, respectively. Uttar Pradesh, Punjab and Bihar again occupy the bottom three positions.

Tamil Nadu, Haryana and Punjab lead the league tables on the 'governance and political stability pillar', with Telangana, Bihar and Himachal Pradesh being placed at the bottom. Andhra Pradesh and Tamil Nadu have moved up 4 places each from the 13th to the 9th positions, and the 5th to the 1st positions, respectively. In contrast, Uttarakhand and Uttar Pradesh have slipped 4 places each from the 3rd to the 8th and the 14th to the 19th positions, respectively.

The perceptions-based survey, an integral part of N-SIPI 2018, helps in assessing the ground level impact of various reforms. The findings of the survey show that Gujarat has retained the top spot in the rankings with Haryana and West Bengal being placed at the 2nd and 3rd spots, respectively, in the league table, and West Bengal particularly showing a tremendous improvement by moving up 18 places from the 21st to the 3rd spot. Uttarakhand too has made a significant improvement by moving up 10 places in the rankings though Telangana and Andhra Pradesh have slipped 17 and 15 places, respectively. The states at the bottom with regard to the perceptions survey are Karnataka, Telangana and Maharashtra.

The survey has thus thrown up interesting results. Bihar and Karnataka face serious challenges in the procurement of land. In terms of labour, Gujarat and Haryana are perceived to be the best states, whereas Jharkhand, Karnataka, Assam and Maharashtra are lagging behind. While Chhattisgarh, Punjab, Haryana and Karnataka are doing in well in terms of the availability of power supply, Uttarakhand, Haryana, Gujarat, and West Bengal are seen as the most industry-friendly states and firms in Rajasthan are observed to have achieved optimal utilisation of their installed capacities.

Thus, by delineating the metrics of economic governance, business competitiveness and business growth opportunities at the state and regional levels, N-SIPI 2018 would prove to be a valuable addition to the existing literature, effectively guiding future investment decisions in each of the surveyed states.



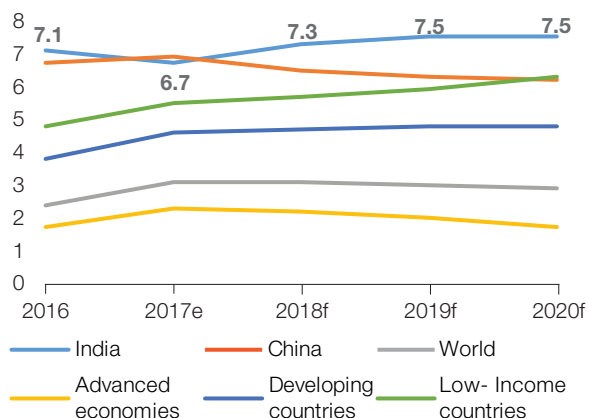
## Section 1

# 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 2019 and 2020. In 2018, India is poised to grow at 7.3 per cent, which is faster than China and other developing countries.<sup>1</sup> Being a developing country, India's growth rate is also well above the 2.2 per cent growth rate of the advanced economies (Figure 1.1). The World Bank forecasts that global growth will strengthen to 3.1 per cent in 2018 and the accelerated growth will benefit trading partners including India. India continues to make rapid strides to remain competitive globally. Ranking for India improved remarkably for the second year in a row in the World Economic Forum's Global Competitiveness Index (GCI) (which ranks 137 countries)<sup>2</sup>. India's rank in the last two years has jumped up by 16 spots from 55th in 2016 to 40th in 2018.

**Figure 1.1** Global Real GDP Growth



Source. Global Economic Prospects, World Bank, June 2018.

#### 1.1.1. Major Change in Policy and Governance

One of the most significant changes in policy and governance witnessed since the release of the NCAER-

State Investment Potential Index (N-SIPI) 2017 has been the transition to a uniform value-added tax at the Central- and state levels in the form of the Goods and Services Tax (GST). In order to capture the reaction of businesses to this major tax policy change, we added a brand new set of questions to the N-SIPI 2018 survey round. The timing of the N-SIPI 2018 survey has allowed us to capture respondents' attitudes towards GST roughly after a year since its implementation. Since GST system introduced in India continues to witness eclectic policy revisions and modifications, this momentous tax policy reform is still very much a work-in-progress. For instance, the e-way bill requirement is a major recent addition to the new GST system. Another example which shows that India is still nowhere close to an established indirect tax regime is the compliance requirement of a 'GSTR2' tax filing form. This form was introduced at the onset of GST in July 2017 but was revoked quickly due to its elaborate format and complexity. Since then, this tax filing form has been on pending status and it is unclear as to when it will be restored as a compliance requirement for businesses. In the midst of these GST-related changes, we uncover the divergent perspectives of firms towards the GST policy in N-SIPI 2018.

#### 1.1.2. The State Investment Potential Index

The 'Doing Business' indicators in India are showing signs of improvement. While India is growing as a land of investment opportunities, informational asymmetries create a large gap between investment decisions and spatial locations. The N-SIPI measures informational asymmetries by providing a single composite investment score. It offers a comprehensive snapshot of the investment environment in all the states of India in the form of an index. More specifically, it assesses the various factors that primarily determine and influence investment opportunities such as land, labour, GST policy, infrastructure, economic governance and the business environment.

1. The figures cited here are based on the following data sources: (i) "Global Real GDP Growth", World Bank, Global Economic Prospects, June 2018, (ii) "Global Trends in Economic Policy Uncertainty" (EPU), Economic Policy Uncertainty, 2018; and (iii) "Doing Business" World Bank 2018 report on Reforming to Create Jobs.

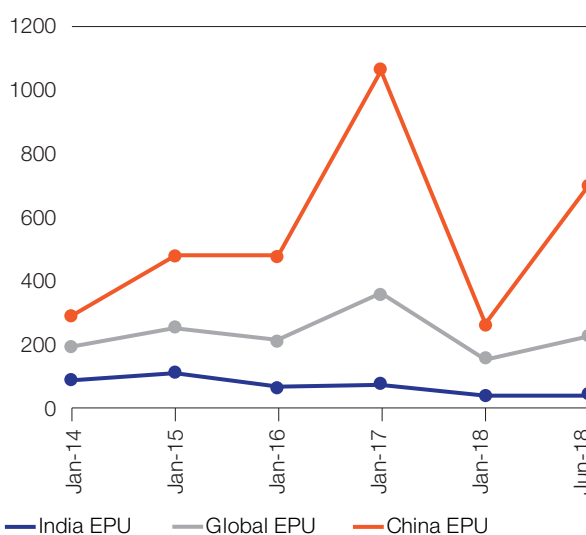
2. The GCI index is based on 12 pillars, which are determined by a country's institutional factors, various policies, and factors contributing towards the productivity of an economy.

In March 2016, NCAER rolled out the first of its kind ranking of the states based on their investment potential. N-SIPI-2016 is a pioneering and unique effort to provide the metrics of economic governance, business competitiveness and business growth opportunities at the state and regional levels. It provides a systematic, consistent and reliable “go-to” Index for potential investors. N-SIPI 2018 is the third edition in the annual series of these rankings. N-SIPI 2018 builds on the framework and methodology of 2017, and incorporates the results of an extensive survey conducted across 21 states in May and June 2018. In N-SIPI 2018, businesses rate the difficulties faced by them with respect to land, labour, access to adequate infrastructure, perceptions of the economic climate, governance and future growth opportunities. All these factors critically contribute towards business investment decisions.

### 1.1.3. India on the Move

The Economic Policy Uncertainty Index (EPU) for India is very favourable as compared to the rest of the world (Figure 1.2). The value of the index indicates that the lower the EPU index, the greater is the confidence in economic policy. We observe a brief spike during the period December 2016 to February 2017 following demonetisation. Nevertheless, EPU has shown a steady decline since January 2017, which suggests strong fundamentals of growth and investment in India.

**Figure 1.2** Global Trends in Economic Policy Uncertainty (EPU)



Source: Source: Economic Policy Uncertainty (EPU) Index, 2018.

At the heel of the reforms initiated in foreign direct investment (FDI) regulations, FDI inflows in India touched record highs in 2017, and India moved to the 8th spot in AT Kearney’s FDI Confidence Index. In 2018, however, the index ranked India at the 11th spot, three places down from the previous year. India remains the second highest ranked emerging market on the Index. A variety of recent reforms have made its regulatory environment more business-friendly, and economic growth is forecast to rebound this year.<sup>3</sup> Foreign investors see the ‘Make in India’ brand, one of the important investment promoting policies of the Department of Industrial Policy and Promotions (DIPP), in a very positive light. Additionally, India’s economy offers global businesses an easy access to low-cost labour, favourable demographics, and a perpetually expanding market size. All these components create incredible growth opportunities for businesses. However, extensive changes in the indirect tax policy in the previous year could somewhat stifle these growth possibilities, though succinctly.

### 1.1.4. Review of the DIPP Report and the World Bank’s Assessment

The state-wise report released by DIPP in July 2018 publishes the results of perception-based surveys with a primary focus on the ease of doing business. According to the DIPP report, Andhra Pradesh and Telangana have jointly topped the ‘ease of doing business’ ranking for 2017 (published this year).

The report prepared by DIPP also provides estimation of an Index using information collected from the Business Reform Action Plan (BRAP), which basically comprises reforms on 58 regulatory processes, policies, practices and procedures spread across 10 distinct areas spanning the lifecycle of a typical business. These reforms mainly include single window clearance, tax reforms, labour and environment reforms, dispute resolution and the issuance of construction permits.

In the World Bank’s latest “Doing Business 2018”<sup>4</sup> report, India’s rank moved up from 130 in 2017 to 100 among 190 countries. Moreover, with the implementation of various key reforms at the state level and groundbreaking reforms like GST, India’s global rank may improve further over the next couple of years once GST is integrated into India’s economy.

3. <https://www.atkearney.com/foreign-direct-investment-confidence-index>. Definition: The FDI Confidence Index is an indicator created by A.T. Kearney, a global management consulting firm operating in 40 countries across the world. The index ranks countries on a scale from 0 to 3 based on their attractiveness for foreign direct investments. A score of 3 represents the highest level of confidence.

4. Source: “Doing Business, 2018: Reforming to Create Jobs”, the World Bank Group’s flagship report. This report relies on four main sources of information: the relevant laws and regulations, ‘doing business’ respondents, the governments of the economies covered, and the World Bank Group’s regional staff.

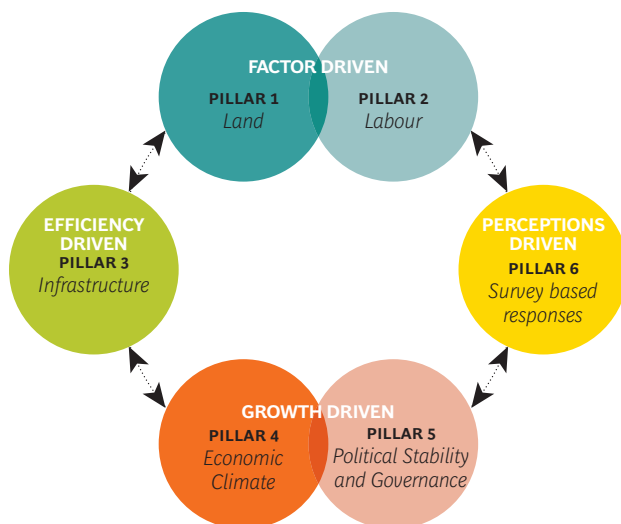
N-SIPI effectively complements the above-mentioned ‘ease of doing business’ rankings in both the DIPP report as well as the World Bank report. It adds extensively to perceptions on the ease of doing business in different states in India by gathering insights on many other eminent investment attributes. Therefore, it addresses information gaps in many ways by furnishing more comprehensive information on the location-specific risks and rewards associated with business investments. This third edition of N-SIPI ensures continuity, consistency and reliability in ranking India’s state investment potential over the coming years.

## 1.2. METHODOLOGY

### 1.2.1. The Six Pillars

The N-SIPI has been constructed using six pillars that can be classified under the following four broad categories: factor-driven (land and labour), efficiency-driven (infrastructure), growth-driven (economic climate, and political stability and governance), and perceptions-driven (responses to the surveys) (Figure 1.3).

**Figure 1.3** The Six Pillars of N-SIPI



Under each of the five secondary pillars, there are a number of sub-indicators. Each sub-indicator has been normalised to make it unit-free. As such, 100 would now represent the best state and zero the worst state under each sub-indicator. For the survey pillar, normalisation has been ensured by the weighting technique used to club the responses to each of the questions in the survey. There are 52 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.

### 1.2.2. The 2018 Rankings

The industry survey was conducted in 21 states. Among the seven North-eastern states, only Assam was covered. The other states not covered in the survey include Goa, Jammu and Kashmir, and Sikkim. The Index in this study is hence N-SIPI 21,<sup>5</sup> which ranks the 21 states covered based on the six pillars and 52 sub-indicators. The details of the states’ ranking in N-SIPI-21 under each pillar and sub-indicator have been provided separately in Appendix B.

## 1.3. FINDINGS

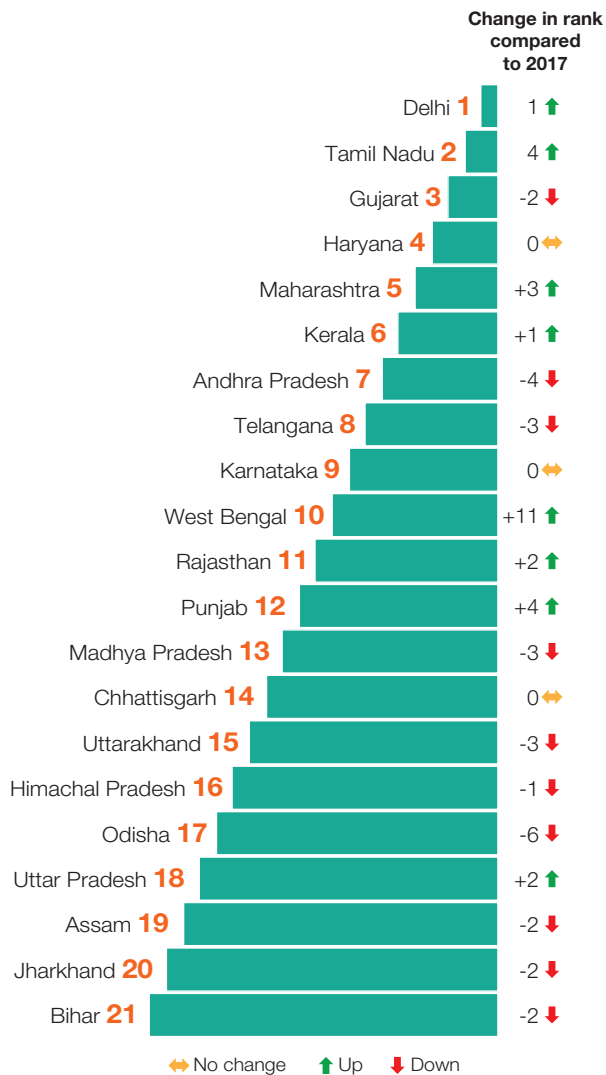
Delhi jumps one spot to lead N-SIPI 2018; Gujarat loses its first spot and slips to the third position; Maharashtra and Tamil Nadu move into the top five.

Delhi, Tamil Nadu, Gujarat, Haryana, Maharashtra and Kerala are the top six states for business investment potential under N-SIPI-21, which ranks states based on all the six pillars (Figure 1.4). Delhi tops the rankings under the third and fourth pillars on infrastructure and economic conditions in the state. Tamil Nadu comes in second place and tops the rankings in labour and governance. Although Assam, Jharkhand and Bihar are ranked among the least favourable states for investment, they are ranked higher under individual pillars, with Bihar doing better in the labour pillar, Assam in the land pillar, and Jharkhand in the economy pillar. Chhattisgarh and Karnataka maintain their ranks from last year at the 14th and 9th positions, respectively.

As compared to the 2017 ranking, West Bengal, Tamil Nadu and Punjab have made the most rapid gains in 2018, moving up by 11, 4 and 4 spots to the 10th, 2nd, and 12th positions, respectively, in 2018. Odisha, Andhra Pradesh and Telangana have lost the most ground by moving down 6, 4 and 3 spots to the 17th, 7th and 8th positions, respectively.

5. N-SIPI-21 does not include the six North-eastern states of Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura; as well as Sikkim, Goa, and Jammu and Kashmir.

**Figure 1.4** Overall rankings under N-SIPI 2018: All Six Pillars



### 1.3.1. Dynamic Shifts under the Pillars

Assam, Kerala and Himachal Pradesh made the most rapid gains in becoming more competitive under the land pillar, while Haryana, Odisha and Delhi slid down the rankings (Table 1.1). In the labour pillar, Uttar Pradesh and Karnataka moved closer to the top, while Odisha and Telangana moved further away. Uttarakhand and Telangana achieved the most gains in the infrastructure pillar, while Gujarat and Odisha witnessed the maximum slippage. As regards the economy and governance pillars, Rajasthan and Tamil Nadu, respectively, gained the most, while Uttarakhand and Uttar Pradesh, respectively, were the largest losers. Under the survey pillar, Uttarakhand and West Bengal saw a massive improvement in industry perceptions with regard to the investment potential, but Andhra Pradesh and Telangana suffered big losses in terms of the perceptions of industrial firms.

**Table 1.1** Dynamic shifts: Change in rankings in 2018 as compared to 2017

| OVERALL        |   |    |
|----------------|---|----|
| West Bengal    | ▲ | 11 |
| Tamil Nadu     | ▲ | 4  |
| Punjab         | ▲ | 4  |
| Maharashtra    | ▲ | 3  |
| Madhya Pradesh | ▼ | -3 |
| Uttarakhand    | ▼ | -3 |
| Andhra Pradesh | ▼ | -4 |
| Odisha         | ▼ | -6 |

| LABOUR        |      | INFRASTRUCTURE |      |
|---------------|------|----------------|------|
| Uttar Pradesh | ▲ 3  | Uttarakhand    | ▲ 4  |
| Karnataka     | ▲ 2  | Telangana      | ▲ 3  |
| Haryana       | ▲ 1  | Tamil Nadu     | ▲ 2  |
| Punjab        | ▲ 1  | Punjab         | ▲ 2  |
| Maharashtra   | ▼ -2 | Odisha         | ▼ -5 |
| Odisha        | ▼ -4 | Gujarat        | ▼ -5 |
| Telangana     | ▼ -4 | Andhra Pradesh | ▼ -4 |
|               |      | Bihar          | ▼ -2 |

| ECONOMIC CLIMATE |       | GOVERNANCE/ POL STABILITY |      |
|------------------|-------|---------------------------|------|
| Rajasthan        | ▲ 6   | Andhra Pradesh            | ▲ 4  |
| Andhra Pradesh   | ▲ 5   | Tamil Nadu                | ▲ 4  |
| Telangana        | ▲ 4   | Madhya Pradesh            | ▲ 3  |
| Odisha           | ▲ 4   | Assam                     | ▲ 2  |
| Gujarat          | ▼ -2  | Bihar                     | ▼ -2 |
| West Bengal      | ▼ -3  | West Bengal               | ▼ -3 |
| Tamil Nadu       | ▼ -5  | Uttar Pradesh             | ▼ -5 |
| Uttarakhand      | ▼ -15 | Uttarakhand               | ▼ -5 |

| SURVEY         |       | LAND             |      |
|----------------|-------|------------------|------|
| West Bengal    | ▲ 18  | Assam            | ▲ 7  |
| Uttarakhand    | ▲ 10  | Kerala           | ▲ 6  |
| Tamil Nadu     | ▲ 7   | Himachal Pradesh | ▲ 5  |
| Uttar Pradesh  | ▲ 6   | Rajasthan        | ▲ 2  |
| Karnataka      | ▼ -4  | Odisha           | ▼ -7 |
| Madhya Pradesh | ▼ -4  | Haryana          | ▼ -5 |
| Andhra Pradesh | ▼ -15 | Delhi            | ▼ -5 |
| Telangana      | ▼ -17 | Uttar Pradesh    | ▼ -3 |

Better off ▲      Worse off ▼

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

## 1.4. THE SIX PILLARS OF N-SIPI

### 1.4.1. PILLAR 1: LAND

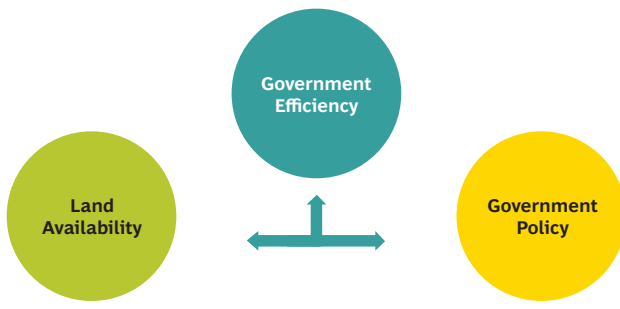
The introduction of the land pillar in N-SIPI 2017 helped improve the quality of the Index, making it more comprehensive. Together, both land and labour give an indication of the factors of production available in a state. The land pillar, as it stands, captures the availability, efficiency and policy space in land<sup>6</sup> across the states (Figure 1.5). As depicted in Figure 1.6, more land available for industrial purposes translates into higher industrial GSVA in the concerned state, stressing the significance of land for growth and the investment prospects of the state.

### Key Takeaways

Acquiring land is perhaps one of the most difficult processes, also involving litigation, in setting up an industry. The new Land Acquisition Act of 2013 is an improvement over the old Land Acquisition Act of 1894 in many ways, as it also includes the compensation aspect of land acquisition. The new Act has increased the compensation to four times the market price in rural areas and twice in urban regions, topped by a Relief and Rehabilitation (R&R) package for the affected families. It has also made the land acquisition process more strenuous by requiring a social impact assessment as well as the consent of 80 per cent of the affected families (70 per cent in the case of public-private partnership [PPP] projects), whenever land is acquired for private companies. As expected, the states that witness a higher incidence of stalling of projects foster perceptions among the respondents of challenges in the acquisition of land for setting up factories there (Figure 1.7).

**Figure 1.5** The First Pillar: Land

What does the Land Pillar indicate?

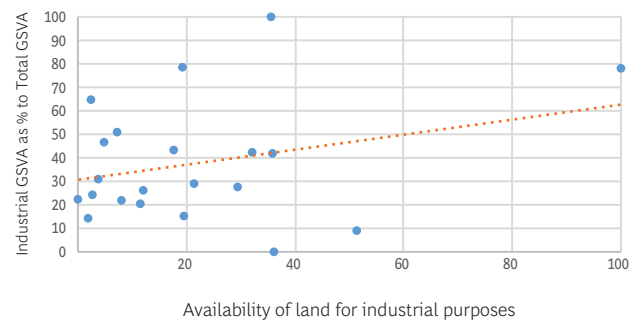


|                     | 2018           | Trend  |
|---------------------|----------------|--------|
| <b>Top 6 states</b> | Telangana      | ▲ (+1) |
|                     | Madhya Pradesh | ▲ (-2) |
|                     | Tamil Nadu     | ↔      |
|                     | Kerala         | ▲ (+6) |
|                     | Andhra Pradesh | ▲ (+1) |
|                     | Maharashtra    | ▲ (+1) |

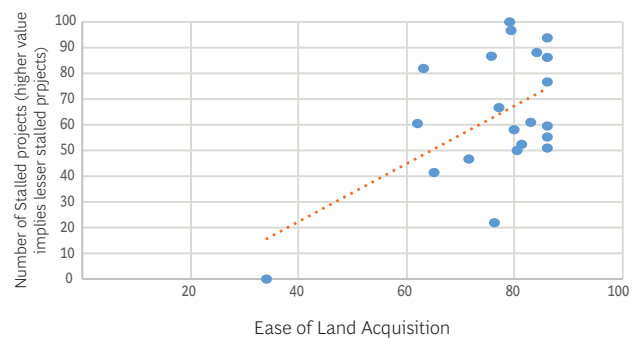
**Note 1:** Change in rankings as compared to 2017.

**Note 2:** The trends for all the states have been given in Appendix B.

**Figure 1.6** Availability of Land for Industrial Purposes and Industrial GSVA



**Figure 1.7** Ease of Land Acquisition and Stalled Industrial Projects



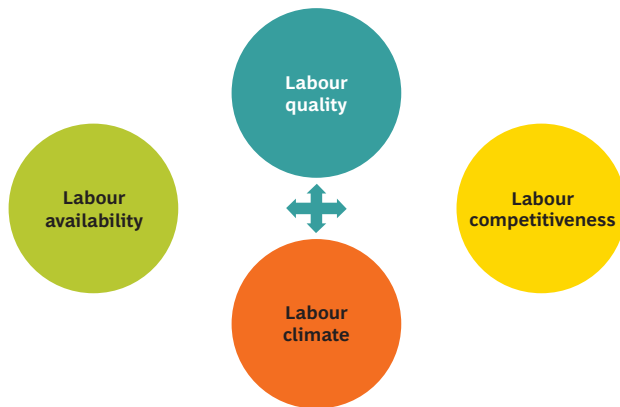
6. Apart from the availability and policy space for land, the price of land is equally important for locational choice. However, there are no comparable and reliable published data for the different states. With the market prices of land varying significantly from the fundamental value of land and with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

### 1.4.2. PILLAR 2: LABOUR

For industry, the availability of an educated and skilled workforce at competitive wages in a favourable labour environment is a significant factor affecting locational choice, as depicted in Figure 1.8. While some of the labour sub-indicators are unambiguously unidirectional, others can be interpreted in two ways. For instance, the prevalence of higher manufacturing wages in a state is 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 adversely affects both industry and the labour force, making these indicators unidirectional from both the society and industry points of view.

**Figure 1.8** The Second Pillar: Labour

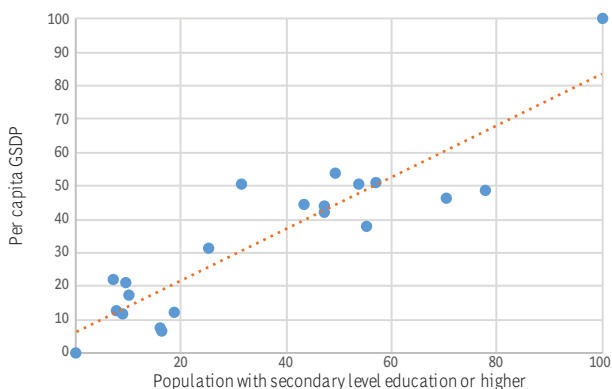
What does the Labor Pillar indicate?



|                     | 2018           | Trend <sup>1</sup> |
|---------------------|----------------|--------------------|
| <b>Top 6 states</b> | Tamil Nadu     | ↔                  |
|                     | Andhra Pradesh | ↔                  |
|                     | Karnataka      | ▲ (+2)             |
|                     | Uttar Pradesh  | ▲ (+3)             |
|                     | Kerala         | ▲ (+1)             |
|                     | Maharashtra    | ▼ (-2)             |

**Note 1:** Change in rankings as compared to 2017.  
**Note 2:** The trends for all the states have been given in Appendix B.

**Figure 1.9** Educated Workforce and per capita GSDP



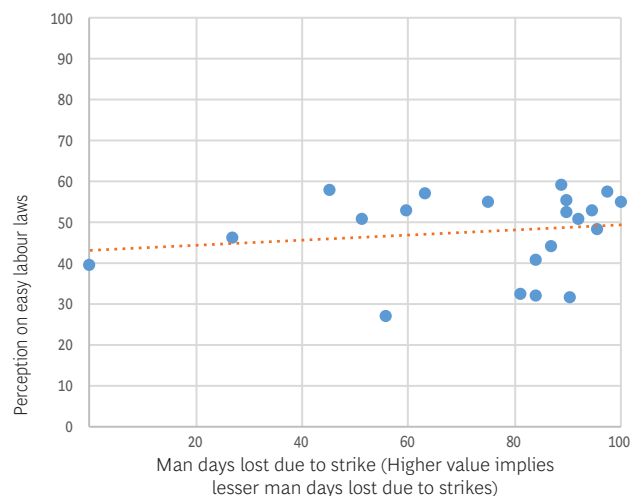
### Key Takeaways

It is no surprise that 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 concerted efforts to match labour market skills with industry demand may help smoothen labour market frictions (Figure 1.10). It has also been observed that states recording a higher number of days lost due to strikes are among those perceived to have more stringent labour laws (Figure 1.11). With the persistence of complex and divergent labour laws and regulations across different states, the challenge for labour market reforms would be to ensure that economic growth translates into better labour market conditions for the current 500 million-plus workforce in the country.

**Figure 1.10** Number of Persons Enrolled in Technical Courses and Availability of Skilled Labour



**Figure 1.11** Number of Man-days Lost due to Strikes and Labour Laws



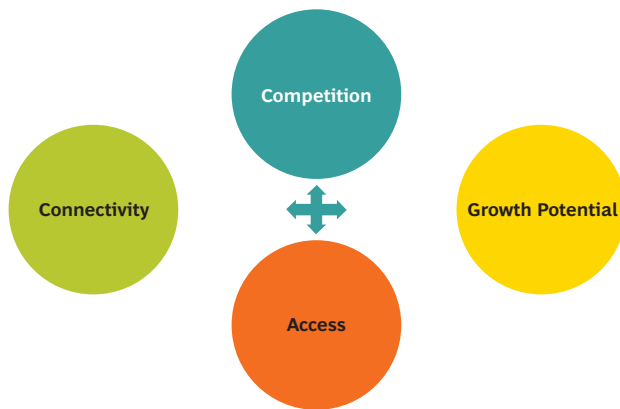


### 1.4.3. PILLAR 3: INFRASTRUCTURE

Infrastructure is a key driver of investment decisions and an important factor in locational choice and the profitability of investment. The infrastructure pillar captures how states stack up in terms of the various facets necessary for continuous growth and capacity utilisation including the availability of power, roads, and credit. India is making rapid strides in improving its infrastructure facilities (Figure 1.12). In 2017, India jumped two places to rank 66th amongst 137 countries in the infrastructure pillar of the World Economic Forum’s (WEF’s) Global Competitiveness Index (GCI).<sup>7</sup> While it is important to consider the existing infrastructure in the country, the tremendous potential for new investment in infrastructure in the coming years too cannot be ignored. The Union Budget of 2018–19 posits a tremendous push to the infrastructure sector through the allocation of Rs. 5.97 lakh crore (US\$ 92.22 billion) for the sector.

**Figure 1.12** The Third Pillar: Infrastructure

What does the Infrastructure Pillar indicate?



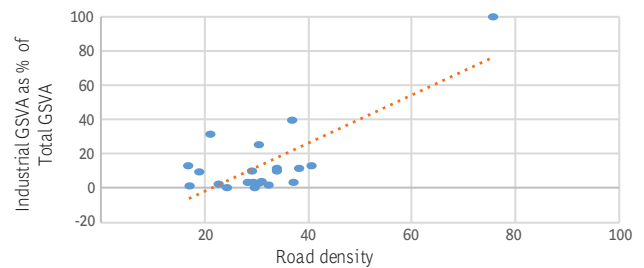
| 2018                | Trend <sup>1</sup> |
|---------------------|--------------------|
| <b>Top 6 states</b> |                    |
| Delhi               | ↔                  |
| Punjab              | ▲ (+2)             |
| Maharashtra         | ▼ (-1)             |
| Haryana             | ▲ (+2)             |
| Kerala              | ↔                  |
| Tamil Nadu          | ▲ (+2)             |

**Note 1:** Change in rankings as compared to 2017.  
**Note 2:** The trends for all the states have been given in Appendix B.

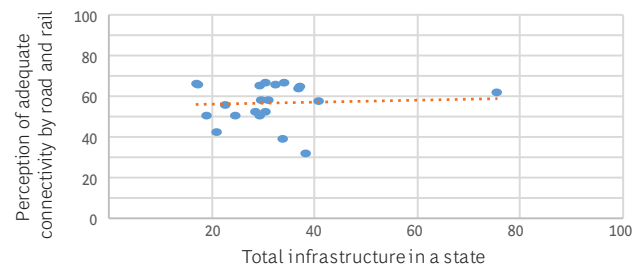
### Key Takeaways

Road density (measured as a proportion of the area of the state) and Industrial GSVA (as a percentage of the total GSVA) are positively correlated (Figure 1.13). In view of the significance of road connectivity for fostering industrial prosperity, it is crucial for the Ministry of Road Transport and Highways to fructify its plans of extending the coverage of India’s national highway network to 50,000 kilometres by 2019. Although the level of overall infrastructure in a state is a composite of many co-existing factors, according to industry perception, the most significant factor in a state for ensuring adequate infrastructure is the level of road and rail connectivity (Figure 1.14). Commensurate with this perception, the Union Budget of 2018–19 allocated a record amount of Rs. 1.48 trillion (US\$ 22.86 billion) to the railways. Figure 1.15 illustrates a clear synergy between the states facing power shortage and the ones reporting adequate availability of power.

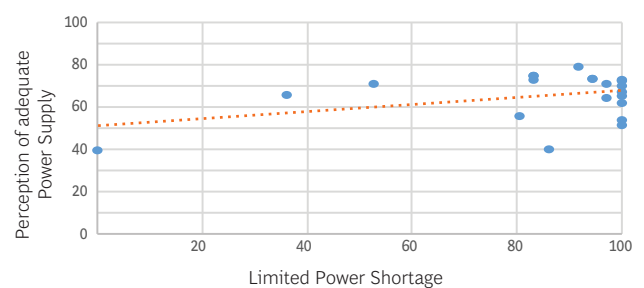
**Figure 1.13** Road Density and Industrial Parks



**Figure 1.14** Level of Infrastructure in a State and the Perception of Adequate Connectivity by Road and Rail



**Figure 1.15** Power Shortage and Availability of Power Supply



7. The Global Competitiveness Report, 2017.



#### 1.4.4. PILLAR 4: ECONOMIC CLIMATE

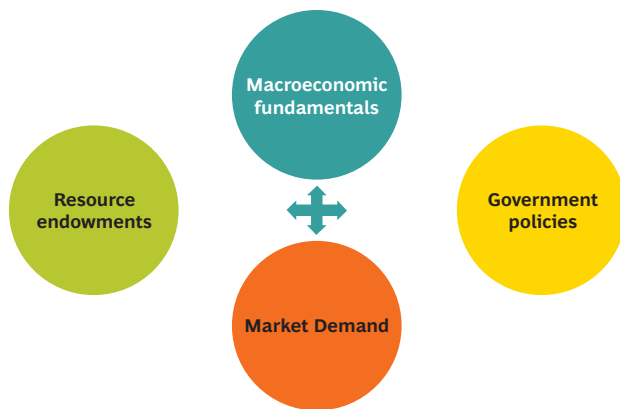
N-SIPI's economic pillar draws upon a broad spectrum of parameters, encompassing macroeconomic fundamentals, government policies, market demand, and resource endowments (Figure 1.16). States exhibiting higher growth and per capita incomes are naturally more attractive for investors than others. However, the economic pillar also tries to capture the negative externalities associated with the 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

The economic pillar indicates that industry does better in a state with a more favourable economic climate (Figure 1.17). Also, commensurate with our expectation, the number of bank branches translates into positive perceptions regarding access to finance in a state (Figure 1.18). Again as per expectations, the prevalence of more favourable industrial policies in a state lead to increased welfare of the population (measured in terms of per capita income) (Figure 1.19). With the states making efforts to improve their business climate and facilitate the ease of doing business on the DIPP/World Bank business reforms scale,<sup>8</sup> increased competitiveness and a more business-friendly environment in the states are

**Figure 1.16** The Fourth Pillar: Economic Conditions

What does the Economic Pillar indicate?



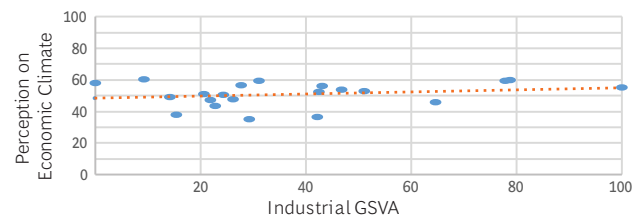
|                     | 2018           | Trend <sup>1</sup> |
|---------------------|----------------|--------------------|
| <b>Top 6 states</b> | Delhi          | ▲ (+1)             |
|                     | Telangana      | ▲ (+4)             |
|                     | Gujarat        | ▼ (-2)             |
|                     | Maharashtra    | ▲ (+1)             |
|                     | Karnataka      | ▲ (+2)             |
|                     | Andhra Pradesh | ▲ (+5)             |

**Note 1:** Change in rankings as compared to 2017.

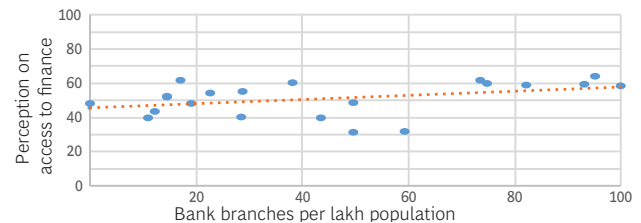
**Note 2:** The trends for all the states have been given in Appendix B.

certain to have multiplier effects on investment and growth. Although there were initial hiccups after the introduction of GST last year, the average GST revenue in 2017–18 has been impressive, at Rs. 89,885 crore, followed by Rs. 1,03,459 crore and Rs. 94,016 crore in April and June 2018, respectively. Figure 1.20 shows that high GST revenue as a percentage of non-agriculture GSVA is associated with negative perceptions about the tax policy transition to GSP. Thus, it can be inferred that despite the difficulties it has caused to firms, implementation of GST has resulted in higher revenue generation for the states.

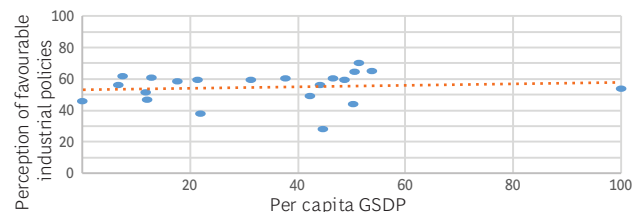
**Figure 1.17** Industrial GSVA and Perceptions about a Favourable Economic Climate



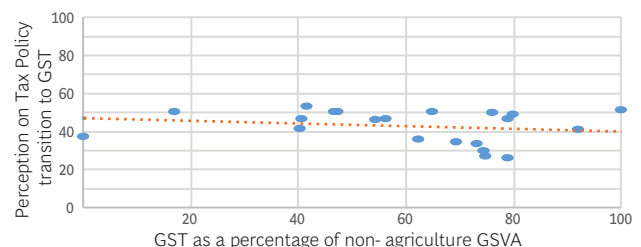
**Figure 1.18** Number of Bank Branches and Perceptions Regarding Access to Finance



**Figure 1.19** Per Capita GSDP and Perception of Favourable Industrial Policies



**Figure 1.20** GST and Perception on Ease of Transition to GST



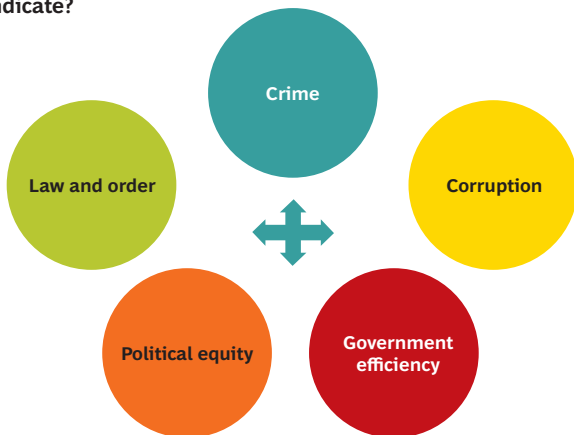
8. Department of Industrial Policy and Promotion and World Bank, October 2016. “Assessment of State Implementation of Business Reforms”. The national implementation average of 340 business reforms in 2016 was 49 per cent as against the 2015 national average of 32 per cent.

### 1.4.5. 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 through identification of politicians with a clean criminal record in the legislative assembly (Figure 1.21). The Worldwide Governance Indicator (WGI) of the World Bank,<sup>9</sup> which is exclusively a perceptions-based measure of governance, is a major cross-country comparison index for evaluating governance and political stability. In the WGI 2016, India has improved in three of the six governance indicator pillars—government effectiveness, control of corruption, and regulatory quality—but it has slipped in case of the remaining three pillars—voice and accountability, political stability/absence of violence, and the rule of law—as compared to WGI 2015. India is placed in the bottom bracket with respect to the indicator that captures political stability and the absence of violence. This trend makes it imperative for India to orient its policies towards strengthening governance and institutions in order to reap the concomitant economic benefits.

**Figure 1.21** The Fifth Pillar: Governance and Political Stability

**What does the Governance and Political Stability Pillar indicate?**



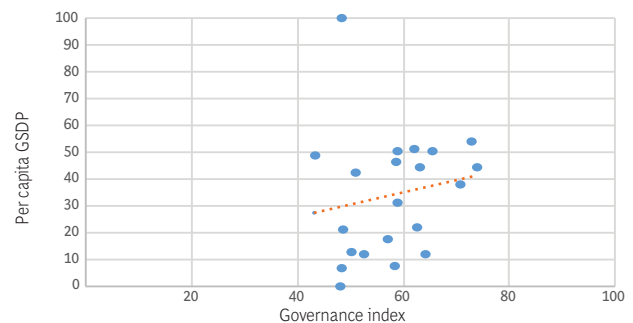
|                     | 2018           | Trend <sup>1</sup> |
|---------------------|----------------|--------------------|
| <b>Top 6 states</b> | Tamil Nadu     | ▲ (+4)             |
|                     | Haryana        | ▼ (-1)             |
|                     | Punjab         | ▲ (+1)             |
|                     | Gujarat        | ▼ (-2)             |
|                     | Madhya Pradesh | ▲ (+3)             |
|                     | Karnataka      | ▲ (+1)             |

**Note 1:** Change in rankings as compared to 2017.  
**Note 2:** The trends for all the states have been given in Appendix B.

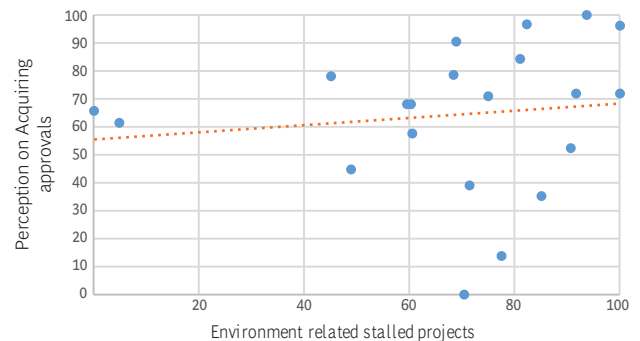
### Key Takeaways

The more well-off states have better governance, which suggests that the better-off states have more effective regulatory mechanisms in place which make it more conducive to do business there (Figure 1.22). However, the number of stalled projects (due to environmental clearance issues) in a state does not seem to be a dampener for the business, as observed from positive perceptions about obtaining approvals for starting a business (Figure 1.23). This could perhaps be the outcome of more optimistic business expectations resulting from the recent switch to GST. Increased police strength also translates into a perception of good law and order in the state (Figure 1.24).

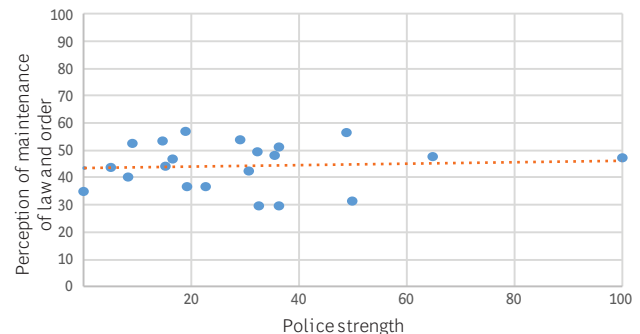
**Figure 1.22** Governance and per capita GDP



**Figure 1.23** Stalled Projects and Perceptions on Acquiring Approvals for Business



**Figure 1.24** Police Strength and Law and Order in the State



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

### 1.4.6. PILLAR 6: PERCEPTIONS

The nationwide N-SIPI 2018 survey, which was conducted between May and June 2018, covers 1049 industrial units in 43 districts across twenty major states and one Union Territory (Delhi). The aim of the survey was to enable a better understanding of the ground realities, as seen through the eyes of industrialists, in different states of India. The survey seeks responses to a number of questions ranging from the current business climate to the availability of land, labour, infrastructure, economy and governance to various other issues faced by businesses in their respective states (Figure 1.25).

#### Key Takeaways

Figure 1.26 shows the results of the N-SIPI survey and delineates the percentage of respondents who perceive a set of 18 constraints as either ‘severe’ or ‘moderate’ hurdles for their business operations. The law and order situation in the state was found to be the number one constraint faced by business. Similar to the survey results of N-SIPI 2017, in 2018 too, corruption continues to remain a major constraint faced by business. The Global Competitiveness Report 2017–2018 also ranks corruption, along with tax

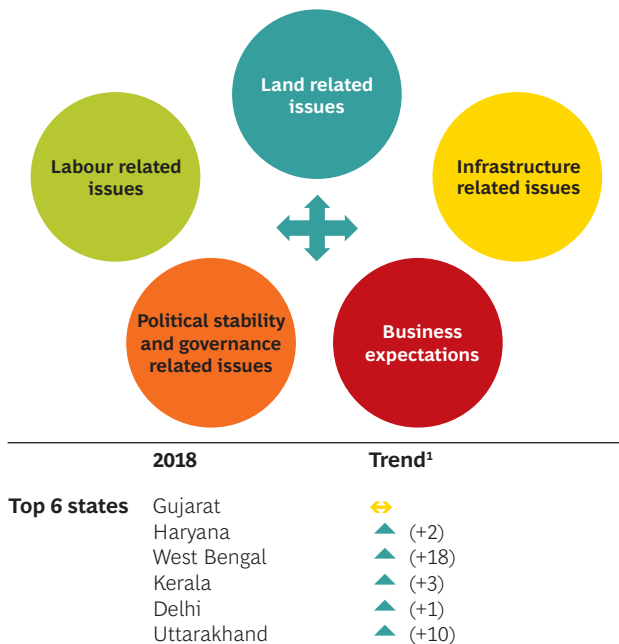
regulations, as the most problematic factor for doing business in India.<sup>10</sup>

The law and order situation in the state is rated by the most of the respondents as a major constraint, in contrast to N-SIPI 2017, wherein it was ranked 10th. Interestingly, however, the severity of constraints faced by businesses under most of the categories is declining. In N-SIPI 2017,<sup>11</sup> 56.5 per cent of the respondents rated corruption as being the biggest problem. In contrast, N-SIPI 2018 finds that while corruption is still the dominant constraint faced by industry, 45.9 per cent of the respondents rank this as 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 figure has declined from 72.1 per cent to 43.6 per cent over the years. This suggests that states are on track for streamlining the process of getting approvals and improving 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.

Figure 1.25 The Sixth Pillar: Perceptions

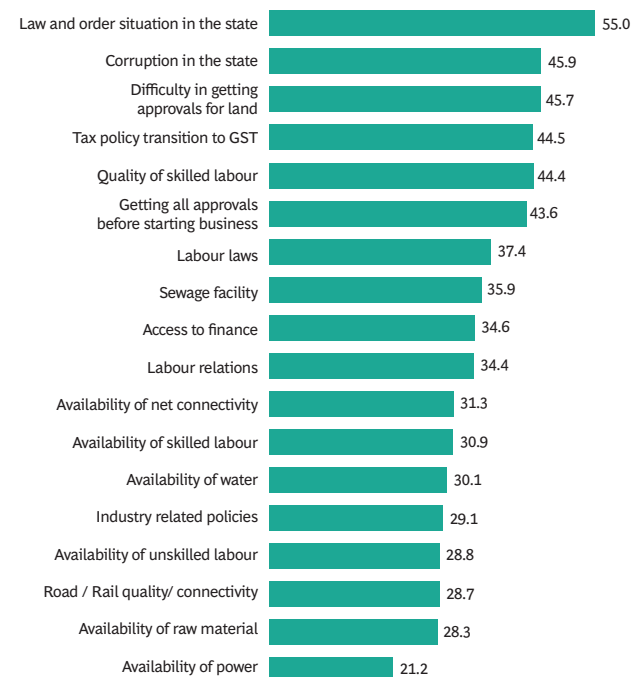
#### What does the Perceptions Pillar indicate?



Note 1: Change in rankings as compared to 2017.

Note 2: The trends for all the states have been given in Appendix B

Figure 1.26 Constraints Faced by Business (% Respondents)



10. The Global Competitiveness Report, 2017–2018, p. 202.

11. The industry survey for N-SIPI 2018 was carried out between May and June 2018.

Other major issues of concern found by the N-SIPI 2018 survey included the difficulty in obtaining approvals for land, the quality of skilled labour, 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, and the Jan Dhan Yojana in August 2014. The transition of the tax policy to GST has been ranked by 44.5 per cent as a major constraint. Interestingly, industry-related policies and the availability of unskilled labour are not that problematic, while the availability of power and raw material, and rail and road quality and connectivity are seen to be the least problematic for the firms in the sample.

### Perceptions on GST

The inclusion of survey questions pertaining to GST has been the highlight of N-SIPI 2018. This involved two GST-specific questions, including one each pertaining to the economy and business environment pillars. The findings based on responses to these questions are illustrated in Figures 1.27 and 1.28.

More than 56 per cent of the 1049 industries reported no problem related to tax policy transition to GST. However, around 14 per cent of the industries stated that they faced severe problems related to the tax policy transition to GST (Figure 1.27).

It may be observed from Figure 1.28 that more than 39 per cent of the industries perceived that the introduction of GST would have a positive impact on their businesses while over 42 per cent did not foresee any impact. However, a little over 17 per cent envisaged that GST would have a negative impact on their businesses.

Figure 1.27 Respondents Reporting Problems Related to Tax Policy Transition to GST (%)

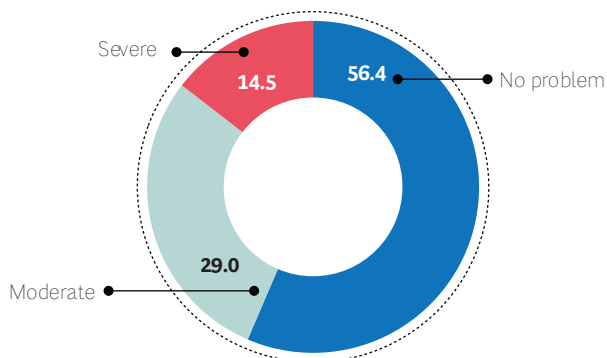
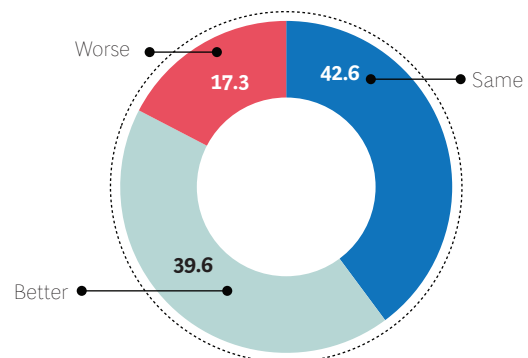


Figure 1.28 Respondents Perceiving the Impact of GST on Their Businesses (%)





## Section 2

# The N-SIPI Survey: Key Findings

### 2.1. INTRODUCTION

The N-SIPI Survey of Industrial and Services Units, 2018, was conducted for 21 major states at the national level to facilitate a better understanding of the impediments and constraints faced by businesses at the ground level. The survey gathered information and feedback on the key drivers of investment in the state, that is, Land, Labour, Infrastructure, Economy, Governance and Business Environment, which in turn, determine the general business atmosphere of the state. The results of this survey form the sixth pillar of N-SIPI 2018.

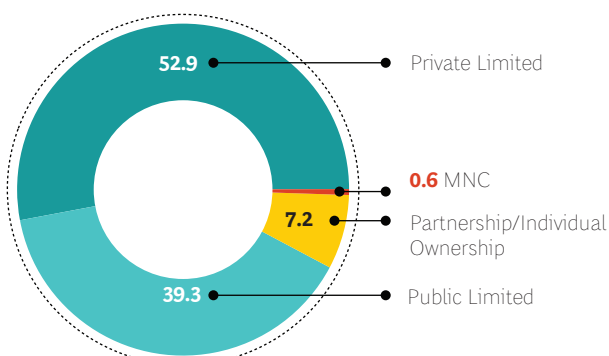
This report presents the key results of the survey carried out during May and June 2018. The survey covered 1049 industrial units in 21 states, including Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand and West Bengal. The respondents for this survey were primarily medium and large firms in these states. The respondents were usually senior officials including Managing Directors (MDs), Chief Executive Officers (CEOs), HR Heads, or Managers of the enterprises surveyed. The data was collected on the basis of responses to the structured

questionnaires and face-to-face interviews conducted by the field staff engaged by NCAER.

The N-SIPI Perception Survey is aimed to have a better understanding of the constraints to business in the selected states at ground level, depicting perceptions emerging from their experience and involvement on various aspects of reforms as captured through specific indicators at the firm level through the responses to the structured questionnaire both from the manufacturing and the services sector units.

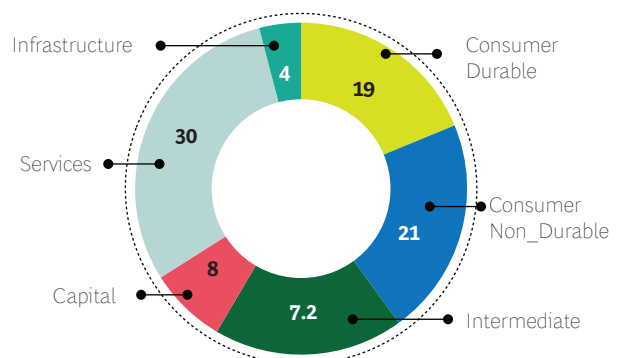
In this survey, the firms were categorised by ownership (private limited, public limited, partnership, multinational corporations and public sector enterprises), industry (consumer durable, consumer non-durable, intermediate, capital goods, infrastructure and services), and firm size (annual turnover) (see Figures 2.1–2.3). Over half (54 per cent) of the manufacturing firms were those with annual turnovers ranging from Rs. 10 crore to Rs. 100 crore while 11 per cent of the firms surveyed had annual turnovers exceeding Rs. 500 crores (Figure 2.3a). About 34 per cent of the firms in the services sector had annual turnovers exceeding Rs. 50 crores (Figure 2.3b).

**Figure 2.1** Survey Coverage by Ownership Type of a Firm



Source: N-SIPI survey data, 2018.

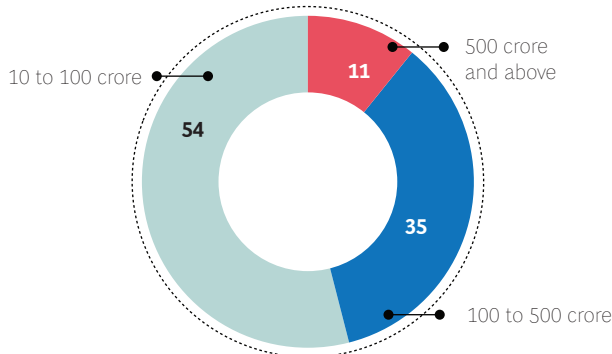
**Figure 2.2** Survey Coverage by Industry Sectors



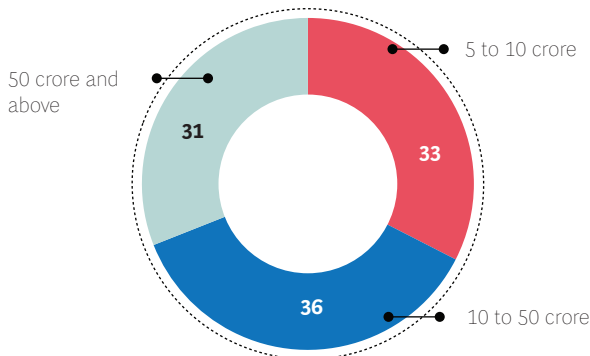
Source: N-SIPI survey data, 2018.

**Figure 2.3** Survey Coverage by Firm Size

**Figure 2.3a: Manufacturing Firms**



**Figure 2.3b: Service Firms**



Source: N-SIPI survey data, 2018.

## 2.2. SURVEY METHODOLOGY, QUESTIONNAIRE STRATEGY AND DESCRIPTION

The entire survey was carried out using CAPI (Computer Aided Personal Interview) with the aim of capturing real-time data from the industrial/services units in the panel. The questionnaire of the N-SIPI 2018 survey was converted into a software application portal through Personal Digital Assistance (PDA) for canvassing at the field level. Apart from enabling feedback on the questionnaire by the respondent, CAPI helped us identify the locations of the units (through GPS), the time of the interview and some other recorded features, such as the photographs of the units and respondents, among other things. The data from the system was transmitted directly from the field to the server created for this purpose, which was analysed almost instantaneously for preparing responses to the NCAER field supervisors and guiding them for further action in the field units.

The N-SIPI questionnaire has several sections. The survey questions on the category of ‘land’ largely attempted to

capture the level of difficulty in securing land for the existing businesses and identifying the firms that experienced relatively fewer problems in the process of acquiring land. The questions for ascertaining the condition of the labour market have been designed not just to identify but also to weigh the level of difficulty faced by the firms on key related issues including the availability and quality of skilled labour, availability of unskilled labour, labour relations, and labour laws. Questions pertaining to infrastructure touched upon the availability of power, Internet connectivity, sewage facilities, and the quality of road and rail connectivity. As in the case of the labour-related issues, the firms were asked to rank their levels of difficulty in each of the spheres. Questions related to the economy and governance covered the following issues—industry-related policies, access to finance, availability of raw material, securing approvals (including environment clearance) before starting the business, corruption, the law and order situation, and the tax policy, especially after the passage of the Goods and Services Tax (GST).

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 their respective states, and an assessment of their financial position a year ahead. The firms’ assessment of the conditions within their respective states helped in determining the potential attractiveness of that state for businesses in the future. The detailed tabulation of state-wise results is given Tables 1–24 in the Appendix C.

## 2.3. KEY RESULTS

### 2.3.1. Land

Procuring land for running industrial units can be a challenge due to various difficulties and the complex nature of regulations. The prevalence of a horde of middlemen adds to the challenges. However, barring the states of Bihar, Jharkhand, Karnataka, Maharashtra and Odisha, over 80 per cent of the respondents located in the other states in the sample faced no difficulty in acquiring land for industrial use (Figure 2.4 and Appendix Table C 2). Inter-state comparisons indicate that respondents in the states of Andhra Pradesh, Delhi, Kerala, Rajasthan, Uttar Pradesh and Uttarakhand faced no problems, while those in Bihar, Karnataka, Maharashtra and Odisha faced varying levels of difficulties, ranging from over 70 per cent to a little less than 30 per cent. More than one-third of the firms found it easy to procure land for a service unit whereas about half the respondents



found it equally easy to acquire land for a manufacturing unit. A little less than one-fifth of the respondents said that the procurement of land is easy for both the manufacturing as well as the services units (Figure 2.5).

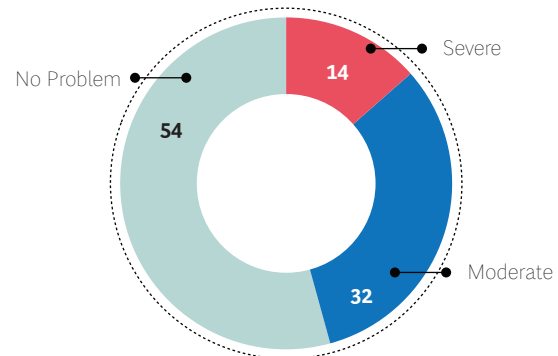
The firms were also asked questions about the levels of difficulty faced in obtaining permission and approvals from the government departments before starting a business. The

*Bihar and Karnataka face serious challenges in the procurement of land.*

survey response shows that 14 per cent of the firms faced severe difficulties while another 32 per cent reported facing a moderate level of difficulty (Figure

2.6). The remaining 54 per cent of the firms faced no significant level of difficulty in obtaining approvals. Firms in Gujarat, Chhattisgarh, Himachal Pradesh and Delhi faced the least difficulty in obtaining approvals for land, while the number of firms facing moderate to severe difficulties was the highest in Karnataka, Tamil Nadu and Uttar Pradesh (Appendix Table C 3).

**Figure 2.6** Firms Facing Difficulties in Securing Approvals for Land



Source: N-SIPI survey data, 2018.

### 2.3.2. Labour

After the 'land' factor, we gauge the perceptions of businesses on 'labour', which is also a critical factor of production and actively contributes

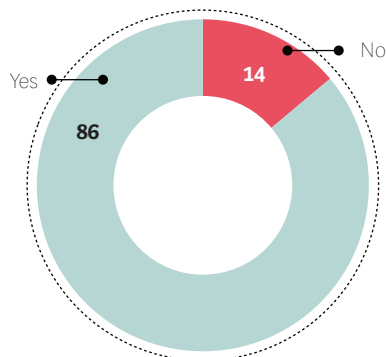
towards smooth business operations. The N-SIPI survey questionnaire included queries for a given set of labour-related constraints. The choices for responses included the following options for

*Gujarat and Haryana are perceived to be the best states in terms of all the aspects related to labour, while Jharkhand, Karnataka, Assam and Maharashtra are lagging behind.*

constraints faced in running business operations in the specific states: –'severe', 'moderate', or 'no constraints'. The quality and availability of skilled labour appears to be the biggest challenge and one of the most frequent concerns for businesses with close to half the respondents rating this as a 'severe' or 'moderate' constraint (Figure 2.7).

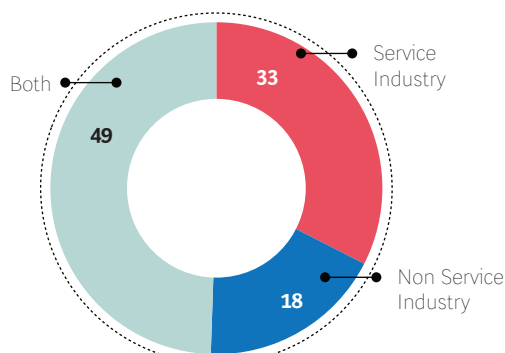
Over two-thirds of the respondents reported that labour laws, labour relations, and the availability of unskilled labour was not a problem for their respective states (Figure 2.7).

**Figure 2.4** Respondents Facing Problems in Acquiring Land



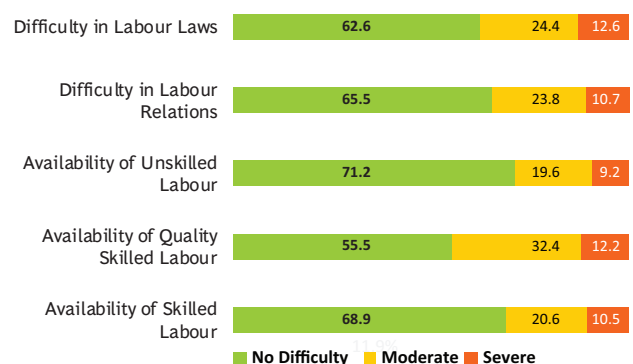
Source: N-SIPI survey data, 2018.

**Figure 2.5** Perceptions about the Types of Industries that Acquire Land More Easily



Source: N-SIPI survey data, 2018.

**Figure 2.7** Perceptions on Labour-related Indicators (% Respondents)



Source: N-SIPI survey data, 2018.

The respondents' views regarding the availability of skilled labour varied widely across states. States like Jharkhand, Karnataka, Himachal Pradesh and Assam are placed at one extreme, with more than 40 per cent of the respondents

*The availability of quality skilled labour and the existing labour laws are seen as constraining factors by one-fourth of the units canvassed.*

in these states showing moderate concern regarding the availability of skilled labour, while companies located in Gujarat, Haryana, Uttar Pradesh and West Bengal expressed a correspondingly more favourable view (Appendix Table C 4).

There was also a major variation in the respondents' perceptions of labour quality. While Haryana and Gujarat continue to be viewed as the best states in terms of the quality of skilled labour, it is seen as a moderate constraint in Jharkhand, Karnataka, Telangana and Madhya Pradesh (Appendix Table C 5). West Bengal, Gujarat, Punjab and Haryana appear to be the best states for the availability of unskilled labour, which is, however, seen as a stumbling block in Telangana, Madhya Pradesh and Uttar Pradesh (Appendix Table C 6).

Labour relations are not perceived as a problem by around 66 per cent of the respondents across all the states, with Haryana, West Bengal and Gujarat topping the chart in this perception but it is seen as a moderate or severe problem by respondents in Karnataka, Telangana and Andhra Pradesh (Appendix Table C 7).

Similarly, 63 per cent of the firms surveyed did not report any significant difficulties with regard to labour laws in the state, while another 25 per cent reported a moderate level of difficulty and the remaining 13 per cent faced severe difficulties in this regard. Labour laws seem to be a constraining factor in Maharashtra, Karnataka, Madhya Pradesh and Chhattisgarh. Amongst the firms that were least affected by labour laws, a large number belonged to Haryana, Gujarat, West Bengal, Odisha and Himachal Pradesh. Across states, the largest proportion of firms in Gujarat reported no problem in contrast to Chhattisgarh, which accounted for the largest proportion of firms reporting a severe problem associated with labour laws (Appendix Table C 8).

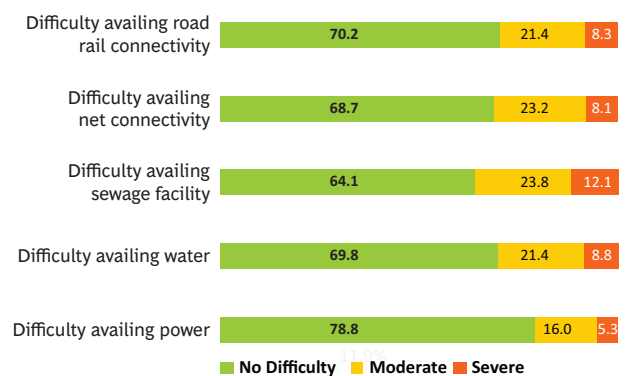
Firms were further asked to rank each of the labour-related issues in terms of their relative importance for their businesses in the respective states. The availability of skilled labour was ranked as the top most factor by 22 per cent of the firms, while the availability of quality skilled labour was ranked first by 25.2 per cent of the firms. The

availability of unskilled labour was accorded the top rank by 15.4 per cent of the firms. Labour relations were ranked at the top by 15 per cent of the firms whereas labour laws were placed in the top position by a little over 25 per cent of the firms. In essence, therefore, the availability of quality skilled labour and the prevalent labour laws constitute the major constraining factors in the running of businesses for one-fourth of the responding firms all over the country.

### 2.3.3. Infrastructure-related Issues

The progress made in infrastructure development is not uniformly distributed across states. Many highly publicised projects stay unfinished for a longer period of time without tangible benefits to the users. The N-SIPI survey module has a comprehensive set of questions covering the infrastructure components as critical issues for the smooth functioning of business. The responses from this survey suggest that a broad set of parameters related to infrastructure are viewed as satisfactory by 64 per cent or more of the respondents (Figure 2.8). As in the previous survey, industry is most concerned about the availability of sewage facilities while the availability of power is viewed as being the least problematic.

**Figure 2.8** Perceptions on Infrastructure-related Indicators (% Respondents)



Source: N-SIPI survey data, 2018.

Infrastructure is a crucial parameter for running a successful business. The N-SIPI survey asked questions with regard to the availability of power, railways, roads, ports, airports, water supply, and sewage disposal. The respondents were asked whether they find a given set of infrastructure-related constraints to be severe, moderate, or not a constraint at all for operating their businesses. The feedback on

*The availability of power supply is seen to be optimal in states like Chhattisgarh, Haryana, Punjab and Karnataka.*

power availability was relatively positive, with an average of 78 per cent of the respondents reporting facing no significant

difficulty in this regard. Chhattisgarh, Haryana, Punjab and Karnataka are observed to be states with excellent supply of power, while states that lag behind include Uttarakhand, Jharkhand and West Bengal (Appendix Table C 9).

Similarly, most of the responding firms expressed satisfaction with respect to the availability of water, with close to three-fourths of them stating that they faced no problem. The states exhibiting the best results with regard to water supply were Himachal Pradesh, Karnataka and Haryana. Surprisingly, nearly one-fifth of the severely constrained firms in terms of access to water supply belonged to Maharashtra despite it being a coastal state; and Uttarakhand emerges as the most severely water-constrained state (Appendix Table C 10).

The responses on the availability of sewage facilities are a source of worry as compared with the other infrastructure indicators. Constraints pertaining to this issue were reported to be 'moderate' and 'severe' by around 36 per cent of the overall respondents, that is, this parameter performed the worst among all the infrastructure issues considered in the survey. In the case of sewage facilities, the states of Karnataka, Assam, Kerala and West Bengal performed extremely well while these facilities were seen to be inadequate in the states of Uttarakhand, Rajasthan, Telangana, Odisha and Bihar (Appendix Table C 11).

Internet connectivity was viewed as a moderate or severe problem by over 40 per cent of the respondents in Uttarakhand, Telangana, Maharashtra and Tamil Nadu. The states ranked at the top with respect to Internet connectivity were Karnataka, Himachal Pradesh, Delhi, Chhattisgarh and Haryana (Appendix Table C 12).

The performance of states on road and rail connectivity was not an issue with over two-thirds of the surveyed firms while a little over one-fifth expressed a moderate concern on the issue. Here too, Haryana, Himachal Pradesh, Karnataka, Kerala and Rajasthan did very well, while Telangana was ranked the lowest on the perception of good road and rail connectivity in the state (Appendix Table C 13).

### 2.3.4. Economic Environment

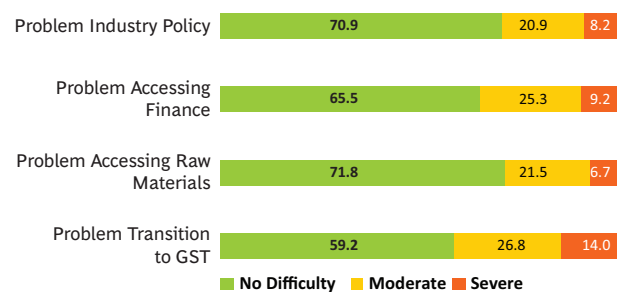
Among the various indicators concerning the economic environment in the states, industrial policy is perceived as the key determinant of the firms' decisions to make specific investments in any state. The firms' viewpoints on the diverse aspects of business (that is, the constraints they face regarding the availability of land, labour, infrastructure, clearances and regulatory procedures) have been separately

obtained through individual questions. Their perceptions of industrial policy are equally important. The industrial policy of a state signifies the government efforts to design or alter the industrial structure in such a way that it promotes efficiency and productivity. These efforts can be attempted through different levers such as a special drive to encourage a selected group of industries to achieve their unutilised potential through the establishment of Special Export Zones (SEZs) for attracting foreign participation or investment, privatisation of state public sector units (PSUs), and promotion of public-private PPP ventures, among other things. The firms in states that do well on these fronts mostly view industrial policy to be favourable in the respective.

The N-SIPI survey found that more than 70 per cent of the firms affirmed the suitability of the prevalent industry policy in their respective states (Figure 2.9). However, around 21 per cent of the respondents expressed a moderate level of concern in this regard while 8 per cent said that they were severely concerned with regard to the existing industrial policies, which indicate their expectations from the respective state governments. The states of Uttarakhand, Haryana, Gujarat and West topped the list by reporting a high proportion of positive responses for this indicator, whereas Karnataka, Chhattisgarh and Maharashtra appeared to be the poorest performers in this regard (Appendix Table C 14).

*Uttarakhand, Haryana, Gujarat and West Bengal are seen as being the most industry-friendly states.*

**Figure 2.9** Perceptions on Economy-related Indicators (% Respondents)



Source: N-SIPI survey data, 2018.

At an aggregate level, access to finance was viewed as being favourable and conducive to growth by more than 65 percent of the respondents. Himachal Pradesh appears to be the bright spot on this parameter, followed by West Bengal, Gujarat and Delhi whereas Karnataka, Telangana and Maharashtra fall behind in terms of providing easy access to finance to firms (Appendix Table C 15).

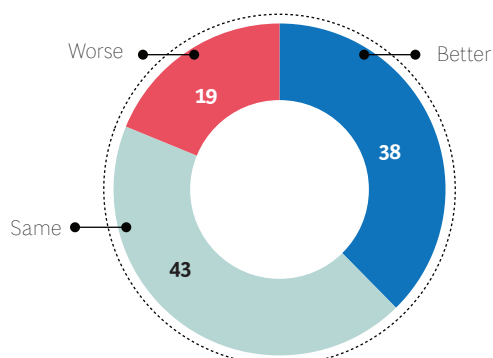
Firms are optimistic with regard to the availability of raw material, with around 72 per cent of the respondents facing no difficulty in procuring raw materials (Figure 2.9). Most of the firms that are satisfied with the availability of raw materials belong to Delhi, Gujarat and West Bengal, in that order. In contrast, the availability of raw materials is observed to be poor in states like Maharashtra, Telangana and Assam, which also reflects the firms' perceptions about infrastructural constraints in these states (Appendix Table C 16).

The implementation of GST in the states after its introduction in July 2017 has emerged as the most pressing issue faced by most firms, with over 40 per cent of the firms expressing a moderate or severe level of difficulty on this front. Surprisingly, Bihar emerged as the most tax-friendly state, followed by Gujarat, while firms from Madhya Pradesh, Kerala and Himachal Pradesh faced significant problems in this sphere (Appendix Table C 17). The next sub-section provides greater details on GST and its impact across states.

### GST

Since GST is still a burning issue, new questions on this issue were added in the N-SIPI 2018 survey to gauge its impact at the ground level. A majority of the responding units perceived no impact of the GST policy (43 per cent), whereas 38 per cent report that GST has helped improve their business activities and 19 per cent claimed that it had had a severe impact on their business operation (Figure 2.10). Among the states most affected by the imposition of GST, Andhra Pradesh faced the maximum adverse impact (58 per cent), followed by Telangana, Uttarakhand and Tamil Nadu. In contrast, respondents in states like Jharkhand (86.7 per cent), Odisha and West Bengal noted the positive impact of GST in their respective business operations.

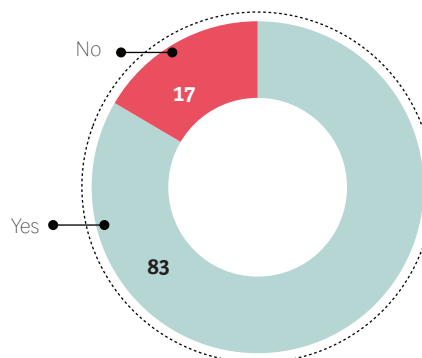
**Figure 2.10** Impact of GST on Business



Source: N-SIPI survey data, 2018.

As regards compliance with the GST rules, more than 83 per cent of the responding units reported that they generate e-way bills whereas the remaining 17 per cent of the firms do not do so (Figure 2.11). Among the firms that have not been generating e-way bills, a majority of the units are located in Kerala (61 per cent), followed by those in Gujarat (35 per cent).

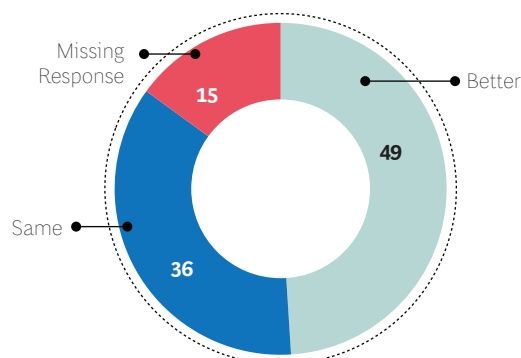
**Figure 2.11** Firms Generating e-Way Bills



Source: N-SIPI survey data, 2018.

The questions pertaining to the impact of generation of e-way bills is important as it is intended to assess the prevalent ground level business environment as businesses transition into the post-GST phase. A majority of the responding firms report the positive impact of the generation of e-Way bills. Intriguingly, more than 15 per cent of the firms in the survey did not respond to the specific query on e-way bills (Figure 2.12). Significantly, the units that noted a positive impact of the generation of e-way bills are mostly located in the consuming states. The number of respondents providing positive feedback on e-way bills is remarkably high in Jharkhand (77 per cent), followed by West Bengal and Bihar, while there is no perceived impact in Telangana, Maharashtra and Gujarat.

**Figure 2.12** Impact of Generation of e-Way Bills

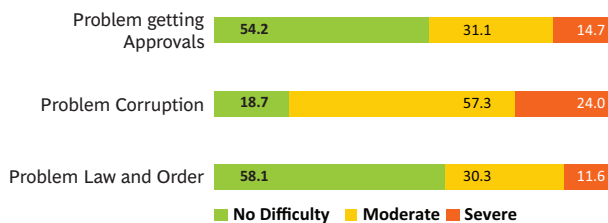


Source: N-SIPI survey data, 2018.

### 2.3.5. Governance

There were varied responses for different indicators on governance conditions at the aggregate level. A little over 54 per cent of the responding units reported no problem in procuring approvals (including environmental clearances) before starting their businesses in their respective states (Figure 2.13). Another 31 per cent of the firms reported facing a moderate level of difficulty while almost 15 per cent of the respondents reported a severe level of difficulty in obtaining approvals. At the state level, approvals were the most difficult to obtain in Karnataka, where about 43 per cent of the respondents claimed facing a severe level of difficulty in obtaining them, followed by Telangana and Maharashtra, in that order. Approvals for starting a business were seen to be the easiest to obtain in Gujarat, as indicated by the highest proportion of firms in that state reporting no problem, followed by firms in Delhi and Haryana (Appendix Table C 18).

**Figure 2.13** Response (%) on Broad Governance-related Indicators (% Respondents)



Source: N-SIPI survey data, 2018.

Among the three governance issues, corruption is reported to be the most serious, with only an average of 19 per cent of the firms claiming that they faced no problems related to corruption in their respective states. On the other hand, as many as 24 per cent of the firms asserted that corruption was a serious issue for businesses. The situation is particularly grave in Punjab where 61 per cent of the respondents faced severe difficulties on account of corruption, which is more than 2.5 times the corresponding national average of 24 per cent. The other states encountering the problem of corruption are Jharkhand, Karnataka, Telangana and Bihar, whereas Himachal Pradesh has been noted as the least corrupt state (Appendix Table C 19).

Around 42 per cent of the responding units stated that the law and order situation in their respective states posed moderate to serious problems. While Rajasthan and Chhattisgarh are seen to be the best states with regard to the maintenance of law and order, at the other

end of the spectrum are the states of Kerala, Haryana and Andhra Pradesh, where the law and order situation is reported to be the most worrisome by a large number of firms. At the all-India level, nearly two-thirds of the firms reported facing moderate law and order problems, with Himachal Pradesh topping the ranks for a moderate level of problems (70 per cent), followed by Haryana (64.1 per cent) and Andhra Pradesh (51.1 per cent) (Appendix Table C 20).

### 2.3.6. Perceptions Regarding the Business Climate

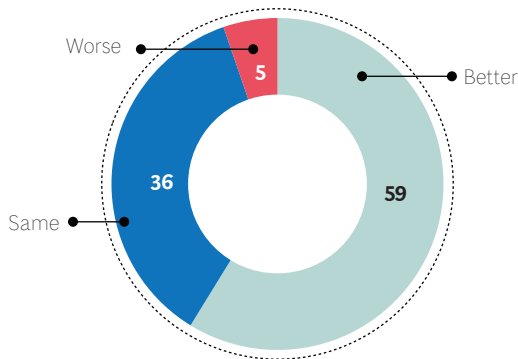
The successful operation of businesses is contingent upon various internal and external influences. The preceding sections delineate the perceptions of the responding units from different states regarding factors that influence their business operations directly or indirectly. Some of the factors are internally controllable; for example, the quality of skilled labour can be enhanced by imparting internal training, and managing unions to some extent, whereas most of the other factors concerning the economic, regulatory, tax-related and law and order conditions, are exogenous and thus beyond the control of the firms. Altogether these factors determine the overall business environment for firms, which in turn, influence the firms' future decisions on investment for augmenting capacity and expanding business.

The survey indicates that the business environment across the country seems to have improved or has at least remained stable. While only 5 per cent of the responding units expressed concerns regarding the future business environment, a large proportion of them (59 per cent) expressed hopes of a better business environment, one year ahead (Figure 2.14). Interestingly, Jharkhand, followed by Haryana, expressed the maximum optimism about business prospects in the next year, while Uttar Pradesh and Telangana were the least optimistic (Appendix Table C 21).

The results are almost the same with regard to the perceptions of the responding units hoping for a better financial position in the future (Figure 2.15), wherein 36 per cent of the firms did not expect any significant change and only a tiny fraction of the firms were wary of worse financial conditions in the future. Incidentally, the largest proportion of firms in Jharkhand, followed by those in Haryana, expressed optimism about a better financial performance in the future, as opposed to highest proportion of firms in Andhra Pradesh and Maharashtra expecting the situation to worsen in the future (Appendix Table C 22).

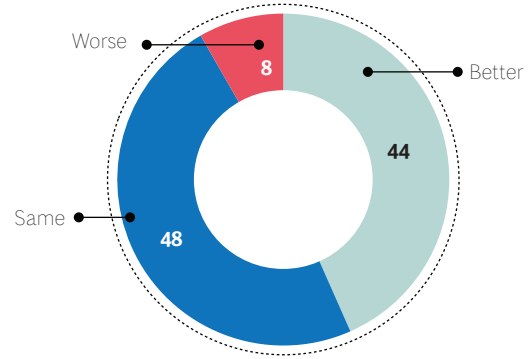


**Figure 2.14** Perceptions on Business Environment One Year Ahead



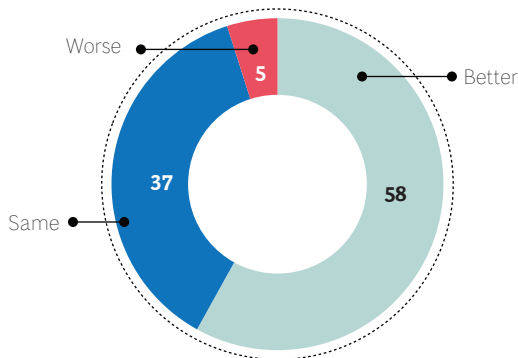
Source: N-SIPI survey data, 2018.

**Figure 2.16** Perceptions on the Present Investment Climate vis-à-vis a Year Ago



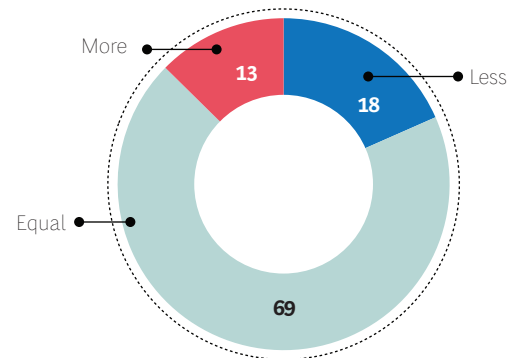
Source: N-SIPI survey data, 2018.

**Figure 2.15** Perceptions on the Firms' Own Financial Position One Year Ahead



Source: N-SIPI survey data, 2018.

**Figure 2.17** Firms' Levels of Operation vis-à-vis Their Installed Capacities



Source: N-SIPI survey data, 2018.

As many as 44 per cent of the firms asserted that the investment climate had improved as compared to that prevalent the preceding year (Figure 2.16). Another 48 per cent of the firms reported no change in investment conditions while 8 per cent of firms were apprehensive of a worsening business climate in the future. Firms in the latter category are mainly located in the states of Andhra Pradesh, Telangana, Tamil Nadu and Delhi. Overall, the firms in Jharkhand, Assam and Uttarakhand expressed more positive perceptions regarding the forthcoming investment climate in comparison to the perceptions reported in the N-SIPI 2017 report (Appendix Table C 23).

Over two-thirds of the firms are seen to operate at their optimal capacities (Figure 2.17) whereas 18 per cent operate below their respective installed capacities. These could be

*Firms in Rajasthan achieve the maximum utilisation of their installed capacities.*

on account of infrastructural shortfalls related to power, water and the availability of raw material, or labour issues. Rajasthan has the highest

proportion of firms operating above their respective installed capacities while the highest proportion of firms operating below their installed capacities belong to Andhra Pradesh (Appendix Table C 24).

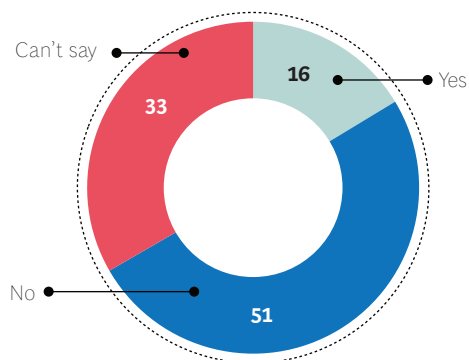
#### *Locational Assessment of Investment*

An improved economic environment and greater ease of doing business have prompted states to woo investors in a competitive framework. It was also found that more than half the firms interviewed were satisfied with the overall business climate and the available opportunities within the state in which they are currently located. When asked if better business conditions were prevalent in another state, over 50 per cent of the firms gave a clear verdict in favour of their respective present states, while 33 per cent expressed no firm judgment on this issue (Figure 2.18). Only a little over 16 per cent of the firms expressed a positive opinion regarding the business environment being better in other states and their locational advantages. This is an indication of the huge competition that states face in terms of either attracting new investment or retaining existing businesses,

which may also entail additional investments in the latter. Among those expressing a positive opinion about the business environment in other states, 66 per cent were willing to shift their businesses to the other states (Figure 2.19). Among the choice of these new business destinations, Gujarat topped the list (28 per cent), followed by Delhi, Maharashtra, Tamil Nadu, Karnataka and Haryana, in that order (Figure 2.20).

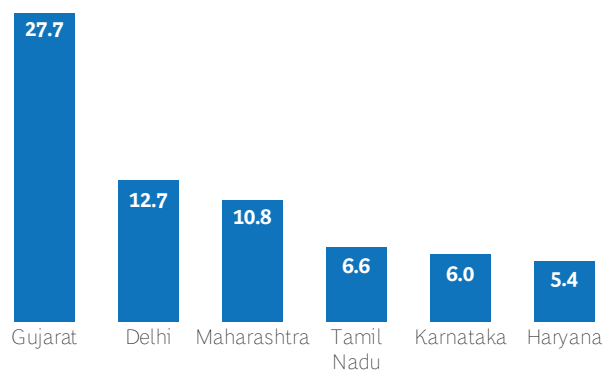
Thus, the N-SIPI 2018 survey has thrown up many results that do not conform to traditional wisdom and reflect a dynamic scenario, as reflected in the perceptions of the responding units in the different states. Therefore, the perceptions-related pillar, which is based on a primary survey of the participating firms, should thus be seen in confluence with all the other pillars, the data for which have been collated from secondary sources.

**Figure 2.18** Perceptions on Whether Doing Business Is Easier in Other States



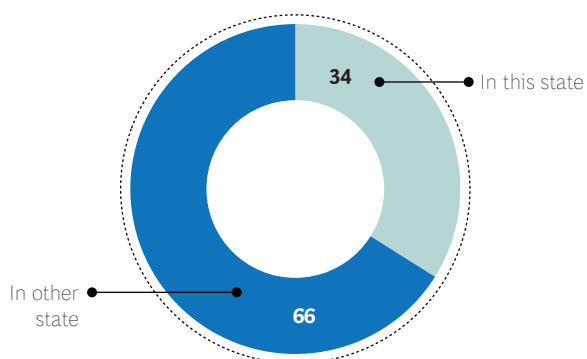
Source: N-SIPI survey data, 2018.

**Figure 2.20** Top Six States Preferred by Firms for Doing Business



Source: N-SIPI survey data, 2018.

**Figure 2.19** Firms' Preferred Locations



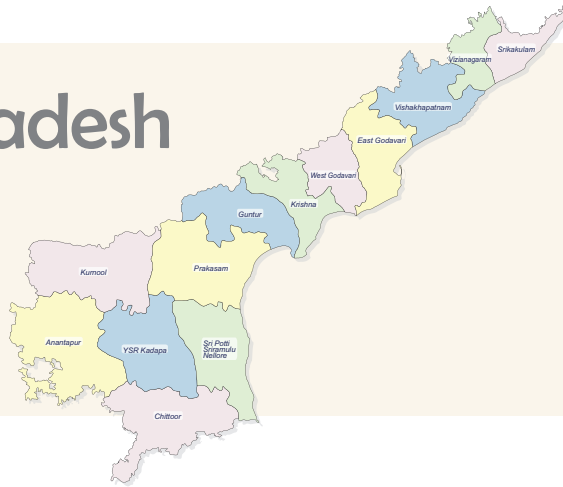
Source: N-SIPI survey data, 2018.



**Section 3**

**N-SIPI  
State Profiles**

# Andhra Pradesh



## Statistics

|                         |                       |
|-------------------------|-----------------------|
| Capital                 | Hyderabad, Amaravathi |
| Area (sq. km)           | 1,60,205              |
| Location                | Southern India        |
| Per capita income (Rs.) | 107802 (2016-17)      |
| Population              | 84,580,777            |
| Literacy Rate (%)       | 67.02                 |

## State Focus Sectors

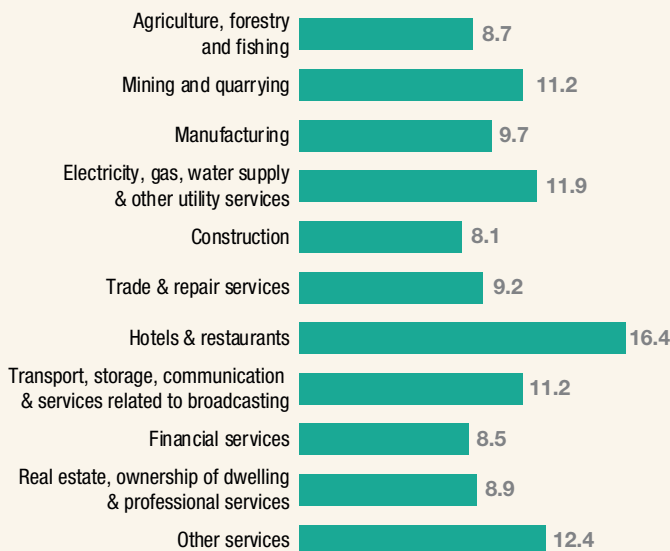
- Agro & Food Processing
- Life sciences (including pharmaceutical, biotechnology & medical equipment)
- Textile & Apparel
- Electronics & Information Technology
- Aerospace & Defence
- Automobiles & Auto Components
- Petroleum, Chemicals, (including Fertilizers) and Petrochemicals
- Energy
- Mineral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

Source: Industrial Development Policy (2015-2020).

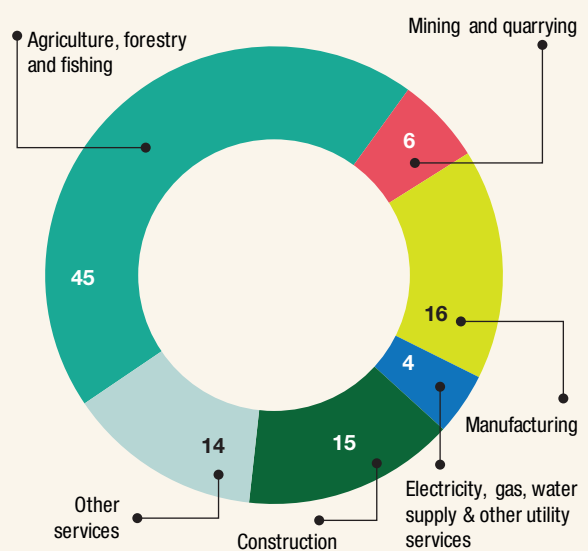
## Incentives

- 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 years average ending, 2016-17



## Sector-wise Contribution in Gross Value Added, 2016-17

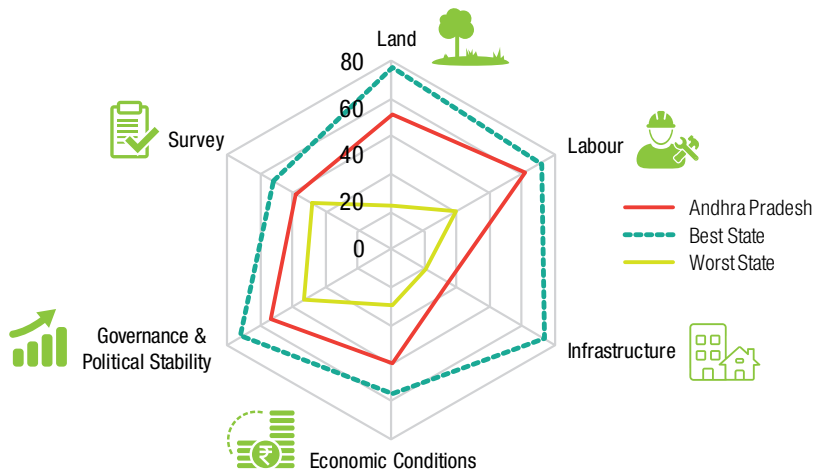


# ANDHRA PRADESH

**RANK**

**7**

## States Performance on the Six Broad Pillars



Andhra Pradesh is one of the top five states in land and labour pillars, but lags relatively behind in N-SIPI perceptions and Infrastructure pillars. Overall rank of the state has gone down from 3 in N-SIPI'17 to 7 in N-SIPI'18.

### Strengths

The state ranks high in labour conditions, especially in labour force participation rate and availability of skilled labour. The state also fares well in cargo handling, number of smart cities, average GSDP for last 3 years.

### Weaknesses

The state ranks lowest in perception on business climate. The state also fallbehind in perception on labour, infrastructure, police strength and insurgency rates.

## LAND

|                                       | Score       | Rank     |
|---------------------------------------|-------------|----------|
| <b>LAND - OVERALL</b>                 | <b>57.5</b> | <b>5</b> |
| Digitized land records                | 100.0       | 1        |
| Land related stalled projects         | 76.5        | 8        |
| Industrial parks in state             | 45.8        | 5        |
| Land available for industrial purpose | 7.9         | 14       |

## LABOUR

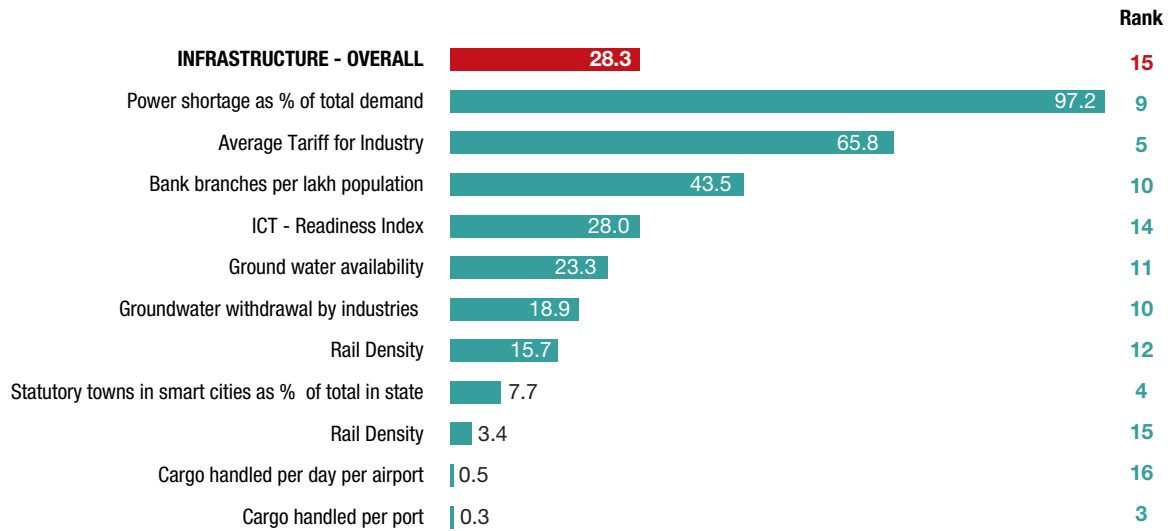
|  | Score       | Rank     |
|--|-------------|----------|
| <b>LABOUR - OVERALL</b>                                  | <b>66.6</b> | <b>2</b> |
| Average wages of salaried persons                        | 94.6        | 4        |
| Share of contract workers in total labour force          | 93.8        | 5        |
| Per cent 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                                 | 40.0        | 6        |
| Share of workforce in manufacturing sector               | 32.0        | 13       |
| Share of labour force with secondary education and above | 25.2        | 12       |

## SURVEY

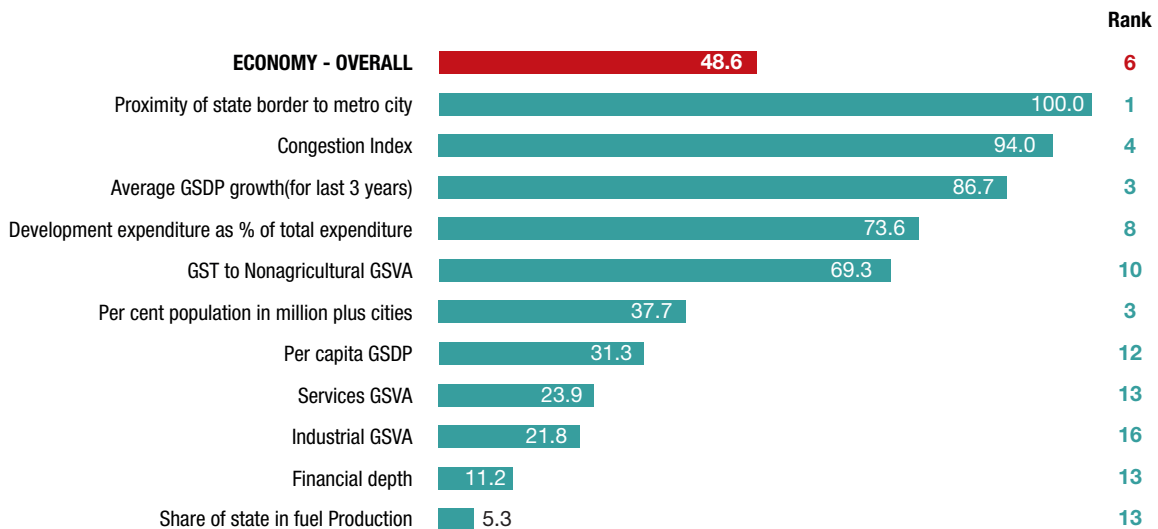
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>SURVEY - OVERALL</b>                          | <b>46.9</b> | <b>17</b> |
| Perception on land                               | 63.0        | 10        |
| Perception on infrastructure                     | 50.6        | 17        |
| Perception on economic conditions                | 47.1        | 16        |
| Perception on labour                             | 43.3        | 17        |
| Perception on governance and political stability | 39.1        | 12        |
| Perception on business climate                   | 38.2        | 21        |



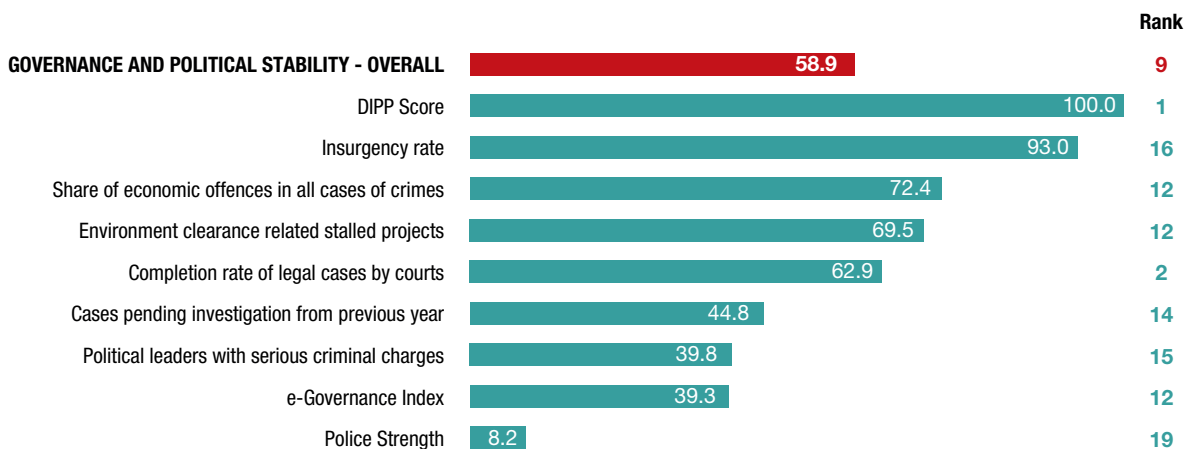
## INFRASTRUCTURE



## ECONOMY



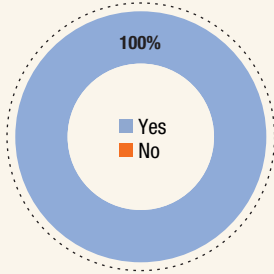
## GOVERNANCE AND POLITICAL STABILITY



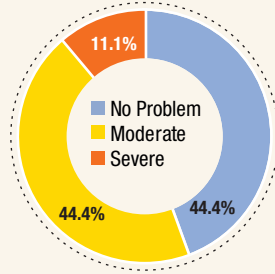
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

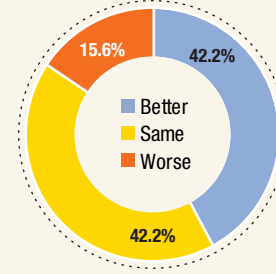


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



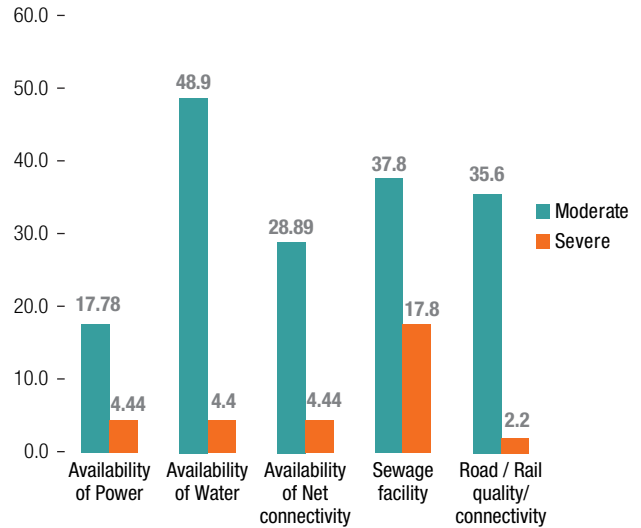
### Labour related issues

% respondents finding these a moderate or severe problem



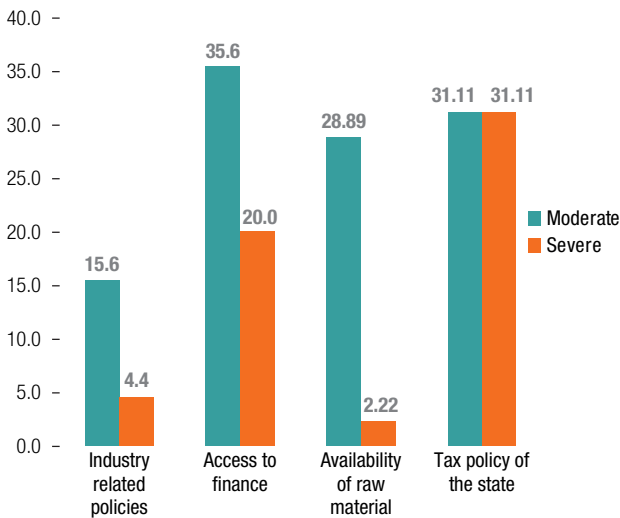
### Infrastructure related issues

% respondents finding these a moderate or severe problem



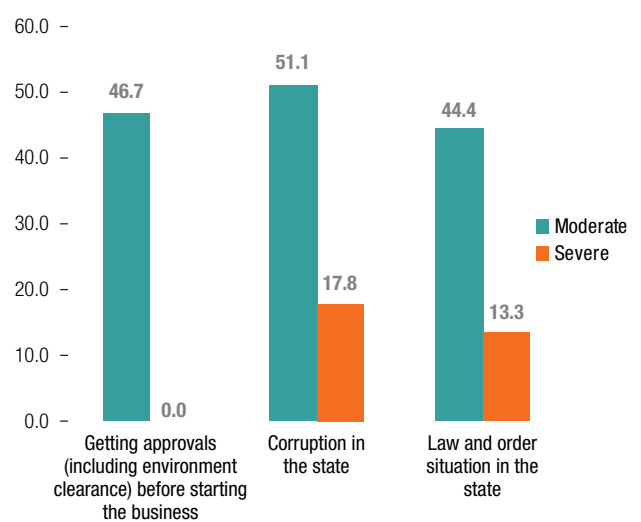
### Economy related issues

% respondents finding these a moderate or severe problem

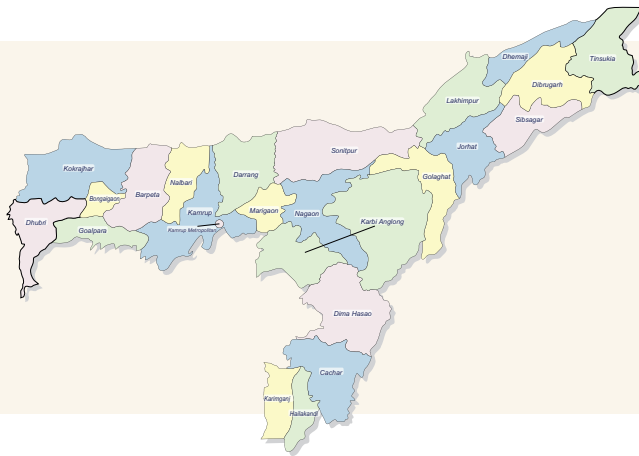


### Governance related issues

% respondents finding these a moderate or severe problem



# Assam



## Statistics

|                         |                     |
|-------------------------|---------------------|
| Capital                 | Dispur              |
| Area (sq. km)           | 78,438              |
| Location                | North-eastern India |
| Per capita income (Rs.) | 54056 (2015-16)     |
| Population              | 31,205,576          |
| Literacy Rate (%)       | 72.2                |

## State Focus Sectors

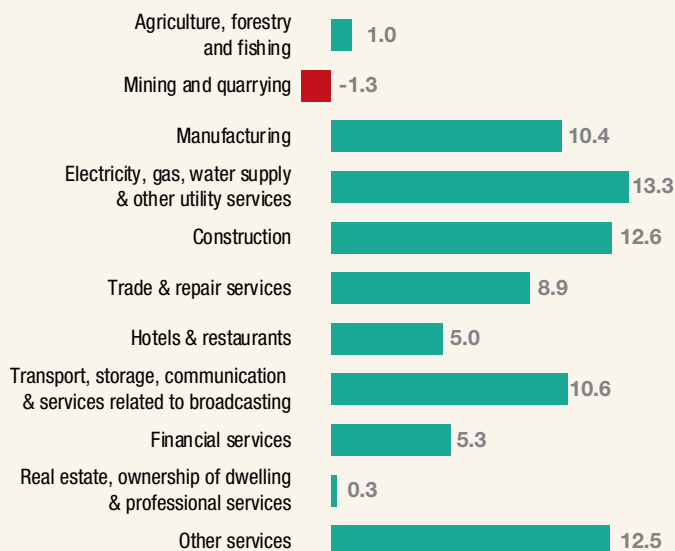
- Food processing and agro based industries
- Extraction and Value Addition of Herbal Medicinal and Aromatic Plants
- Mineral based industries
- Bamboo based industries
- Horticulture
- Information Technology related activities
- Hospitality industry and Tourism
- Bio-Technology sector.

Source: Assam Industrial Development Corporation Limited, 2014.

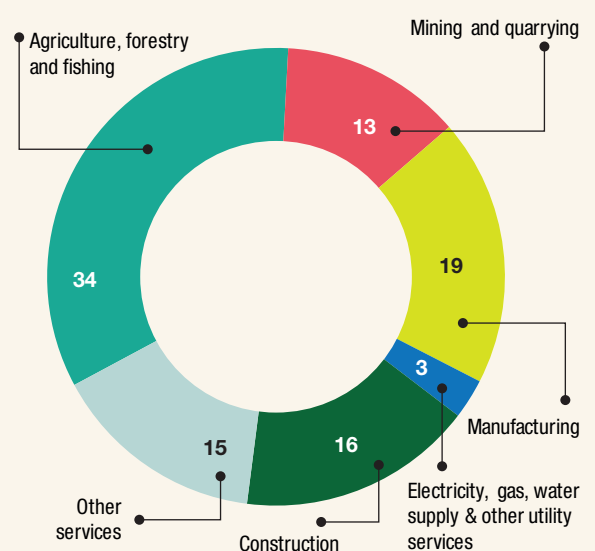
## Incentives

- 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 2015-16



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

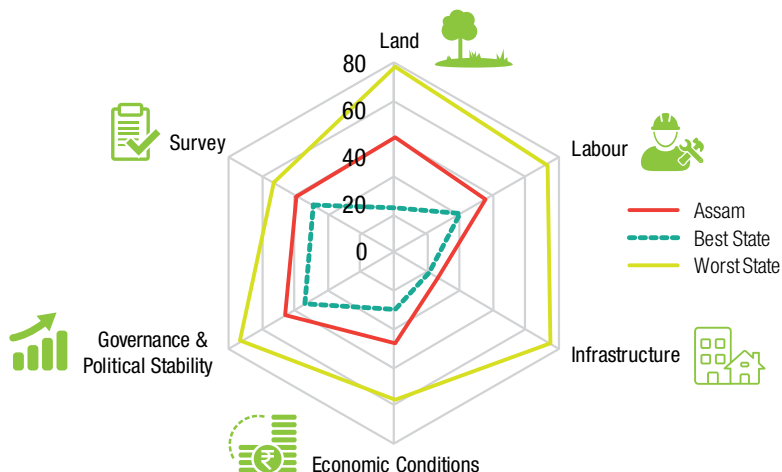


ASSAM

RANK

19

### States Performance on the Six Broad Pillars



Assam has made an improvement in the Land pillar, but broadly lags behind in all the pillars. Overall rank of the state has gone down from 17 in N-SIP17 to 19 in N-SIP18.

#### Strengths

The state ranks highest in terms of having the least number of projects stalled based on land related disputes and environmental clearances. The state also does well in being competitive in wage rates in the manufacturing sector along with least man days lost due to strikes.

#### Weaknesses

The state lags in land available for industrial purposes and bank branches. The state also falls behind in power shortage, seating capacity of ITIs and DIPP score.

## LAND

|                                       | Score       | Rank      |
|---------------------------------------|-------------|-----------|
| <b>LAND - OVERALL</b>                 | <b>48.3</b> | <b>12</b> |
| Digitized land records                | 100.0       | 1         |
| Land related stalled projects         | 93.3        | 13        |
| Land available for industrial purpose | 0.0         | 21        |
| Industrial parks in state             | 0.0         | 17        |

## LABOUR

|  | Score       | Rank      |
|--|-------------|-----------|
| <b>LABOUR - OVERALL</b>                                  | <b>43.7</b> | <b>19</b> |
| Labour force participation rate                          | 97.3        | 2         |
| Share of labour force with secondary education and above | 95.5        | 3         |
| Per cent of workforce having technical education         | 93.7        | 2         |
| Seating capacity of ITIs                                 | 51.7        | 17        |
| Average wages of salaried persons                        | 28.0        | 11        |
| Average wages in manufacturing sector                    | 18.6        | 13        |
| Share of workforce in manufacturing sector               | 6.8         | 20        |
| Least mandays lost due to strike                         | 1.8         | 21        |
| Share of contract workers in total labour force          | 0.0         | 21        |

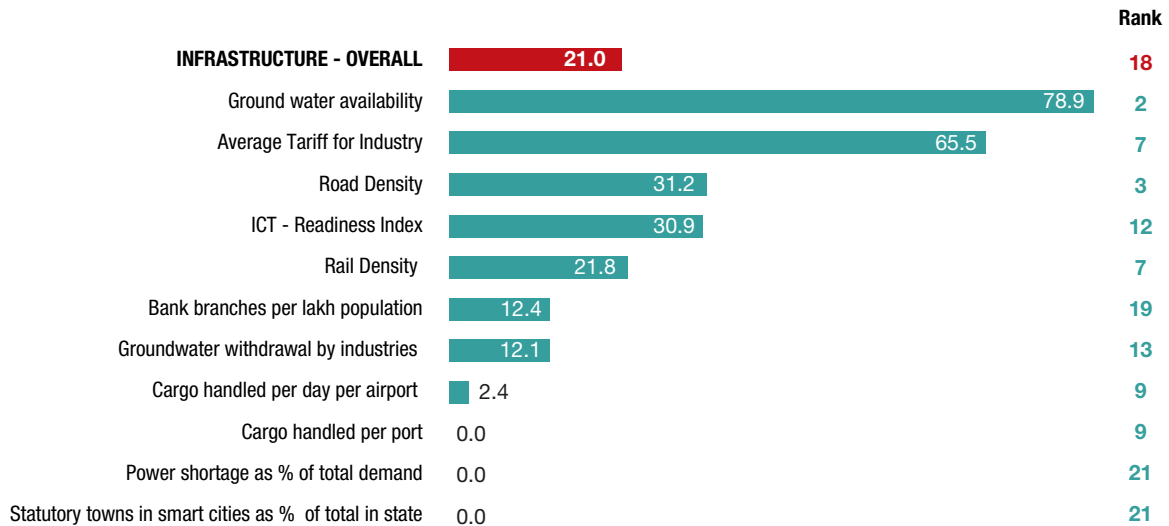
## SURVEY

|  | Score       | Rank      |
|--|-------------|-----------|
| <b>SURVEY - OVERALL</b>                          | <b>47.0</b> | <b>16</b> |
| Perception on land                               | 60.5        | 13        |
| Perception on business climate                   | 53.0        | 3         |
| Perception on labour                             | 46.9        | 14        |
| Perception on economic conditions                | 43.6        | 18        |
| Perception on infrastructure                     | 40.1        | 20        |
| Perception on governance and political stability | 37.8        | 15        |

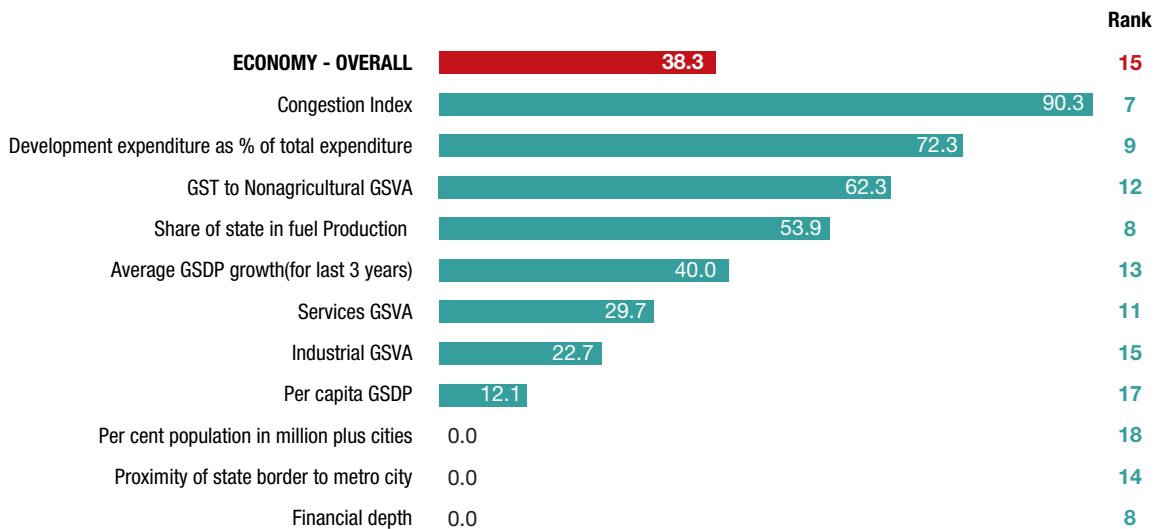




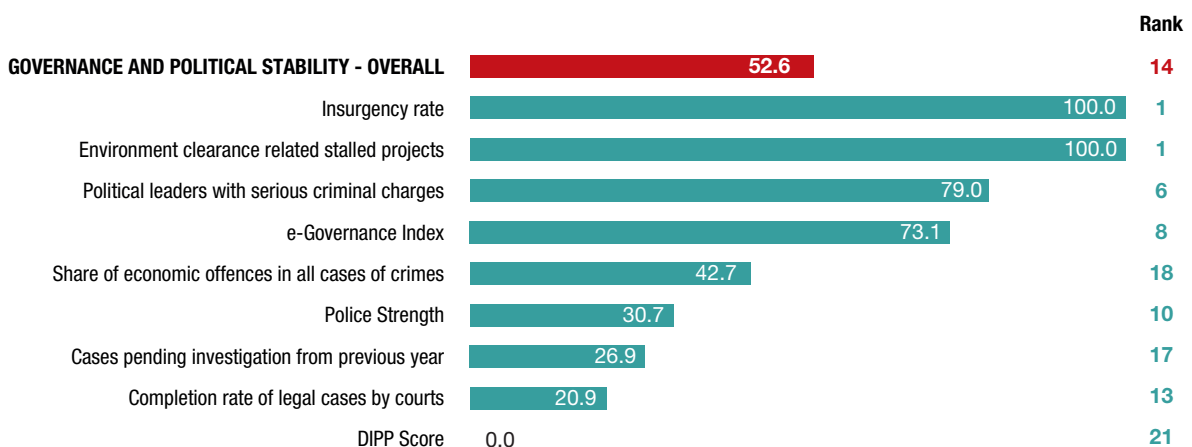
## INFRASTRUCTURE



## ECONOMY



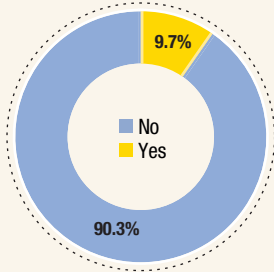
## GOVERNANCE AND POLITICAL STABILITY



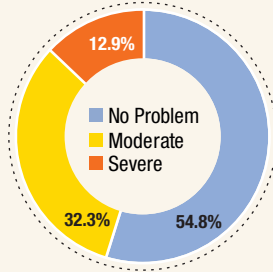
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

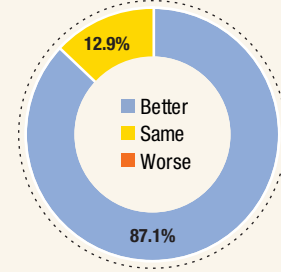


Percentage respondents facing problem in getting approvals for land



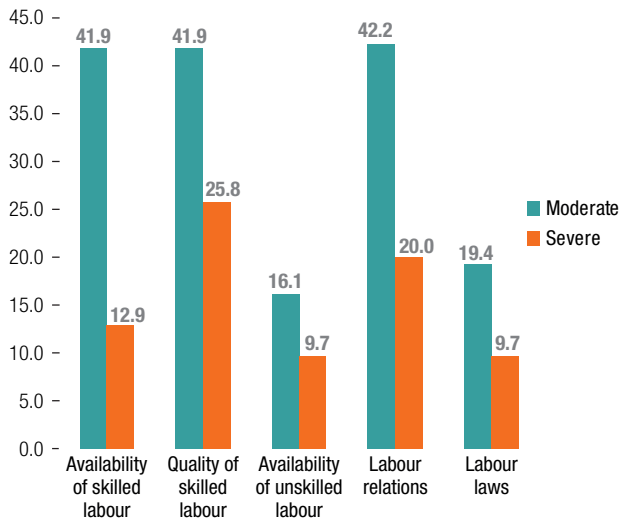
### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



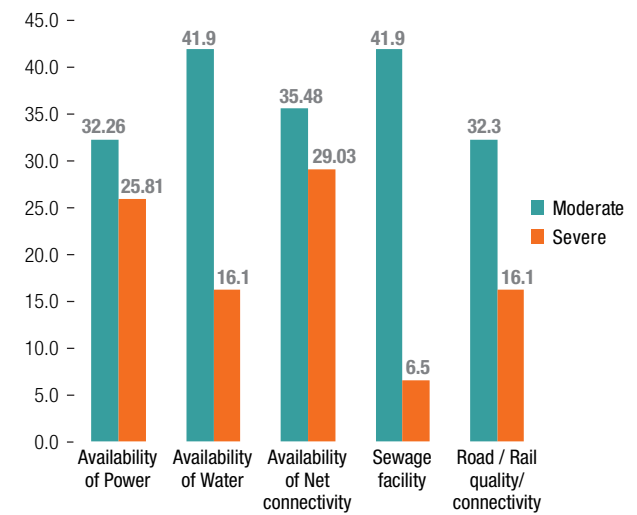
### Labour related issues

% respondents finding these a moderate or severe problem



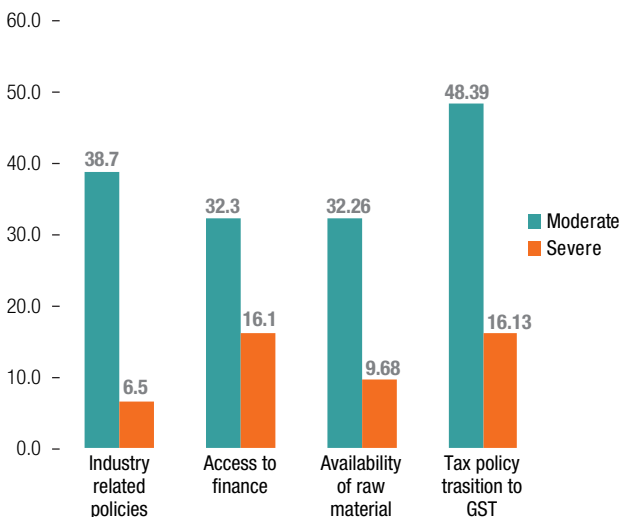
### Infrastructure related issues

% respondents finding these a moderate or severe problem



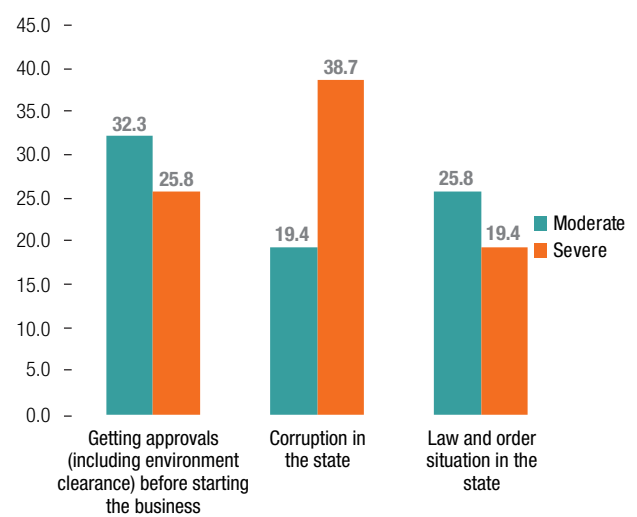
### Economy related issues

% respondents finding these a moderate or severe problem



### Governance related issues

% respondents finding these a moderate or severe problem



# Bihar



## Statistics

|                         |                 |
|-------------------------|-----------------|
| Capital                 | Patna           |
| Area (sq. km)           | 94,163          |
| Location                | Eastern India   |
| Per capita income (Rs.) | 29178 (2016-17) |
| Population              | 104,099,452     |
| Literacy Rate (%)       | 61.8            |

## State Focus Sectors

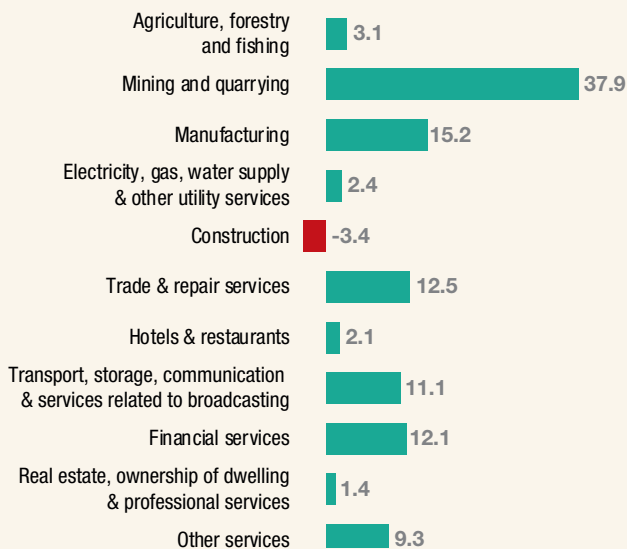
- Food processing
- Sugar Industry
- Power Sector
- IT and Communication
- Electronic hardware (computers, medical and automotive)
- Small machine manufacturing industries (seeders, dibbler, de-huskers, diesel pumps etc)
- Leather Industry
- Mines and Minerals
- Energy and Infrastructure
- Textiles
-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

Source: Bihar Industrial Investment Promotion Policy, 2016.

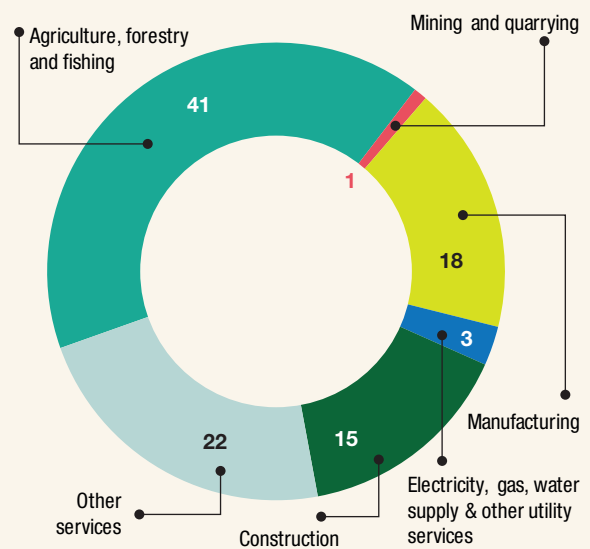
## Incentives

- 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-imbursalment of electricity duty for the new industrial units.
- Capital Subsidy for industrial units, inclusion of Entry- Tax in the re-imbursalment 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 *Bihar Industrial Investment Promotion Policy, 2016*.

## Growth in Gross Value Added, 3 year average ending 2016-17



## Sector wise contribution in Gross Value added, 2016-17

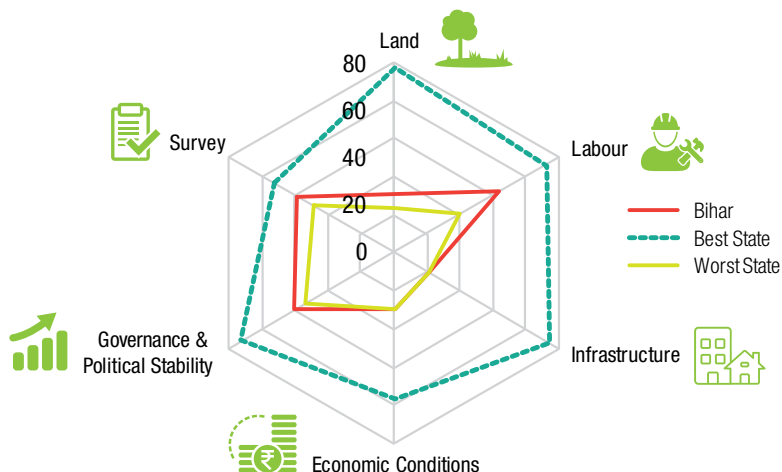


BIHAR

RANK

21

### States Performance on the Six Broad Pillars



Bihar has performed well in the labour pillar to rank among the top ten states, but lags behind in all other pillars. Overall rank of the state has also decreased from 19 in N-SIPI'17 to 21 in N-SIPI'18.

#### Strengths

The state has the top most rank in being competitive in wages in the manufacturing sector and among the salaried workers. The state also ranks high in services GSVA, ground water availability and e-governance. Rail density in the state is also high.

#### Weaknesses

The state lags behind in per capita, power shortage, projects stalled due to land related issues and educated labour force.

## LAND

|                                       | Score       | Rank      |
|---------------------------------------|-------------|-----------|
| <b>LAND - OVERALL</b>                 | <b>24.6</b> | <b>18</b> |
| Digitized land records                | 96.8        | 12        |
| Land available for industrial purpose | 1.7         | 20        |
| Land related stalled projects         | 0.0         | 21        |
| Industrial parks in state             | 0.0         | 17        |

## LABOUR

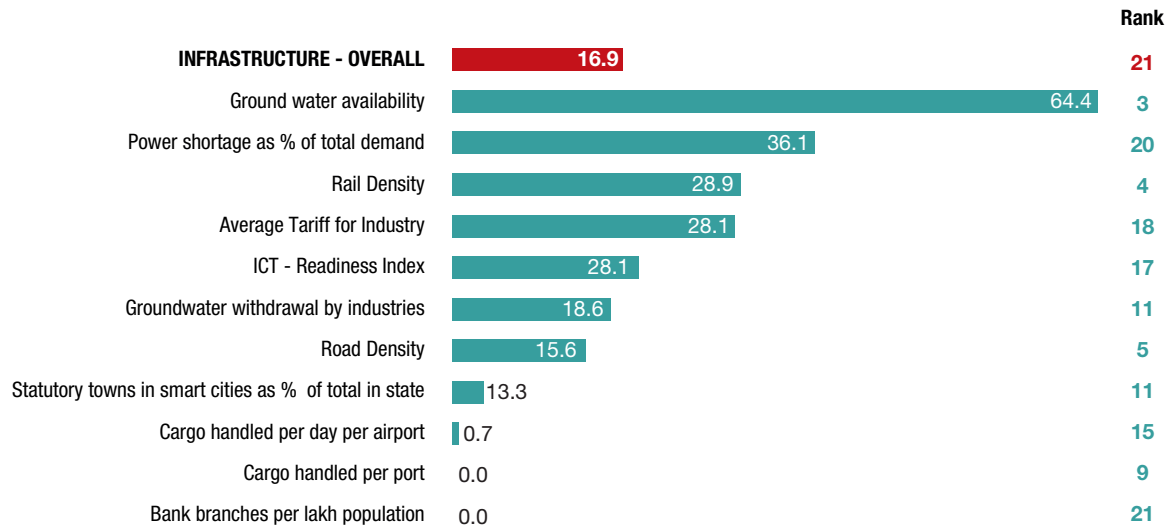
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>LABOUR - OVERALL</b>                                  | <b>50.7</b> | <b>10</b> |
| Average wages in manufacturing sector                    | 100.0       | 1         |
| Average wages of salaried persons                        | 96.5        | 2         |
| Least mandays lost due to strike                         | 89.6        | 7         |
| Share of contract workers in total labour force          | 82.1        | 12        |
| Seating capacity of ITIs                                 | 40.9        | 5         |
| Labour force participation rate                          | 25.7        | 14        |
| Share of workforce in manufacturing sector               | 17.0        | 18        |
| Percent of workforce having technical education          | 4.3         | 19        |
| Share of labour force with secondary education and above | 0.0         | 21        |

## SURVEY

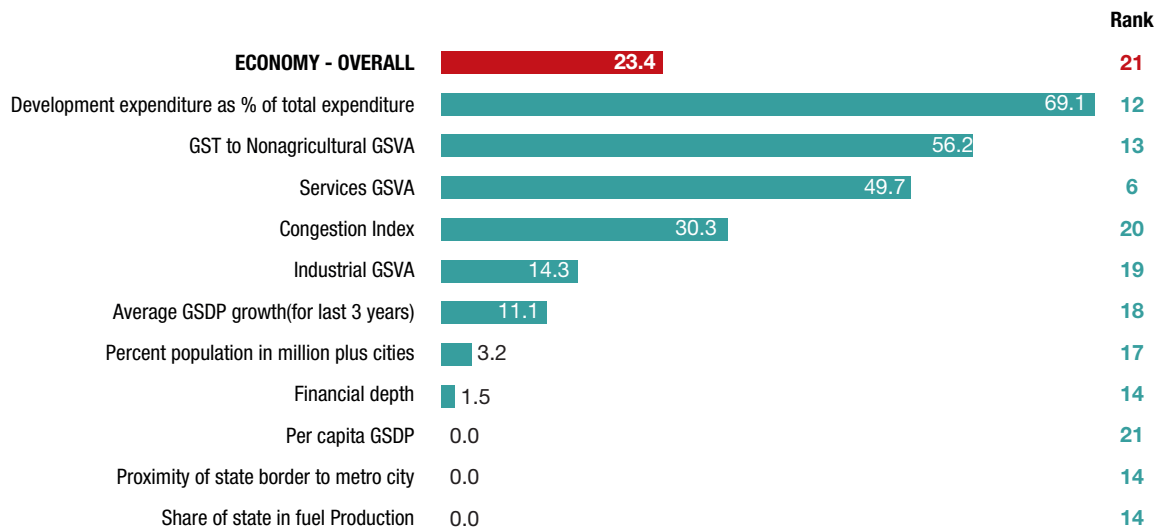
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>SURVEY - OVERALL</b>                          | <b>46.8</b> | <b>18</b> |
| Perception on infrastructure                     | 60.1        | 10        |
| Perception on labour                             | 54.5        | 8         |
| Perception on economic conditions                | 49.0        | 14        |
| Perception on business climate                   | 46.2        | 15        |
| Perception on governance and political stability | 36.2        | 16        |
| Perception on land                               | 34.9        | 21        |



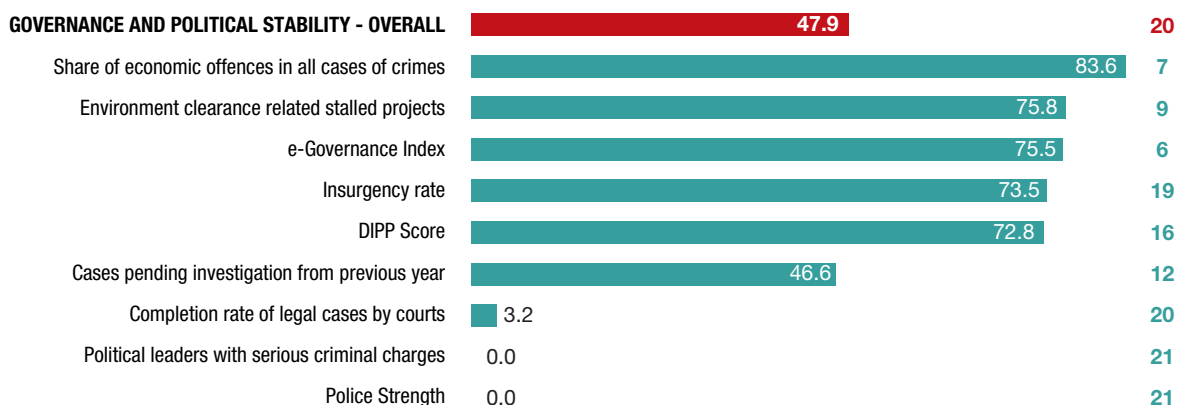
## INFRASTRUCTURE



## ECONOMY



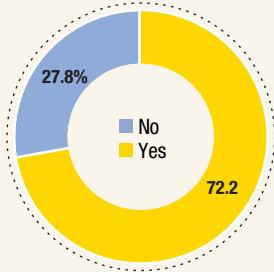
## GOVERNANCE AND POLITICAL STABILITY



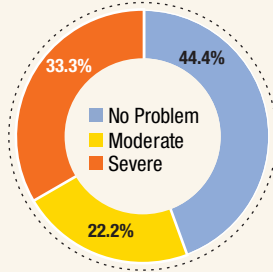
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

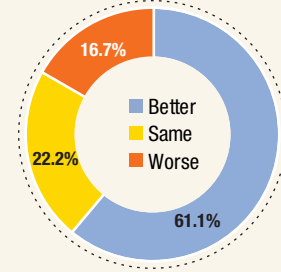


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



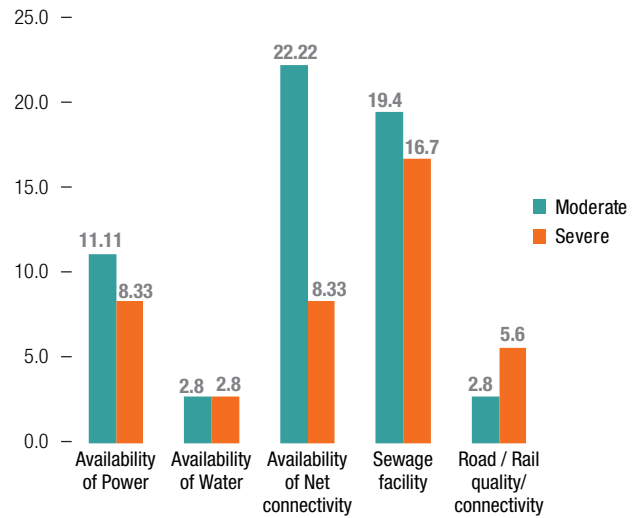
### Labour related issues

% respondents finding these a moderate or severe problem



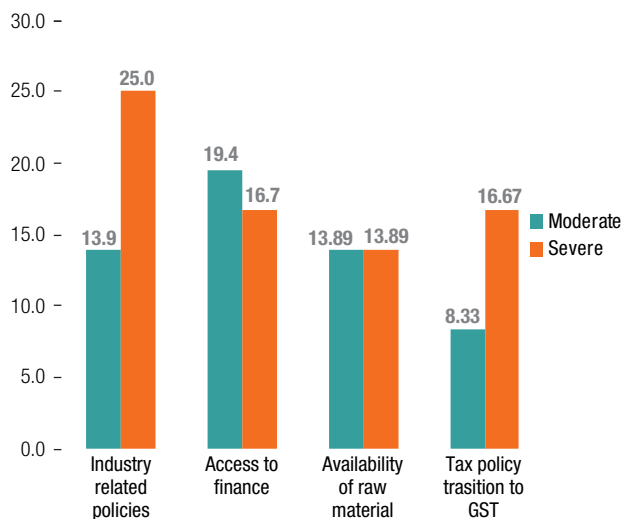
### Infrastructure related issues

% respondents finding these a moderate or severe problem



### Economy related issues

% respondents finding these a moderate or severe problem



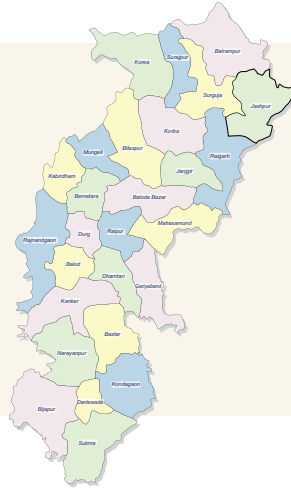
### Governance related issues

% respondents finding these a moderate or severe problem





# Chhattisgarh



## Statistics

|                         |                 |
|-------------------------|-----------------|
| Capital                 | Raipur          |
| Area (sq. km)           | 1,35,192        |
| Location                | Central India   |
| Per capita income (Rs.) | 80168 (2016-17) |
| Population              | 25,545,198      |
| Literacy Rate (%)       | 70.3            |

## State Focus Sectors

- Forest Products (herbs, spices, medicines)
- Automobile, Auto Components
- Mineral based
- Plant, machineries, engineering products and its spares
- Agro & Food Processing
- Pharmaceutical industry
- White goods, electronic and electrical consumer goods
- IT & ITES industry
- Biotechnology & Nanotechnology
- Textile Industry
- Power generation, transmission & distribution among others

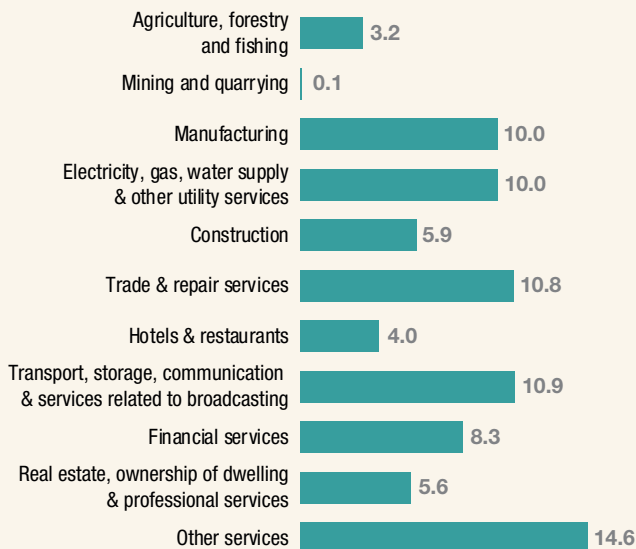
Source: State Industrial Policy 2014-19.

## Incentives

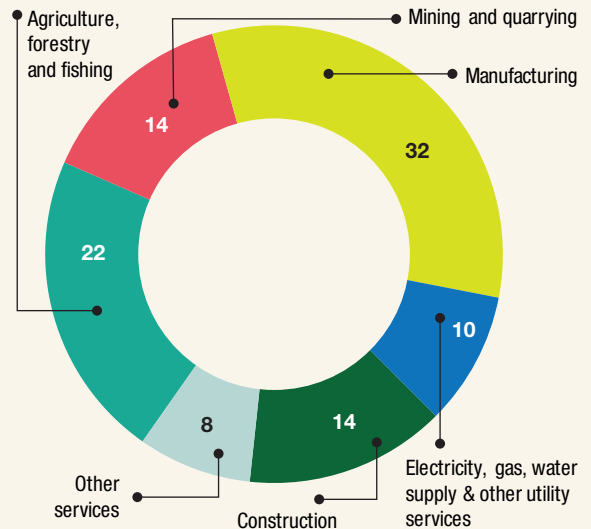
- Subsidy on interest payment, fixed capital investment, technical patent, and technology purchase
- Concession in electricity, land premium on allotment of land in industrial areas
- Single window system for ease of doing business and export promotion initiatives

Source: State Industrial Policy 2014-19.

## Growth in Gross Value Added, 3 years average ending, 2016-17



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

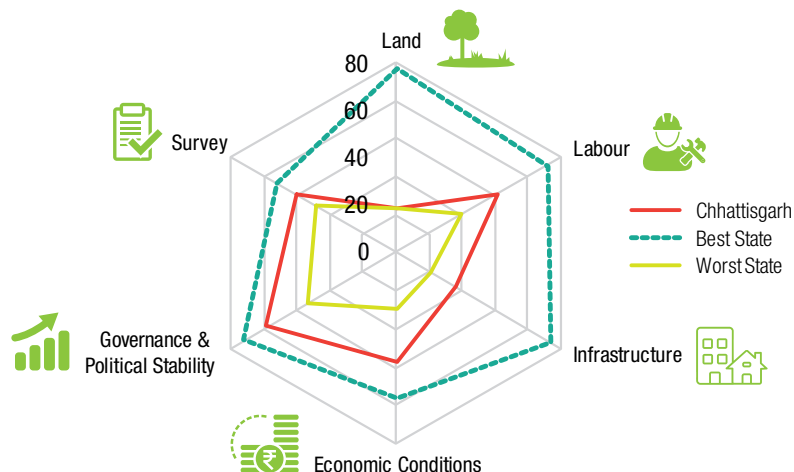


# CHHATTISGARH

**RANK**

**14**

## States Performance on the Six Broad Pillars



Chhattisgarh is among the top ten states in two pillars: economic conditions and governance and political stability, but has lost ground compared to last year in the perceptions survey pillar. The state ranks lowest in the Land pillar. The overall rank in Chhattisgarh remained same at 14 in N-SIPI'17 and N-SIPI'18.

### Strengths

The state ranks top most in terms of development expenditure, labour force participation rate and share of contract labour in total labour force.

### Weaknesses

The state falls in high number of incidences of insurgencies, digitalized land records and land availability for industrial purposes.

## LAND

|                                       | Score       | Rank      |
|---------------------------------------|-------------|-----------|
| <b>LAND - OVERALL</b>                 | <b>18.3</b> | <b>21</b> |
| Land related stalled projects         | 66.7        | 9         |
| Land available for industrial purpose | 2.5         | 19        |
| Digitized land records                | 2.2         | 19        |
| Industrial parks in state             | 1.7         | 15        |

## LABOUR

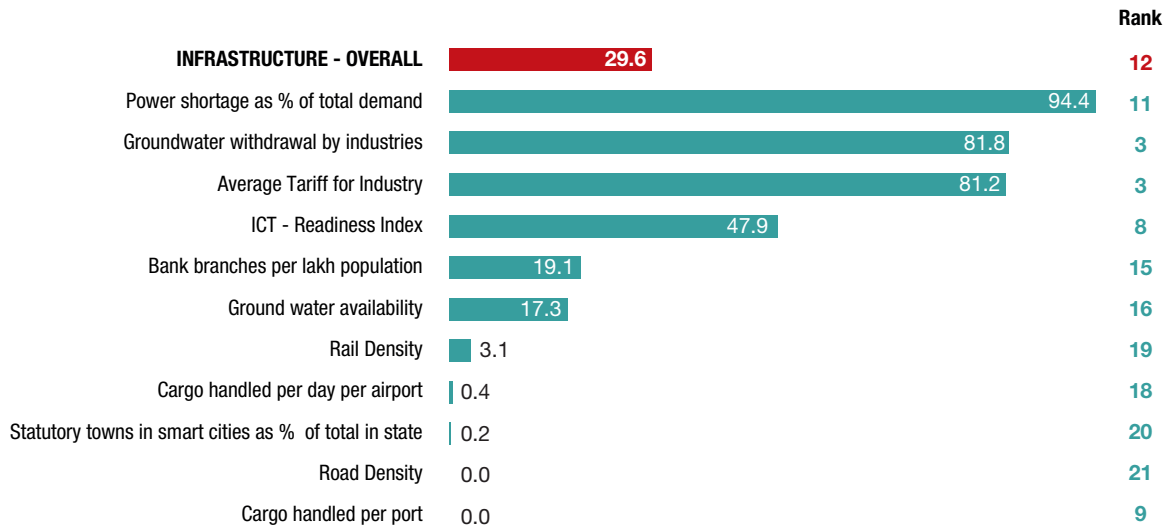
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>LABOUR - OVERALL</b>                                  | <b>49.2</b> | <b>12</b> |
| Labour force participation rate                          | 100.0       | 1         |
| Share of contract workers in total labour force          | 100.0       | 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        |
| Per cent of workforce having technical education         | 17.4        | 15        |
| Seating capacity of ITIs                                 | 9.1         | 16        |
| Share of labour force with secondary education and above | 7.1         | 20        |
| Share of workforce in manufacturing sector               | 0.0         | 21        |

## SURVEY

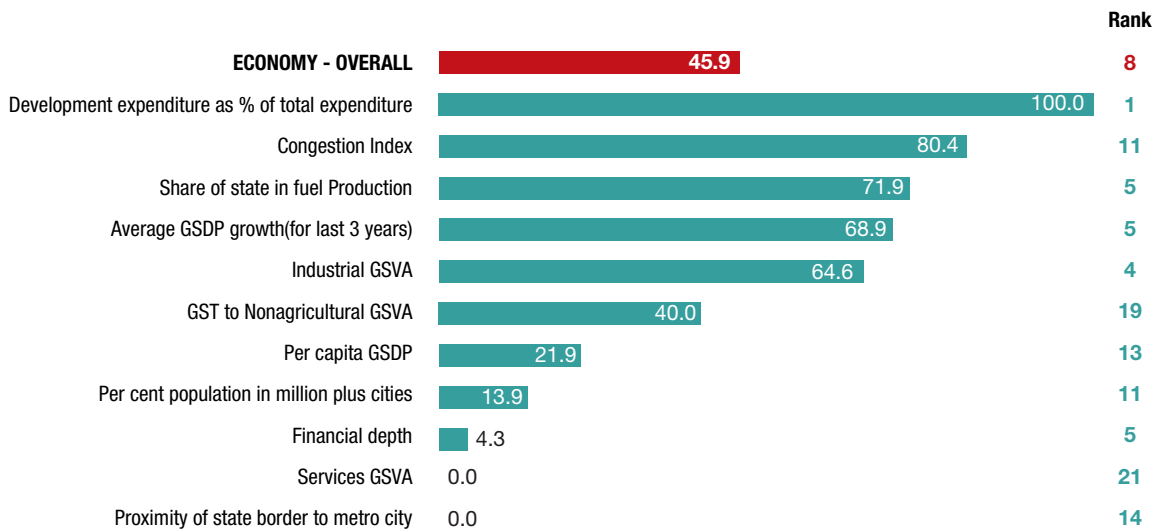
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>SURVEY - OVERALL</b>                          | <b>47.8</b> | <b>14</b> |
| Perception on land                               | 58.8        | 15        |
| Perception on infrastructure                     | 56.7        | 12        |
| Perception on labour                             | 48.5        | 12        |
| Perception on economic conditions                | 45.7        | 17        |
| Perception on business climate                   | 44.2        | 18        |
| Perception on governance and political stability | 33.0        | 18        |



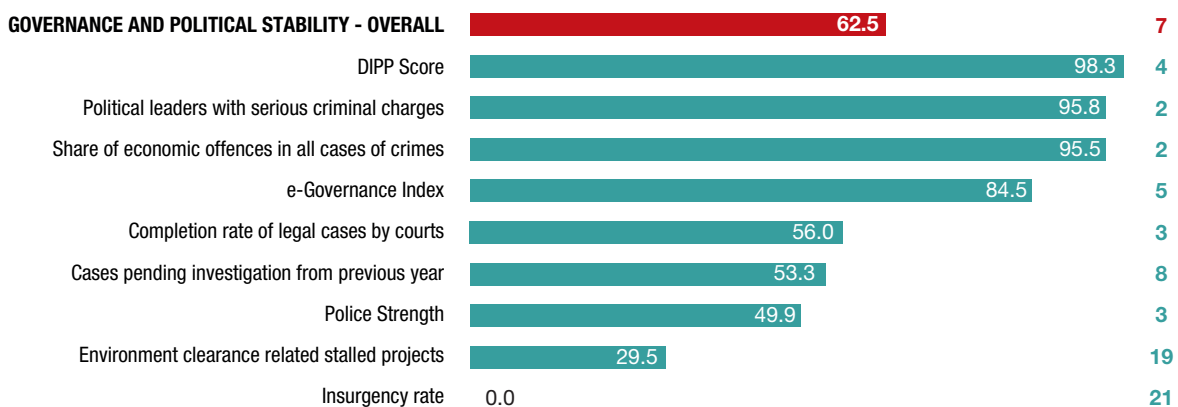
## INFRASTRUCTURE



## ECONOMY



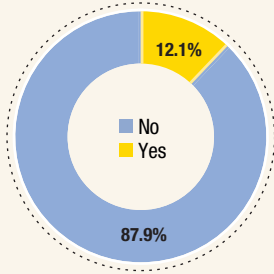
## GOVERNANCE AND POLITICAL STABILITY



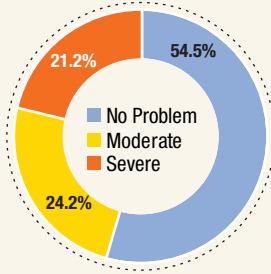
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

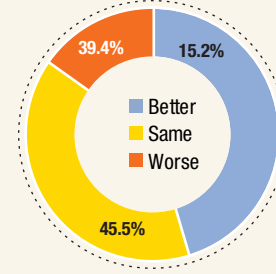


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



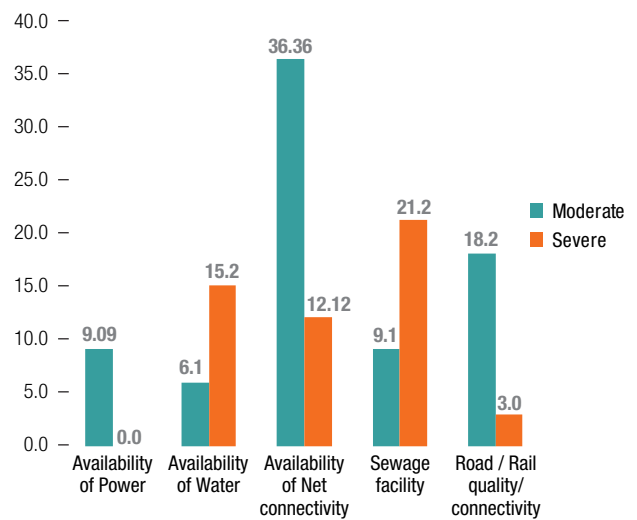
### Labour related issues

% respondents finding these a moderate or severe problem



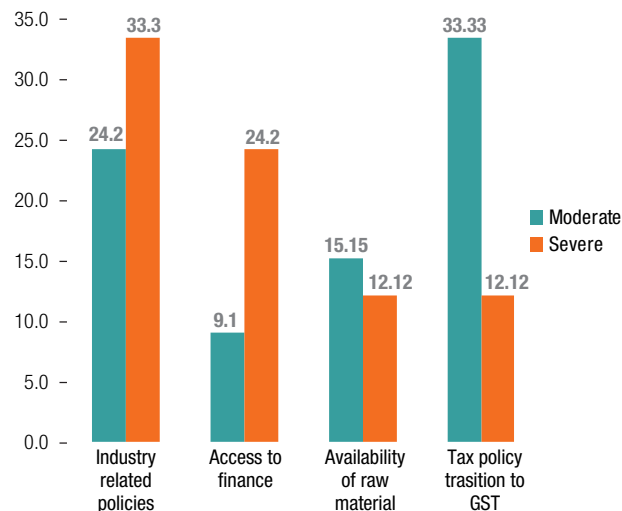
### Infrastructure related issues

% respondents finding these a moderate or severe problem



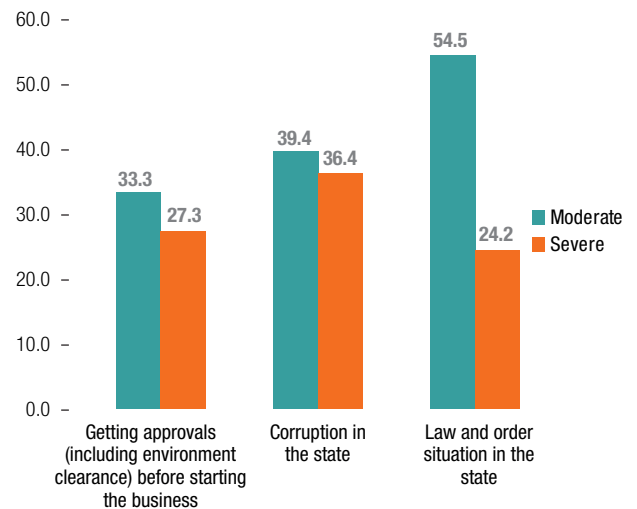
### Economy related issues

% respondents finding these a moderate or severe problem

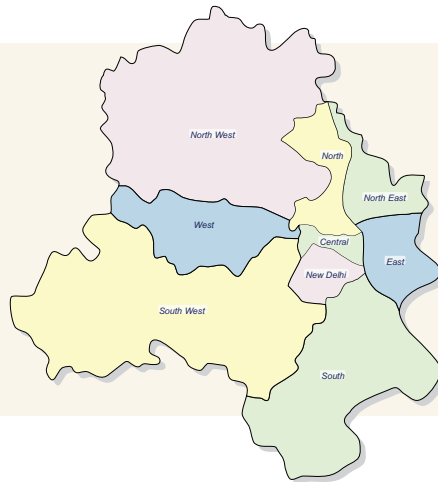


### Governance related issues

% respondents finding these a moderate or severe problem



# Delhi



## Statistics

|   |                 |
|---|-----------------|
| Capital                                 | Delhi           |
| Area (Sq.km):                           | 1483            |
| Location:                               | North India     |
| Population:                             | 26.50 Million   |
| Per capita income Rs.329093 for 2017-18 |                 |
| Literacy Rate:                          | 86.34% for 2017 |

## State Focus Sectors

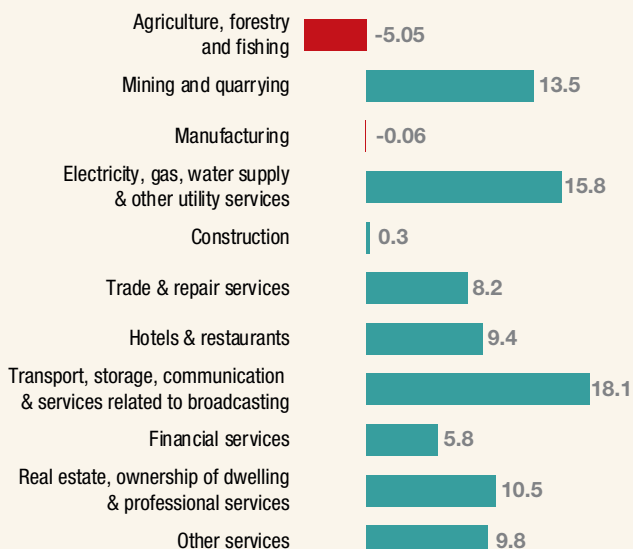
- IT and IT enabled services
- Educational services
- Traditional Industries –Khadi, Handloom & Handicraft
- Skill Development
- Business and Financial Services
- Media
- Research and Development
- Biotechnology

**Source:** Industrial Policy for Delhi, 2010-2021.

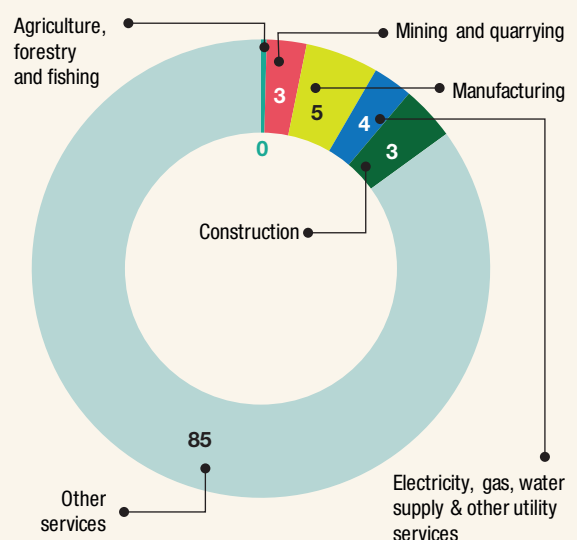
## Incentives

- 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 of 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 years average ending, 2016-17



## Sector-wise contribution in Gross Value Added, 2016-17

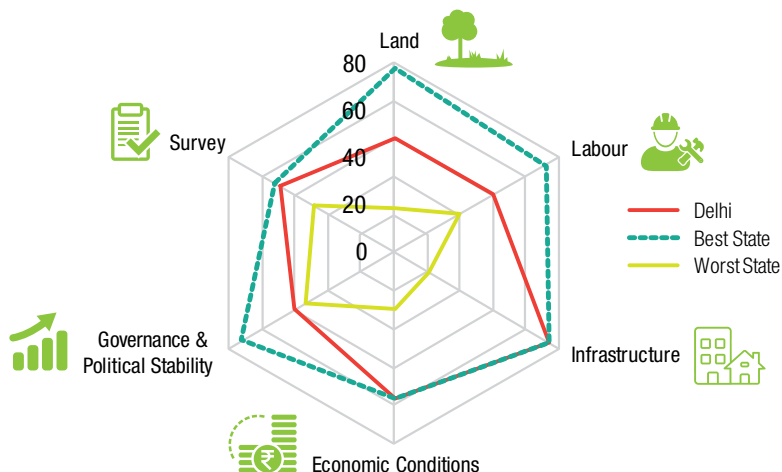


DELHI

RANK

1

## States Performance on the Six Broad Pillars



Delhi tops the ranking for infrastructure and economic climate, but lags behind in land, labor and governance and political stability. The overall rank of Delhi has improved from 2 in N-SIPI'17 to 1 in N-SIPI'18.

### Strengths

Delhi tops in a number of sub pillars including computerization of land registration, share of labour force with secondary force and above, road and rail density, statutory smart cities, services GSVAs, per capita GSDP.

### Weaknesses

Delhi ranks at the bottom for certain sub pillars namely labor force participation, average wages of salaried persons, industrial GSVAs and one of the lowest DIPP score.

## LAND

|                                       | Score       | Rank      |
|---------------------------------------|-------------|-----------|
| <b>LAND - OVERALL</b>                 | <b>47.8</b> | <b>13</b> |
| Digitized land records                | 100.0       | 1         |
| Land related stalled projects         | 55.1        | 14        |
| Land available for industrial purpose | 36.2        | 3         |
| Industrial parks in state             | 0.0         | 17        |

## LABOUR

|  | Score       | Rank      |
|--|-------------|-----------|
| <b>LABOUR - OVERALL</b>                                  | <b>48.4</b> | <b>13</b> |
| 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                                 | 4.1         | 19        |
| Labour force participation rate                          | 0.0         | 21        |
| Average wages of salaried persons                        | 0.0         | 21        |

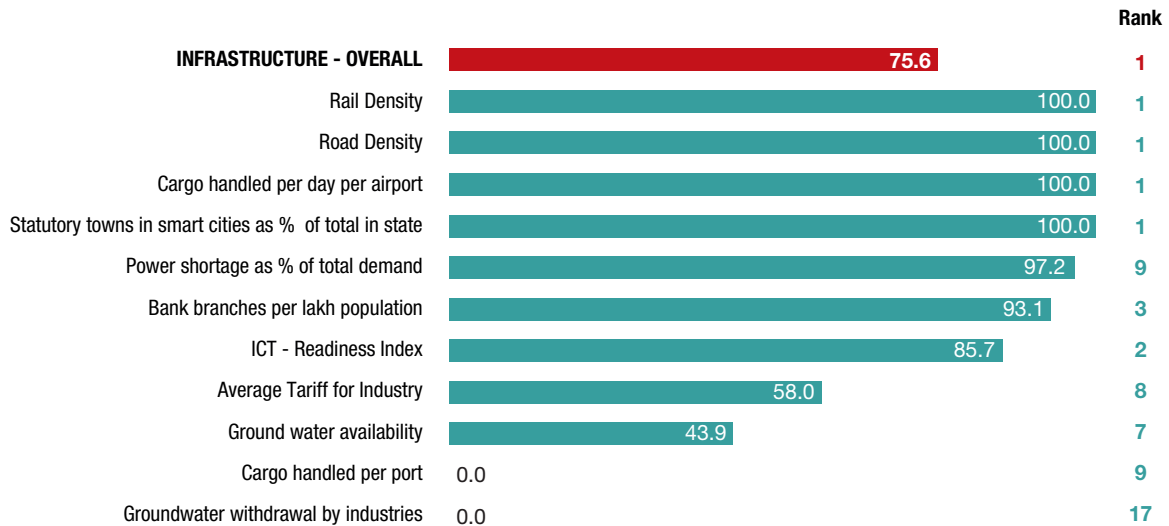
## SURVEY

|  | Score       | Rank     |
|--|-------------|----------|
| <b>SURVEY - OVERALL</b>                          | <b>55.4</b> | <b>5</b> |
| Perception on land                               | 67.4        | 3        |
| Perception on infrastructure                     | 60.8        | 8        |
| Perception on economic conditions                | 57.8        | 5        |
| Perception on labour                             | 52.9        | 10       |
| Perception on business climate                   | 49.1        | 7        |
| Perception on governance and political stability | 44.1        | 7        |

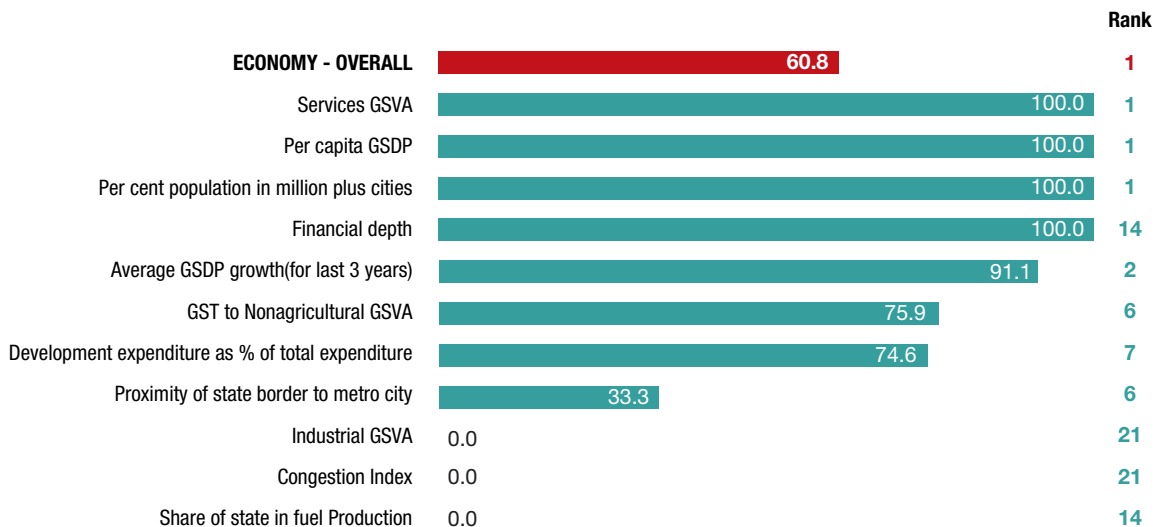




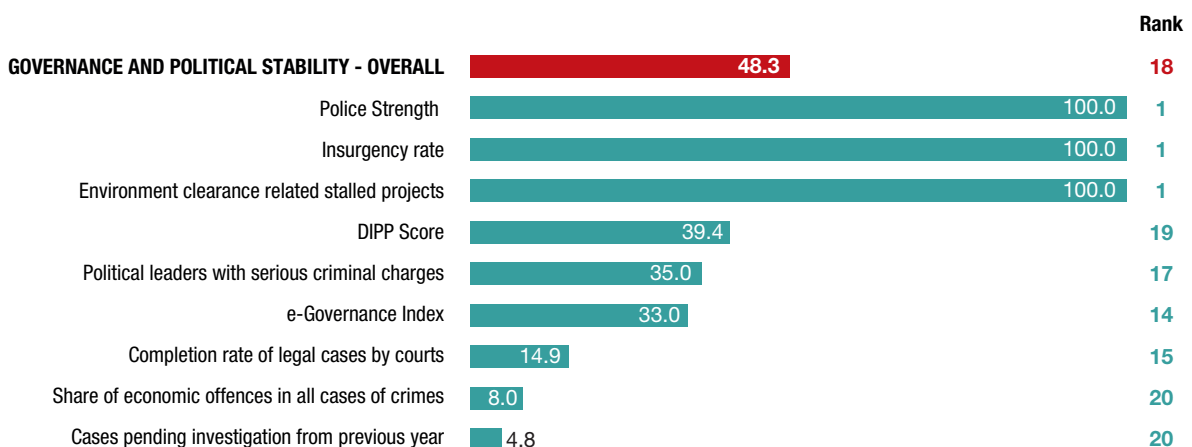
## INFRASTRUCTURE



## ECONOMY



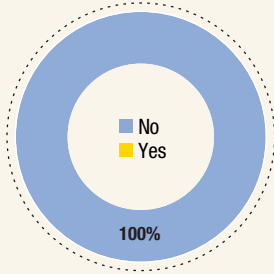
## GOVERNANCE AND POLITICAL STABILITY



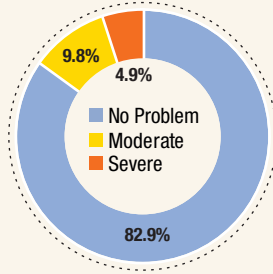
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

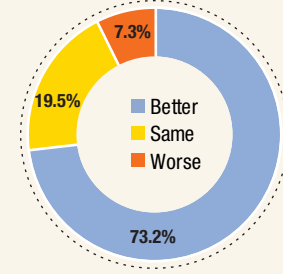


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



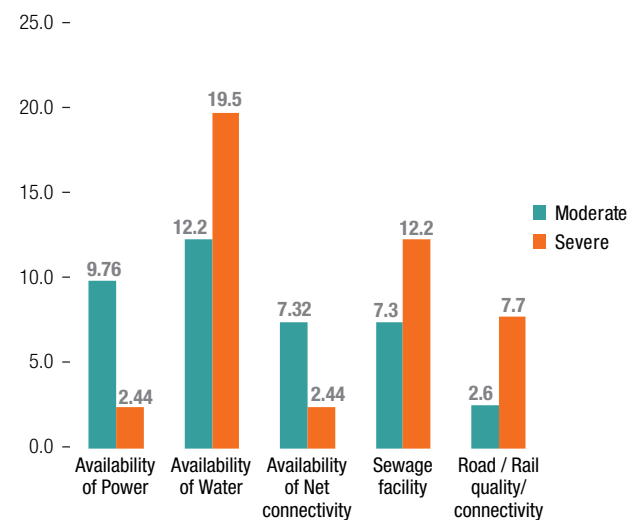
### Labour related issues

% respondents finding these a moderate or severe problem



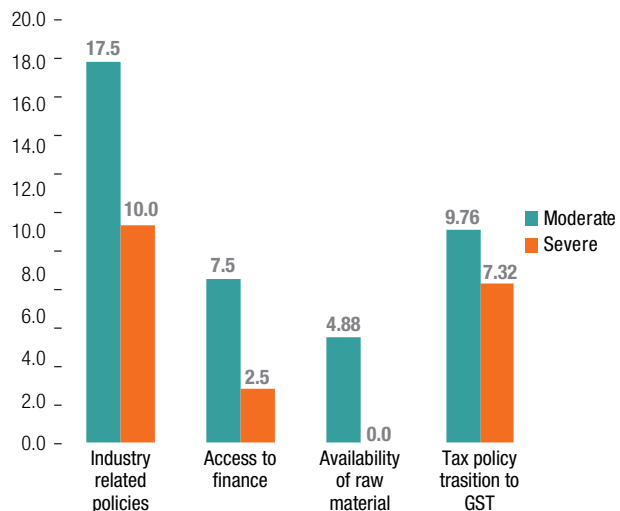
### Infrastructure related issues

% respondents finding these a moderate or severe problem



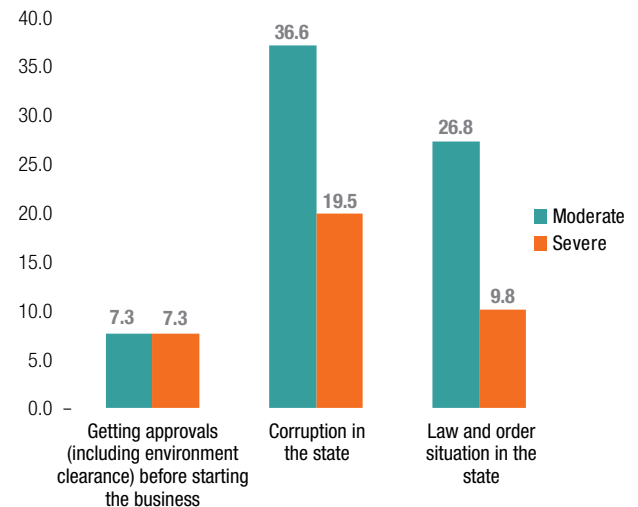
### Economy related issues

% respondents finding these a moderate or severe problem



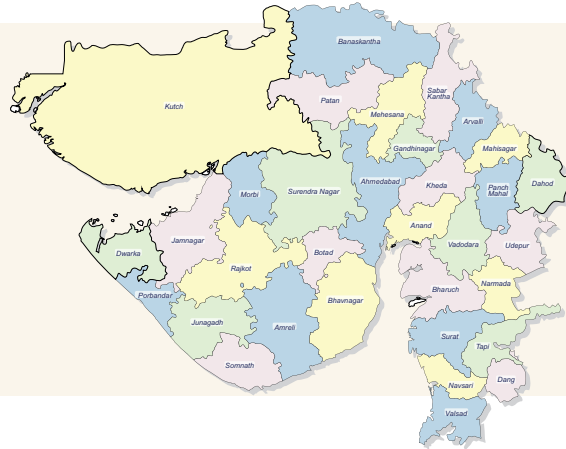
### Governance related issues

% respondents finding these a moderate or severe problem



# Gujarat

| RANK |   |
|------|---|
| 2018 | 3 |
| 2017 | 1 |



## Statistics

|                          |                        |
|--------------------------|------------------------|
| Capital:                 | Gandhi Nagar           |
| Area (sq.km):            | 196063                 |
| Location:                | Western India          |
| Population:              | 60400000 (2011 census) |
| Per Capita Income: (Rs)  | 156691 for 2016-17     |
| Total Literacy Rate (%): | 79.31 for 2017         |

## State Focus Sectors

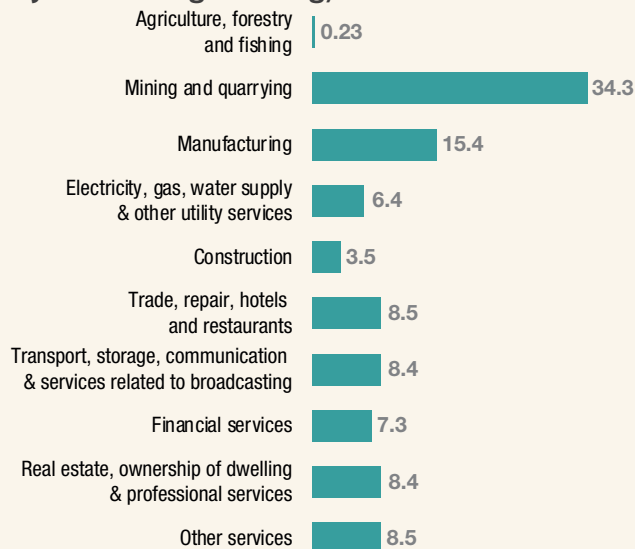
- Agro Based and Food processing Industry
- Chemical & Petrochemicals
- Information Technology
- Mineral Based and Allied Industries
- Plastic and Allied Industry
- Port-Related Activities & Infrastructure
- Textile & Apparels Industry
- Health care Industry
- Manufacturing
- Truism

## Incentives

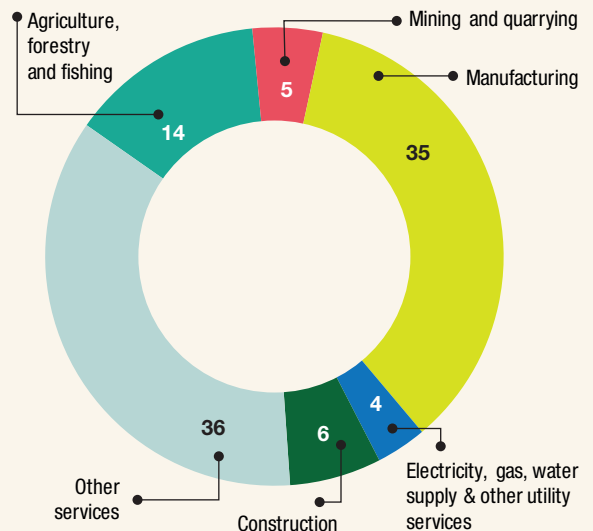
- Incentives and assistances for allotment of land, mega IT/ ITes projects, development of Technology Park, exemption/ concession in registration/stamp duty, lease rentals, electric duty and industrial tariff under the state's new IT Policy.
- Incentives for clusters and anchor units, registration and stamp duty concession, uninterrupted availability of power tariff subsidy, VAT/CST incentives, 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.

**Source:** State Industrial and Investment Policy-2015, Gujarat and Government Portal of Gujarat.

## Growth in Gross Value Added, 3 years average ending, 2016-17



## Sector-wise Contribution in Gross Value Added, 2016-17

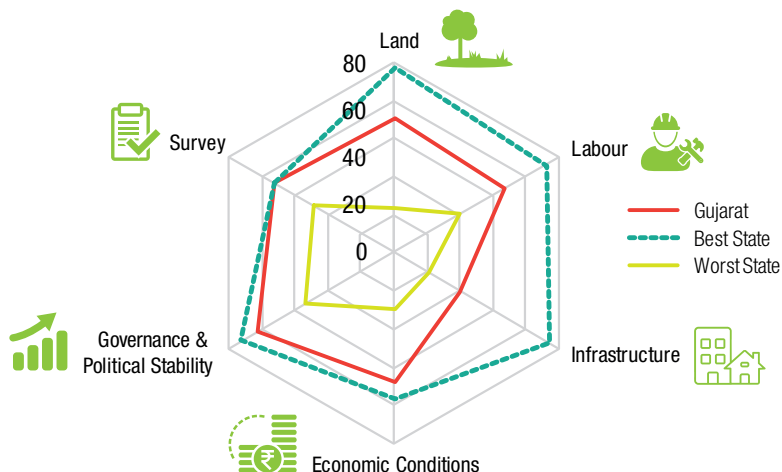


GUJARAT

RANK

3

States Performance on the Six Broad Pillars



Gujarat fell two ranks to overall rank of 3 in N-SIPI'18. In comparison to last year, the rank of Gujarat has fallen in all the pillars except the perception pillar.

Strengths

Gujarat exhibits top rank with respect to computerization of land registration, cargo handled per port, low power shortage, lower insurgency rate and average GSDP growth for the last three years. In addition, Gujarat is the top ranked in the industry perception with respect to land.

Weaknesses

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

LAND

|                                       | Score       | Rank     |
|---------------------------------------|-------------|----------|
| <b>LAND - OVERALL</b>                 | <b>55.7</b> | <b>8</b> |
| Digitized land records                | 100.0       | 1        |
| Land related stalled projects         | 61.2        | 10       |
| Industrial parks in state             | 42.4        | 6        |
| Land available for industrial purpose | 19.2        | 10       |

LABOUR

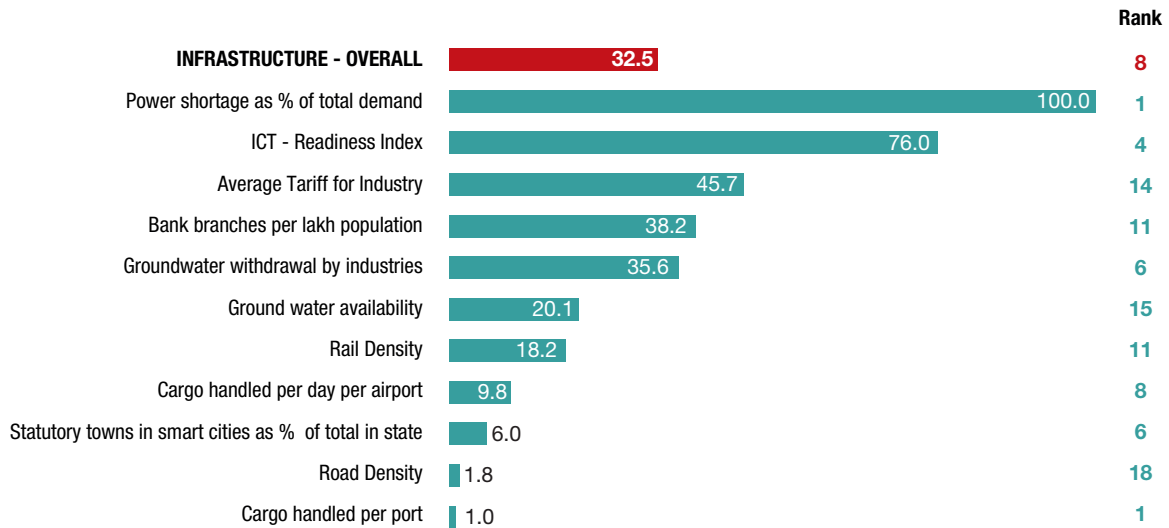
|  | Score       | Rank     |
|--|-------------|----------|
| <b>LABOUR - OVERALL</b>                                  | <b>53.8</b> | <b>8</b> |
| Average wages of salaried persons                        | 87.6        | 7        |
| Share of workforce in manufacturing sector               | 83.7        | 4        |
| Least mandays lost due to strike                         | 63.2        | 15       |
| Average wages in manufacturing sector                    | 63.1        | 11       |
| Per cent of workforce having technical education         | 53.3        | 10       |
| Share of contract workers in total labour force          | 44.6        | 18       |
| Share of labour force with secondary education and above | 31.4        | 11       |
| Seating capacity of ITIs                                 | 29.7        | 9        |
| Labour force participation rate                          | 27.2        | 13       |

SURVEY

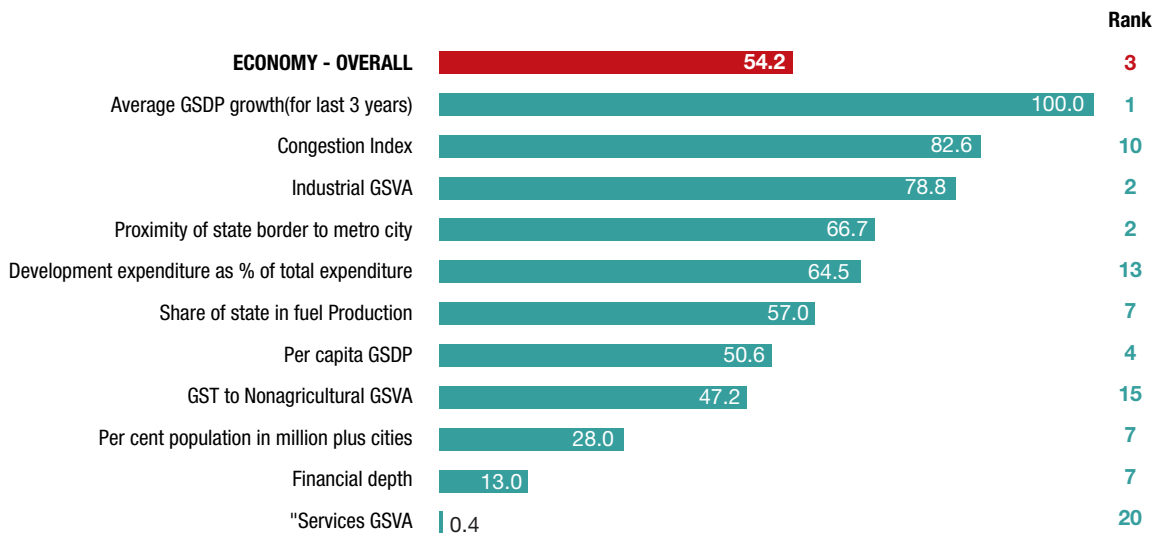
|  | Score       | Rank     |
|--|-------------|----------|
| <b>SURVEY - OVERALL</b>                          | <b>57.8</b> | <b>1</b> |
| Perception on land                               | 68.3        | 1        |
| Perception on infrastructure                     | 65.7        | 2        |
| Perception on economic conditions                | 59.9        | 2        |
| Perception on labour                             | 58.9        | 3        |
| Perception on business climate                   | 47.1        | 13       |
| Perception on governance and political stability | 46.8        | 4        |



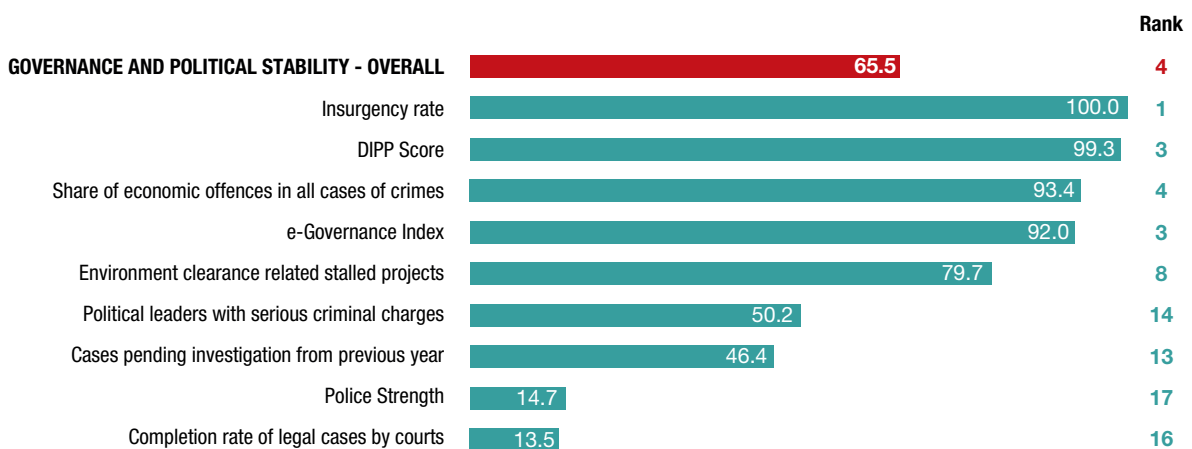
## INFRASTRUCTURE



## ECONOMY



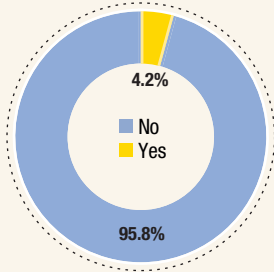
## GOVERNANCE AND POLITICAL STABILITY



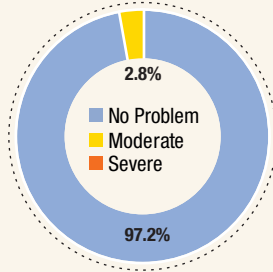
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

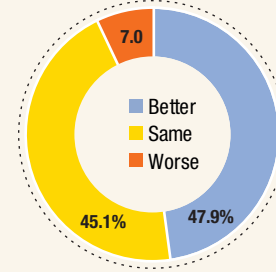


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



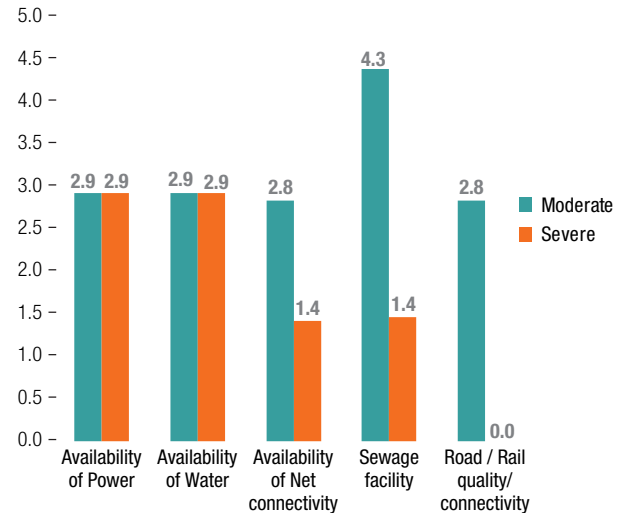
### Labour related issues

% respondents finding these a moderate or severe problem



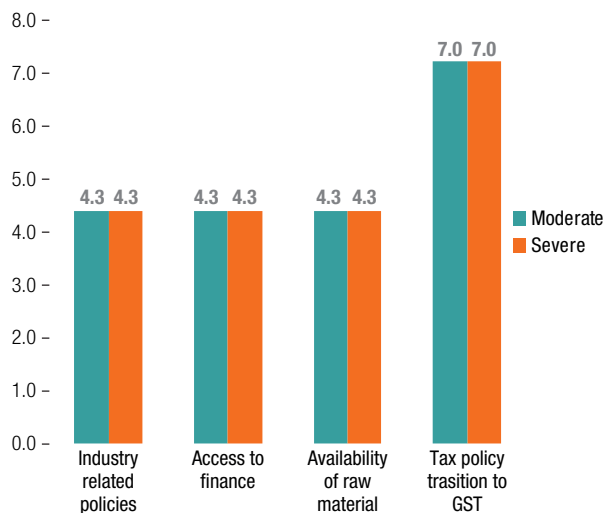
### Infrastructure related issues

% 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



## Statistics

|                   |                        |
|-------------------|------------------------|
| Capital:          | Chandigarh             |
| Area (sq.km):     | 44212                  |
| Location:         | North India            |
| Population:       | 25353081 (2011 census) |
| Per capita income | Rs. 180174 for 2016-17 |
| Literacy Rate:    | 76.64 % for 2017       |

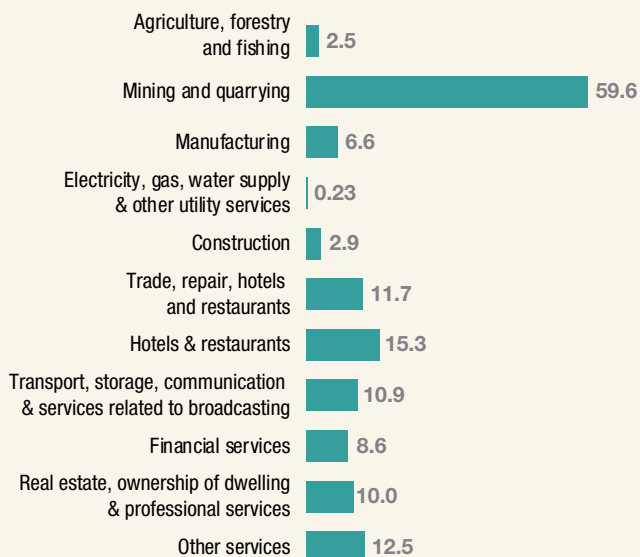
## State Focus Sectors

- 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

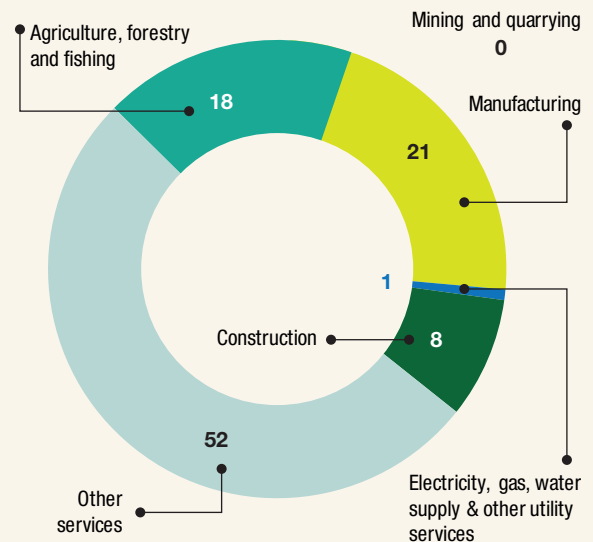
## Incentives

- Allotment of land in the Industrial estate developed by HSIIDC, investment subsidy in lieu of VAT/SGST and freight subsidy to 100 % Export-oriented units.
- Investment in service 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 of Haryana.

## Growth in Gross Value Added, 3 years average ending 2016-17



## Sector-wise Contribution in Gross Value Added, 2016-17



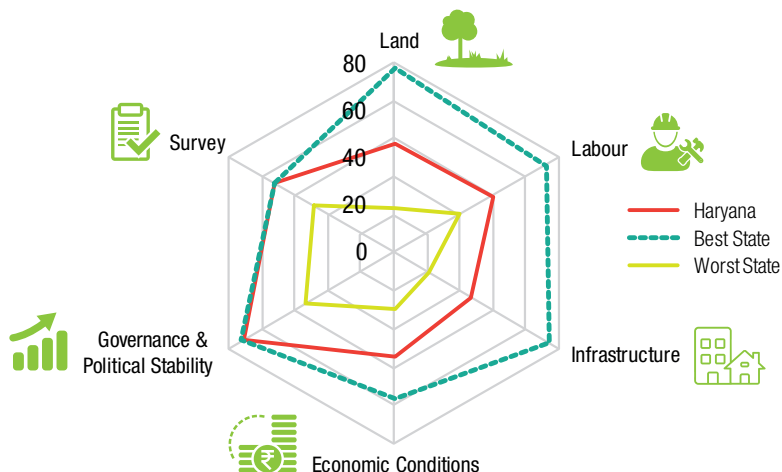


HARYANA

RANK

4

States Performance on the Six Broad Pillars



Like last year, Haryana is among the top performing states in terms of governance and political stability, but lags behind in the economy, labour and land pillars. Overall rank has remained same at 4 in N-SIPI'17 and N-SIPI'18.

Strengths

Haryana's strengths lie in high per capita GSDP, low power shortage and Development expenditure. There has been a marked improvement from last year in terms of industry perception for business climate in the state.

Weaknesses

The state displays an inferior performance in labour force participation, low average wage and large number of contract workers.

LAND

|                                       | Score       | Rank      |
|---------------------------------------|-------------|-----------|
| <b>LAND - OVERALL</b>                 | <b>45.5</b> | <b>14</b> |
| Digitized land records                | 80.3        | 16        |
| Land related stalled projects         | 44.9        | 17        |
| Industrial parks in state             | 35.6        | 9         |
| Land available for industrial purpose | 17.7        | 11        |

LABOUR

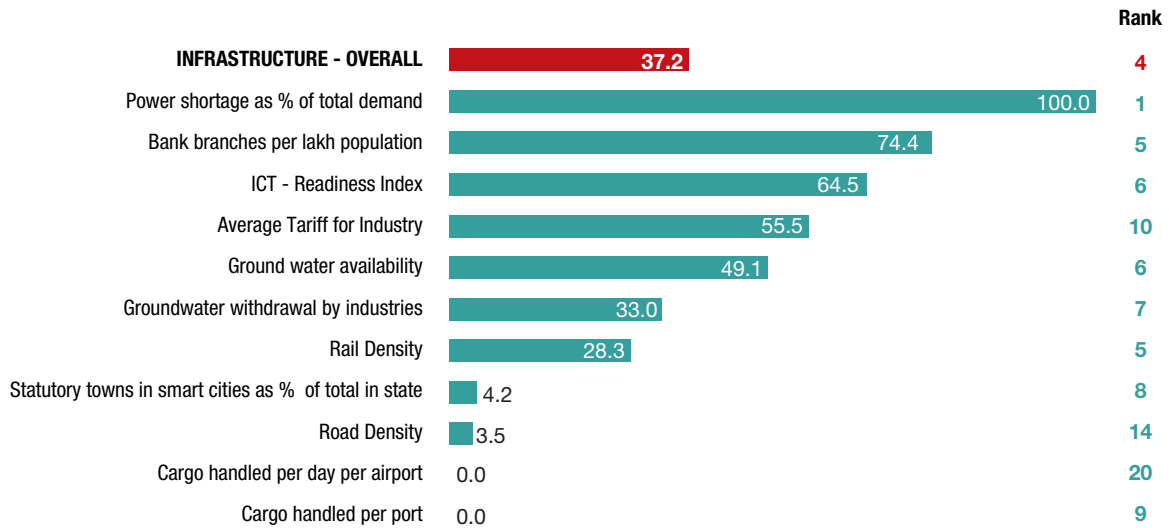
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>LABOUR - OVERALL</b>                                  | <b>47.7</b> | <b>14</b> |
| Least mandays lost due to strike                         | 88.8        | 9         |
| Average wages in manufacturing sector                    | 66.8        | 10        |
| Per cent 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                                 | 11.9        | 13        |
| Labour force participation rate                          | 7.3         | 19        |

SURVEY

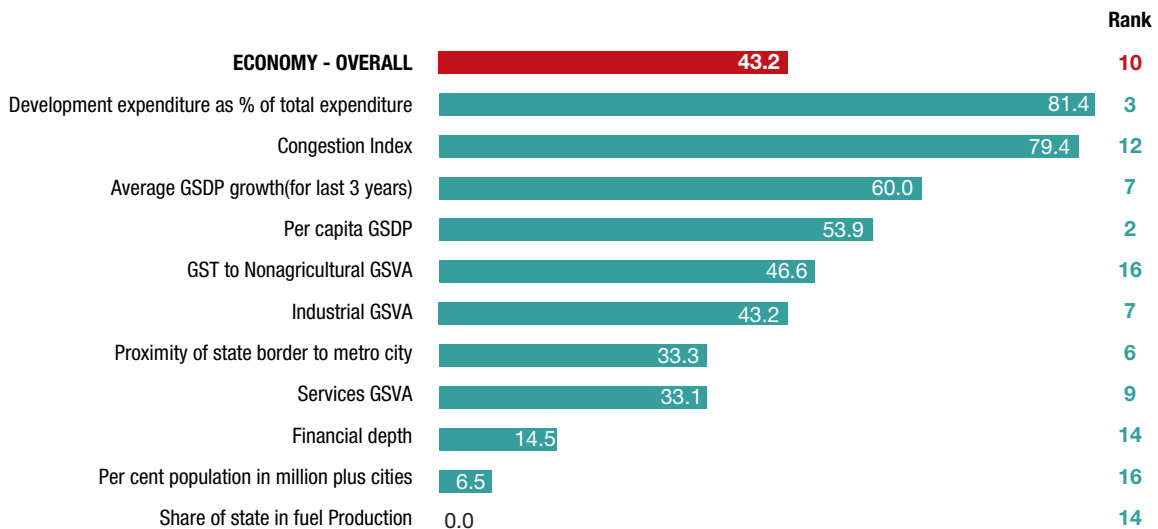
|  | Score       | Rank     |
|--|-------------|----------|
| <b>SURVEY - OVERALL</b>                          | <b>57.3</b> | <b>2</b> |
| Perception on land                               | 64.6        | 5        |
| Perception on infrastructure                     | 61.8        | 6        |
| Perception on labour                             | 59.7        | 2        |
| Perception on economic conditions                | 56.1        | 7        |
| Perception on business climate                   | 54.0        | 1        |
| Perception on governance and political stability | 47.8        | 3        |



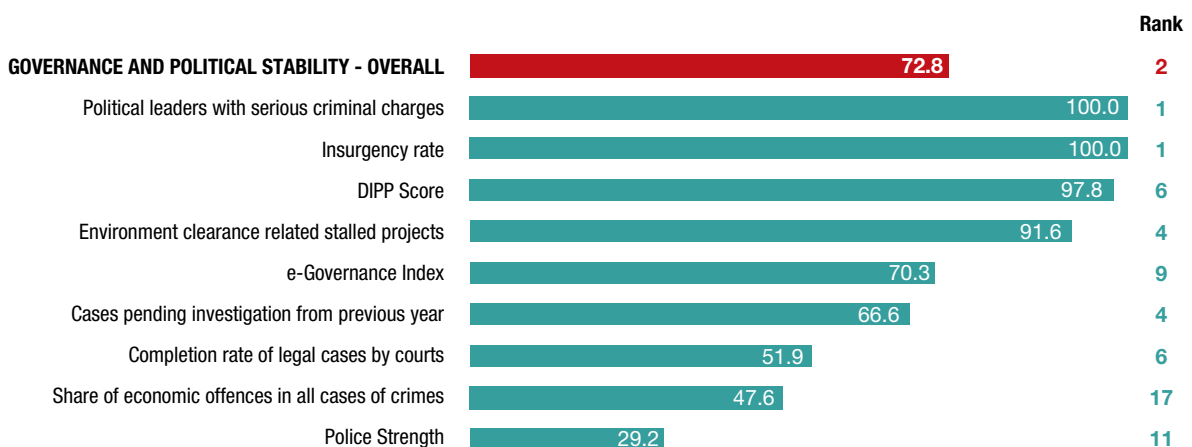
## INFRASTRUCTURE



## ECONOMY



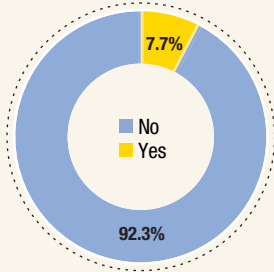
## GOVERNANCE AND POLITICAL STABILITY



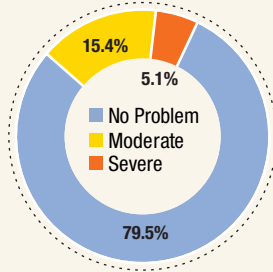
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

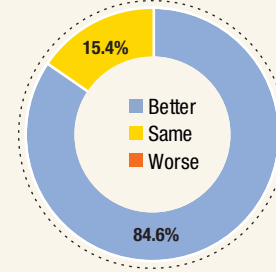


Percentage respondents facing problem in getting approvals for land



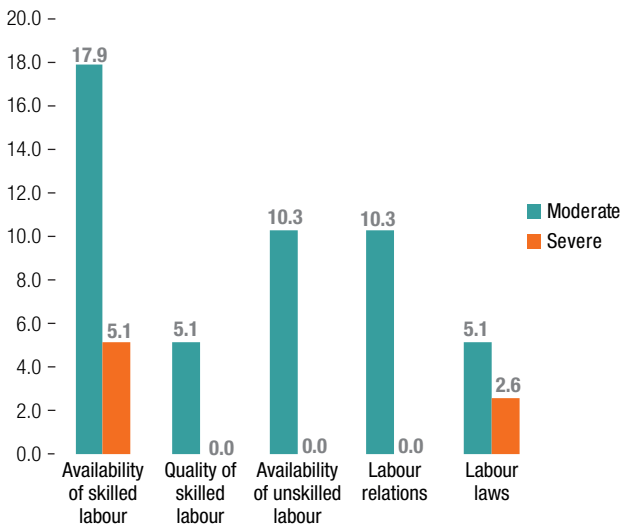
### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



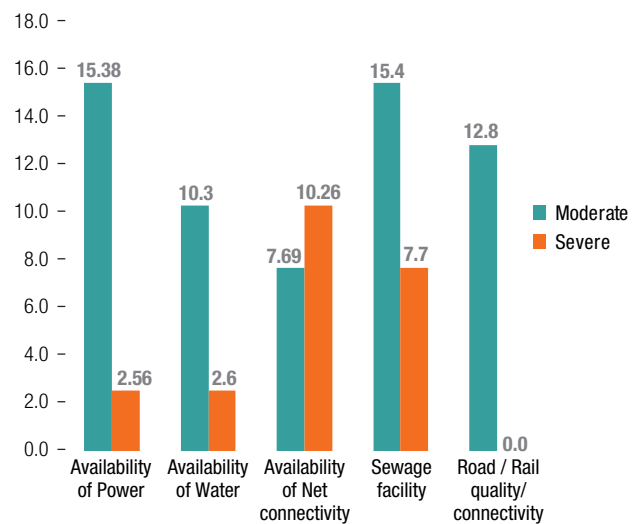
### Labour related issues

% respondents finding these a moderate or severe problem



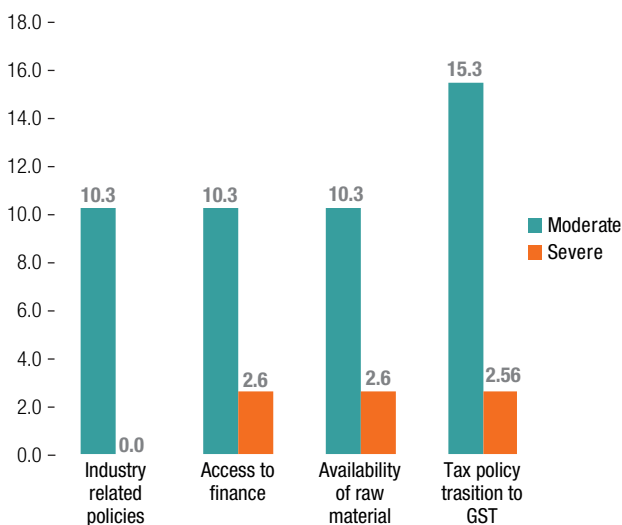
### Infrastructure related issues

% 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



## Statistics

|                    |                                    |
|--------------------|------------------------------------|
| Capital:           | Shimla                             |
| Area (Sp.km):      | 55673                              |
| Location:          | Northern India                     |
| Per capita Income: | Rs. 146073<br>for the year 2016-17 |
| Population:        | 6865000                            |
| Literacy Rates:    | 83.78 % for 2017                   |

## State Focus Sectors

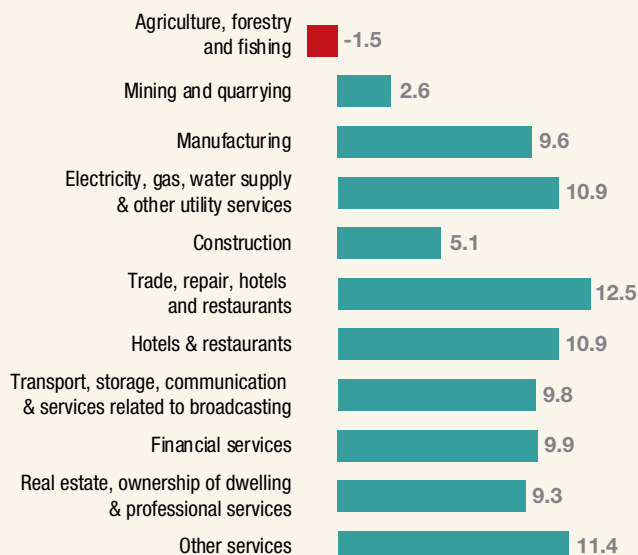
- Handlooms
- Handicrafts
- Sericulture Industry
- Agro/Horticulture/Animal Husbandry & Aqua-Produce based industry
- MSME
- Khadi, Textiles and garments industry
- Mineral based industry

**Source:** Industrial Policy, Government of Himachal Pradesh-2013-14.

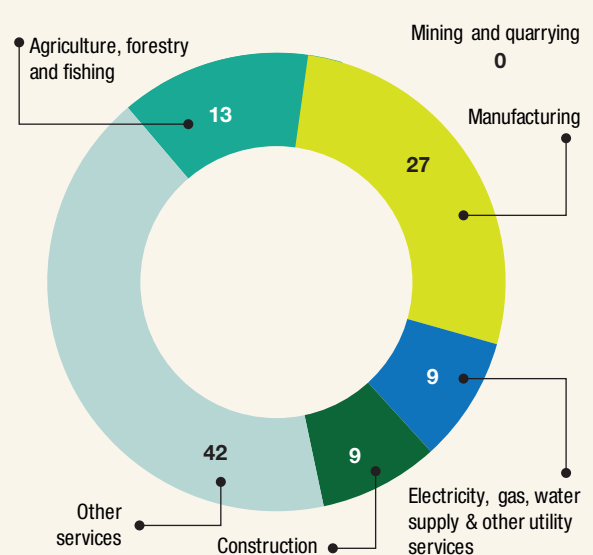
## Incentives

- 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 innovation.
- Streamlined and rationalised State taxes payment, location based tax incentives, timely tax refunds and resolution of the disputes.

## Growth in Gross Value Added, 3 years average ending, 2016-17



## Sector-wise contribution in Gross Value Added, 2016-17

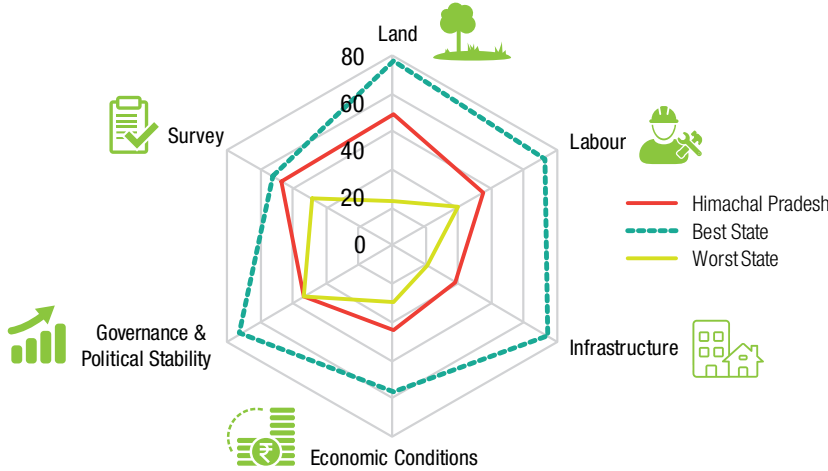


# HIMACHAL PRADESH

**RANK**

**16**

## States Performance on the Six Broad Pillars



Himachal Pradesh is one of top ten states in the N-SIPI perception survey and Land pillar, but lags behind in all the other pillars. Overall rank of the state has declined from 15 in N-SIPI'17 to 16 in N-SIPI'18.

### Strengths

The state has fared well in digitalization of land availability for industrial purpose. The state has a large population with secondary education and technical education.

### Weaknesses

The state ranks lowest for governance and political stability. The state also has the highest proportion of stalled projects due to lack of environmental clearance and low availability of ground water.

## LAND

|                                       | Score       | Rank     |
|---------------------------------------|-------------|----------|
| <b>LAND - OVERALL</b>                 | <b>55.5</b> | <b>9</b> |
| Digitized land records                | 100.0       | 1        |
| Land available for industrial purpose | 100.0       | 1        |
| Land related stalled projects         | 21.9        | 20       |
| Industrial parks in state             | 0.0         | 17       |

## LABOUR

|  | Score       | Rank      |
|--|-------------|-----------|
| <b>LABOUR - OVERALL</b>                                  | <b>43.9</b> | <b>18</b> |
| Least mandays lost due to strike                         | 100.0       | 1         |
| Per cent 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                                 | 11.4        | 14        |
| Share of contract workers in total labour force          | 0.0         | 21        |

## SURVEY

|  | Score       | Rank     |
|--|-------------|----------|
| <b>SURVEY - OVERALL</b>                          | <b>53.9</b> | <b>9</b> |
| Perception on land                               | 60.8        | 12       |
| Perception on infrastructure                     | 60.0        | 11       |
| Perception on economic conditions                | 59.6        | 3        |
| Perception on governance and political stability | 49.1        | 1        |
| Perception on business climate                   | 48.0        | 11       |
| Perception on labour                             | 45.7        | 15       |



## INFRASTRUCTURE

|  |             | Rank      |
|--|-------------|-----------|
| <b>INFRASTRUCTURE - OVERALL</b>                        | <b>30.5</b> | <b>11</b> |
| Average Tariff for Industry                            | 95.2        | 2         |
| Bank branches per lakh population                      | 95.0        | 2         |
| Power shortage as % of total demand                    | 83.3        | 15        |
| ICT - Readiness Index                                  | 26.9        | 16        |
| Road Density   | 2.6         | 16        |
| Statutory towns in smart cities as % of total in state | 2.0         | 16        |
| Rail Density   | 0.0         | 21        |
| Cargo handled per day per airport                      | 0.0         | 20        |
| Cargo handled per port                                 | 0.0         | 9         |
| Ground water availability                              | 0.0         | 21        |
| Groundwater withdrawal by industries                   | 0.0         | 17        |



## ECONOMY

|   |             | Rank      |
|---|-------------|-----------|
| <b>ECONOMY - OVERALL</b>                          | <b>35.9</b> | <b>16</b> |
| Congestion Index                                  | 90.5        | 6         |
| Industrial GSVA                                   | 78.0        | 3         |
| Average GSDP growth(for last 3 years)             | 66.7        | 6         |
| Per capita GSDP                                   | 48.6        | 6         |
| Development expenditure as % of total expenditure | 46.9        | 17        |
| GST to Nonagricultural GSVA                       | 16.7        | 20        |
| Services GSVA                                     | 11.7        | 18        |
| Financial depth                                   | 0.1         | 14        |
| Per cent population in million plus cities        | 0.0         | 18        |
| Proximity of state border to metro city           | 0.0         | 14        |
| Share of state in fuel Production                 | 0.0         | 14        |



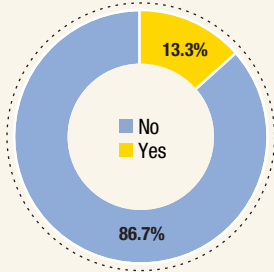
## GOVERNANCE AND POLITICAL STABILITY

|   |             | Rank      |
|---|-------------|-----------|
| <b>GOVERNANCE AND POLITICAL STABILITY - OVERALL</b> | <b>43.2</b> | <b>21</b> |
| Insurgency rate                                     | 100.0       | 1         |
| Share of economic offences in all cases of crimes   | 87.8        | 5         |
| Political leaders with serious criminal charges     | 60.7        | 11        |
| DIPP Score  | 60.6        | 17        |
| Police Strength                                     | 48.8        | 4         |
| Cases pending investigation from previous year      | 13.9        | 19        |
| Completion rate of legal cases by courts            | 11.6        | 17        |
| e-Governance Index                                  | 5.6         | 20        |
| Environment clearance related stalled projects      | 0.0         | 21        |

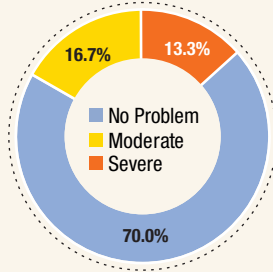
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

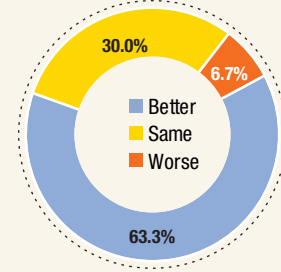


Percentage respondents facing problem in getting approvals for land



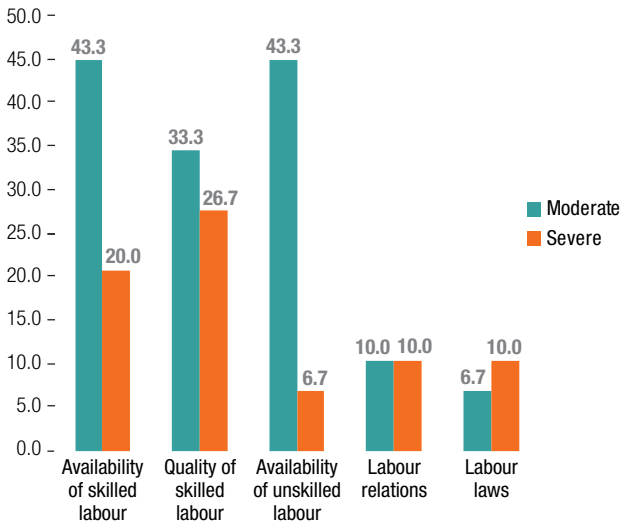
### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



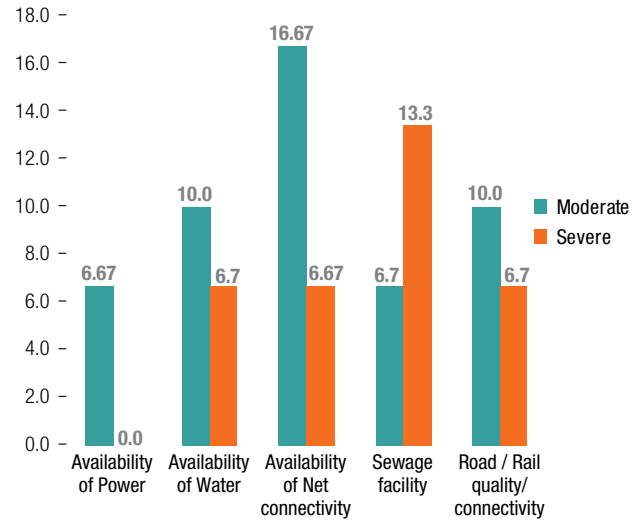
### Labour related issues

% respondents finding these a moderate or severe problem



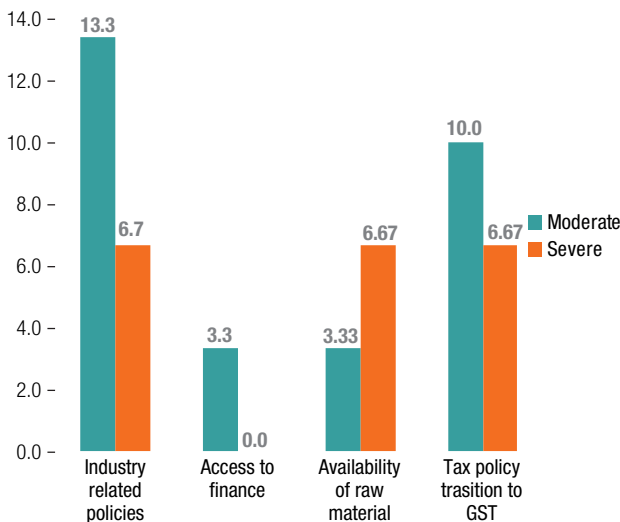
### Infrastructure related issues

% respondents finding these a moderate or severe problem



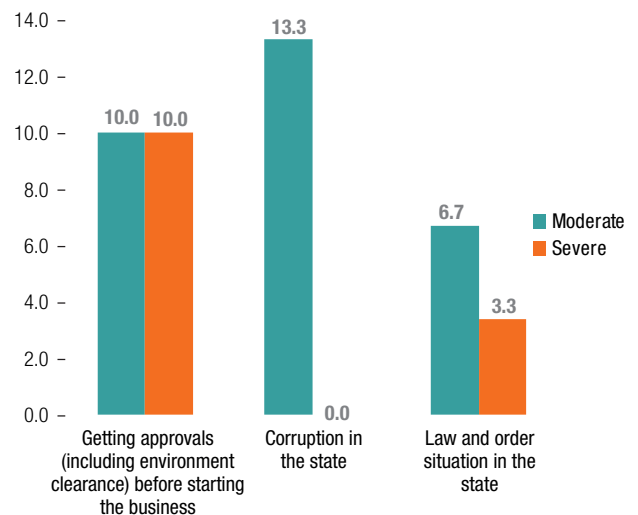
### Economy related issues

% respondents finding these a moderate or severe problem



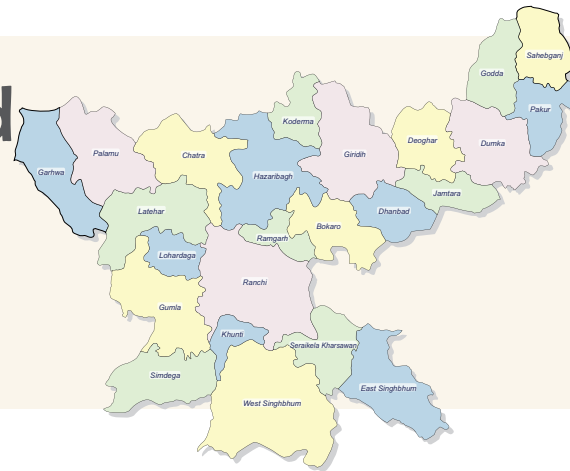
### Governance related issues

% respondents finding these a moderate or severe problem





# Jharkhand



## Statistics

|                          |   |
|--------------------------|---|
| Capital:                 | Ranchi  |
| Area (sq.km):            | 79,716  |
| Location:                | Eastern India                                   |
| Population:              | 329 88134 (2011 census)                         |
| Per Capita Income:       | (Rs.) 62,816<br>(Economic Survey 2016-17)       |
| Total Literacy Rate (%): | 70.3<br>for year 2014 (Economic Survey 2016-17) |

## State Focus Sectors

- Automobile and Auto Components industry
- Energy Infrastructure
- Electronic system and Design & manufacturing
- Food and Feed processing industry
- Mines and Minerals based Industry
- Textile Sector
- Tourism

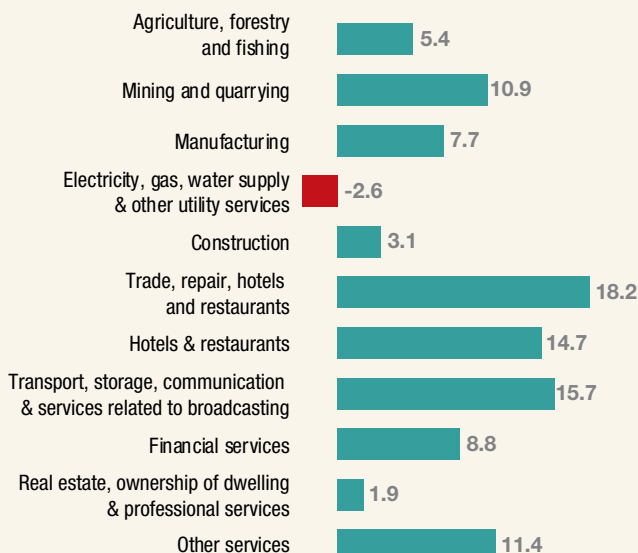
**Source:** Department of Industry, Government of Jharkhand.

## Incentives

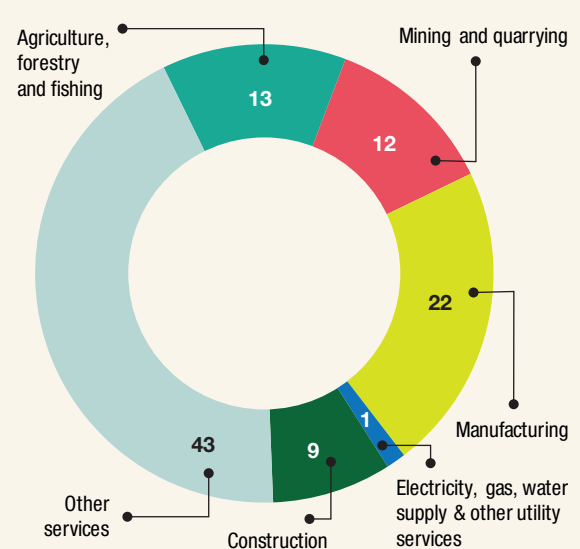
- Single window clearance mechanism for Ease of Doing Business.
- New MSME units will be given incentive of 80% NET VAT payable p.a. for five years from the date of Production with a ceiling of maximum 100% of total fixed capital investment made.
- New large projects, there shall be exemption of 75% of NET VAT p.a. for seven years from the date of production with a ceiling of maximum 100% of total fixed capital investment made.
- Industry unit will enjoy 100% exemption/reimbursement of stamp duty and registration fee for land directly purchased from the raiyats.
- 50% reimbursement of stamp duty and registration fee for manufacturing units with direct employment of 100 persons and of expenditure incurred on patent registration.

**Source:** Jharkhand Industrial policy-2016.

## Growth in Gross Value Added, 3 years average ending, 2016-17



## Sector-wise contribution in Gross value added, 2016-17

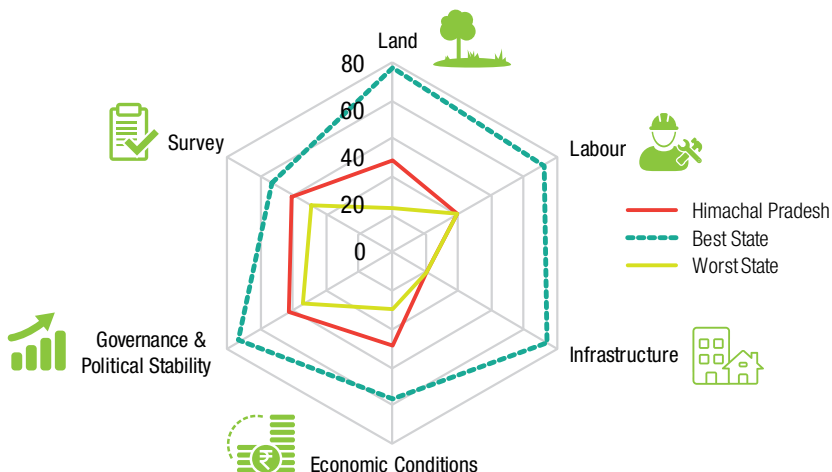


# JHARKHAND

**RANK**

**20**

## States Performance on the Six Broad Pillars



Jharkhand has witnessed a decrease in overall ranking from 18 in N-SIPI'17 to 20 in N-SIPI'18, it falls behind in infrastructure and labour pillars.

### Strengths

Jharkhand is one of the top three states for computerized SROs of land, fuel production, financial depth and resolution of pending cases. The state also ranks at 4 for development expenditure as a % of total expenditure.

### Weaknesses

The state has major limitations in infrastructure especially with respect to ICT readiness and instability in governance due to high rate of insurgency.

## LAND

|                                       | Score       | Rank      |
|---------------------------------------|-------------|-----------|
| <b>LAND - OVERALL</b>                 | <b>38.4</b> | <b>15</b> |
| Digitized land records                | 100.0       | 1         |
| Land related stalled projects         | 46.8        | 18        |
| Land available for industrial purpose | 4.9         | 16        |
| Industrial parks in state             | 1.7         | 15        |

## LABOUR

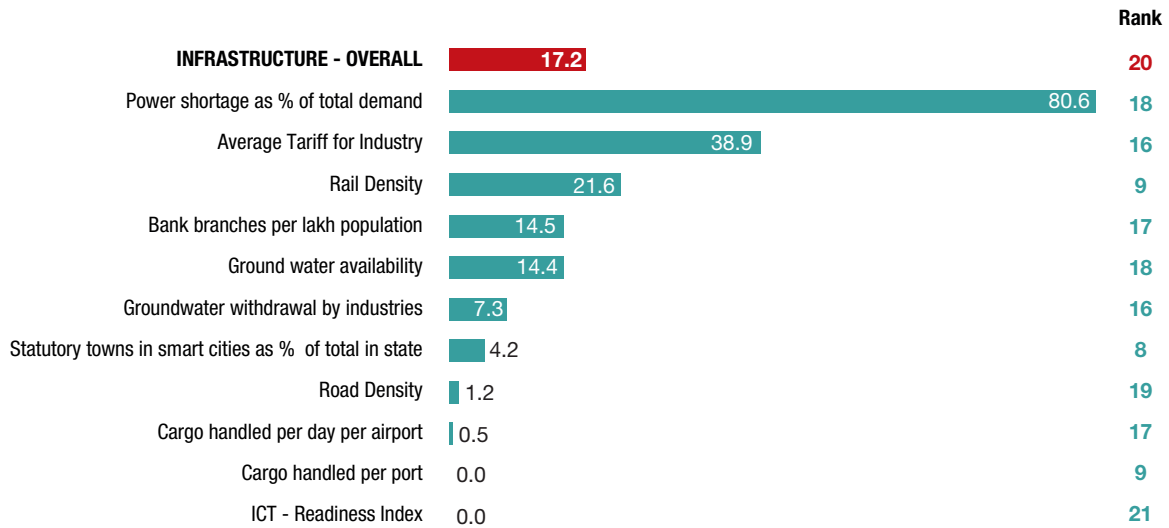
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>LABOUR - OVERALL</b>                                  | <b>31.7</b> | <b>21</b> |
| Least mandays lost due to strike                         | 89.6        | 7         |
| Average wages of salaried persons                        | 56.9        | 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                                 | 10.6        | 15        |
| Share of labour force with secondary education and above | 7.3         | 19        |
| Percent of workforce having technical education          | 4.3         | 19        |
| Average wages in manufacturing sector                    | 0.0         | 21        |

## SURVEY

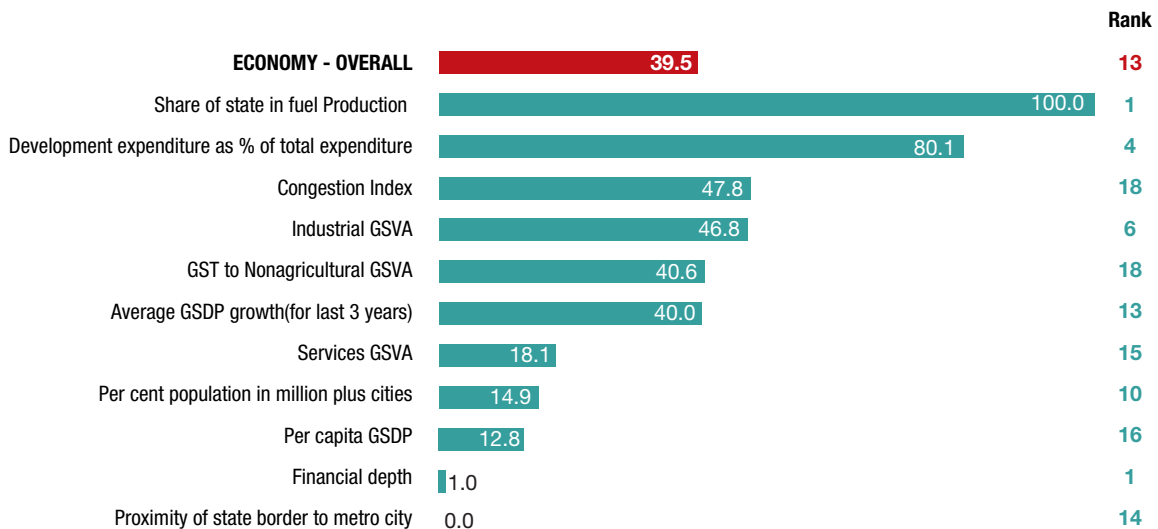
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>SURVEY - OVERALL</b>                          | <b>47.6</b> | <b>15</b> |
| Perception on land                               | 54.1        | 18        |
| Perception on economic conditions                | 54.0        | 9         |
| Perception on infrastructure                     | 51.6        | 15        |
| Perception on business climate                   | 49.7        | 5         |
| Perception on labour                             | 43.7        | 16        |
| Perception on governance and political stability | 32.8        | 19        |



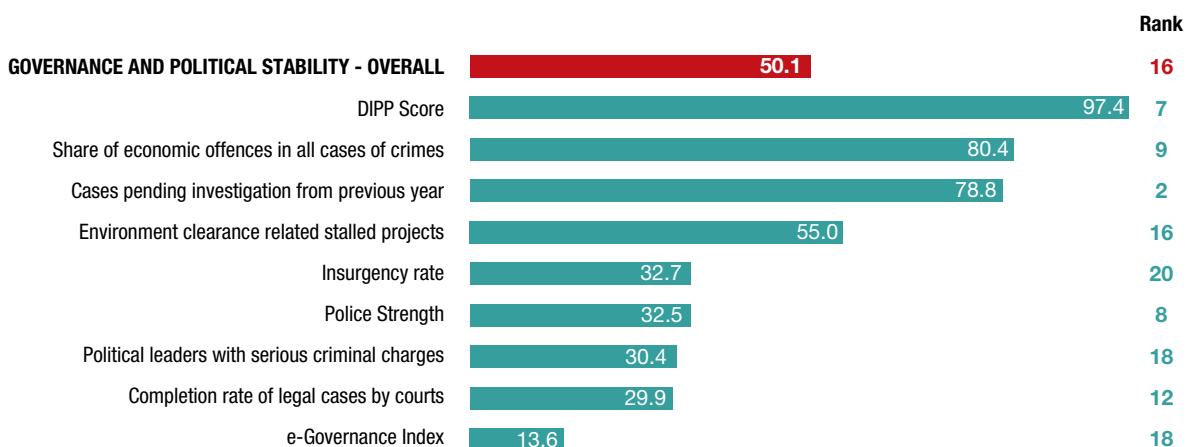
## INFRASTRUCTURE



## ECONOMY



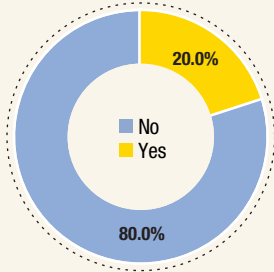
## GOVERNANCE AND POLITICAL STABILITY



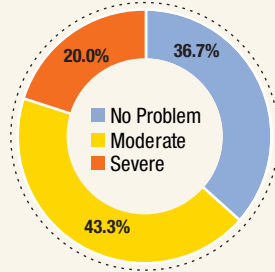
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

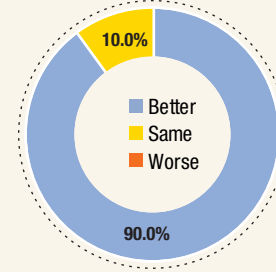


Percentage respondents facing problem in getting approvals for land



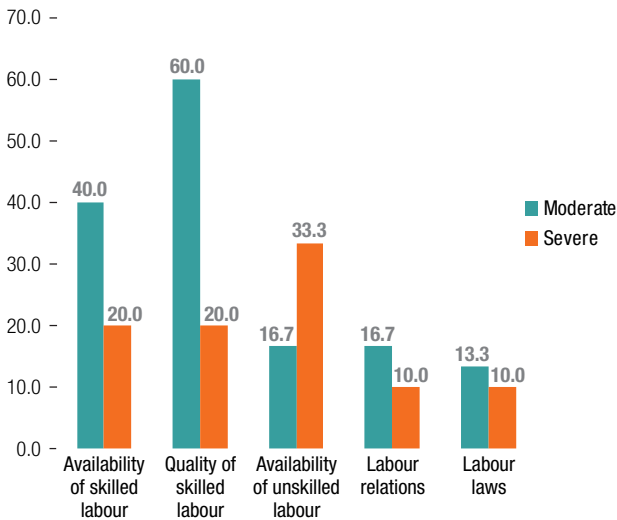
### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



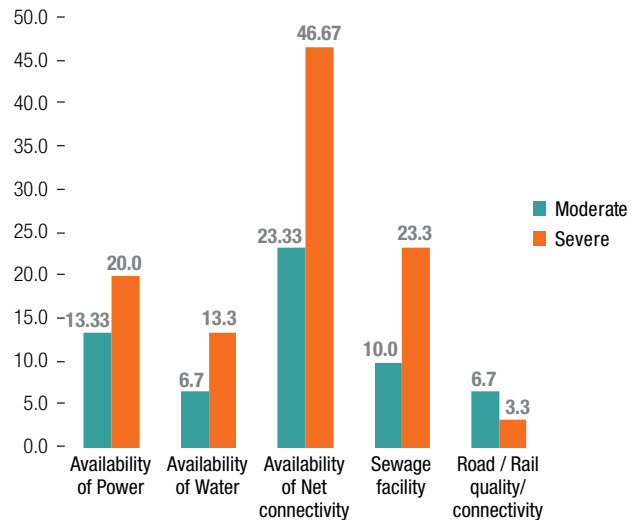
### Labour related issues

% respondents finding these a moderate or severe problem



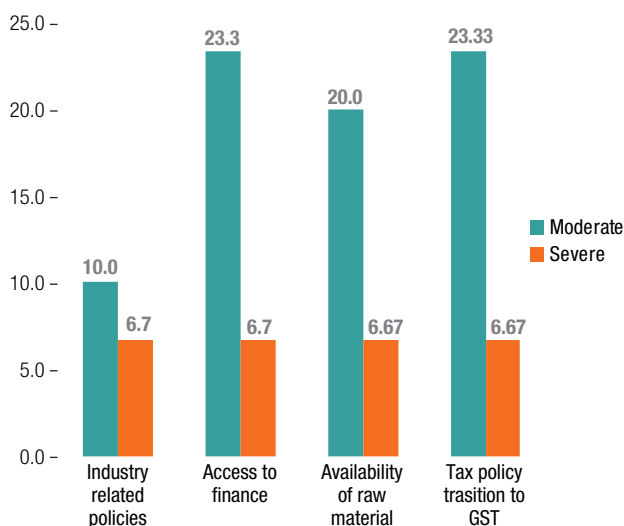
### Infrastructure related issues

% respondents finding these a moderate or severe problem



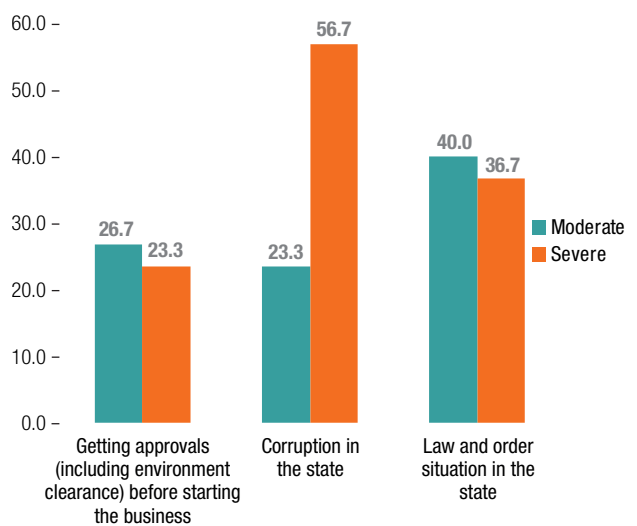
### Economy related issues

% respondents finding these a moderate or severe problem

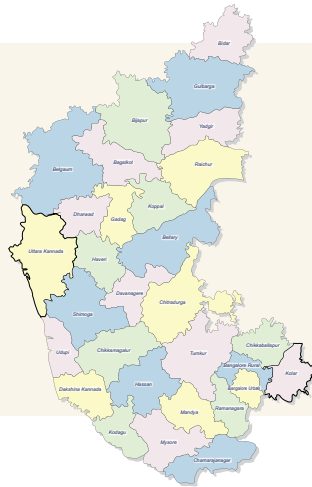


### Governance related issues

% respondents finding these a moderate or severe problem



# Karnataka



## Statistics

|                        |                             |
|------------------------|-----------------------------|
| Capital:               | Bengaluru                   |
| Area (Sp.km):          | 191791                      |
| Location:              | Southern India              |
| Per capita Income: Rs. | 174551 for the year 2017-18 |
| Population:            | 61095000                    |
| Literacy Rates:        | 75.6 % for 2017             |

## State Focus Sectors

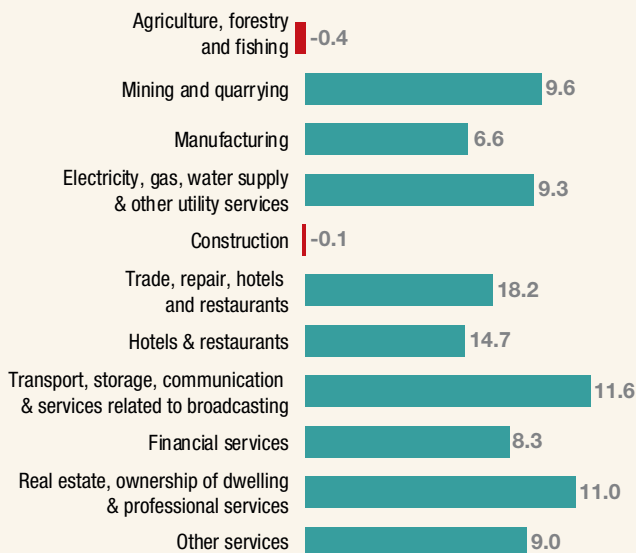
- IT and IT enabled service
- Agro and food processing
- Biotechnology
- Aerospace Industry
- Electronics and Telecom
- Manufacturing
- Energy
- Drugs and Pharmaceuticals
- Automotive and Auto components
- Tourism sector
- Textiles sector

Source: Directorate of Industries and Commerce.

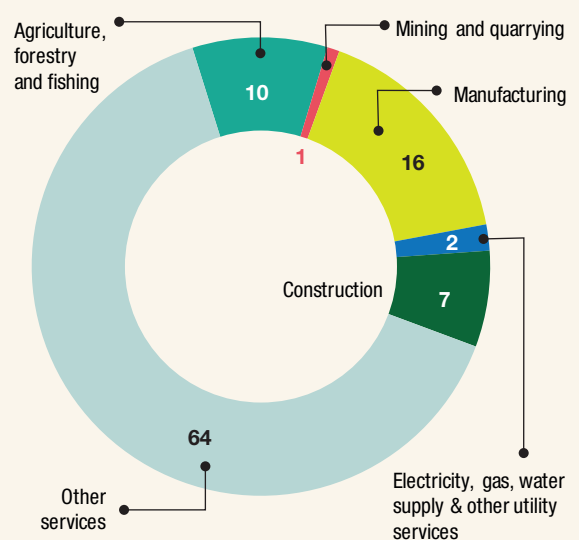
## Incentives

- 100% exemption from entry tax, electricity tariff for ultra-mega and super-mega enterprises.
- Single Window clearing mechanism will be made more effective in improving ease of doing business.
- Interest free loan and investment subsidies
- Concessional registration charges
- Reimbursement of land conversion fee
- 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.

## Growth in Gross Value Added, 3 year average ending, 2016-17



## Sector-wise contribution in Gross Value Added, 2016-17

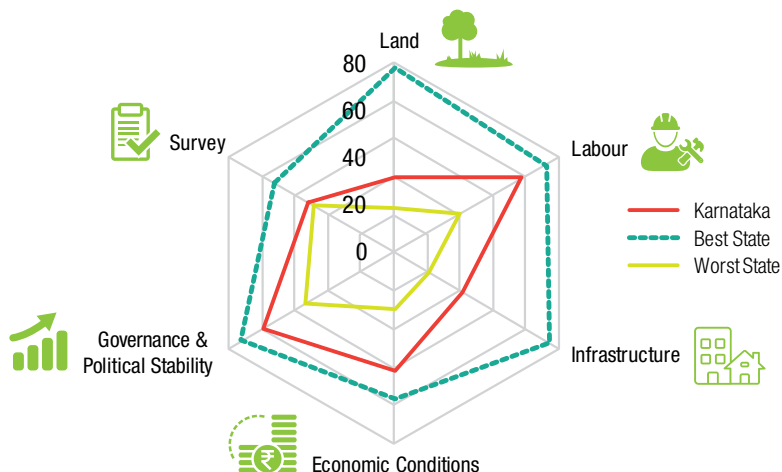


KARNATAKA

RANK

9

States Performance on the Six Broad Pillars



Karnataka is one of the top three states for the labour pillar but lags behind in the perception survey and land. Overall rank of Karnataka is same at 9 for N-SIPI'17 as well as N-SIPI'18.

Strengths

Karnataka is one of the top performing states for e-governance, seating capacities of ITIs, congestion index, low insurgency rates and perception on business climate.

Weaknesses

The state ranks lowest in the perception on economic conditions and perceptions of governance and political stability followed by perception on land and labour, according to the N-SIPI industrial survey.

LAND

|                                       | Score       | Rank      |
|---------------------------------------|-------------|-----------|
| <b>LAND - OVERALL</b>                 | <b>31.1</b> | <b>16</b> |
| Land related stalled projects         | 60.5        | 11        |
| Industrial parks in state             | 42.4        | 6         |
| Land available for industrial purpose | 21.4        | 8         |
| Digitized land records                | 0.0         | 21        |

LABOUR

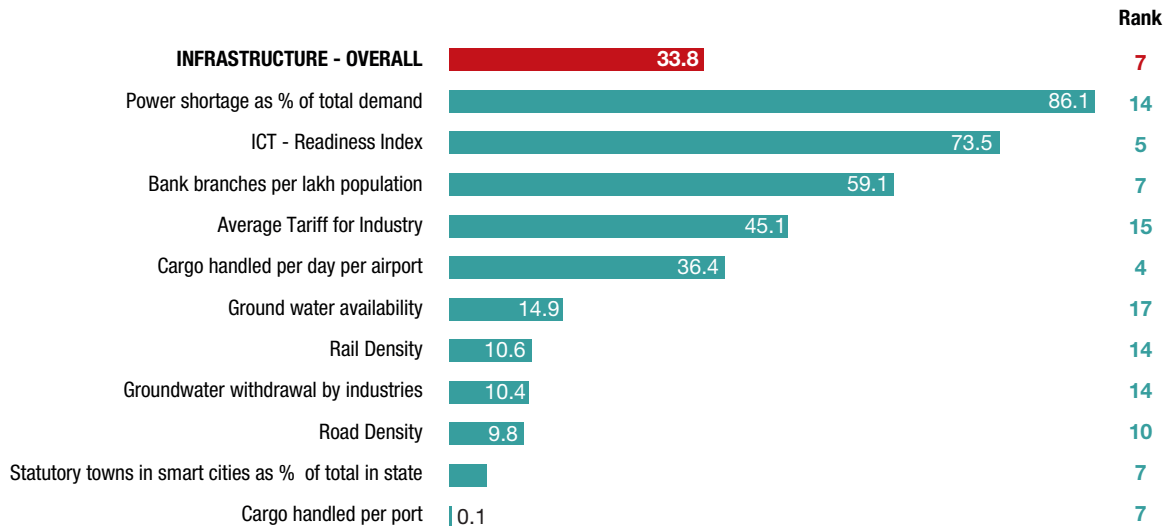
|  | Score       | Rank     |
|--|-------------|----------|
| <b>LABOUR - OVERALL</b>                                  | <b>60.2</b> | <b>3</b> |
| Share of contract workers in total labour force          | 92.9        | 6        |
| Seating capacity of ITIs                                 | 78.5        | 3        |
| Average wages of salaried persons                        | 69.0        | 11       |
| 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

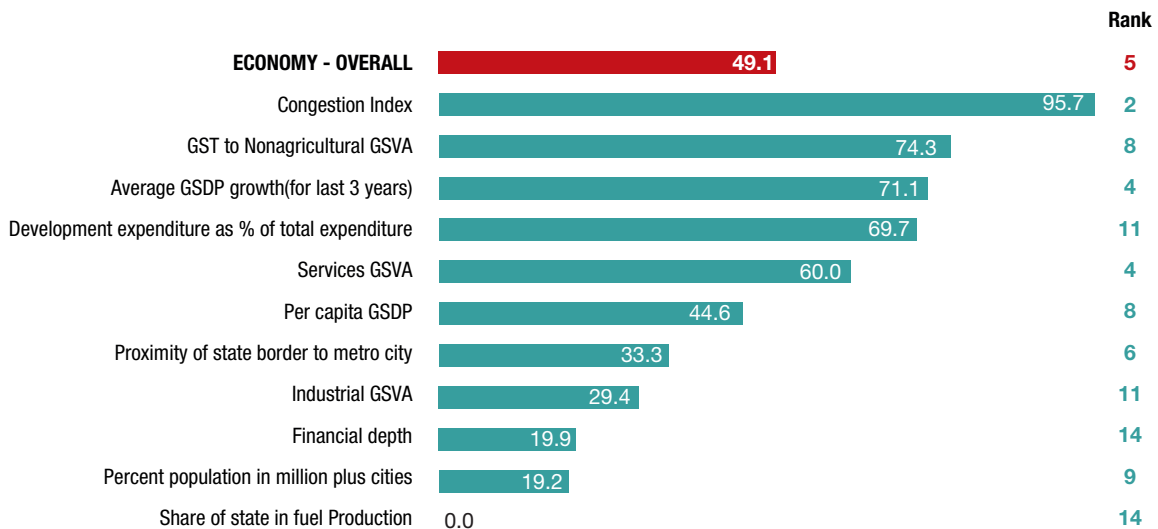
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>SURVEY - OVERALL</b>                          | <b>41.9</b> | <b>19</b> |
| Perception on business climate                   | 53.2        | 2         |
| Perception on land                               | 46.1        | 20        |
| Perception on infrastructure                     | 45.9        | 18        |
| Perception on labour                             | 39.4        | 19        |
| Perception on economic conditions                | 35.3        | 21        |
| Perception on governance and political stability | 31.7        | 21        |



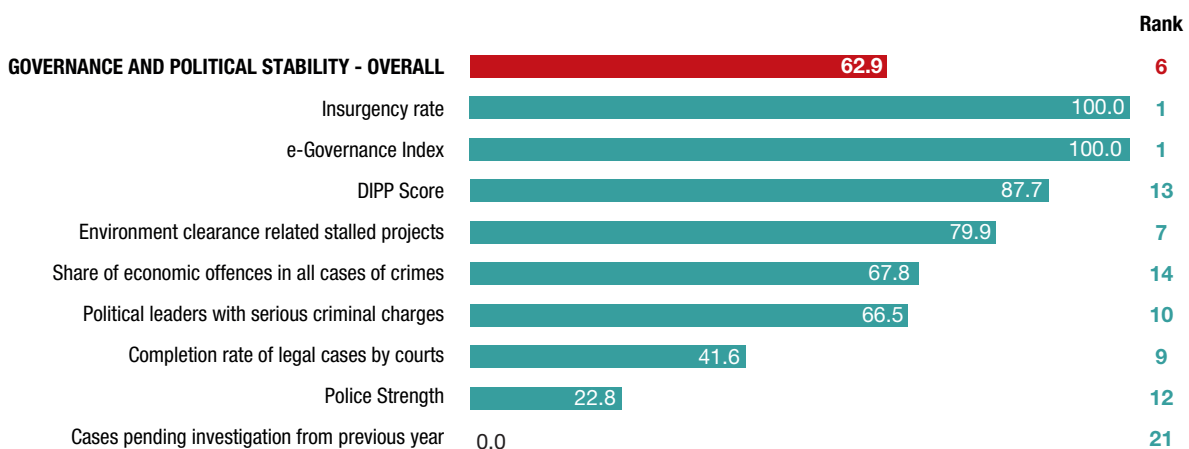
## INFRASTRUCTURE



## ECONOMY



## GOVERNANCE AND POLITICAL STABILITY

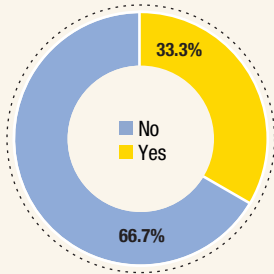




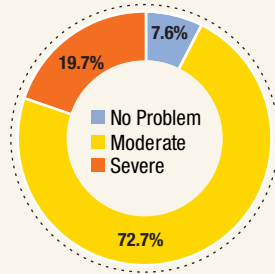
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

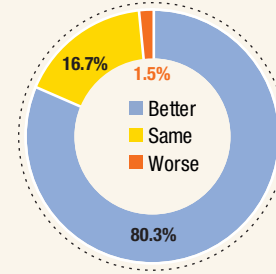


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



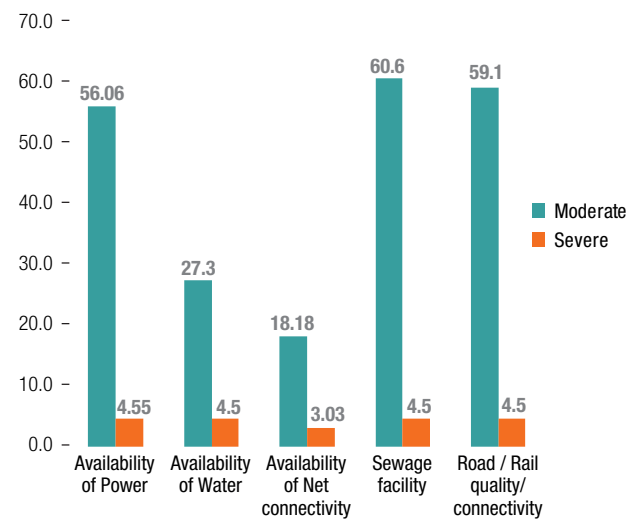
### Labour related issues

% respondents finding these a moderate or severe problem



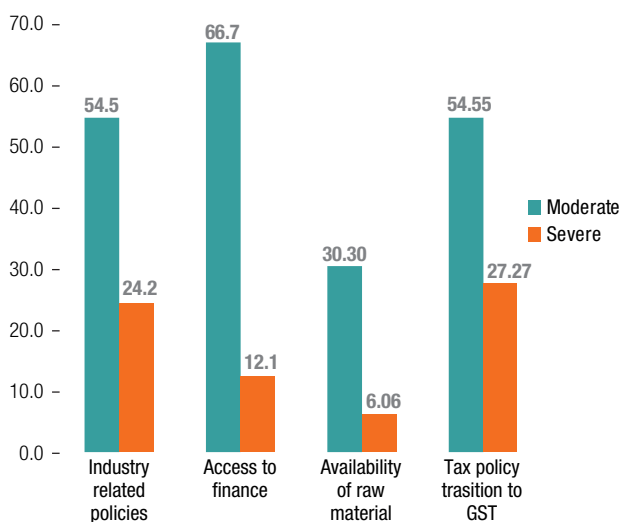
### Infrastructure related issues

% respondents finding these a moderate or severe problem



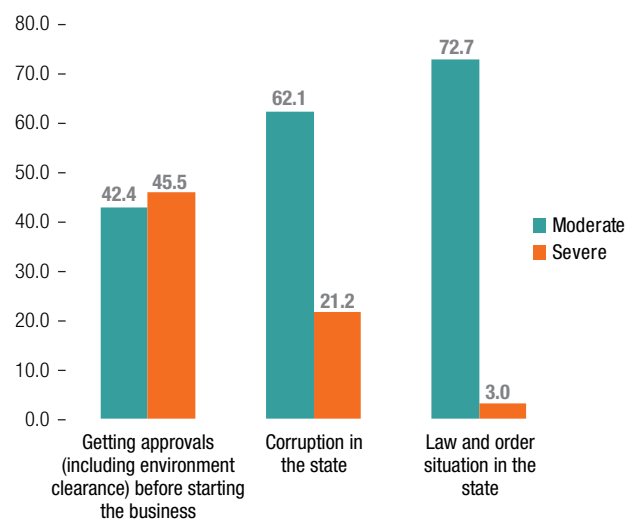
### Economy related issues

% respondents finding these a moderate or severe problem

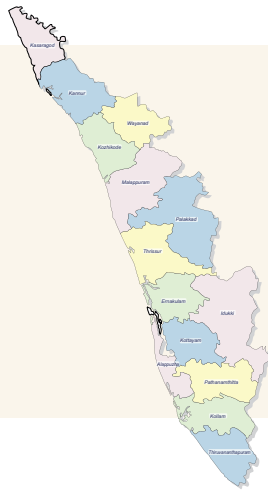


### Governance related issues

% respondents finding these a moderate or severe problem



# Kerala



## Statistics

|                          |   |
|--------------------------|---|
| Capital:                 | Thiruvananthapuram                        |
| Area (sq.km):            | 38852                                     |
| Location:                | Southern India                            |
| Population:              | 33406061 (2011 census)                    |
| Per Capita Income:       | (Rs.) 140107<br>(Economic Review 2016-17) |
| Total Literacy Rate (%): | 93.91 for 2017                            |

## State Focus Sectors

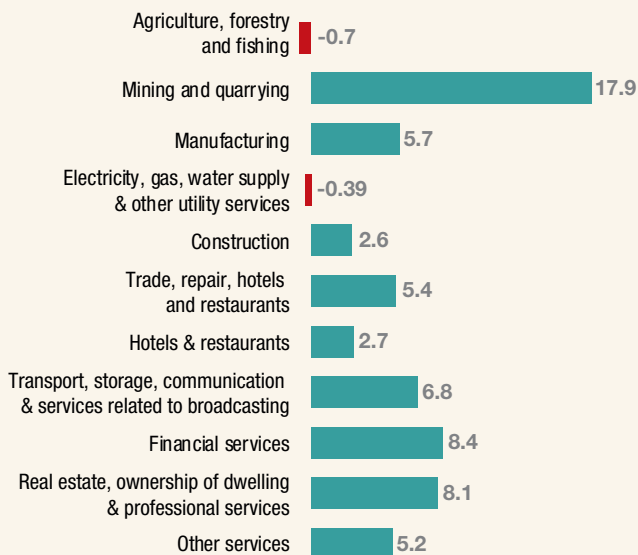
- Food Processing
- Biotechnology and Nanotechnology
- Furniture Sector
- Garments
- Rubber based industry
- Ayurveda medicines
- Marine products
- Light Engineering

## Incentives

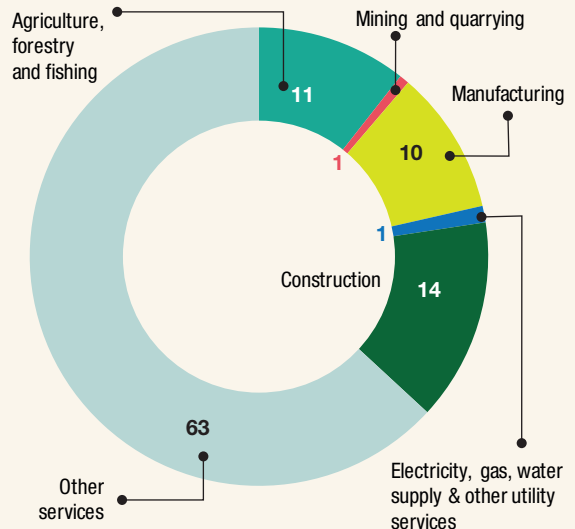
- Common infrastructure like common Effluent Treatment Plants for relocating relatively polluting Industries in the industrial clusters and up to 25% of capital investment in Effluent Treatment Plants
- Proposed 'Green Financial Scheme 'with a cost of Rs. 100 Crore to attract and channelize substantive investment 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-2015-16

Source: Kerala Industrial & Commercial Policy Amended-2015.

## Growth in Gross Value Added, 3 years average ending, 2016-17



## Sector wise Contribution of GVA for the year 2016-17 of Kerala

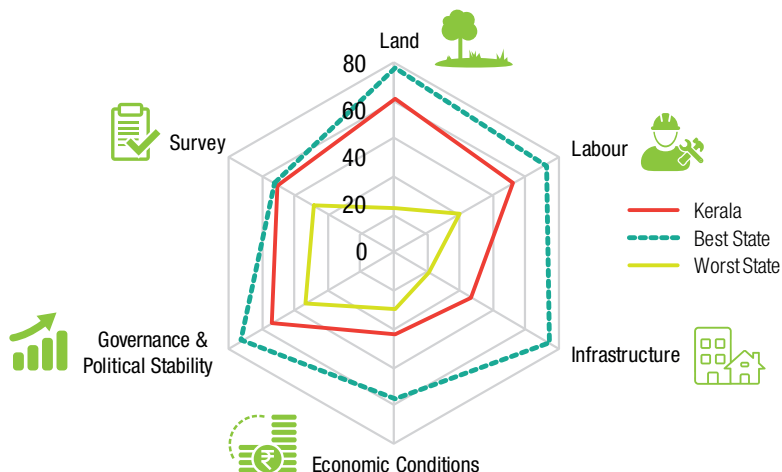


KERALA

RANK

6

States Performance on the Six Broad Pillars



Kerala's overall rank improved from 7 in N-SIPI'17 to 6 in N-SIPI'18. Kerala is one of the top five states for the pillar of land, labour, infrastructure and N-SIPI survey but lags behind on economic conditions, governance and political stability.

Strengths

Kerala is the top most state in terms of the digitalization of land records, percentage of workforce having technical training, congestion and low insurgency.

Weaknesses

The state has the lowest development expenditure and average GSDP growth. The state also ranks low on least mandays lost due to strike and DIPP score.

LAND

|                                       | Score       | Rank     |
|---------------------------------------|-------------|----------|
| <b>LAND - OVERALL</b>                 | <b>64.2</b> | <b>4</b> |
| Digitized land records                | 100.0       | 1        |
| Industrial parks in state             | 93.2        | 2        |
| Land related stalled projects         | 59.7        | 12       |
| Land available for industrial purpose | 3.7         | 17       |

LABOUR

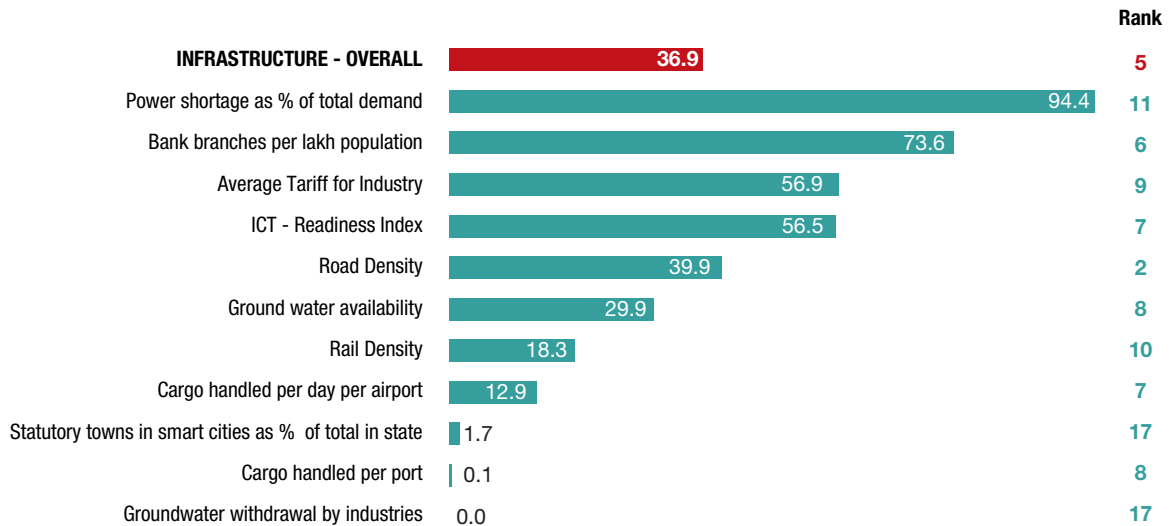
|  | Score       | Rank     |
|--|-------------|----------|
| <b>LABOUR - OVERALL</b>                                  | <b>58.5</b> | <b>5</b> |
| Percent of workforce having technical education          | 100.0       | 1        |
| Share of contract workers in total labour force          | 84.8        | 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                                 | 28.2        | 11       |
| Least mandays lost due to strike                         | 27.0        | 20       |

SURVEY

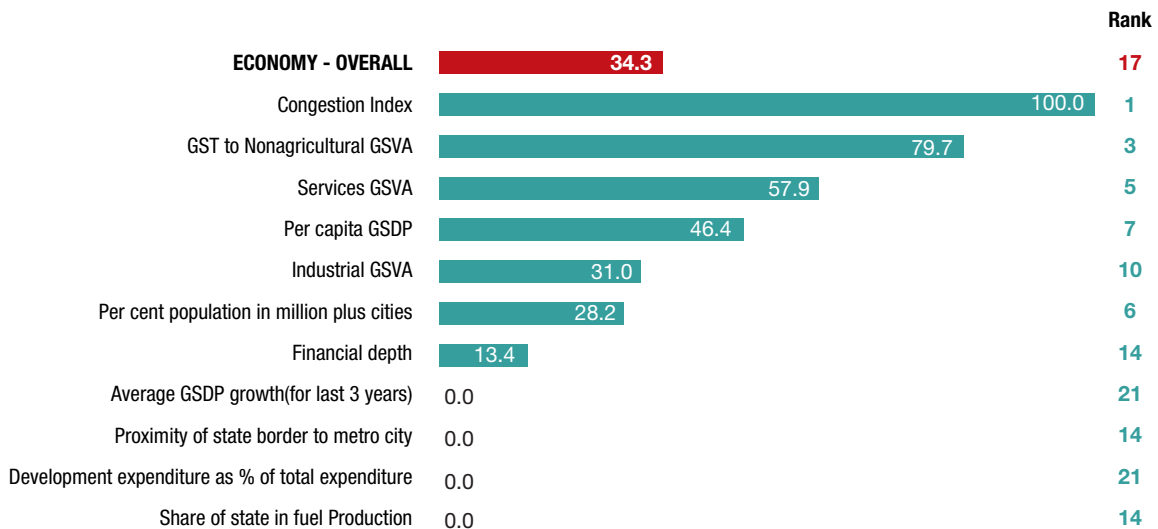
|  | Score       | Rank     |
|--|-------------|----------|
| <b>SURVEY - OVERALL</b>                          | <b>56.4</b> | <b>4</b> |
| Perception on land                               | 66.2        | 4        |
| Perception on infrastructure                     | 65.1        | 3        |
| Perception on economic conditions                | 59.3        | 4        |
| Perception on labour                             | 53.3        | 9        |
| Perception on business climate                   | 48.8        | 8        |
| Perception on governance and political stability | 46.0        | 5        |



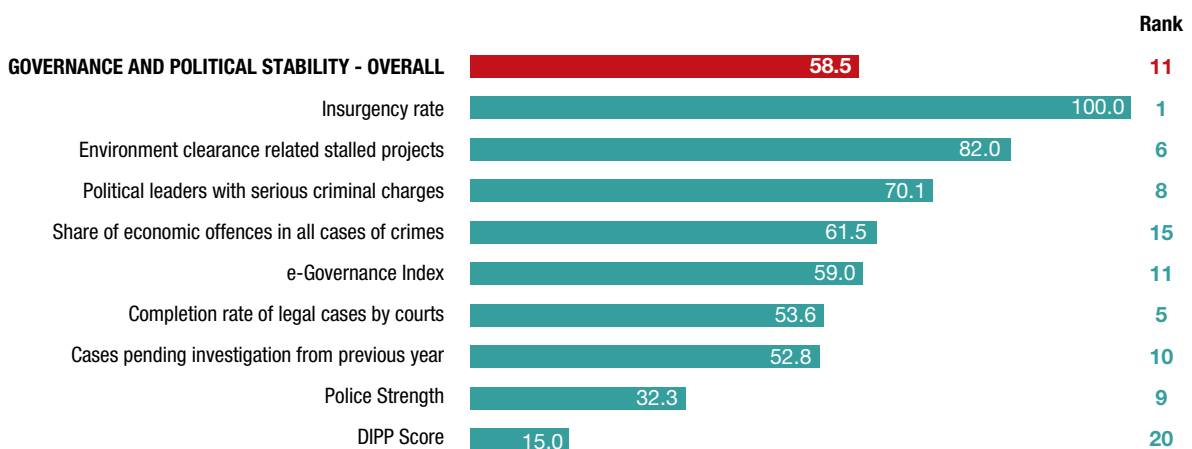
## INFRASTRUCTURE



## ECONOMY



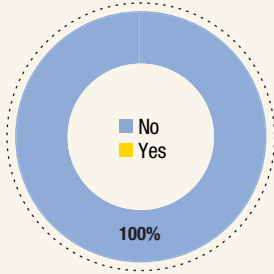
## GOVERNANCE AND POLITICAL STABILITY



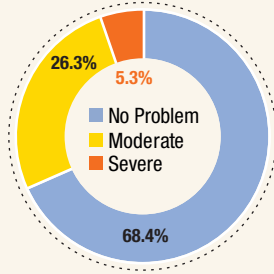
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

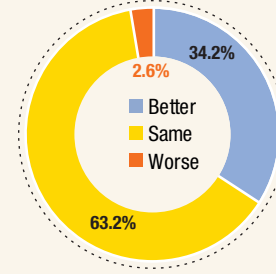


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



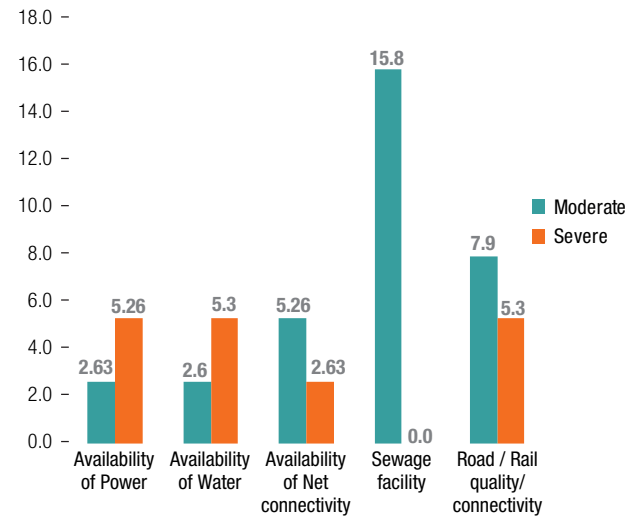
### Labour related issues

% respondents finding these a moderate or severe problem



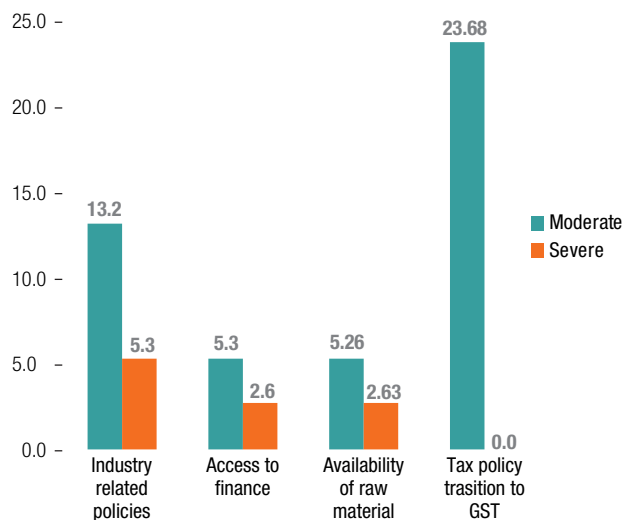
### Infrastructure related issues

% respondents finding these a moderate or severe problem



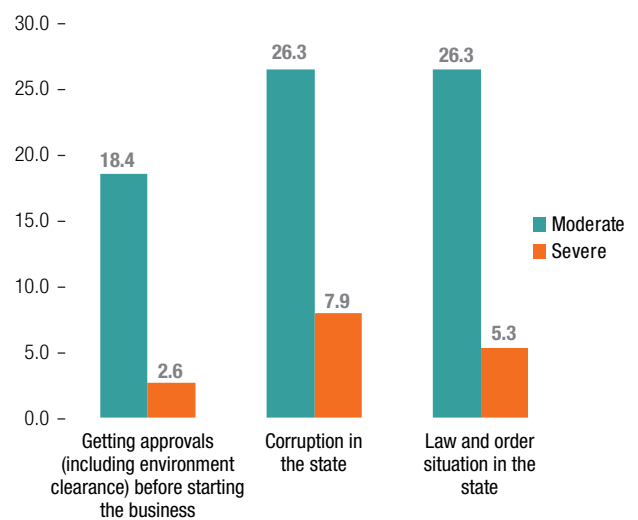
### Economy related issues

% respondents finding these a moderate or severe problem

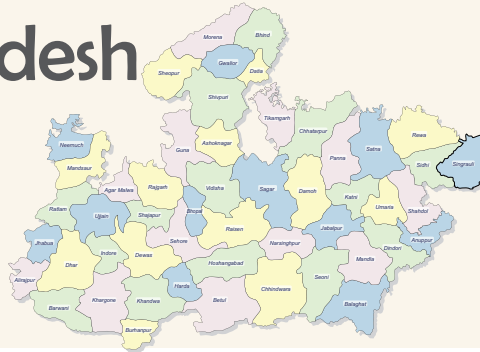


### Governance related issues

% respondents finding these a moderate or severe problem



# Madhya Pradesh



## Statistics

|                        |                   |
|------------------------|-------------------|
| Capital:               | Bhopal            |
| Area (Sp.km):          | 308252            |
| Location:              | Central India     |
| Per capita Income: Rs. | 79907 for 2017-18 |
| Population:            | 72597565          |
| Literacy Rates:        | 70.63% for 2017   |

## State Focus Sectors

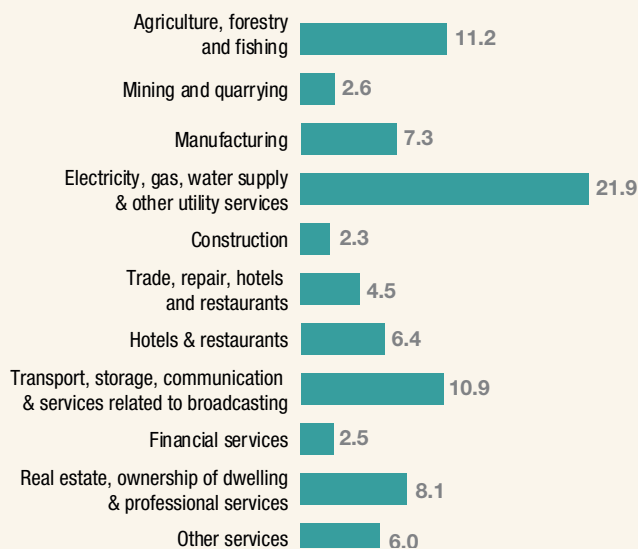
- Agribusiness and Food processing
- Automobile and Engineering
- Defence
- IT/ITes& ESDM
- Renewable Energy
- Pharmaceutical
- Textiles
- Tourism
- Urban Development

**Source:** Department of Industry, Government of Madhya Pradesh.

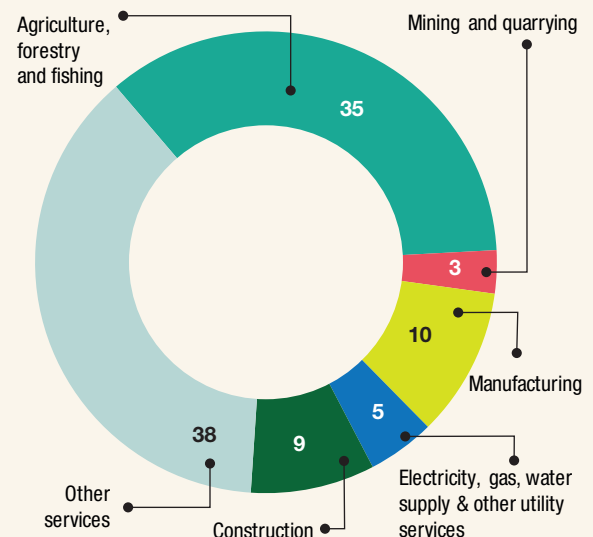
## Incentives

- Value Added tax ( VAT ) refund for up to 10 years – limited to 100% of capital investment
- Entry Tax exemption up to 9 years
- Subsidy of 15% on fixed capital investment for micro and small scale industry
- Land Subsidy for mega projects – 75% (on premium)
- Interest subsidy of 5% for a period of 7 years with a limit of INR 2 million (USD 40,000) for micro and small scale industry.
- Financial Assistance of 15% on infrastructure development cost on establishment of industrial parks with a limit INR 50 million (USD 1 million).
- Special package of fiscal incentives for projects with an investment above or equal to INR 200,000 million (USD 4 billion).
- Provision of customised package of fiscal incentives for projects with an investment more than INR 250 million (USD 5 million).

## Growth in Gross Value Added, 3 year average ending, 2016-17



## Sector-wise contribution in Gross Value Added, 2016-17

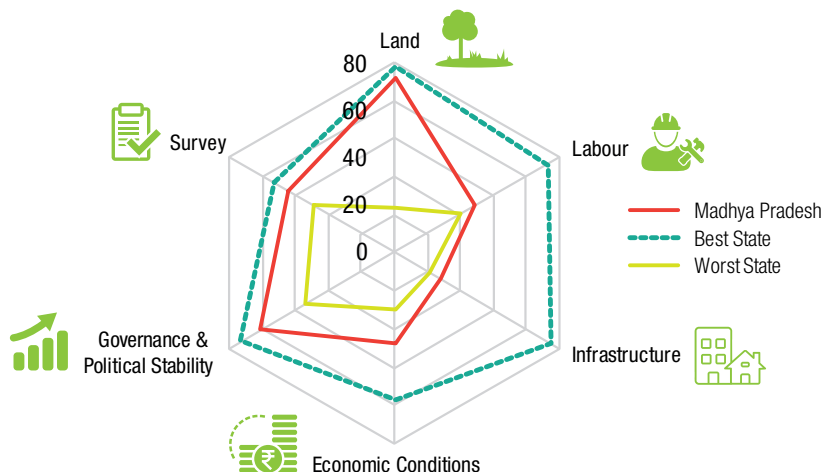


# MADHYA PRADESH

**RANK**

**13**

## States Performance on the Six Broad Pillars



Madhya Pradesh's over all rank has gone down from 10 in N-SIPI'17 to 13 in N-SIPI' 18. Madhya Pradesh is ranked among the top 5 for land and governance and political stability but lags for all the other pillars.

### Strengths

The state has the highest rank for digitalization of land, average wage of salaried persons, low power shortage and share of economic offences in all cases of crime.

### Weaknesses

The state ranks lowest in loss of man-days due to strikes. The state also lack behind in land availability for industrial purpose, labour condition, ICT-readiness and bank branches per lakh population.

## LAND

|                                       | Score       | Rank     |
|---------------------------------------|-------------|----------|
| <b>LAND - OVERALL</b>                 | <b>72.4</b> | <b>2</b> |
| Digitized land records                | 100.0       | 1        |
| Land related stalled projects         | 96.9        | 2        |
| Industrial parks in state             | 89.8        | 3        |
| Land available for industrial purpose | 2.7         | 18       |

## LABOUR

|  | Score       | Rank      |
|--|-------------|-----------|
| <b>LABOUR - OVERALL</b>                                  | <b>39.4</b> | <b>20</b> |
| 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                                 | 29.1        | 10        |
| Per cent 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        |

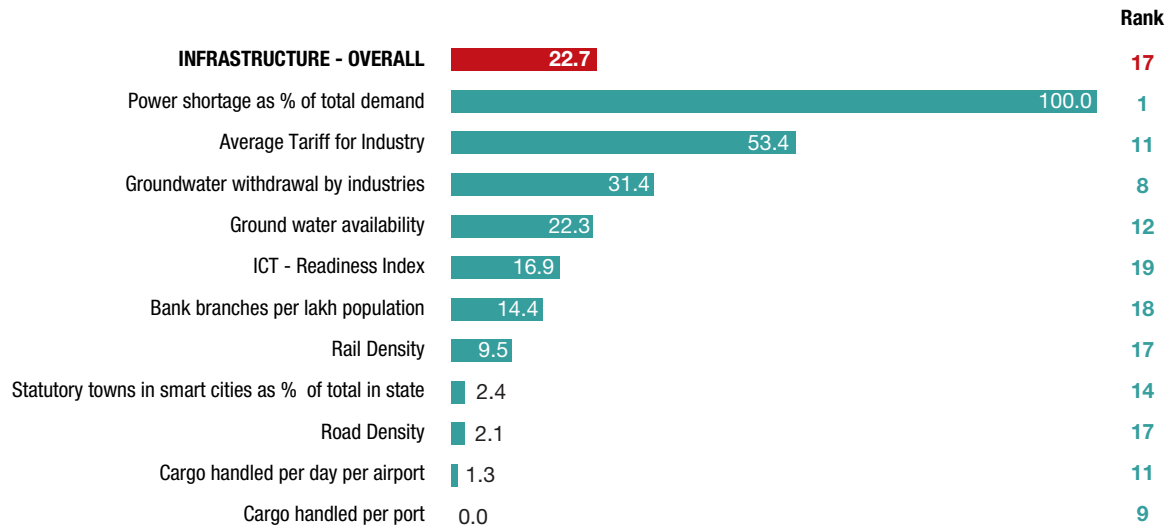
## SURVEY

|  | Score       | Rank      |
|--|-------------|-----------|
| <b>SURVEY - OVERALL</b>                          | <b>50.6</b> | <b>12</b> |
| Perception on land                               | 63.3        | 9         |
| Perception on infrastructure                     | 54.5        | 14        |
| Perception on economic conditions                | 50.8        | 13        |
| Perception on business climate                   | 50.7        | 4         |
| Perception on labour                             | 42.4        | 18        |
| Perception on governance and political stability | 41.7        | 10        |

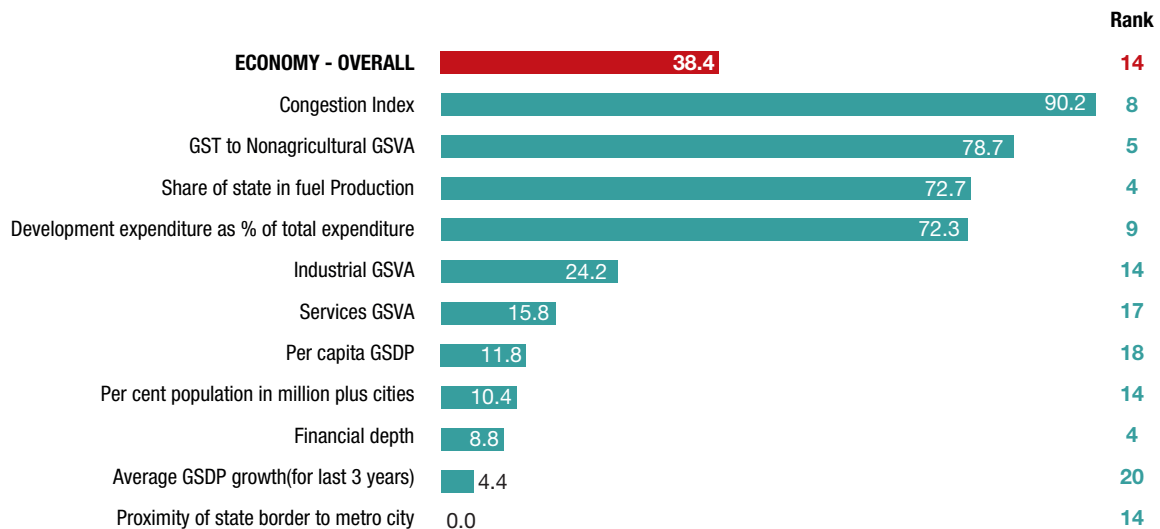




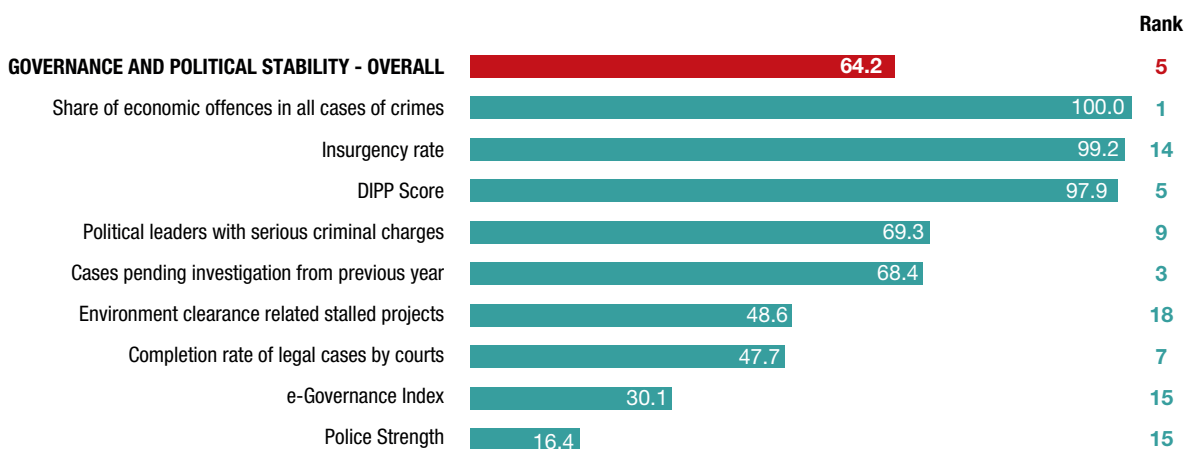
## INFRASTRUCTURE



## ECONOMY



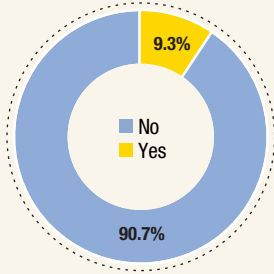
## GOVERNANCE AND POLITICAL STABILITY



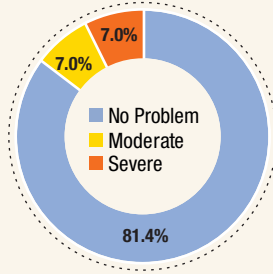
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

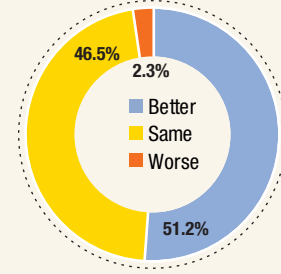


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



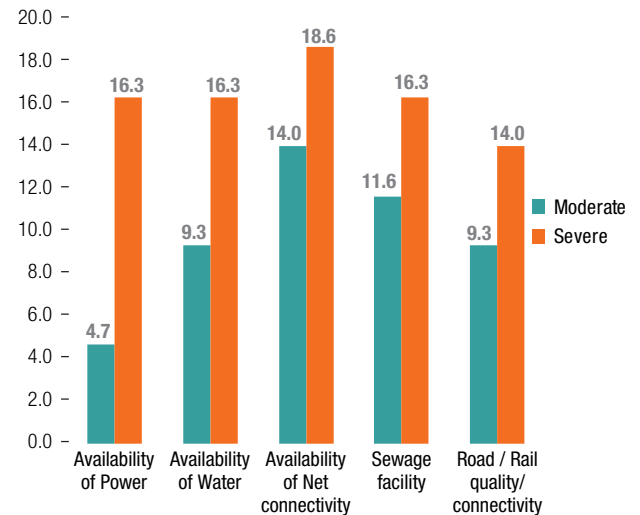
### Labour related issues

% respondents finding these a moderate or severe problem



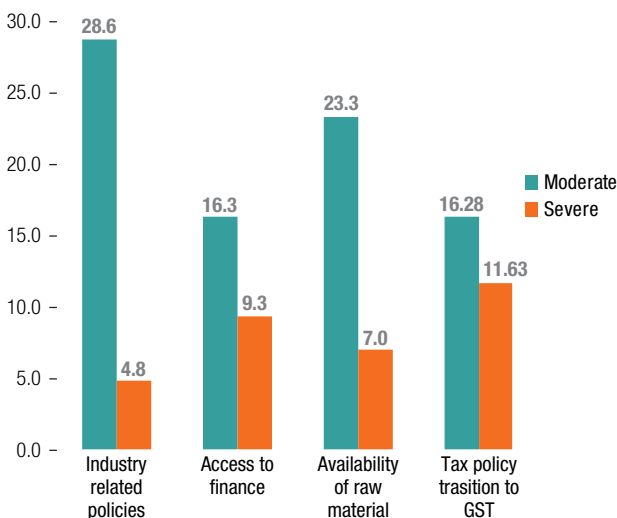
### Infrastructure related issues

% respondents finding these a moderate or severe problem



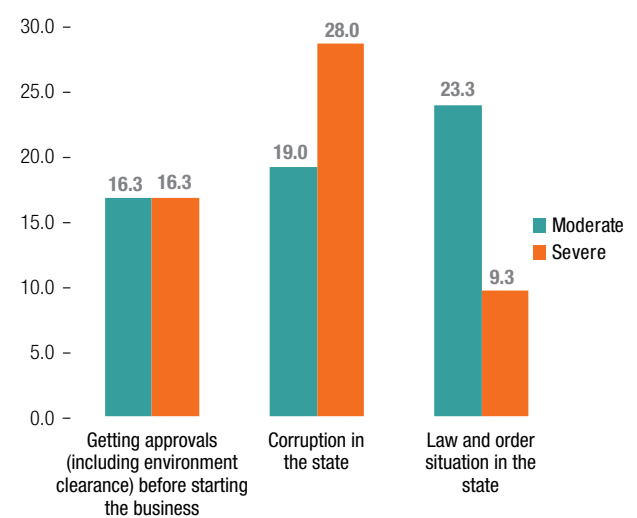
### Economy related issues

% respondents finding these a moderate or severe problem

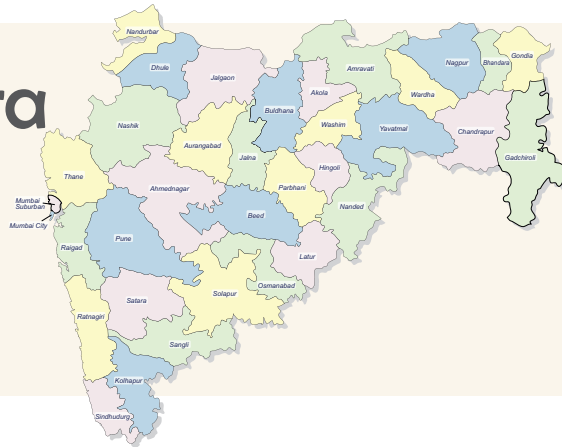


### Governance related issues

% respondents finding these a moderate or severe problem



# Maharashtra



## Statistics

|                    |                                 |
|--------------------|---------------------------------|
| Capital:           | Mumbai (summer) Nagpur (winter) |
| Area (Sq.Km)       | 307713                          |
| Location:          | Western India                   |
| Population:        | 112374000                       |
| Per capita Income: | Rs. 199612.00                   |
| Literacy Rate:     | 83% for 2017                    |

## State Focus Sectors

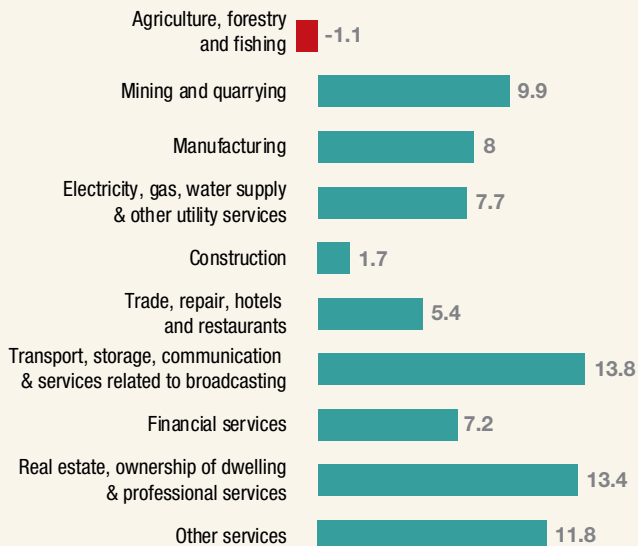
- Auto Industry
- Biotechnology
- Infrastructure Support Institutions
- Food Processing Industry
- Information Technology
- Infrastructure
- Leather Industry

## Incentives

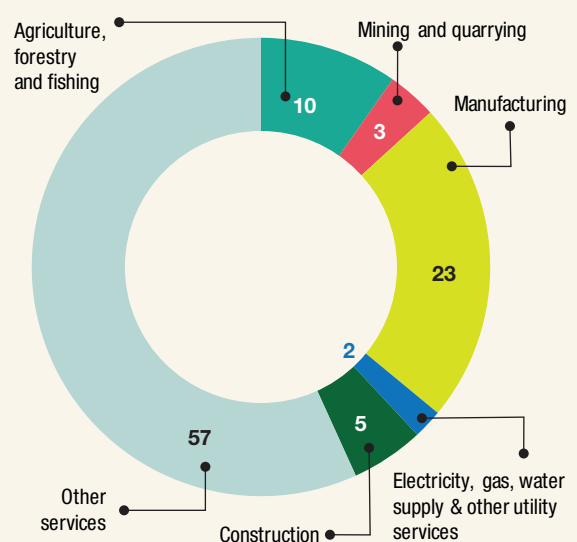
- Reimbursement of cost of water audit and energy audit
- Stamp duty exemption to eligible large IT and BT units in IT and BT parks; exemption from electricity duty
- Multiple incentives such as VAT and CST subsidies, power tariff subsidy, interest subsidy etc.

Source: Industrial Policy of Maharashtra-2013-14.

## Growth in Gross Value Added, 3 years average ending 2016-17



## Sector-wise contribution in Gross Value Added Maharashtra, 2016-17

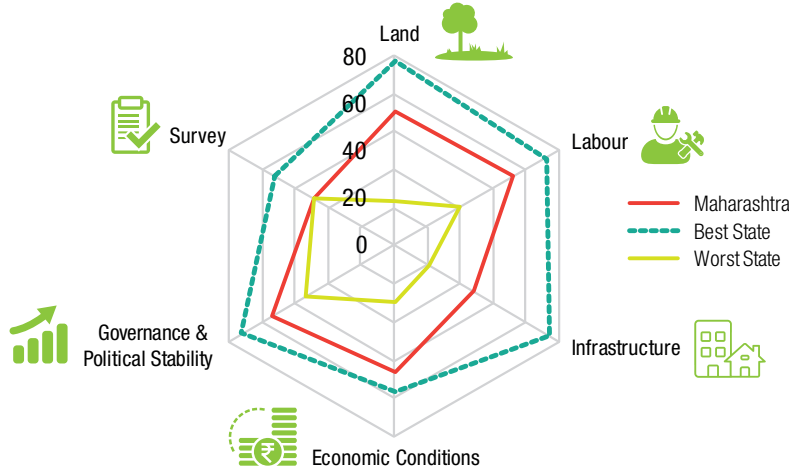


MAHARASHTRA

RANK

5

States Performance on the Six Broad Pillars



Maharashtra has improved its rank from 8 in N-SIP17 to 5 in N-SIP18. The state has the lowest rank in the survey pillar, although the state is among the top ten for all the other pillars.

Strengths

Maharashtra ranks highest in low power shortage and ICT – readiness. The state also performs well in land available for industrial purposes, seating capacities of ITIs, cargo handled, number of smart cities, and percentage of population in million plus cities and proximity of state border to metro city.

Weaknesses

Maharashtra’s biggest weakness on perception of the state at the ground level. For all its strengths, deriving from having Mumbai, India’s financial capital, as the state capital, it ranks low in terms of GSDP.

LAND

|                                       | Score       | Rank     |
|---------------------------------------|-------------|----------|
| <b>LAND - OVERALL</b>                 | <b>56.7</b> | <b>6</b> |
| Digitized land records                | 98.8        | 10       |
| Land related stalled projects         | 82.1        | 7        |
| Land available for industrial purpose | 35.7        | 4        |
| Industrial parks in state             | 10.2        | 11       |

LABOUR

|  | Score        | Rank     |
|--|--------------|----------|
| <b>LABOUR - OVERALL</b>                                  | <b>57.57</b> | <b>6</b> |
| 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       |
| Per cent of workforce having technical education         | 66.3         | 5        |
| Share of labour force with secondary education and above | 53.7         | 6        |
| Seating capacity of ITIs                                 | 44.1         | 4        |
| 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

|  | Score       | Rank      |
|--|-------------|-----------|
| <b>SURVEY - OVERALL</b>                          | <b>39.3</b> | <b>21</b> |
| Perception on land                               | 46.9        | 19        |
| Perception on business climate                   | 43.1        | 19        |
| Perception on infrastructure                     | 39.5        | 21        |
| Perception on labour                             | 37.4        | 21        |
| Perception on economic conditions                | 36.4        | 20        |
| Perception on governance and political stability | 32.3        | 20        |



## INFRASTRUCTURE

|  |             | Rank     |
|--|-------------|----------|
| <b>INFRASTRUCTURE - OVERALL</b>                        | <b>38.3</b> | <b>3</b> |
| Power shortage as % of total demand                    | 100.0       | 1        |
| ICT - Readiness Index                                  | 100.0       | 1        |
| Cargo handled per day per airport                      | 99.5        | 2        |
| Bank branches per lakh population                      | 28.4        | 13       |
| Groundwater withdrawal by industries                   | 27.1        | 9        |
| Ground water availability                              | 20.4        | 14       |
| Road Density   | 11.5        | 8        |
| Rail Density   | 11.4        | 13       |
| Statutory towns in smart cities as % of total in state | 8.6         | 3        |
| Cargo handled per port                                 | 0.4         | 2        |
| Average Tariff for Industry                            | 0.0         | 21       |



## ECONOMY

|   |             | Rank     |
|---|-------------|----------|
| <b>ECONOMY - OVERALL</b>                          | <b>53.0</b> | <b>4</b> |
| Congestion Index                                  | 78.6        | 13       |
| GST to Nonagricultural GSVA                       | 74.5        | 7        |
| Proximity of state border to metro city           | 66.7        | 2        |
| Development expenditure as % of total expenditure | 51.1        | 15       |
| Per capita GSDP                                   | 50.4        | 5        |
| Financial depth                                   | 49.4        | 10       |
| Average GSDP growth(for last 3 years)             | 48.9        | 9        |
| Services GSVA                                     | 44.7        | 7        |
| Per cent population in million plus cities        | 43.3        | 2        |
| Industrial GSVA                                   | 42.3        | 9        |
| Share of state in fuel Production                 | 35.6        | 10       |



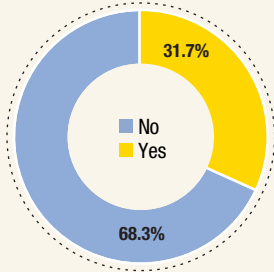
## GOVERNANCE AND POLITICAL STABILITY

|   |             | Rank      |
|---|-------------|-----------|
| <b>GOVERNANCE AND POLITICAL STABILITY - OVERALL</b> | <b>58.9</b> | <b>10</b> |
| e-Governance Index                                  | 99.1        | 2         |
| DIPP Score  | 93.0        | 10        |
| Insurgency rate                                     | 81.5        | 17        |
| Share of economic offences in all cases of crimes   | 74.8        | 11        |
| Environment clearance related stalled projects      | 68.9        | 13        |
| Cases pending investigation from previous year      | 63.5        | 6         |
| Police Strength                                     | 36.2        | 5         |
| Completion rate of legal cases by courts            | 7.2         | 19        |
| Political leaders with serious criminal charges     | 5.7         | 20        |

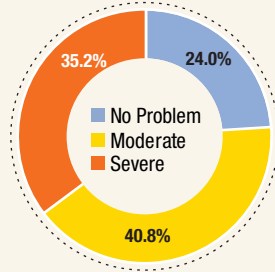
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

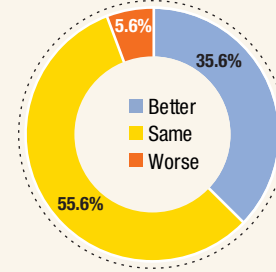


Percentage respondents facing problem in getting approvals for land



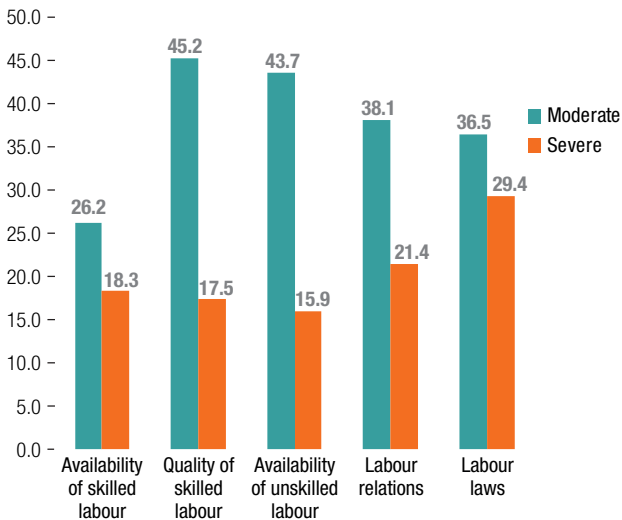
### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



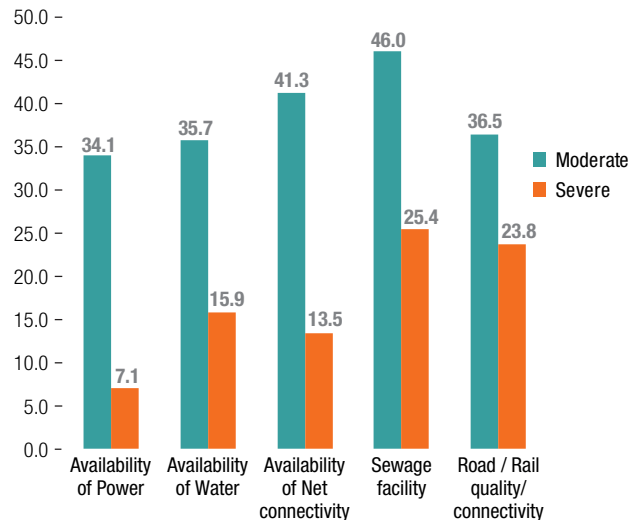
### Labour related issues

% respondents finding these a moderate or severe problem



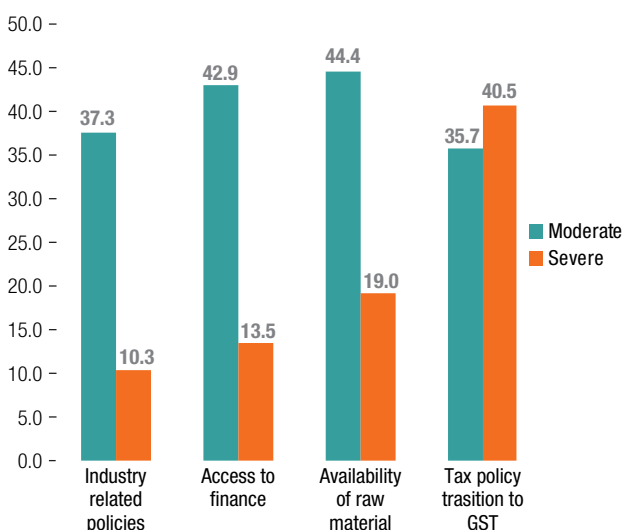
### Infrastructure related issues

% respondents finding these a moderate or severe problem



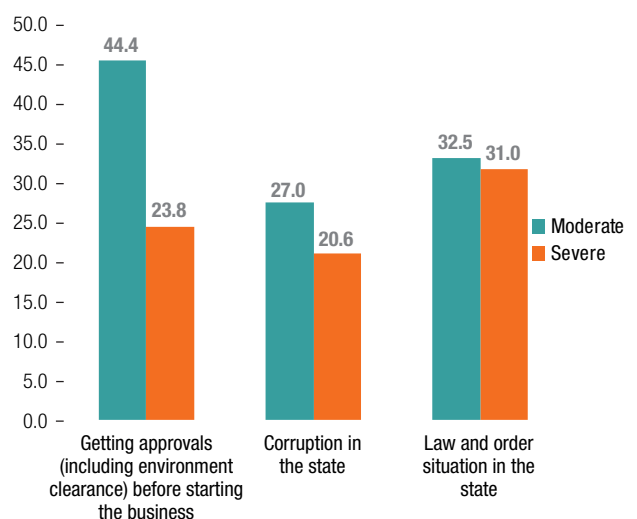
### Economy related issues

% respondents finding these a moderate or severe problem

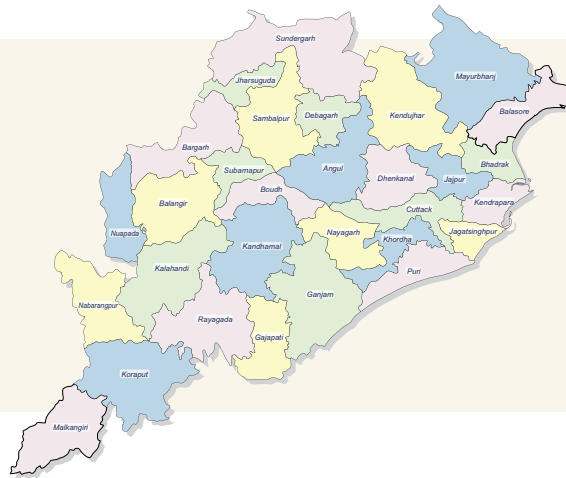


### Governance related issues

% respondents finding these a moderate or severe problem



# Odisha



## Statistics

|                    |                       |
|--------------------|-----------------------|
| Capital:           | Bhubaneswar           |
| Area (Sp.km):      | 155707                |
| Location:          | Eastern India         |
| Per capita Income: | Rs. 77193 for 2017-18 |
| Population:        | 45596577              |
| Literacy Rates:    | 73.45% for 2017       |

## State Focus Sectors

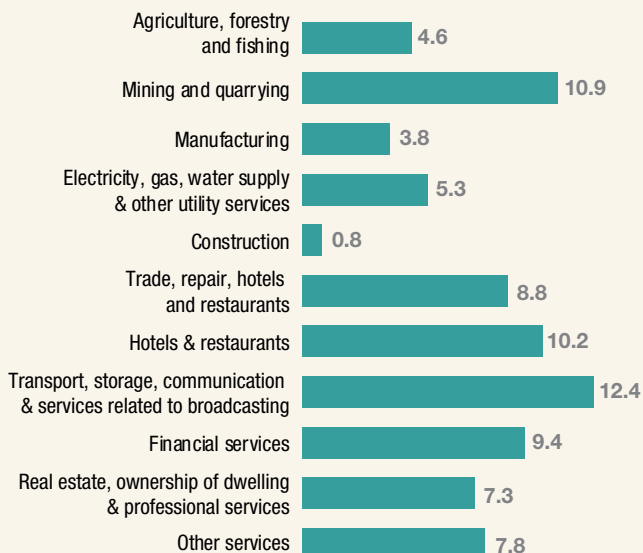
- Information Technology
- Biotechnology
- Agro, marine and food processing
- Tourism
- Textile
- Automotive Industry

## Incentives

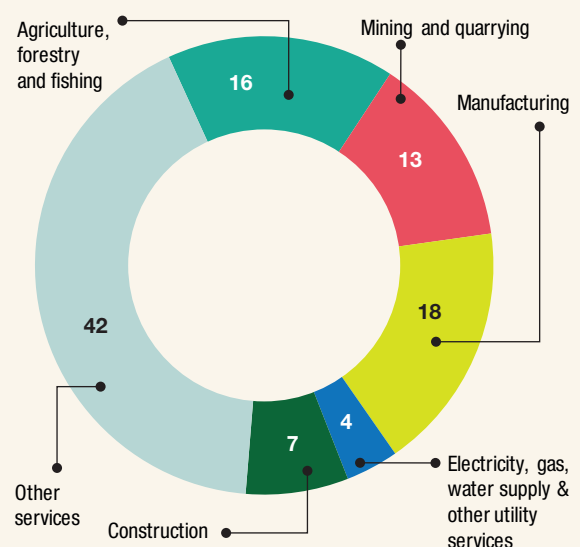
- Capital Investment subsidy
- Capital Grant to support quality infrastructure
- Green category Industries to be approved within 15 days
- Approvals for other projects within 30 days
- 42 listed services applicable for industrial development under Right to Public Services Act.

Source: Odisha State Industrial Policy-2016.

## Growth in Gross Value Added, 3 years average ending 2016-17



## Sector wise Contribution in Gross Value Added, 2016-17

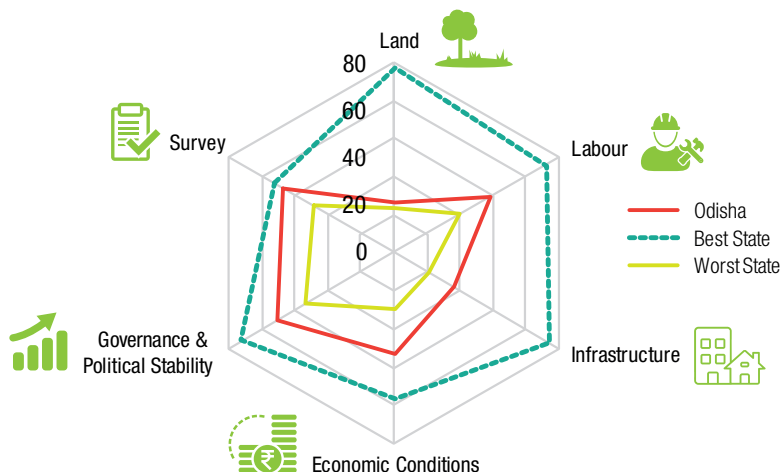


ODISHA

RANK

17

States Performance on the Six Broad Pillars



Odisha's overall rank has dropped significantly from 11 in N-SIPI'17 to 17 in N-SIPI'18. The state lies in the bottom 10 of all the pillars except survey and economy. This is not surprising as it is among the poorer states in India.

Strengths

Odisha has least power shortage, greater road density, higher cargo handling, lower power tariffs and better availability of ground water have contributed to improving overall infrastructure.

Weakness

The overall performance of the state is low in digitalization of land records and average wage in manufacturing sector, high rates of insurgency and low completion rates of legal cases by court.

LAND

|                                       | Score       | Rank      |
|---------------------------------------|-------------|-----------|
| <b>LAND - OVERALL</b>                 | <b>21.1</b> | <b>20</b> |
| Land related stalled projects         | 41.6        | 19        |
| Land available for industrial purpose | 32.0        | 6         |
| Industrial parks in state             | 10.2        | 11        |
| Digitized land records                | 0.5         | 20        |

LABOUR

|  | Score       | Rank      |
|--|-------------|-----------|
| <b>LABOUR - OVERALL</b>                                  | <b>46.8</b> | <b>16</b> |
| 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        |
| Average wages in manufacturing sector                    | 43.2        | 18        |
| Seating capacity of ITIs                                 | 32.9        | 8         |
| Per cent 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        |

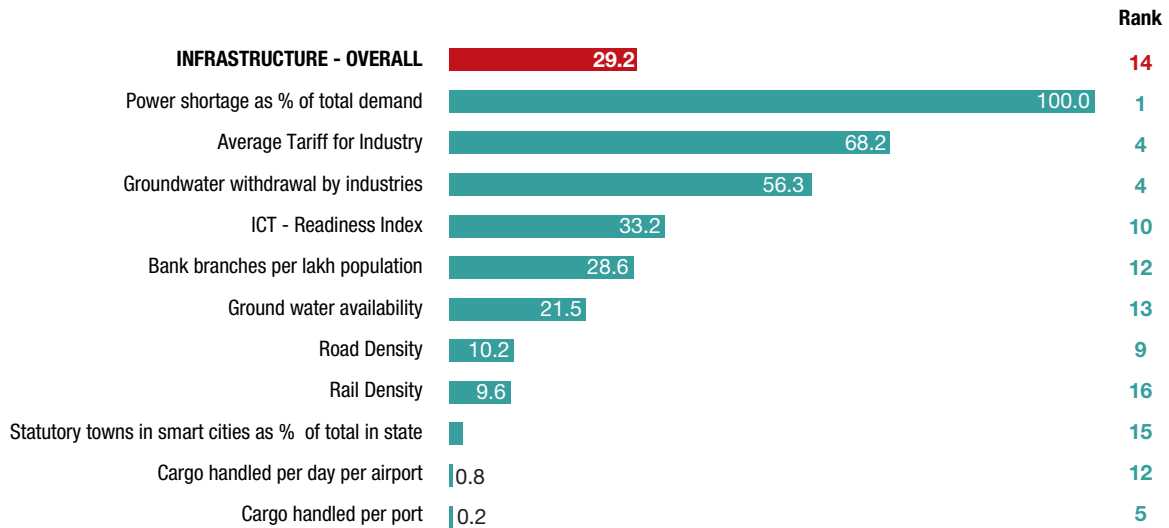
SURVEY

|  | Score       | Rank     |
|--|-------------|----------|
| <b>SURVEY - OVERALL</b>                          | <b>53.9</b> | <b>8</b> |
| Perception on infrastructure                     | 61.4        | 7        |
| Perception on labour                             | 58.7        | 4        |
| Perception on land                               | 54.5        | 17       |
| Perception on economic conditions                | 52.6        | 11       |
| Perception on governance and political stability | 48.4        | 2        |
| Perception on business climate                   | 48.1        | 10       |

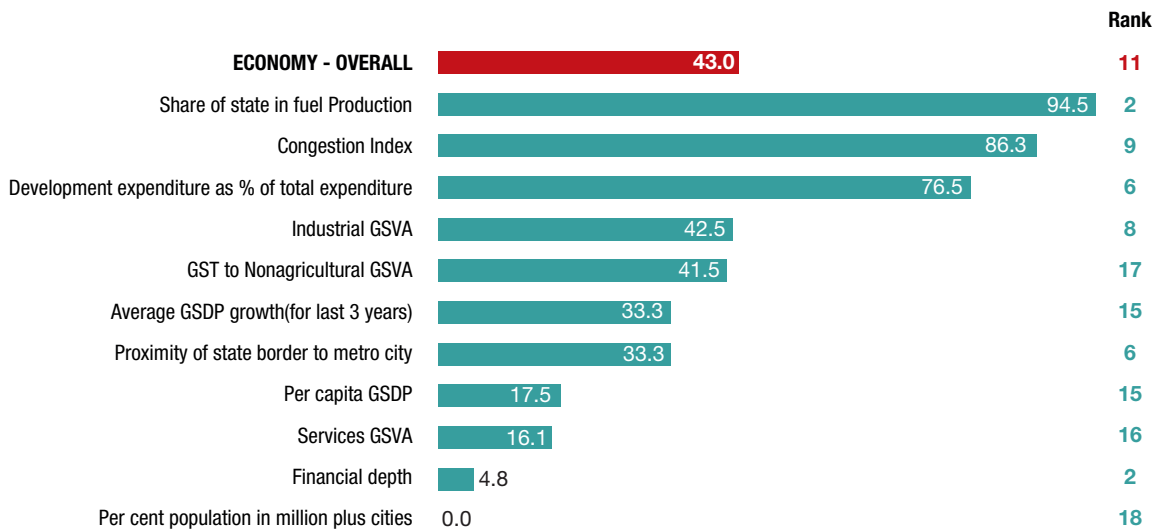




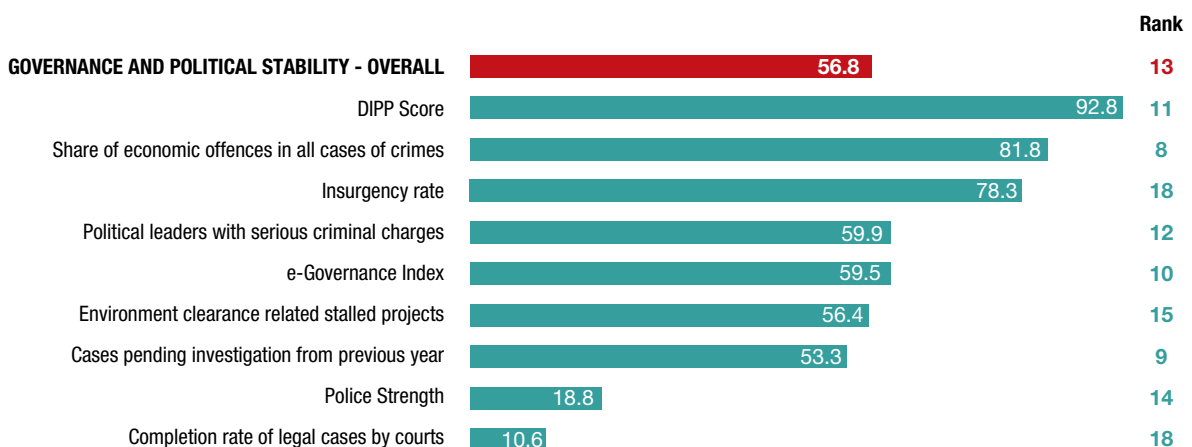
## INFRASTRUCTURE



## ECONOMY



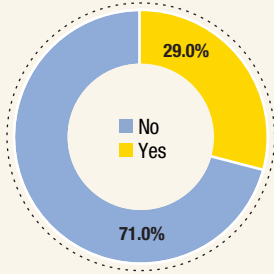
## GOVERNANCE AND POLITICAL STABILITY



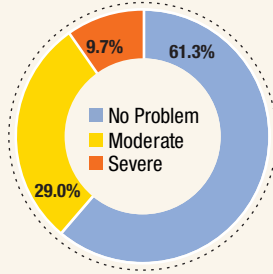
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

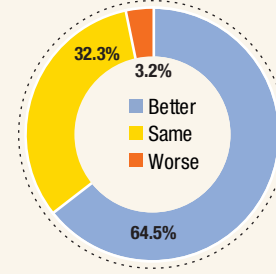


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



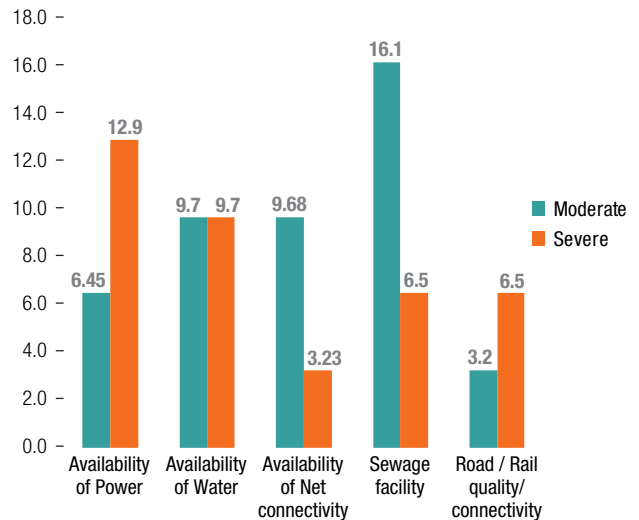
### Labour related issues

% respondents finding these a moderate or severe problem



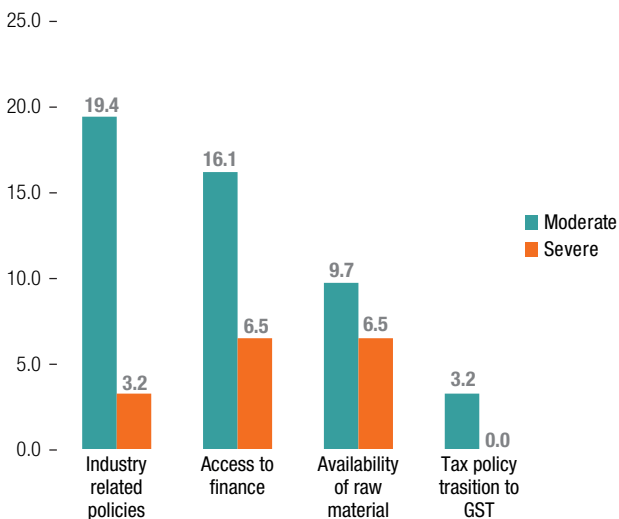
### Infrastructure related issues

% 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



## Statistics

|                    |                        |
|--------------------|------------------------|
| Capital:           | Chandigarh             |
| Area (Sp.km):      | 50362                  |
| Location:          | North India            |
| Per capita Income: | Rs. 142958 for 2017-18 |
| Population:        | 27743338               |
| Literacy Rates:    | 76.68% for 2017        |

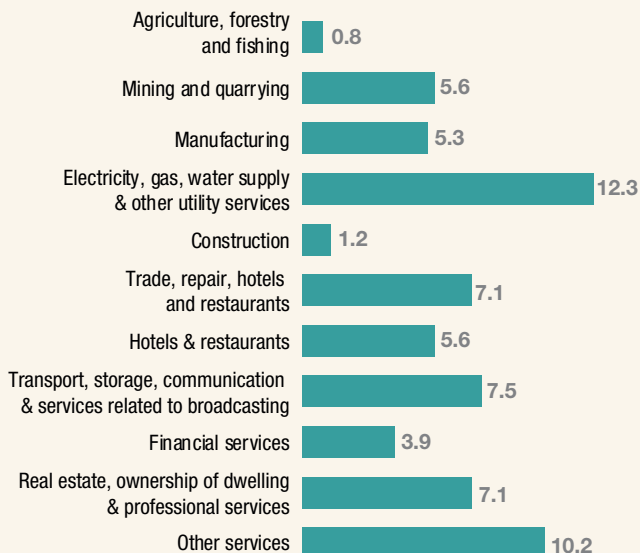
## State Focus Sectors

- Agro business and food processing Industry
- Auto and Auto components
- Light Engineering
- Leather industry
- Sports goods
- Petrochemicals and fertilizers
- Textile
- Tourism

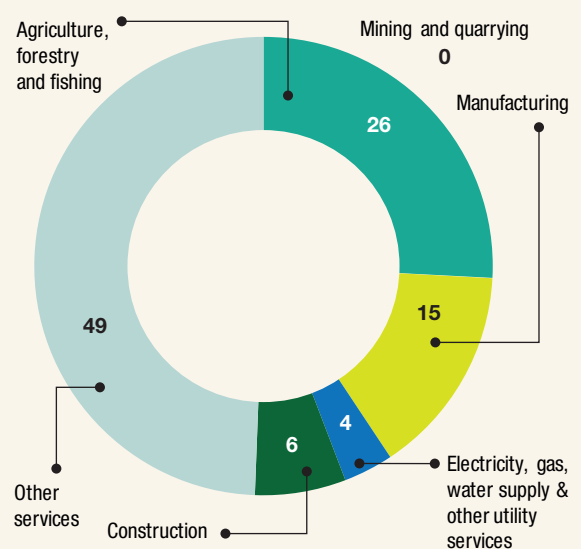
## Incentives

- Freezing of Power Tariff at Rs. 5 per unit (KVAH) for five years
- Investment Subsidy by way of reimbursement of net SGST on intra-state sale
- Interest subsidy on term loan
- Exemption from electricity duty
- Exemption from stamp duty
- Exemption from property tax

## Growth in Gross Value Added, 3 years average ending, 2016-17



## Sectorwise contribution in Gross Value Added in Punjab, 2016-17

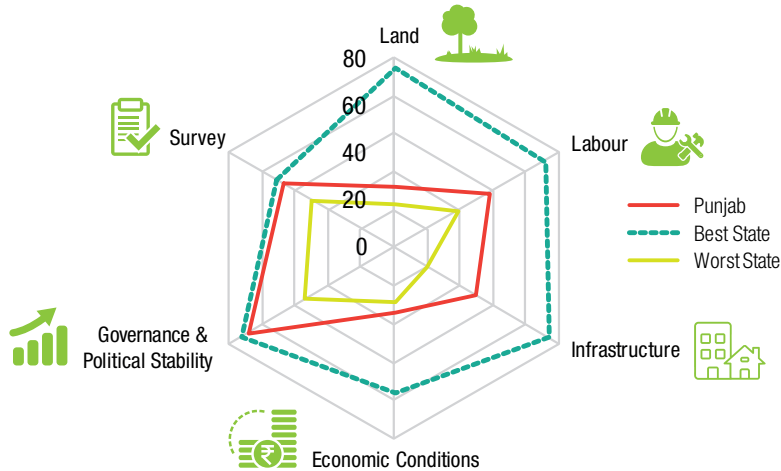


PUNJAB

RANK

12

### States Performance on the Six Broad Pillars



Punjab's overall rank has improved from 16 in N-SIPI'17 to 12 in N-SIPI 2018, despite its poor performance under the land pillar where it ranks a low 17, labour where it ranks 15 and a surprisingly poor performance under the economy pillar where it ranks last but one at the bottom of the league tables.

#### Strengths

Punjab has high rate of land acquisition for industrial purpose. The state ranks at the top with respect to ground water availability, lower rates of insurgency and lower power shortages.

#### Weakness

Punjab's poor performance on the 'economy' pillar and soil-climatic conditions. The state ranks low on average GSDP growth and shortage of labour force participation.

## LAND

|                                       | Score       | Rank      |
|---------------------------------------|-------------|-----------|
| <b>LAND - OVERALL</b>                 | <b>25.7</b> | <b>17</b> |
| Land related stalled projects         | 52.7        | 15        |
| Land available for industrial purpose | 29.3        | 7         |
| Digitized land records                | 15.6        | 17        |
| Industrial parks in state             | 5.1         | 14        |

## LABOUR

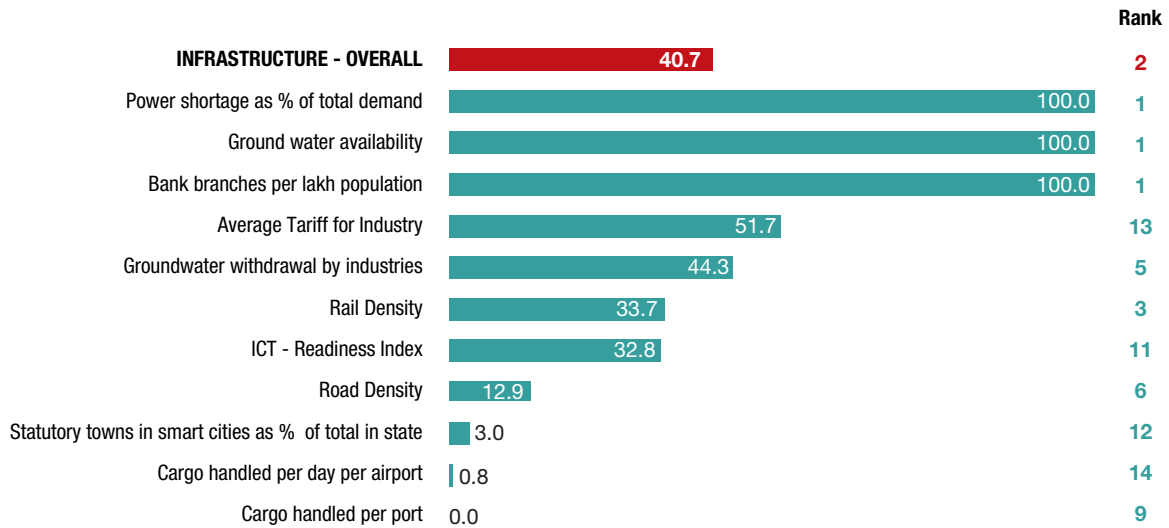
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>LABOUR - OVERALL</b>                                  | <b>47.3</b> | <b>15</b> |
| Average wages in manufacturing sector                    | 73.1        | 4         |
| Share of workforce in manufacturing sector               | 63.3        | 5         |
| Percent of workforce having technical education          | 59.8        | 8         |
| Least mandays lost due to strike                         | 59.7        | 16        |
| Share of labour force with secondary education and above | 55.3        | 5         |
| Average wages of salaried persons                        | 50.6        | 18        |
| Share of contract workers in total labour force          | 42.0        | 19        |
| Seating capacity of ITIs                                 | 19.3        | 12        |
| Labour force participation rate                          | 2.3         | 20        |

## SURVEY

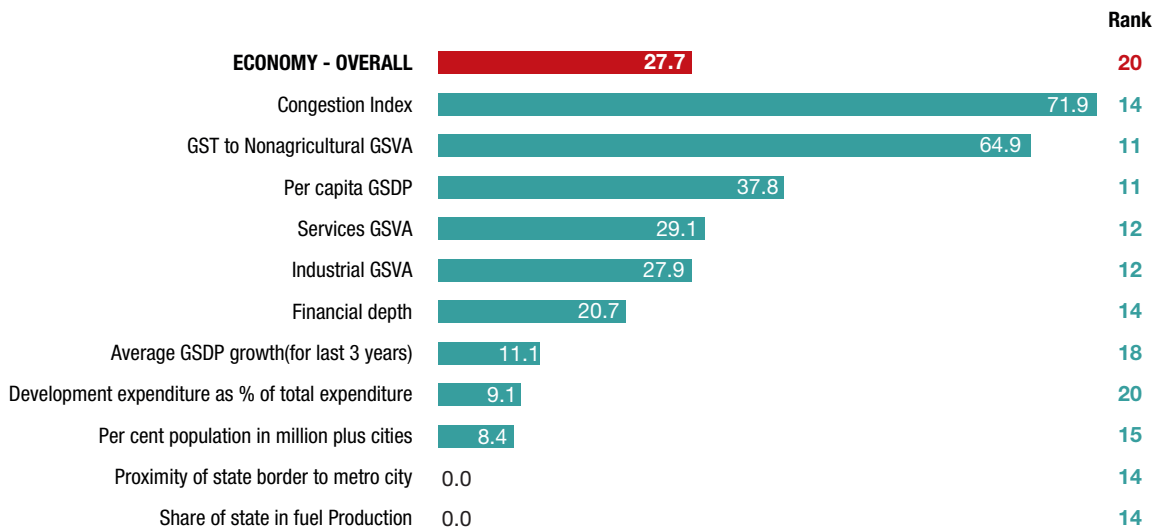
|  | Score       | Rank     |
|--|-------------|----------|
| <b>SURVEY - OVERALL</b>                          | <b>54.3</b> | <b>7</b> |
| Perception on infrastructure                     | 63.9        | 4        |
| Perception on land                               | 61.7        | 11       |
| Perception on economic conditions                | 56.7        | 6        |
| Perception on labour                             | 55.9        | 6        |
| Perception on business climate                   | 49.4        | 6        |
| Perception on governance and political stability | 38.2        | 14       |



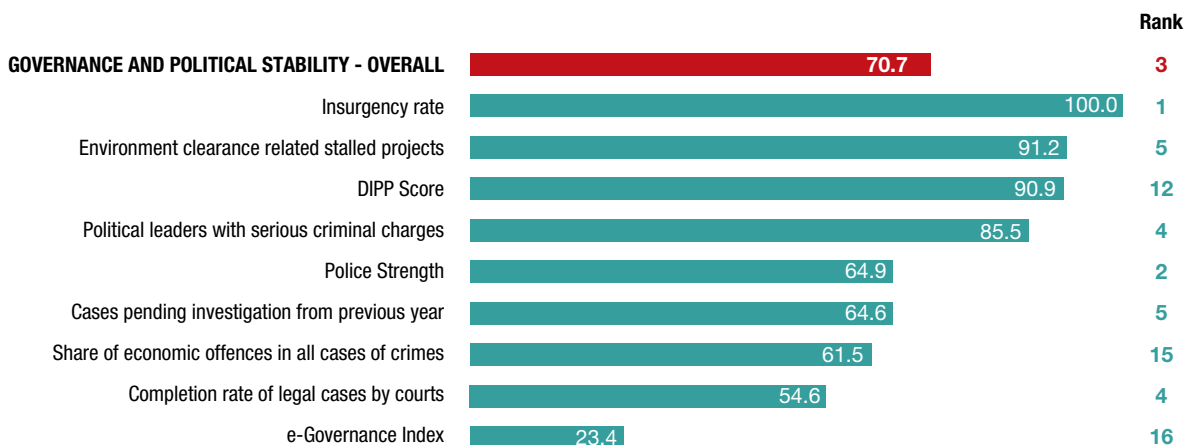
## INFRASTRUCTURE



## ECONOMY



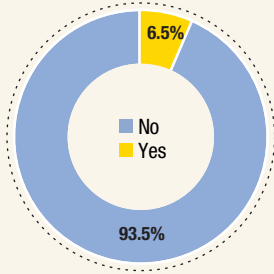
## GOVERNANCE AND POLITICAL STABILITY



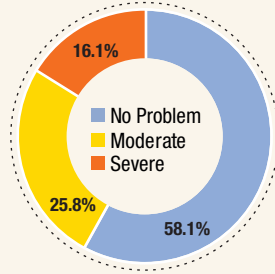
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

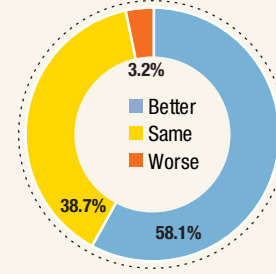


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



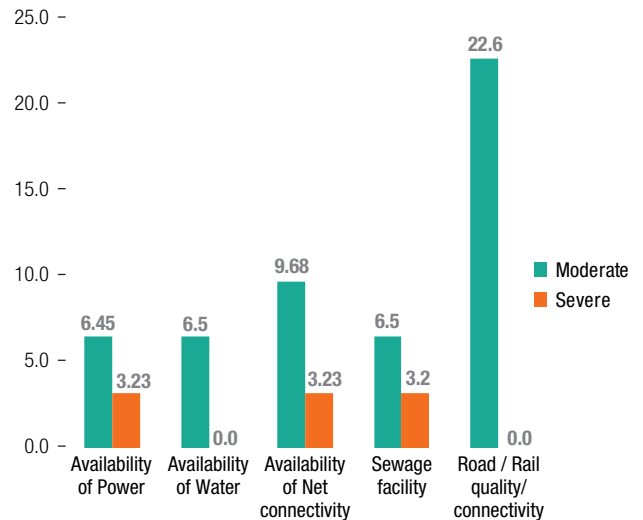
### Labour related issues

% respondents finding these a moderate or severe problem



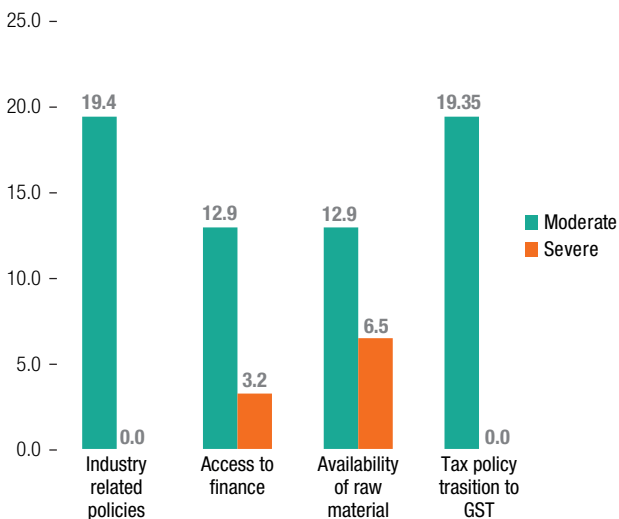
### Infrastructure related issues

% respondents finding these a moderate or severe problem



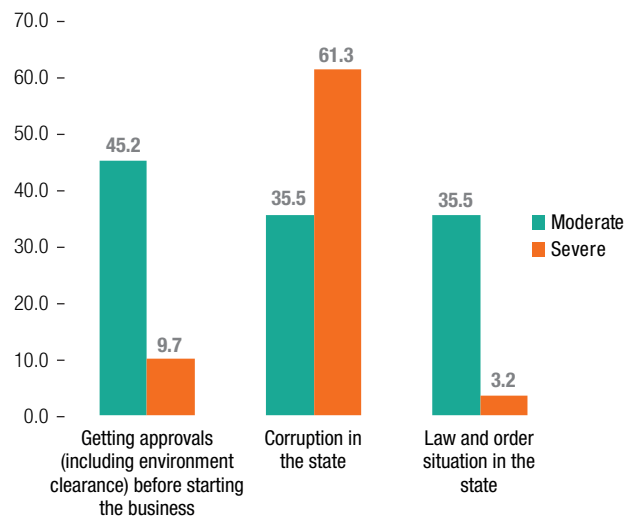
### Economy related issues

% respondents finding these a moderate or severe problem



### Governance related issues

% respondents finding these a moderate or severe problem



# Rajasthan



## Statistics

|                                  |                       |
|----------------------------------|-----------------------|
| Capital:                         | Jaipur                |
| Area (sq.km):                    | 342239                |
| Location:                        | Western India         |
| Per capita Income <sup>1</sup> : | Rs.100551 for 2017-18 |
| Population:                      | 68548000              |
| Literacy Rates %:                | 67.1 for 2017         |

## State Focus Sectors

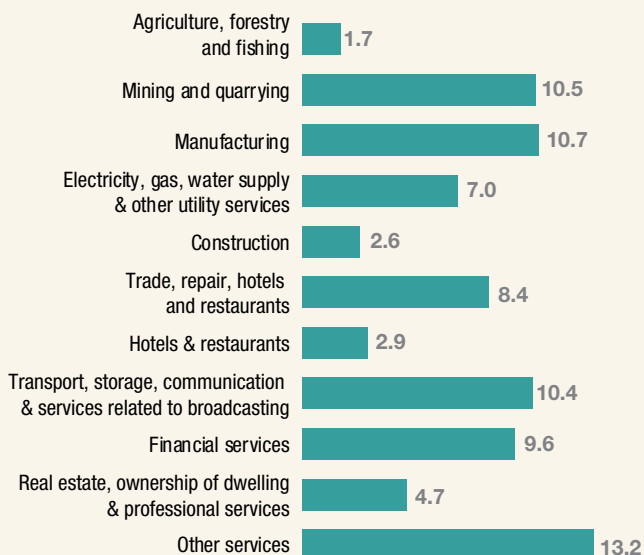
- Garment and Knitwear
- Gems and jewellery
- Textiles
- Electronics and Telecommunications
- Information Technology
- Automobiles and components
- Footwear and Leather goods
- Dimensional Stones
- Cements
- Glass and Ceramics
- Agro processing

## Incentives

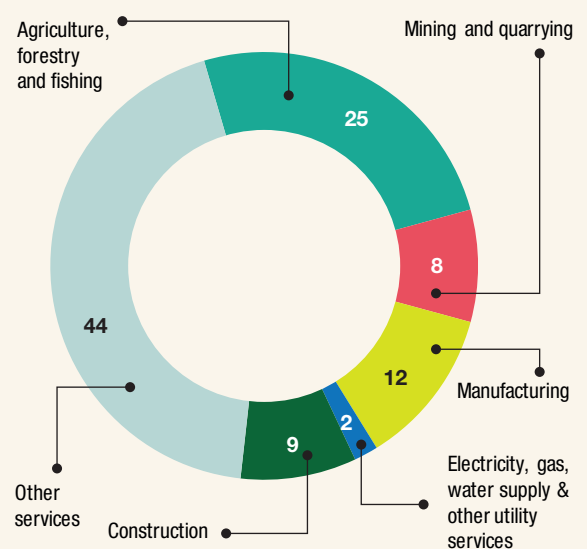
- Employment generation subsidy to manufacturing enterprises
- Exemption from power tariff, land tax
- Exemption from entry tax

**Source:** State Industrial Development Policy 2015.

## Growth in Gross Value Added, 3 years average ending 2016-17



## Sector-Wise contribution in Gross Value Added, 2016-17

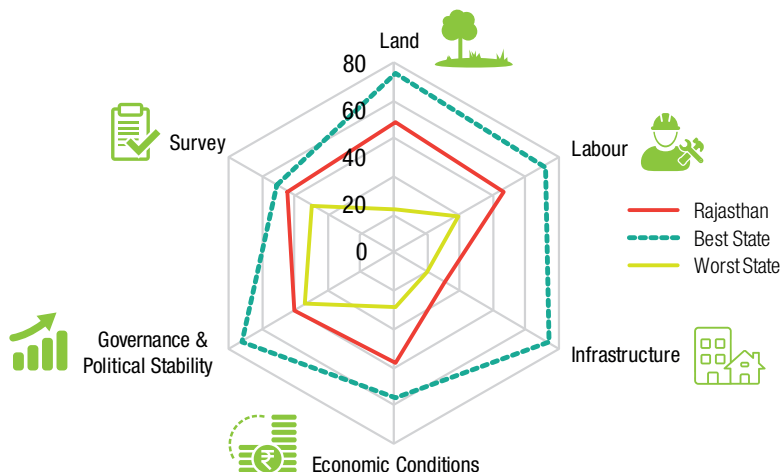


RAJASTHAN

RANK

11

States Performance on the Six Broad Pillars



Rajasthan has improved from rank 13 in N-SIPI'17 to 11 in N-SIPI'18, primarily on account of poor performance on governance and political stability and infrastructure pillars. The state ranks in the top ten in the labour and land pillar.

Strengths

Setting at rest doubts about the receptivity of labour reforms, Rajasthan has marginally improved its ranking under the Infrastructure pillar and remained constant for Labour.

Weakness

The state has highest share of economic offences. The state also falls behind in terms of availability of ground water, road density, ICT-readiness and man-days lost due to strike.

LAND

|                                       | Score       | Rank      |
|---------------------------------------|-------------|-----------|
| <b>LAND - OVERALL</b>                 | <b>55.2</b> | <b>10</b> |
| Digitized land records                | 98.3        | 11        |
| Land related stalled projects         | 94.0        | 3         |
| Industrial parks in state             | 16.9        | 10        |
| Land available for industrial purpose | 11.6        | 13        |

LABOUR

|  | Score       | Rank     |
|--|-------------|----------|
| <b>LABOUR - OVERALL</b>                                  | <b>53.0</b> | <b>9</b> |
| Share of contract workers in total labour force          | 94.6        | 4        |
| Seating capacity of ITIs                                 | 88.0        | 2        |
| 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       |

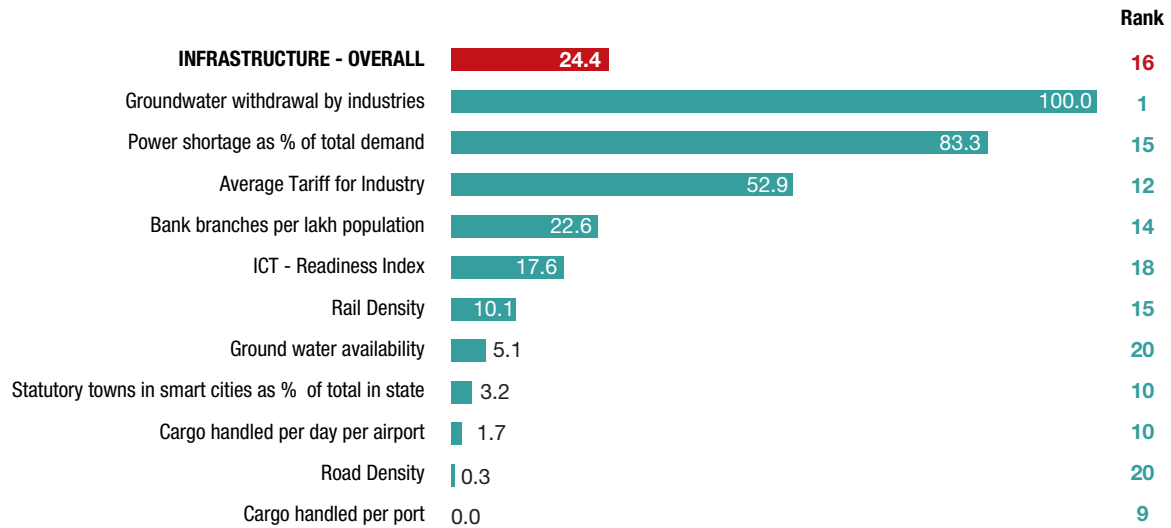
SURVEY

|  | Score       | Rank      |
|--|-------------|-----------|
| <b>SURVEY - OVERALL</b>                          | <b>51.8</b> | <b>11</b> |
| Perception on land                               | 63.5        | 8         |
| Perception on infrastructure                     | 55.1        | 13        |
| Perception on labour                             | 55.0        | 7         |
| Perception on economic conditions                | 51.2        | 12        |
| Perception on business climate                   | 45.6        | 16        |
| Perception on governance and political stability | 40.4        | 11        |

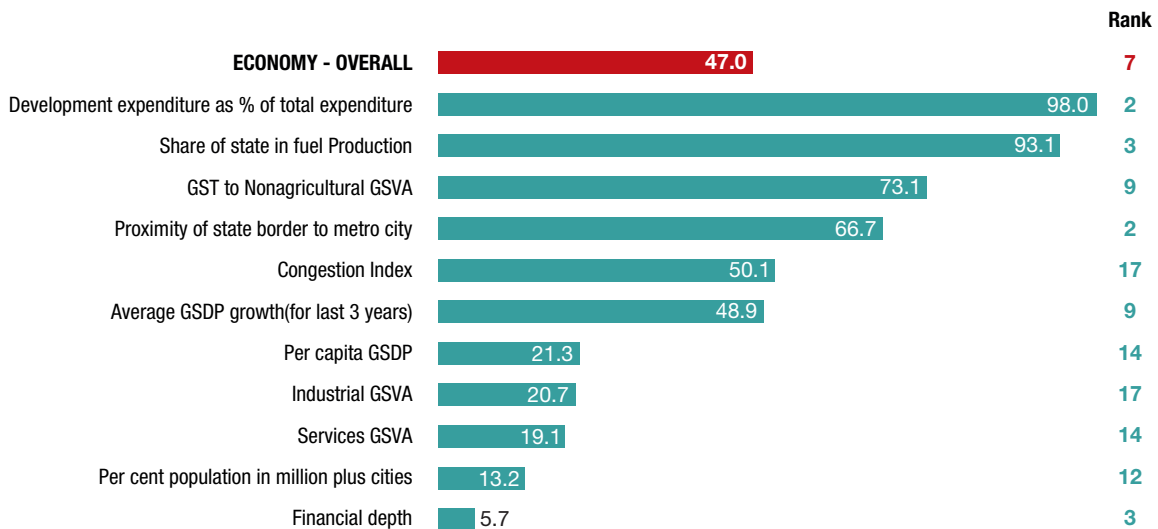




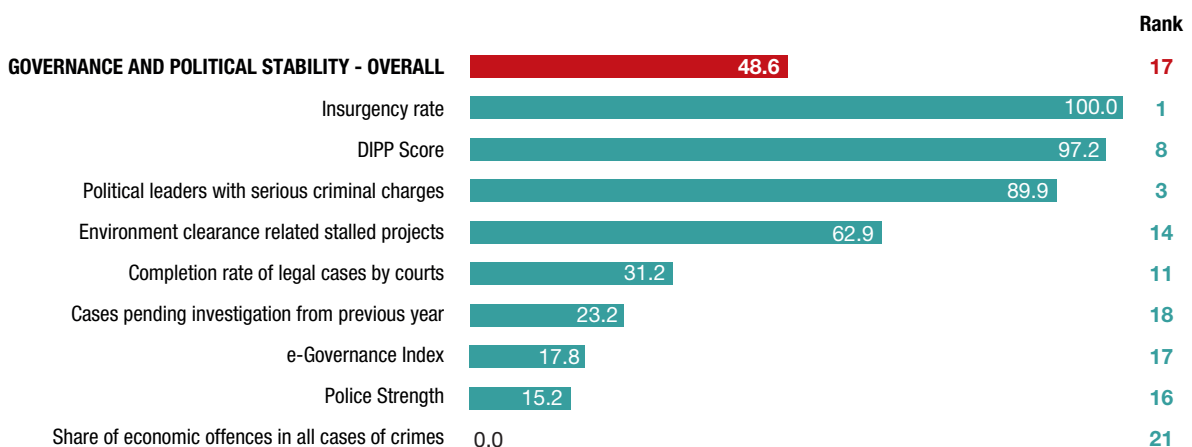
## INFRASTRUCTURE



## ECONOMY



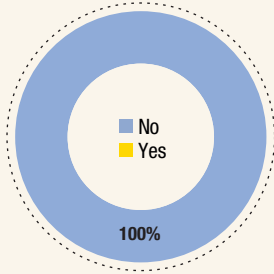
## GOVERNANCE AND POLITICAL STABILITY



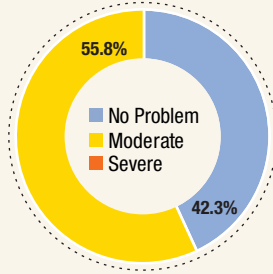
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

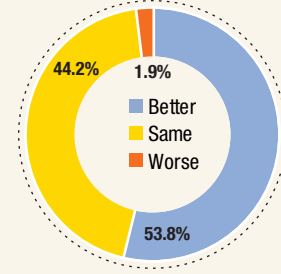


Percentage respondents facing problem in getting approvals for land



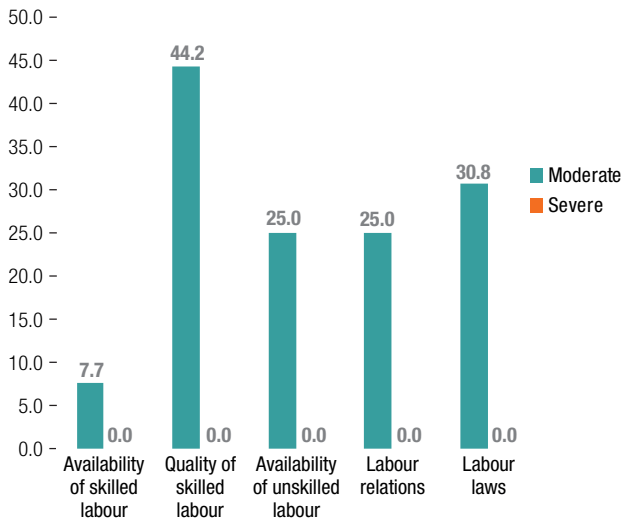
### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



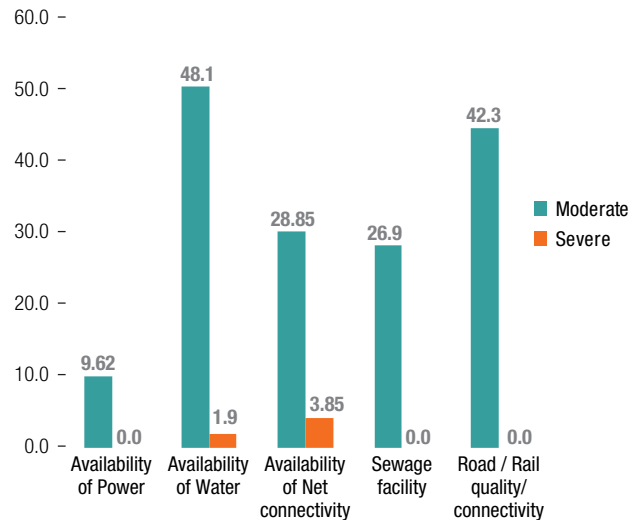
### Labour related issues

% respondents finding these a moderate or severe problem



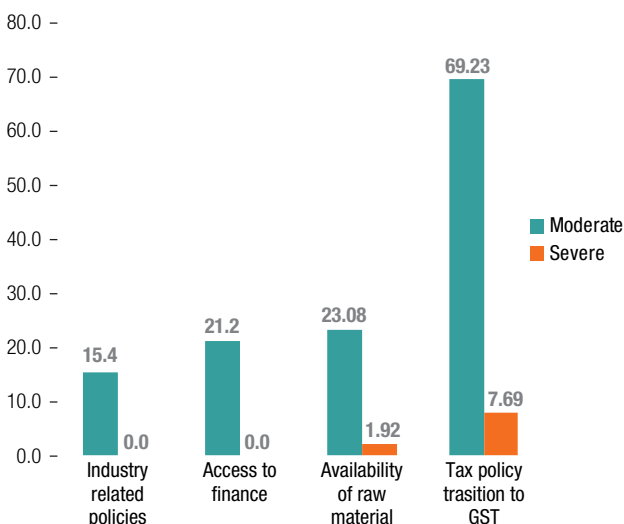
### Infrastructure related issues

% respondents finding these a moderate or severe problem



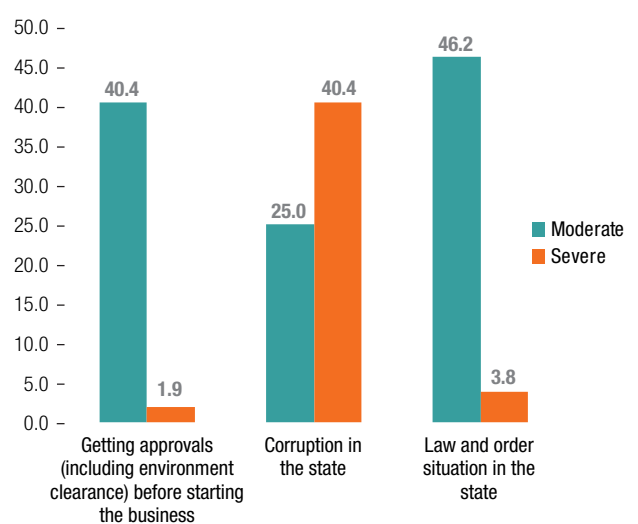
### Economy related issues

% respondents finding these a moderate or severe problem

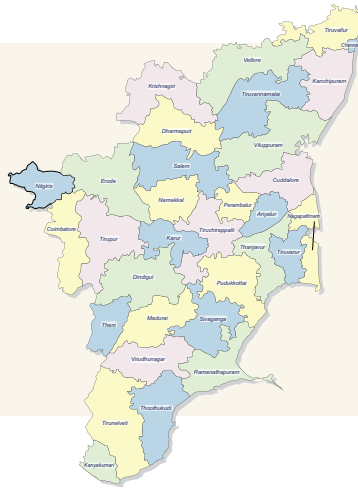


### Governance related issues

% respondents finding these a moderate or severe problem



# Tamil Nadu



## Statistics

|                    |                        |
|--------------------|------------------------|
| Capital:           | Chennai                |
| Area (Sp.km):      | 130060                 |
| Location:          | Southern India         |
| Per capita Income: | Rs. 135806 for 2016-17 |
| Population:        | 77747141               |
| Literacy Rates:    | 80.1                   |

## State Focus Sectors

- Aerospace Sector
- Automobile Sector
- Electronic Hardware Sector
- Heavy Engineering Sector
- Infrastructure sector
- Pharmaceuticals & Biotechnology Sector
- Textiles and Apparels Sectors
- Agro and Food Processing
- IT Sectors

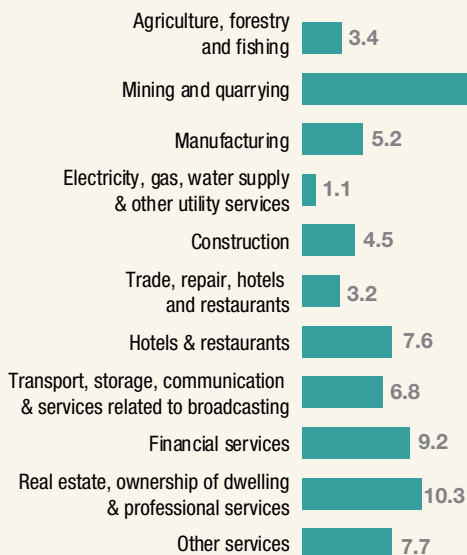
**Source:** Tamil Nadu Industrial Guidance & Export Promotion Bureau, Industries Department, Government of Tamil Nadu.

## Incentives

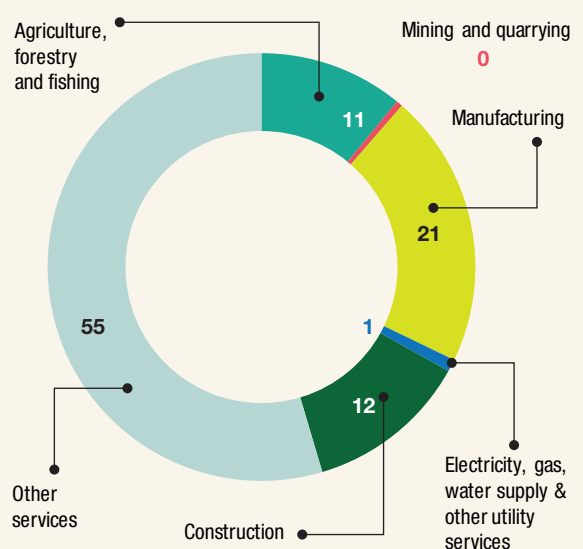
- Capital subsidy, environmental protection infrastructure subsidy
- Exemption from electricity tax, stamp duty on lease or sale of land meant for industrial use
- Incentive available for additional employment generation and SEZ-Developer/Units
- For more details on the incentives and eligibility of the industrial units.

**Source:** Tamil Nadu industrial polict-2014.

## Growth in Gross Value Added, 3 years average ending 2016-17



## Sector-wise Contribution in Gross Value Added, 2016-17

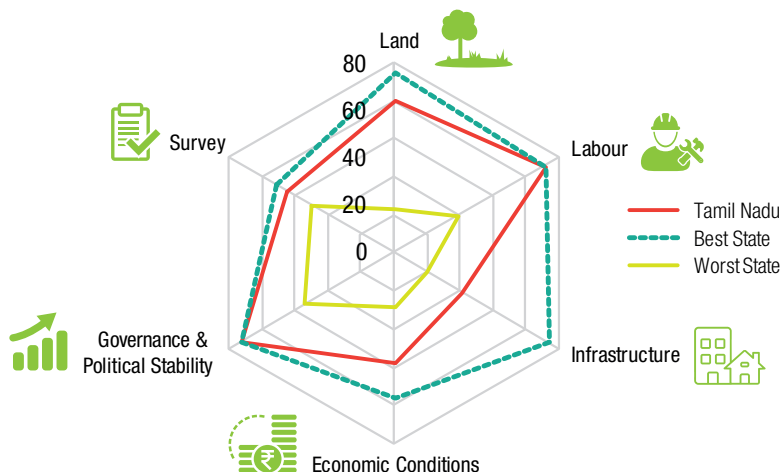


TAMIL NADU

RANK

2

States Performance on the Six Broad Pillars



Tamil Nadu has the highest rank for the pillars Governance and political stability and labour. The state has third rank for Land pillar. The performance on the pillars of Economy and Survey is poor. Overall rank of Tamil Nadu has improved from 8 in N-SIPI'17 to 2 in N-SIPI'18.

Strengths

Tamil Nadu ranks highest in completion of legal cases by courts, lower rates of insurgency and lower power shortages. The state also performs well on percentage of workforce having technical education, share of workforce in manufacturing sector, proximity of state border to metro city.

Weaknesses

The state performs poorly for average tariff for industry, DIPP score, Development expenditure and number of smart cities.

LAND

|                                       | Score       | Rank     |
|---------------------------------------|-------------|----------|
| <b>LAND - OVERALL</b>                 | <b>64.8</b> | <b>3</b> |
| Land related stalled projects         | 86.9        | 5        |
| Industrial parks in state             | 83.1        | 4        |
| Digitized land records                | 82.0        | 15       |
| Land available for industrial purpose | 7.1         | 15       |

LABOUR

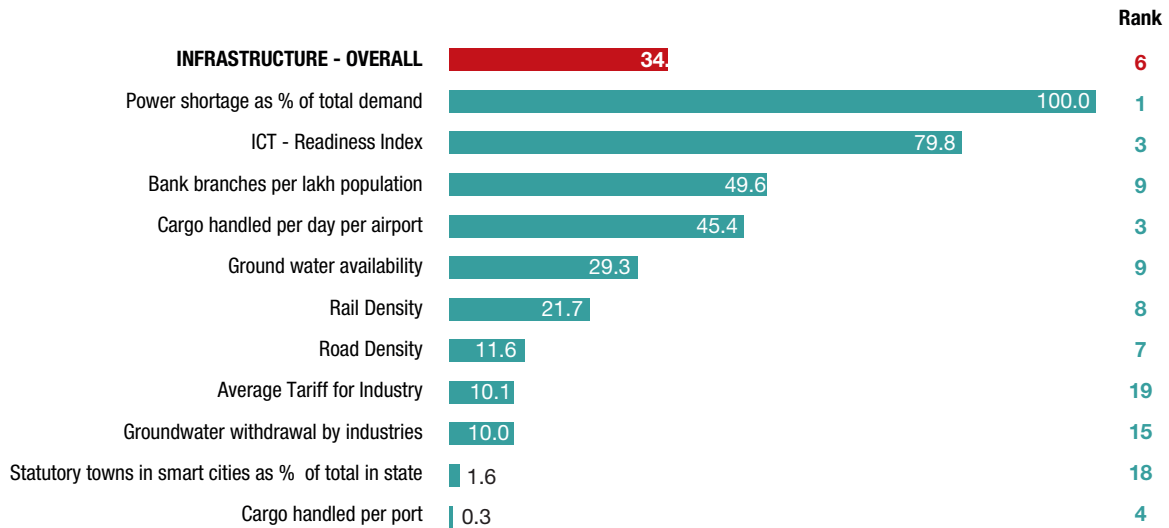
|  | Score       | Rank     |
|--|-------------|----------|
| <b>LABOUR - OVERALL</b>                                  | <b>73.6</b> | <b>1</b> |
| Per cent of workforce having technical education         | 98.9        | 2        |
| Share of workforce in manufacturing sector               | 94.6        | 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                                 | 38.2        | 7        |

SURVEY

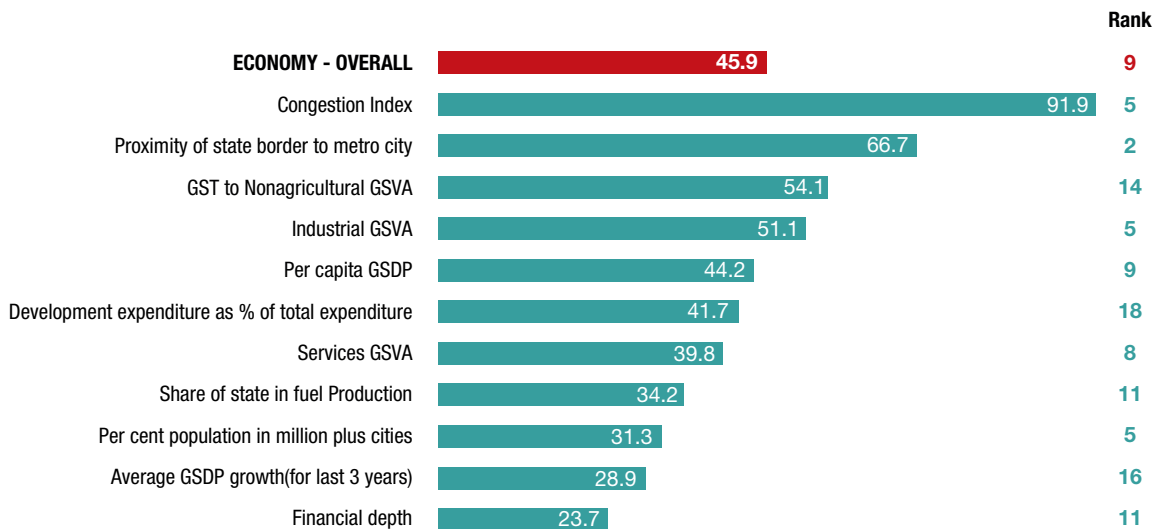
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>SURVEY - OVERALL</b>                          | <b>52.5</b> | <b>10</b> |
| Perception on infrastructure                     | 62.0        | 5         |
| Perception on land                               | 59.3        | 14        |
| Perception on economic conditions                | 52.9        | 10        |
| Perception on labour                             | 52.1        | 11        |
| Perception on business climate                   | 46.6        | 14        |
| Perception on governance and political stability | 42.2        | 9         |



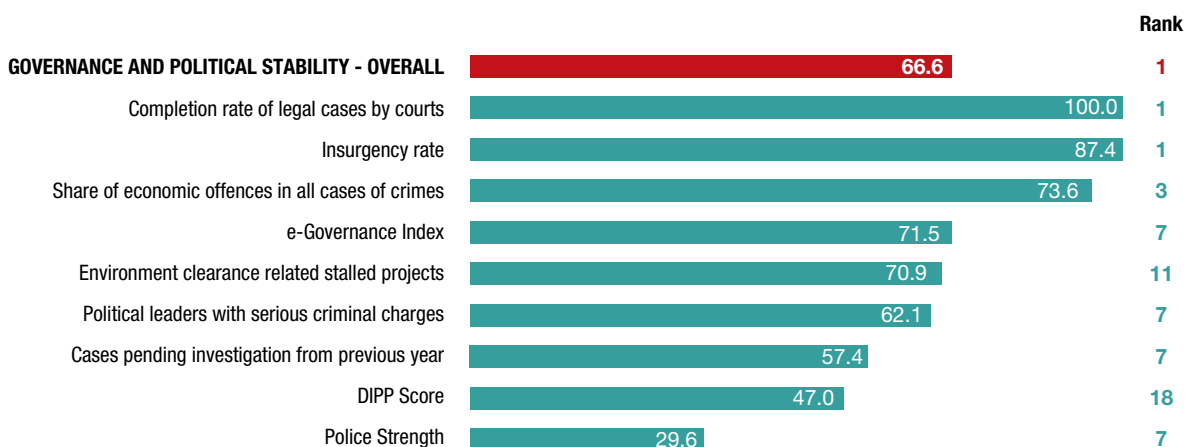
## INFRASTRUCTURE



## ECONOMY



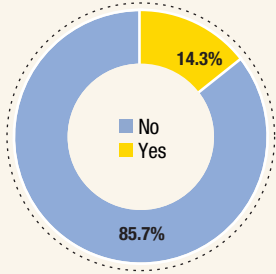
## GOVERNANCE AND POLITICAL STABILITY



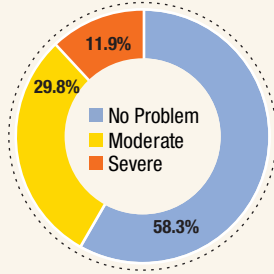
# SURVEY RESULTS

## Perceptions on land

Percentage respondents facing a problem in acquiring land

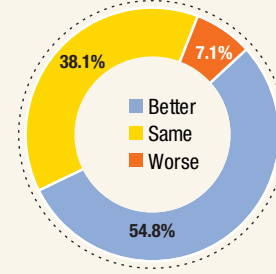


Percentage respondents facing problem in getting approvals for land



## Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



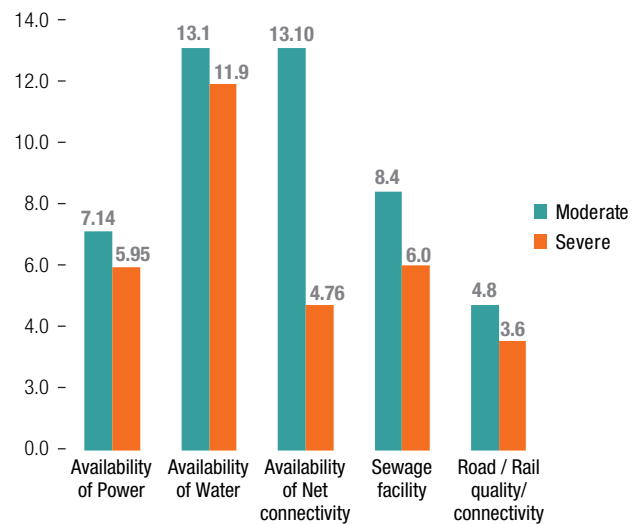
## Labour related issues

% respondents finding these a moderate or severe problem



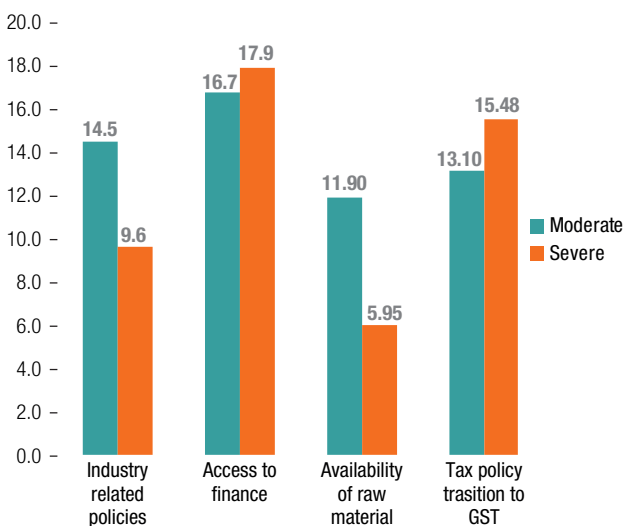
## Infrastructure related issues

% respondents finding these a moderate or severe problem



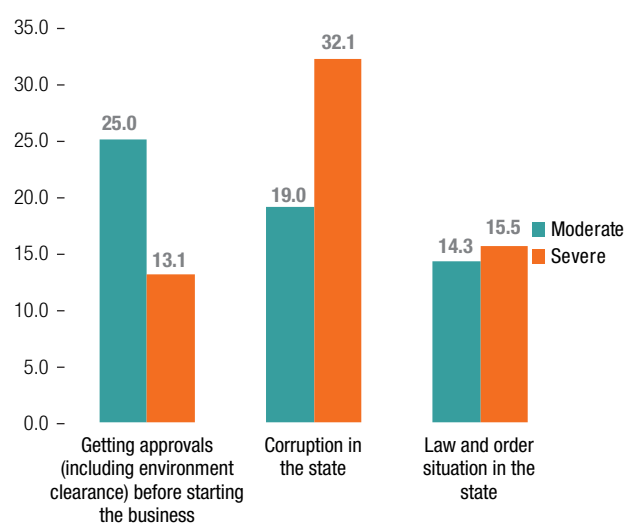
## Economy related issues

% respondents finding these a moderate or severe problem



## Governance related issues

% respondents finding these a moderate or severe problem



# Telangana



## Statistics

|                    |                        |
|--------------------|------------------------|
| Capital:           | Hyderabad              |
| Area (Sp.km):      | 1,14840                |
| Location:          | Southern India         |
| Per capita Income: | Rs. 155612 for 2016-17 |
| Population:        | 35003674               |
| Literacy Rates:    | 66.5                   |

## State Focus Sectors

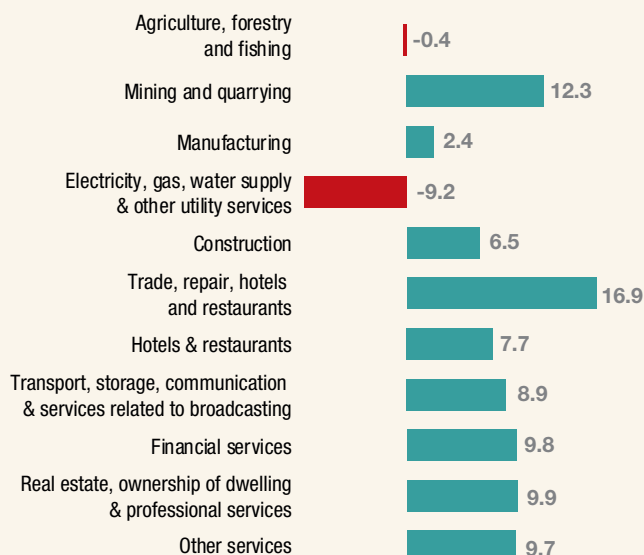
- Pharma/Biotech R& D
- Food Processing
- Gems & Jewellery
- Electrical power generation equipment

## Incentives

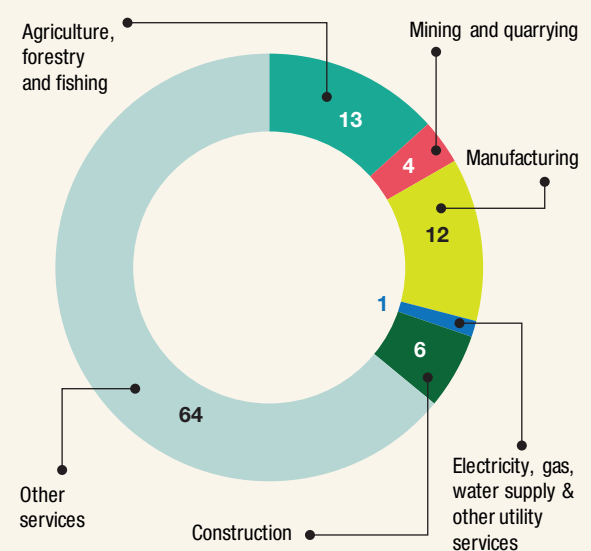
- Reimbursement of stamp duty, power cost, VAT, training & skill development cost, infrastructure development costs
- Investment subsidy, interest subsidy, land cost rebate, land conversion cost, seed capital for 1st generation entrepreneur is also available
- Industrial parks and the required infrastructure 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 to industrial Policy Frame work for the state of Telangana 2014.

Source: Resident Commissioner Government of Telanga-2014.

## Growth in Gross Value Added, 3 years average ending 2016-17



## Sector wise contribution in Gross Value Added, 2016-17

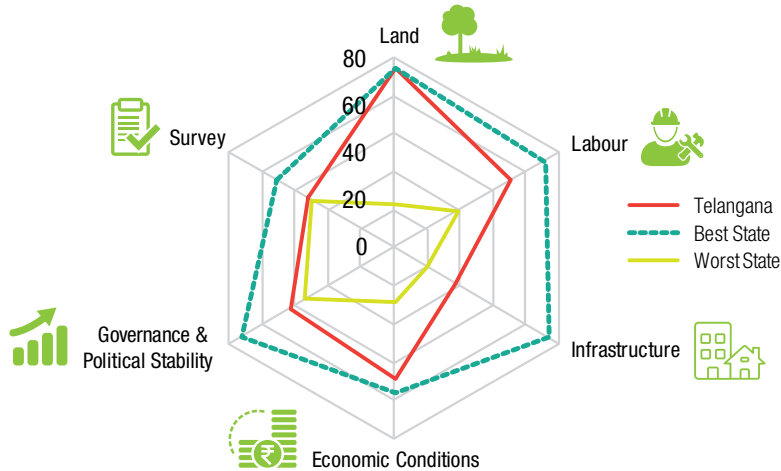


TELANGANA

RANK

8

States Performance on the Six Broad Pillars



The state ranks highest in the Land pillar and second in the economy pillar. For survey, the state ranks last but one. Overall rank of the state has gone down from 5 in N-SIPI'17 to 8 in N-SIPI'18.

Strengths

Telangana ranks highest in terms of digitalization of land records, industrial parks in state, power shortages and DIPP Score. The state has also performed well in labour force participation rate, average wages in manufacturing sector and services GSVA.

Weaknesses

The perception has taken quite a dip in comparison to the previous survey, perception on labour and business climate. Also, the state has perform poorly on seating capacity of ITIs, industrial GSVA and rail density.

LAND

|                                       | Score       | Rank     |
|---------------------------------------|-------------|----------|
| <b>LAND - OVERALL</b>                 | <b>76.9</b> | <b>1</b> |
| Digitized land records                | 100.0       | 1        |
| Industrial parks in state             | 100.0       | 1        |
| Land related stalled projects         | 88.1        | 4        |
| Land available for industrial purpose | 19.5        | 9        |

LABOUR

|  | Score       | Rank     |
|--|-------------|----------|
| <b>LABOUR - OVERALL</b>                                  | <b>57.2</b> | <b>7</b> |
| 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                                 | 0.0         | 21       |

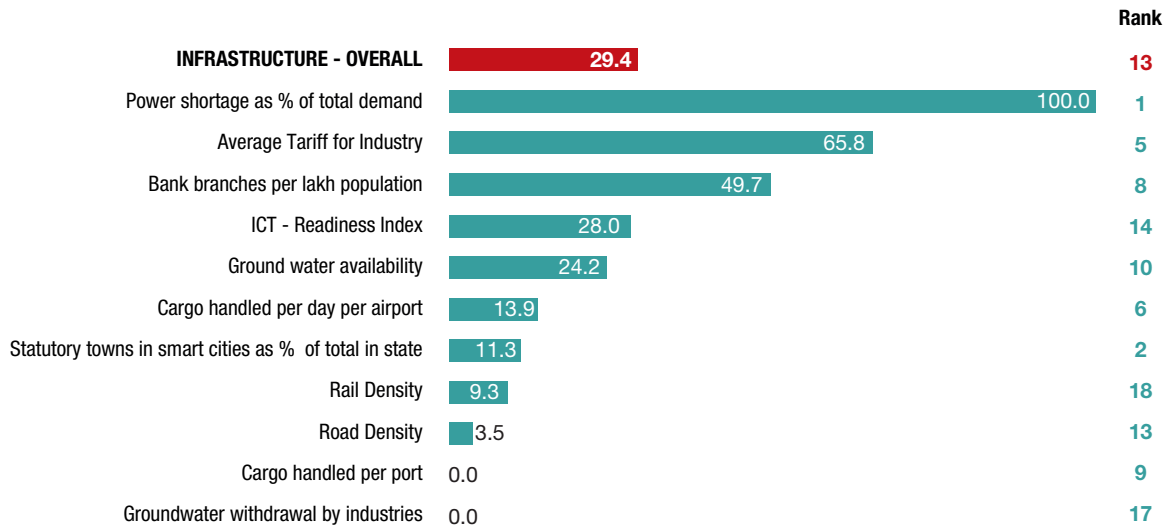
SURVEY

|  | Score       | Rank      |
|--|-------------|-----------|
| <b>SURVEY - OVERALL</b>                          | <b>41.9</b> | <b>20</b> |
| Perception on land                               | 57.0        | 16        |
| Perception on infrastructure                     | 41.9        | 19        |
| Perception on business climate                   | 40.6        | 20        |
| Perception on labour                             | 39.2        | 20        |
| Perception on economic conditions                | 38.2        | 19        |
| Perception on governance and political stability | 34.4        | 17        |

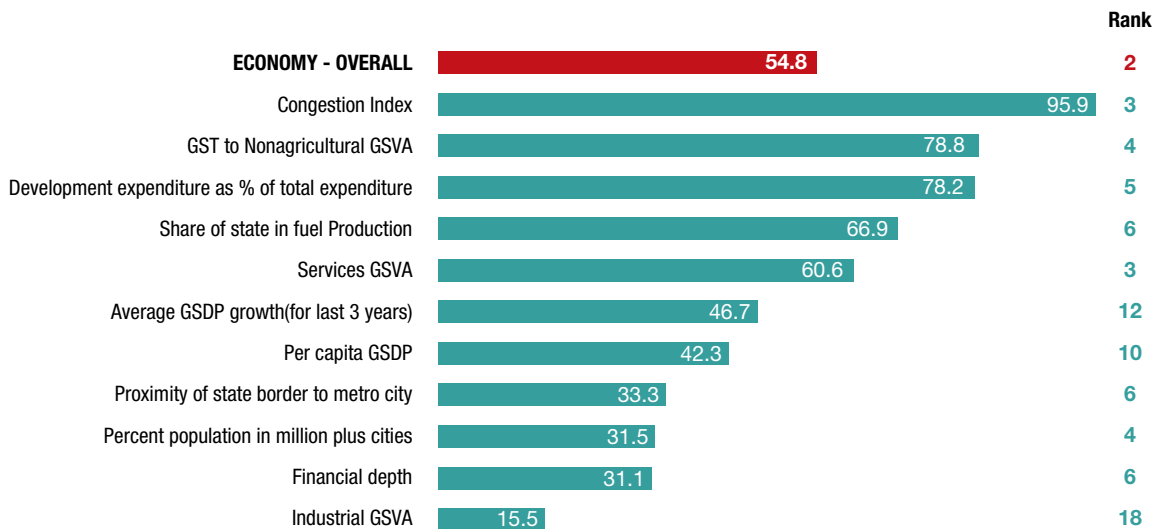




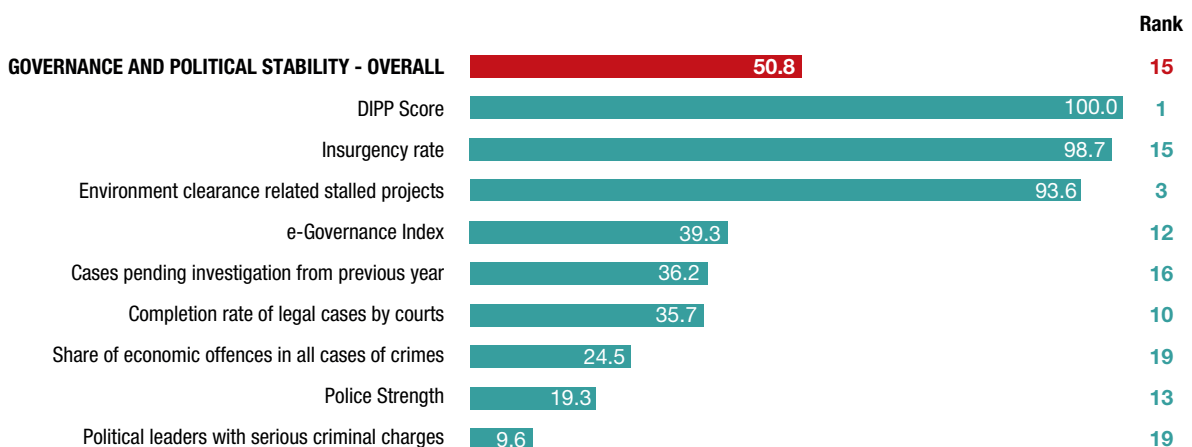
## INFRASTRUCTURE



## ECONOMY



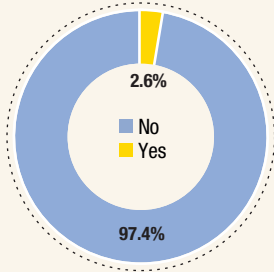
## GOVERNANCE AND POLITICAL STABILITY



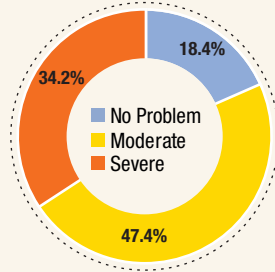
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

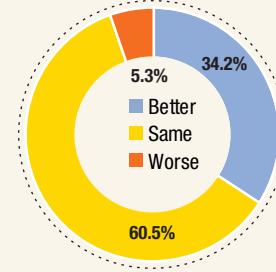


Percentage respondents facing problem in getting approvals for land



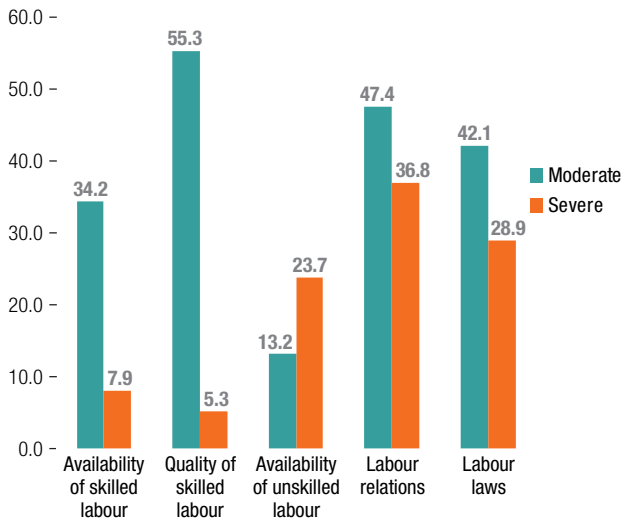
### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



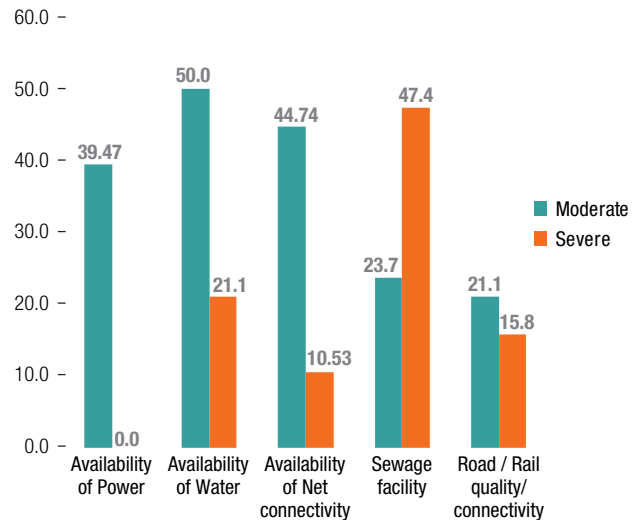
### Labour related issues

% respondents finding these a moderate or severe problem



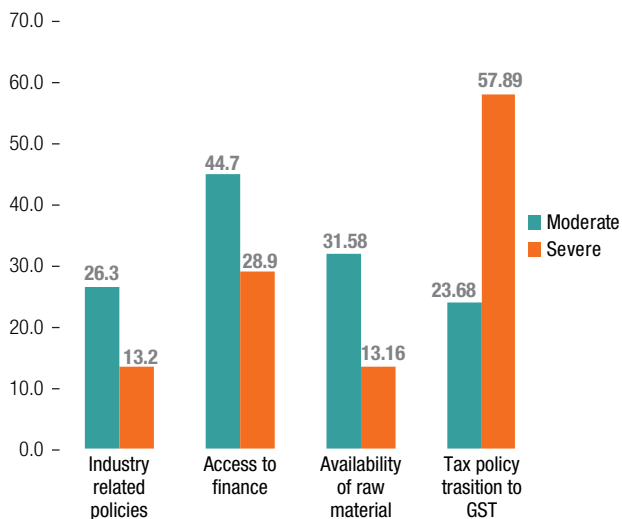
### Infrastructure related issues

% respondents finding these a moderate or severe problem



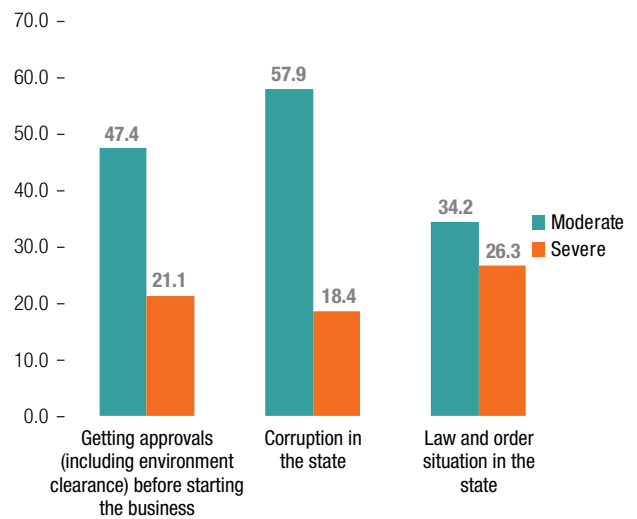
### Economy related issues

% respondents finding these a moderate or severe problem



### Governance related issues

% respondents finding these a moderate or severe problem



# Uttar Pradesh



## Statistics

|                    |                        |
|--------------------|------------------------|
| Capital:           | Lucknow                |
| Area (Sq.Km)       | 2,40,928               |
| Location:          | North India            |
| Population:        | 199,812,341            |
| Per capita Income: | Rs. 50,203 for 2016-17 |
| Literacy Rate:     | 69.72% for 2017        |

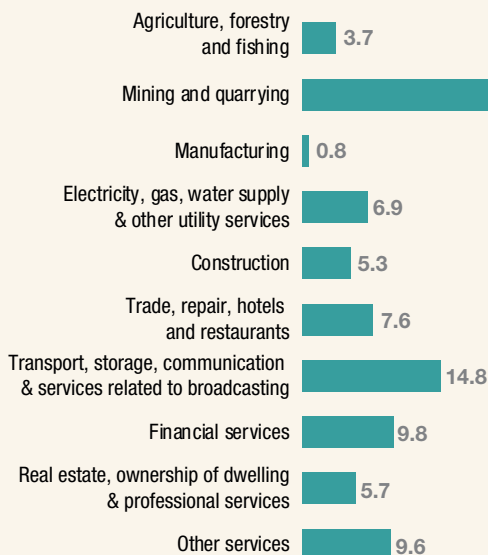
## State Focus Sectors

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

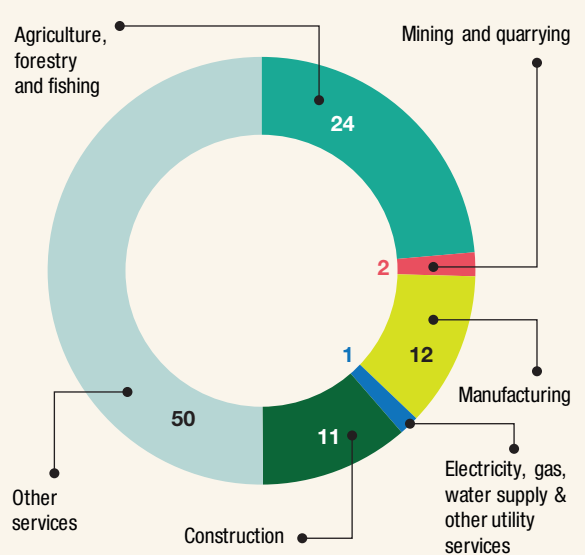
## Incentives

- 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
- Stamp duty of 100% in Bundelkhand&Poorvanchal, 60% in Madhyanchal and 50% in Paschimanchal regions of the state
- EPF reimbursement facility to the extent of 50% to all such new Industrial units providing direct employment to 100 or more unskilled workers
- For more detail on the incentives and eligibility of the industrial units, please refer to infrastructure and industrial investment Policy, 2012, and *Industrial Investment and Employment Promotion Policy of Uttar Pradesh-2017* Uttar Pradesh.

## Growth in Gross Value Added, 3 years average ending 2016-17



## Sector-wise contribution in Gross Value Added, 2016-17

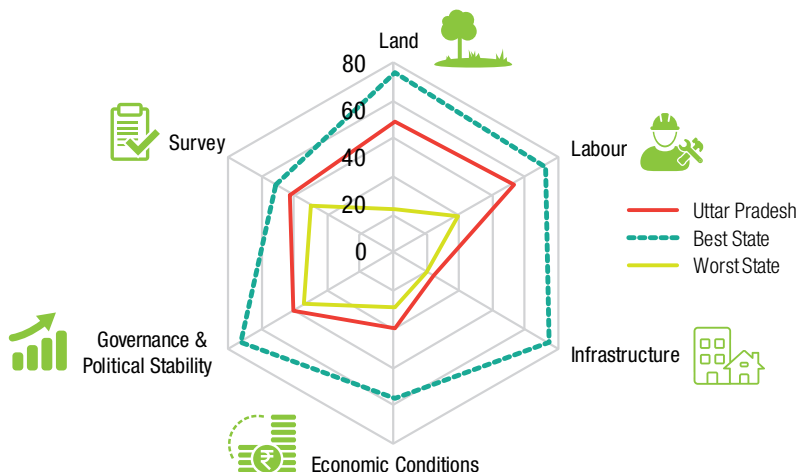


# UTTAR PRADESH

**RANK**

**18**

## States Performance on the Six Broad Pillars



Uttar Pradesh's overall rank has improved from 20 in N-SIPI'17 to 18 in N-SIPI'18. The state ranks among the lowest on economy, governance and political stability and infrastructure. It does well on the land and Labour pillars.

### Strengths

Uttar Pradesh is uniquely positioned to reap the advantage of its young population, younger than in most other States, thanks to having the highest share of seats in ITIs in India.

### Weaknesses

Apart from poor governance and infrastructure, Uttar Pradesh is also handicapped by its low level of economic development.

## LAND

|                                       | Score       | Rank     |
|---------------------------------------|-------------|----------|
| <b>LAND - OVERALL</b>                 | <b>56.0</b> | <b>7</b> |
| Land related stalled projects         | 86.3        | 6        |
| Digitized land records                | 84.9        | 14       |
| Industrial parks in state             | 40.7        | 8        |
| Land available for industrial purpose | 12.1        | 12       |

## LABOUR

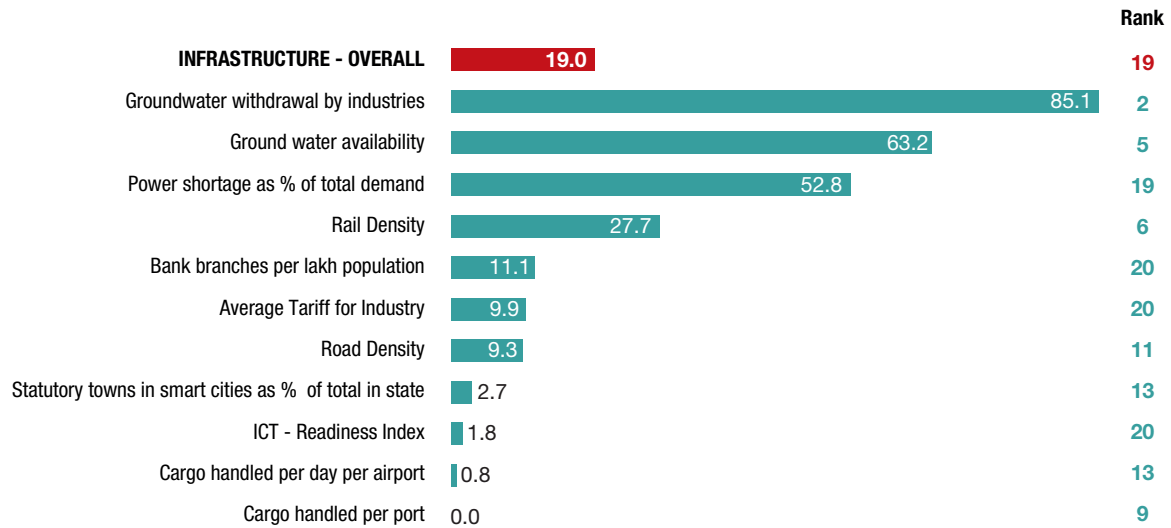
|  | Score       | Rank     |
|--|-------------|----------|
| <b>LABOUR - OVERALL</b>                                  | <b>58.4</b> | <b>4</b> |
| Seating capacity of ITIs                                 | 100.0       | 1        |
| Average wages of salaried persons                        | 94.1        | 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       |
| Per cent of workforce having technical education         | 8.7         | 17       |

## SURVEY

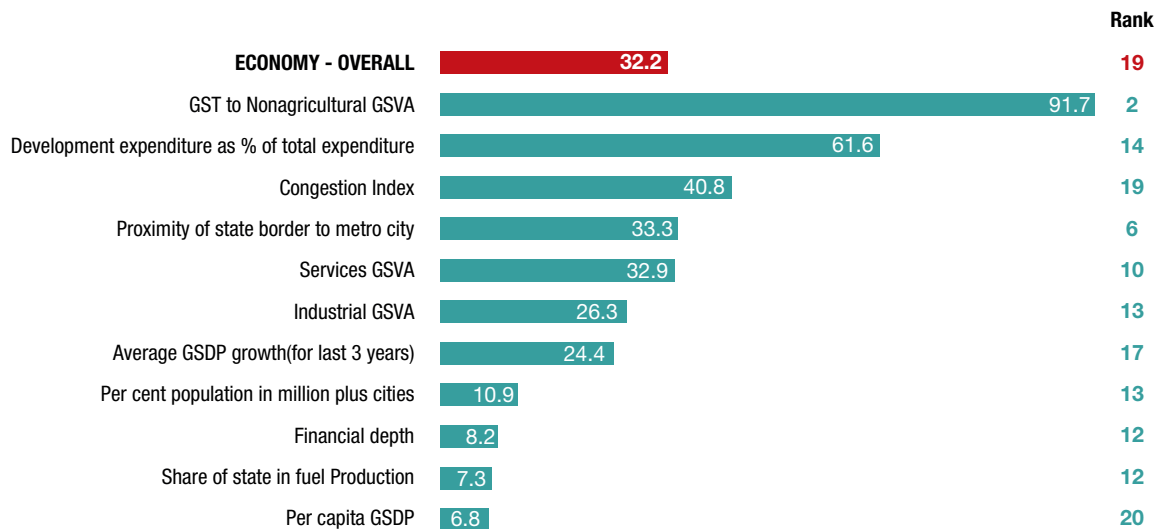
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>SURVEY - OVERALL</b>                          | <b>49.7</b> | <b>13</b> |
| Perception on land                               | 64.0        | 6         |
| Perception on infrastructure                     | 51.5        | 16        |
| Perception on business climate                   | 48.8        | 9         |
| Perception on labour                             | 47.9        | 13        |
| Perception on economic conditions                | 47.6        | 15        |
| Perception on governance and political stability | 38.6        | 13        |



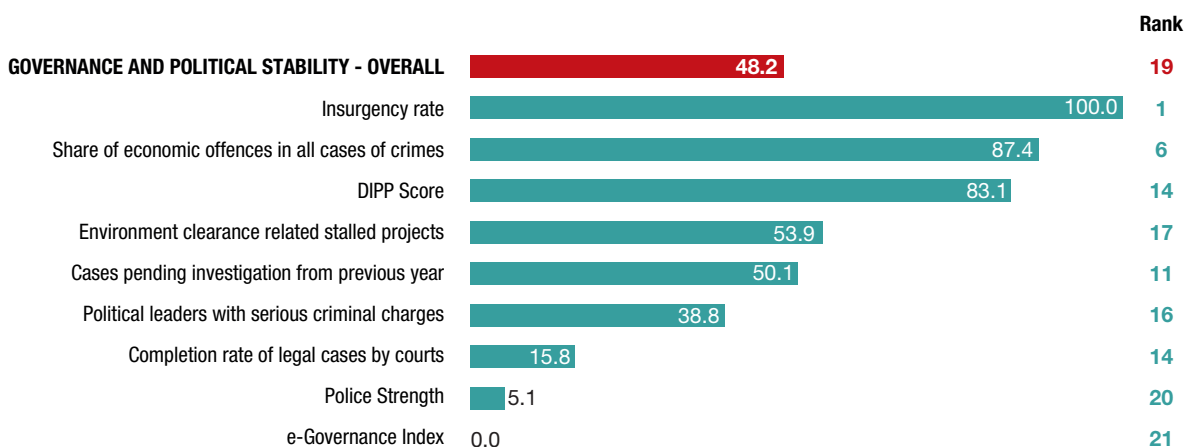
## INFRASTRUCTURE



## ECONOMY



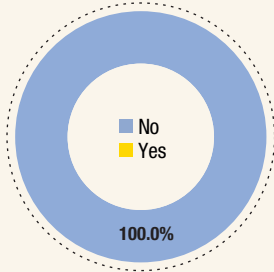
## GOVERNANCE AND POLITICAL STABILITY



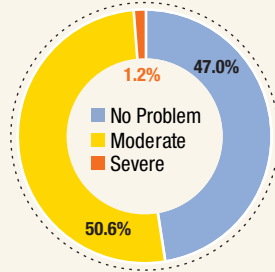
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

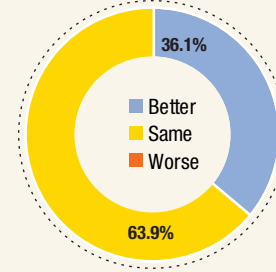


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



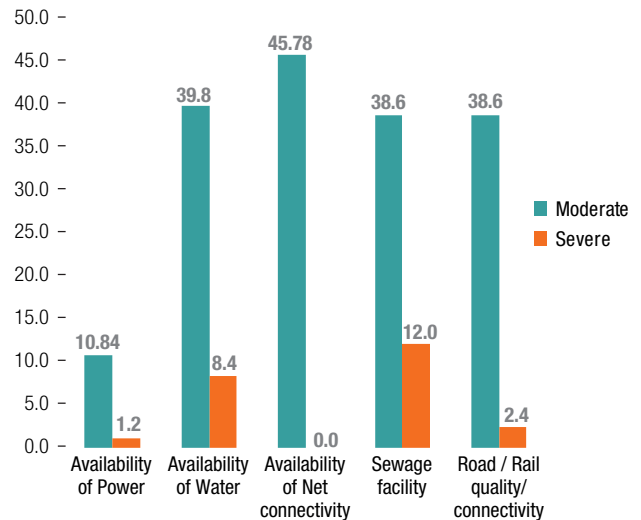
### Labour related issues

% respondents finding these a moderate or severe problem



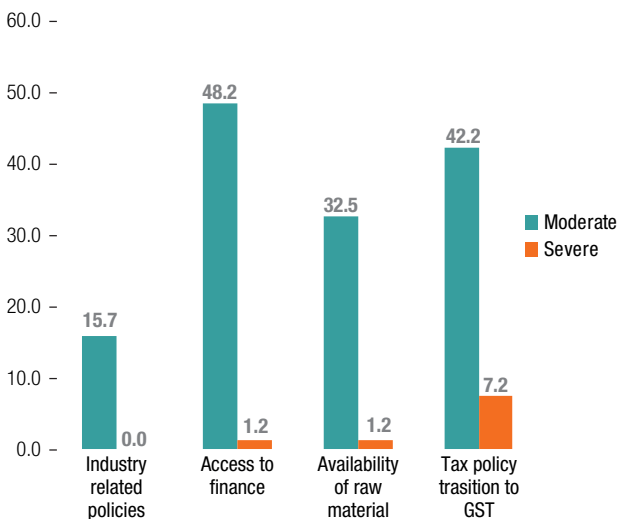
### Infrastructure related issues

% respondents finding these a moderate or severe problem



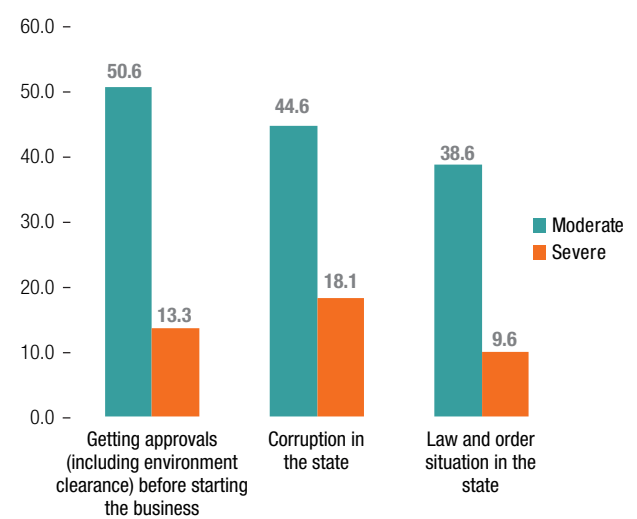
### Economy related issues

% respondents finding these a moderate or severe problem



### Governance related issues

% respondents finding these a moderate or severe problem



# Uttarakhand



## Statistics

|                    |                        |
|--------------------|------------------------|
| Capital:           | Dehradun               |
| Area (Sq.Km)       | 53483                  |
| Location:          | North India            |
| Population:        | 10,086,292             |
| Per capita Income: | Rs. 161102 for 2016-17 |
| Literacy Rate:     | 79.63 % for 2017       |

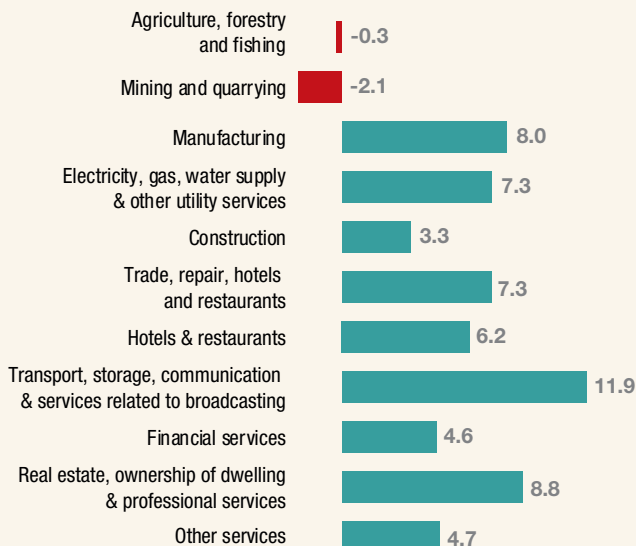
## State Focus Sectors

- Bio-technology
- Tourism
- Agro and food processing
- Textile sector
- Skill development
- Hotel management and health care sector
- Handlooms and Handicrafts
- Petrol –Diesel pumping station/Gas Goodwin

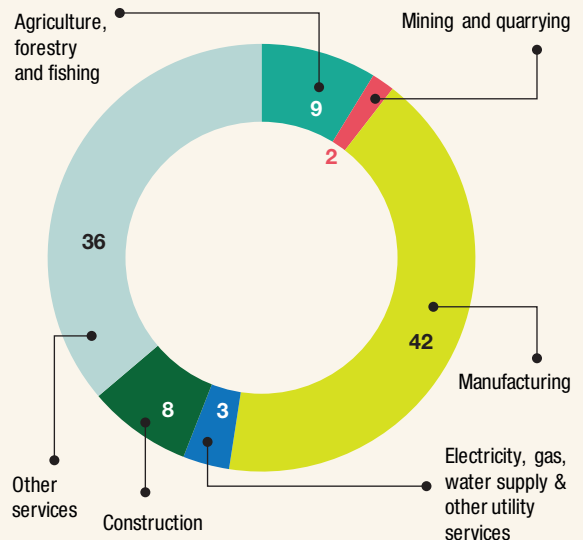
## Incentives

- 100% reimbursement of VAT on sale shall be made to eligible unit under the policy for seven years from the date of commencement of commercial production.
- 100% reimbursement of VAT on purchase of Raw material and packing material under Uttarakhand value added Tax Act, 2005.
- Eligible Textile units will be provided continuous power supply with pre-declared power roasting for next seven years after commencement of commercial production.
- For more details: refer *Uttarakhand MSME Policy-2015*.

## Growth in Gross Value Added, 3 years average ending -2016-17



## Sector-wise contribution in Gross Value Added, 2016-17

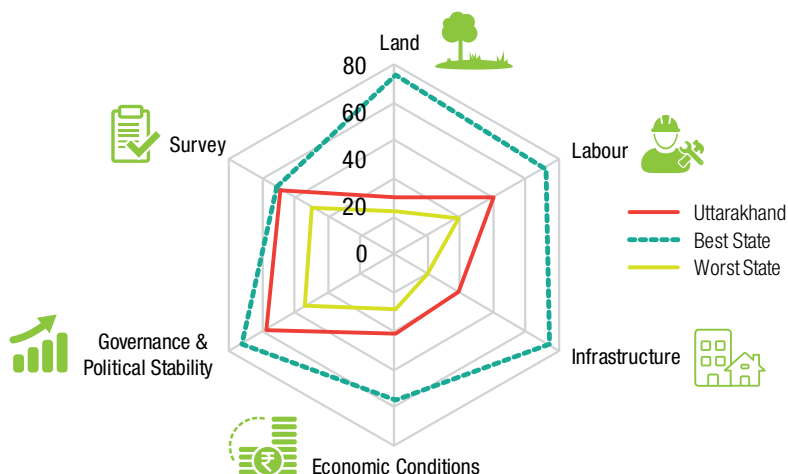


## UTTARAKHAND

RANK

15

### States Performance on the Six Broad Pillars



Uttarakhand's overall rank declined from 12 in N-SIPI'17 to 15 in the 2018 update. The state performed poorly on the pillars of economy and Land. The performance is relatively better for all other pillars.

#### Strengths

Uttarakhand ranks highest for average tariff for industry, Industrial GSVAs, less number of cases pending investigation from previous years and lower insurgency rates. The state also fares well on the perception on land, per capita GSDP and share of contract workers in total labour force.

#### Weakness

The state performs poorly on GST to non-agricultural GSVAs, stalled projects due to environmental clearance and rail density.

## LAND

|                                       | Score       | Rank      |
|---------------------------------------|-------------|-----------|
| <b>LAND - OVERALL</b>                 | <b>24.2</b> | <b>19</b> |
| Land related stalled projects         | 50.9        | 16        |
| Land available for industrial purpose | 35.5        | 5         |
| Digitized land records                | 10.5        | 18        |
| Industrial parks in state             | 0.0         | 17        |

## LABOUR

|  | Score       | Rank      |
|--|-------------|-----------|
| <b>LABOUR - OVERALL</b>                                  | <b>49.3</b> | <b>11</b> |
| 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        |
| Seating capacity of ITIs                                 | 6.3         | 17        |
| Percent of workforce having technical education          | 5.4         | 18        |

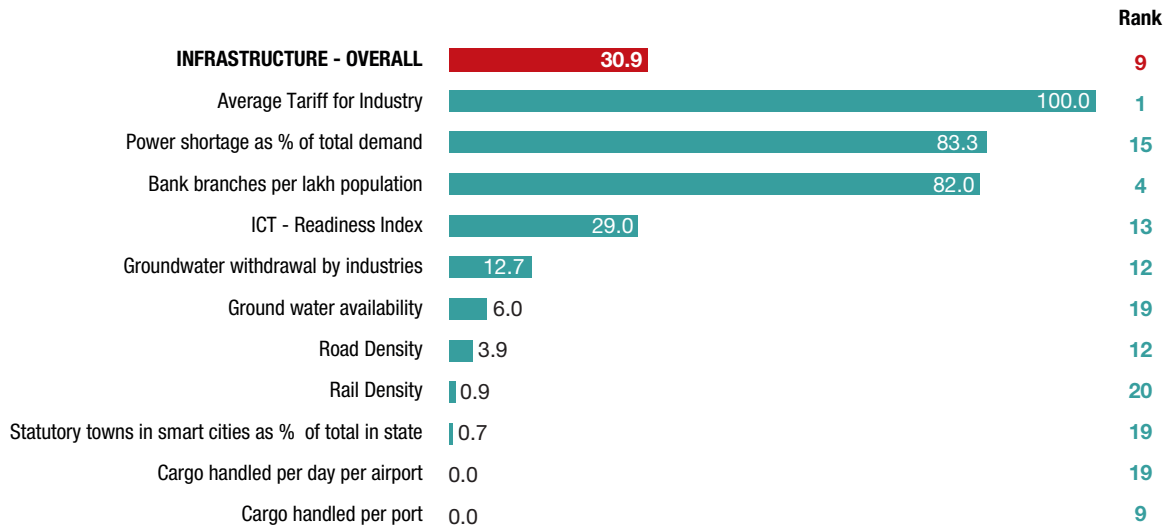
## SURVEY

|  | Score       | Rank     |
|--|-------------|----------|
| <b>SURVEY - OVERALL</b>                          | <b>55.3</b> | <b>6</b> |
| Perception on land                               | 68.1        | 2        |
| Perception on infrastructure                     | 60.3        | 9        |
| Perception on labour                             | 56.5        | 5        |
| Perception on economic conditions                | 55.1        | 8        |
| Perception on business climate                   | 48.0        | 12       |
| Perception on governance and political stability | 44.0        | 8        |

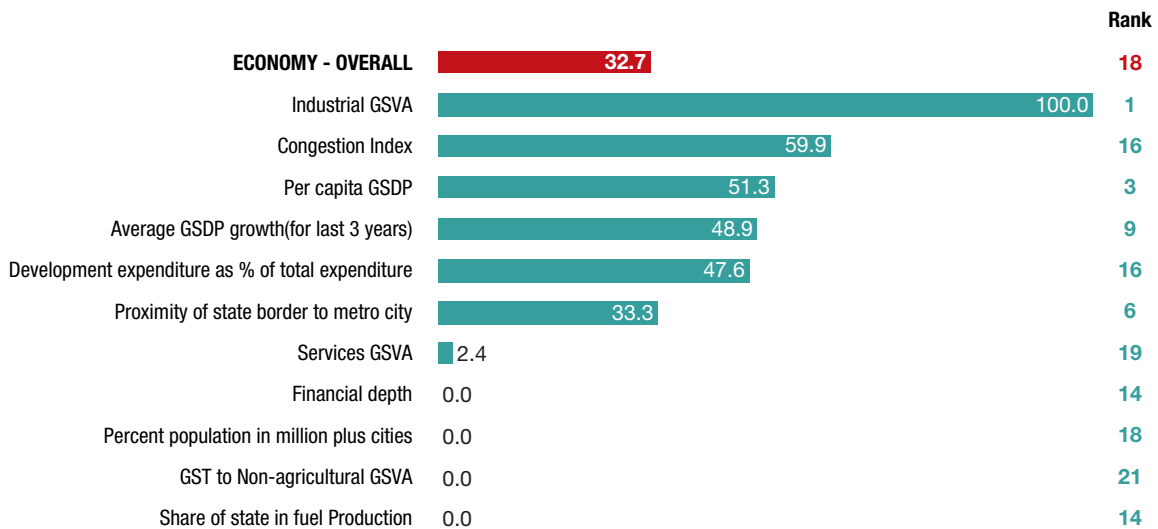




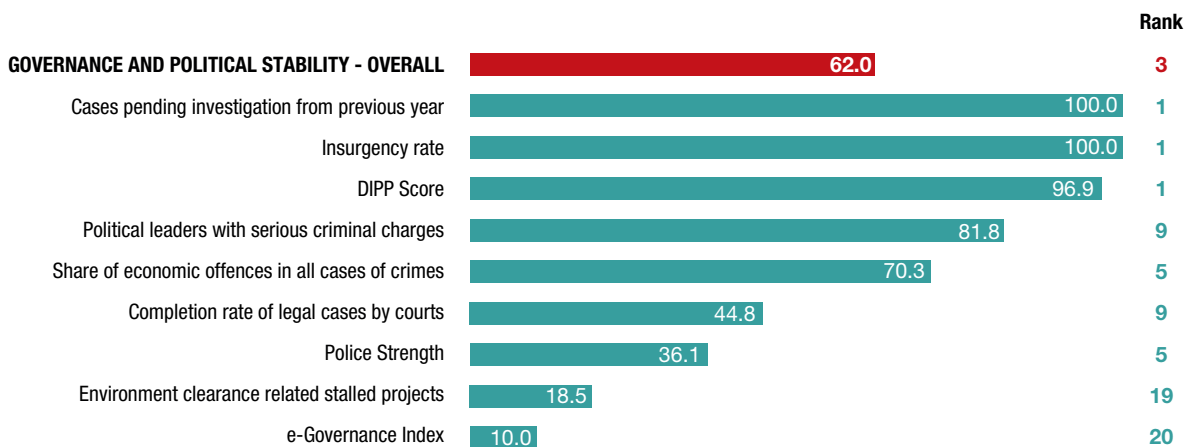
## INFRASTRUCTURE



## ECONOMY



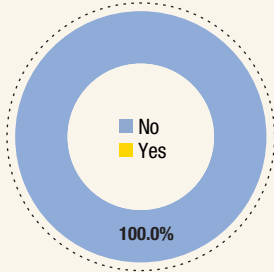
## GOVERNANCE AND POLITICAL STABILITY



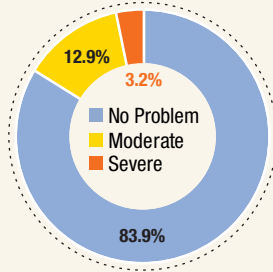
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

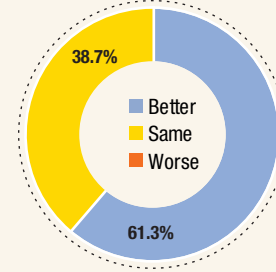


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



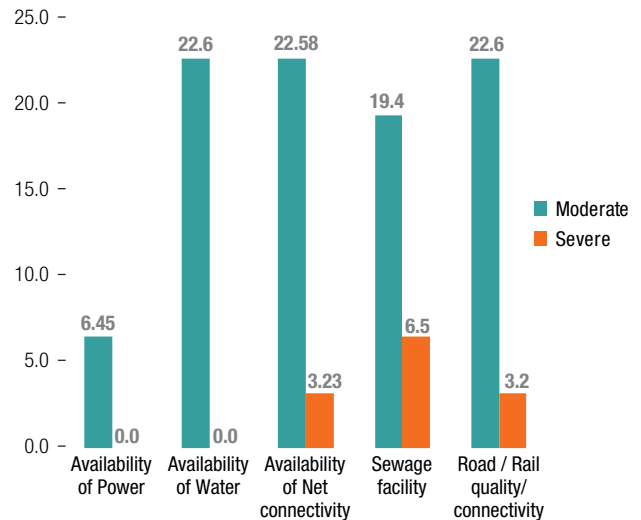
### Labour related issues

% respondents finding these a moderate or severe problem



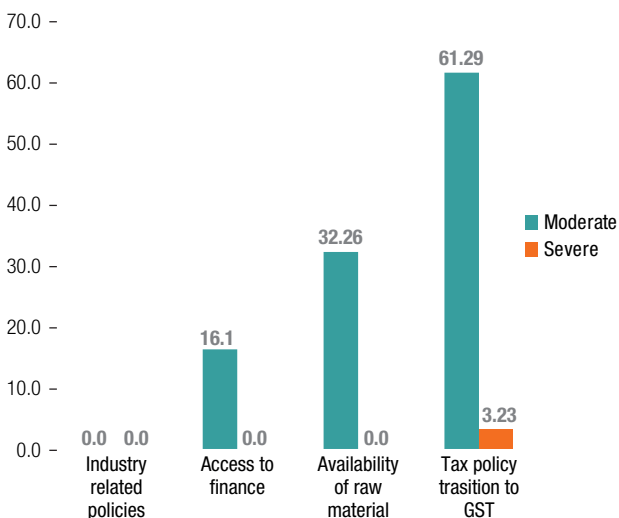
### Infrastructure related issues

% respondents finding these a moderate or severe problem



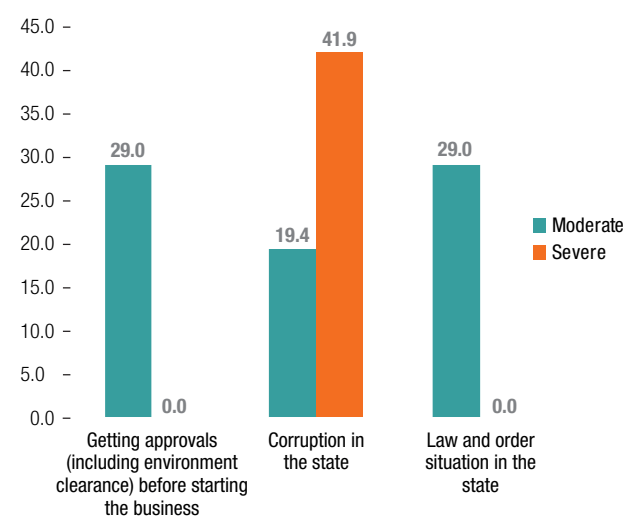
### Economy related issues

% respondents finding these a moderate or severe problem

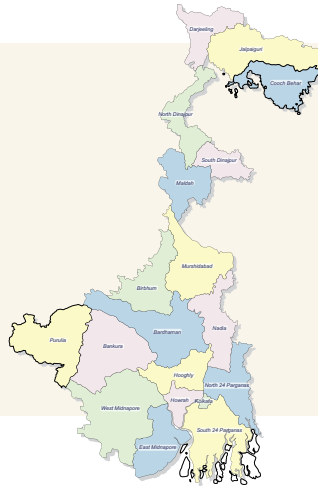


### Governance related issues

% respondents finding these a moderate or severe problem



# West Bengal



## Statistics

|                          |                |
|--------------------------|----------------|
| Capital:                 | Kolkata        |
| Area (sq.km):            | 88752          |
| Location:                | Eastern India  |
| Population:              | 98,945,546     |
| Per Capita Income:       | (Rs.) 108372   |
| Total Literacy Rate (%): | 77.08 for 2017 |

## State Focus Sectors

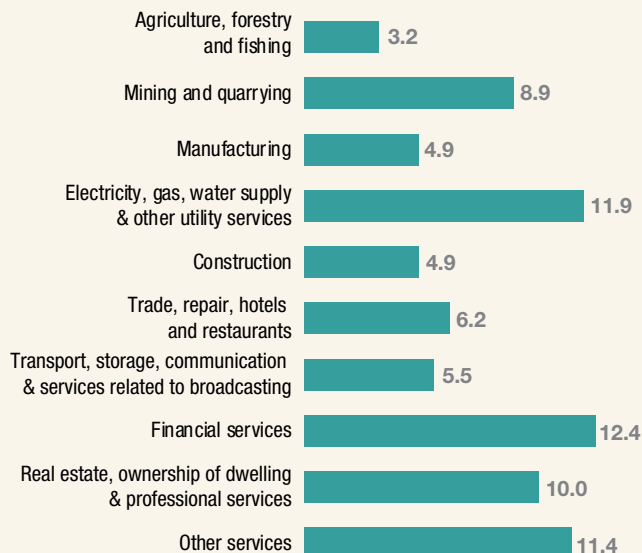
- MSME- in the forefront of economic rejuvenation and incentive policy-2013
- ICT sector
- Chemicals, Petrochemicals and Downstream Industries
- Tourism
- Higher Education
- Agro based, food processing and Aqua Culture
- Textile and Jute
- Gems and Jewellery
- Leather

## Incentives

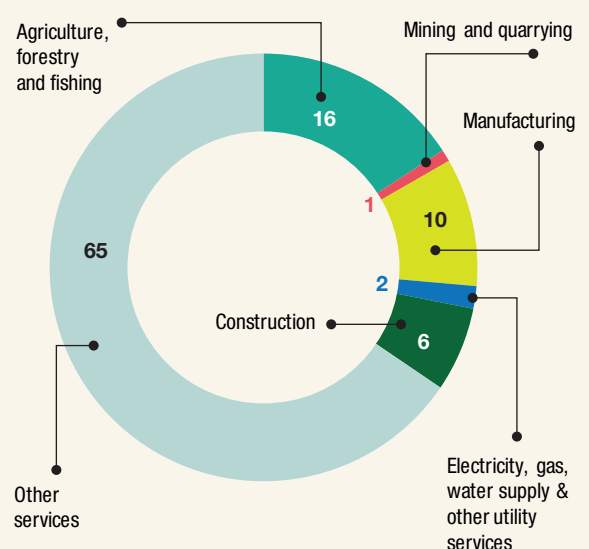
- Fiscal Incentives package for large-scale units to be set up in the state.
- Attractive incentive packages for MSME in terms State capital investment subsidy, interest subsidy on terms of loan, power subsidy, refund of VAT and CST.
- The state government has also launched Scheme of Approved Industrial 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 detail on the incentives and eligibility of the industrial units, please refer to West Bengal Incentive Scheme 2013-14 for MSME and WBIDC website.

Source: Investment and Industrial Policy of West Bengal -2013.

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



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

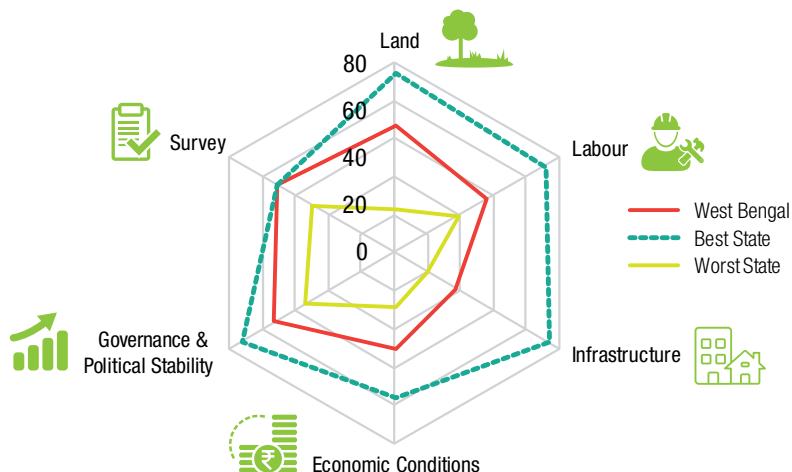


## WEST BENGAL

**RANK**

**10**

### States Performance on the Six Broad Pillars



West Bengal has witnessed a significant improvement in the overall ranking from 21 in N-SIPI'17 to 10 in N-SIPI'18. The state has performed surprisingly well on the survey pillar. Also, the state is in the top 10 of the Infrastructure pillar.

#### Strengths

West Bengal has good infrastructure and despite years of Left-party rule, does reasonably well on the 'economy' pillar thanks to a relatively high share of services in its state domestic product (GSDP) and high ratio of credit to GSDP.

#### Weaknesses

The biggest obstacle the state faces seems to be the poor perception of business climate and poor ranking on the labour pillar.

## LAND

|                                       | Score       | Rank      |
|---------------------------------------|-------------|-----------|
| <b>LAND - OVERALL</b>                 | <b>54.5</b> | <b>11</b> |
| Digitized land records                | 100.0       | 1         |
| Land related stalled projects         | 58.3        | 13        |
| Land available for industrial purpose | 51.2        | 2         |
| Industrial parks in state             | 8.5         | 13        |

## LABOUR

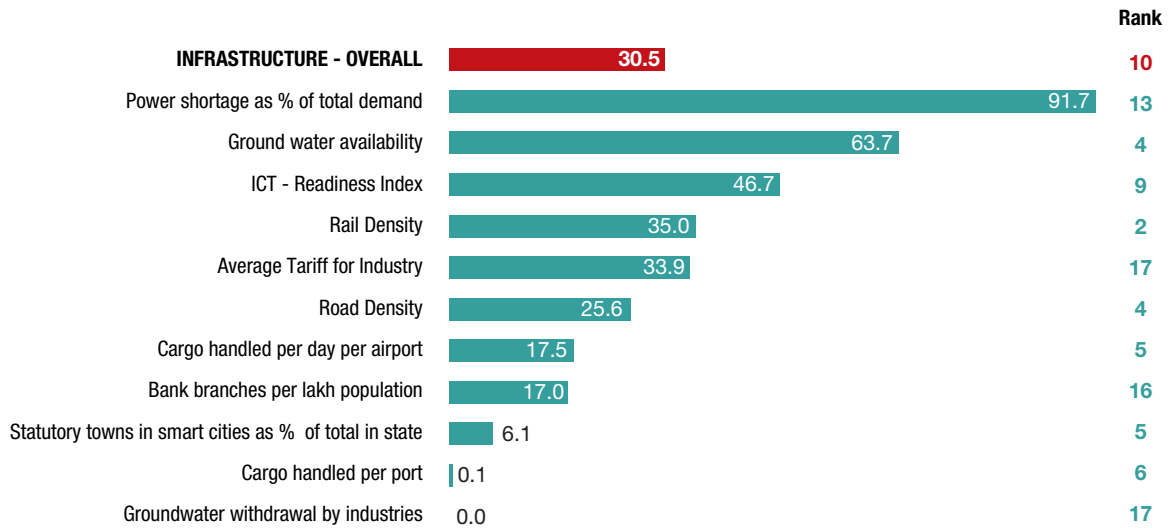
|  | Score       | Rank      |
|--|-------------|-----------|
| <b>LABOUR - OVERALL</b>                                  | <b>45.7</b> | <b>17</b> |
| Share of workforce in manufacturing sector               | 100.0       | 1         |
| Share of contract workers in total labour force          | 70.5        | 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                                 | 6.0         | 18        |

## SURVEY

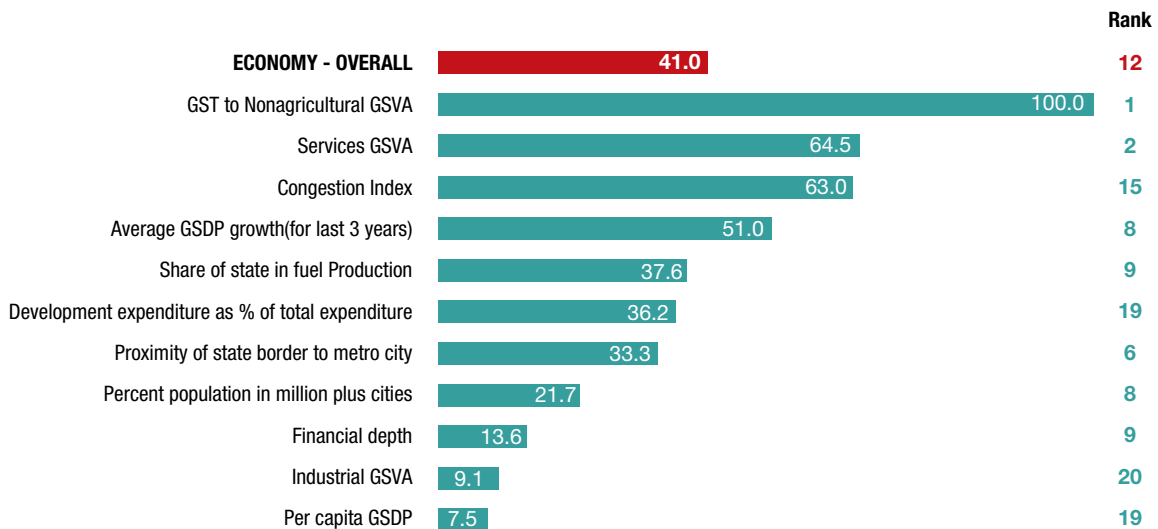
|  | Score       | Rank     |
|--|-------------|----------|
| <b>SURVEY - OVERALL</b>                          | <b>56.7</b> | <b>3</b> |
| Perception on infrastructure                     | 66.0        | 1        |
| Perception on land                               | 64.0        | 7        |
| Perception on economic conditions                | 63.0        | 1        |
| Perception on labour                             | 60.0        | 1        |
| Perception on governance and political stability | 45.4        | 6        |
| Perception on business climate                   | 44.4        | 17       |



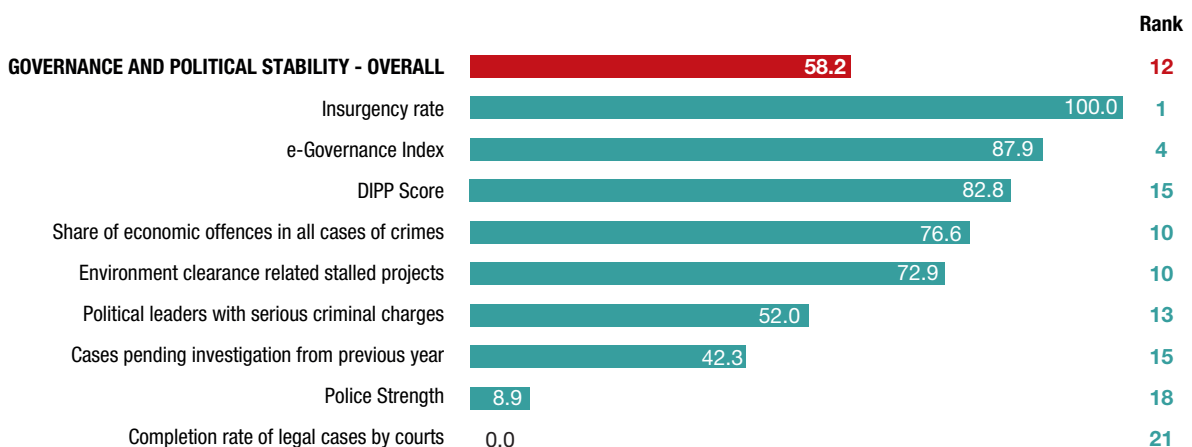
## INFRASTRUCTURE



## ECONOMY



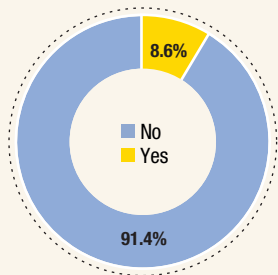
## GOVERNANCE AND POLITICAL STABILITY



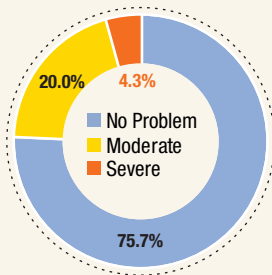
## SURVEY RESULTS

### Perceptions on land

Percentage respondents facing a problem in acquiring land

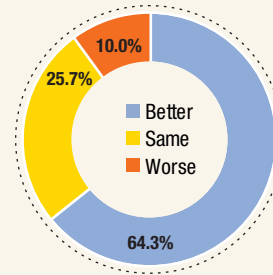


Percentage respondents facing problem in getting approvals for land



### Perceptions on business climate

Percentage respondents perceiving business conditions one year ahead



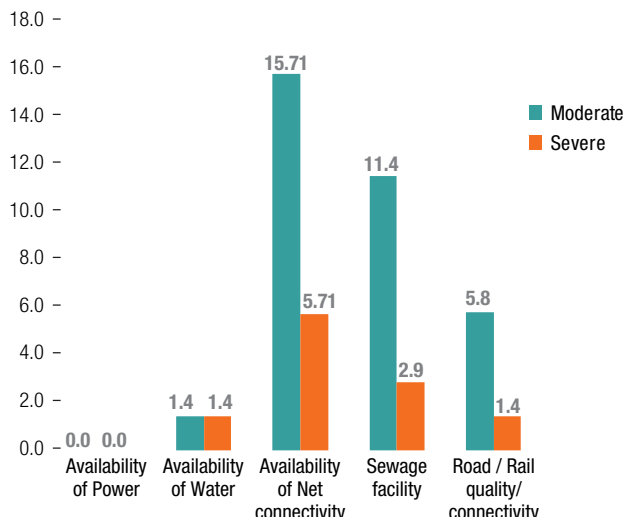
### Labour related issues

% respondents finding these a moderate or severe problem



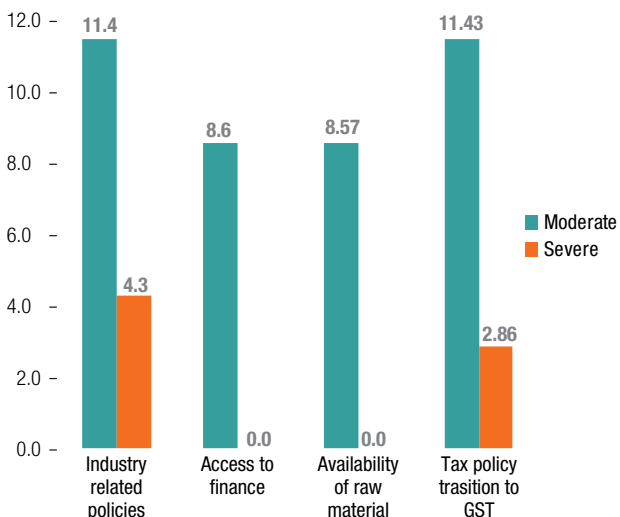
### Infrastructure related issues

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

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

where  $i=1,2,\dots,21$  represents the number of states,  $j=1,2,\dots,n$  represents the number of sub-indicators in each pillar, and  $k=1,2,\dots,6$  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:

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

#### 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. 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,  $k=1,2,\dots,6$  represents the six pillars and  $n$  is the number of sub-indicators under each pillar

The weighted geometric mean<sup>1</sup> 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  $k=1,2,\dots,6$  represents the P pillars and  $w_k$  represents the weight for each of the six pillars.

#### 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<sup>2</sup>.

<sup>1</sup> 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.

<sup>2</sup> 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.

## 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, Ministry of Rural Development, GOI   | 2018                  |
|                |                          | 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)                                    | 2018                  |
|                | Availability             | LN3  | Land availability/ land acquired for Industrial purpose  |                                   | State Industrial Development Corporations; Directorates; Ministry of Micro, Small and Medium Enterprises | 2018                  |
|                | Government policy        | LN4  | Industrial parks (SEZs and NIMZs)  |                                   | Ministry of Commerce and Industry  | 2018                  |
| 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  | 2015                  |
|                | 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               |
| Infrastructure | Connectivity             | I1   | Rail Density (length per 1000 sq km)   |                                   | Ministry of Railways, Govt. of India   | 2016-17               |
|                |                          | 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  | 2016-17               |
|                |                          | I3   | Cargo handled per day per airport (tonnes) as percent of total cargo handled in 21 states                            |                                   | Airports Authority of India  | 2017-18               |
|                |                          | 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  | 2016-17               |
|                | Competitiveness          | I5   | Average Tariff for Industry (Rs/KwH)   |                                   | Annual report of state power utilities and Electricity Department  | 2013-14               |
|                |                          | I6   | Power shortage (as % to Total Demand)  |                                   | Ministry of Power, Govt of India   | 2016-17               |
|                | Access                   | I7a  | Net Annual Ground Water Availability (in mcm) per 1000 Hc as % of 21 states  |                                   | Ground Water Yearbook 2010-11, Table 3   | 2013                  |
|                |                          | I7b  | Groundwater withdrawal by industries as % of 21 states   |                                   | Lok Sabha Unstarred Question No. 137, dated on 02.02.2017  | 2011-2015             |
|                |                          | I8   | ICT - Readiness Index  |                                   | NCAER  | 2013                  |
|                | Growth potential         | I10  | I9   | Bank branches per lakh population |  | Reserve Bank of India |
| I10            |                          |      | Number of Statutory Towns in Smart cities as % to Total statutory towns in state                                     |                                   | Ministry of Urban Development; Census of India, 2011   | 2018                  |



| Pillars    | Importance            | Code | Sub-Pillars  | Status | Source  | Year                              |
|------------|-----------------------|------|--|--------|---|-----------------------------------|
| Economy    | Macro fundamentals    | E1   | Industry sector GSVA as % of total GSVA  |        | Ministry of Statistics and Programme Implementation                             | 2015-16                           |
|            |                       | E2   | Services sector GSVA as % of total GSVA  |        | Ministry of Statistics and Programme Implementation                             | 2015-16                           |
|            |                       | E3   | Per capita GSDP  |        | Ministry of Statistics and Programme Implementation                             | 2015-16                           |
|            |                       | E4   | Average GSVA growth (for latest 3 years)   |        | Ministry of Statistics and Programme Implementation                             | 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 Board   | 2016                              |
|            | Government Policies   | E8   | Development expenditure as % of State's total expenditure  |        | RBI State Finances  | 2015-16                           |
|            |                       | E9   | GST Productivity   |        | Ministry of Finance, GoI (GST), GSVA (MOSPI).                                   | GST revenue – 2017 ; GSVA-2015-16 |
|            | Natural Resources     | E10  | Share of state in fuel production  |        | Indian Bureau of Mines  | 2015-16                           |
|            | Finance Resources     | E11  | Financial Depth  |        | RBI (Credit), MOSPI(GSDP)   | 2015-16                           |
| Governance | Crime                 | G1   | Number of economic offences per lakh population in each state  |        | National Crime Records Bureau (NCRB)  | 2016                              |
|            | 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)  | 2016                              |
|            | Judiciary             | G3   | Weighted average of completion rate of cases under IPC and SLL by courts   |        | National Crime Records Bureau (NCRB)  | 2016                              |
|            | 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)                                 | 2017                              |
|            |                       | G6   | Share of state in total number of incidences of LWE or insurgency in the country   |        | Ministry of Home Affairs, GOI   | 2017                              |
|            | 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)           | 2018                              |
|            |                       | G8   | E-Governance Index   |        | NCAER   | 2011                              |
|            |                       | G9   | DIPP Score   |        | DIPP, Government of India   | 2016                              |
| Survey     | Industry Perception   | S1   | Land   |        | NCAER Survey  | 2018                              |
|            |                       | S1   | Labour   |        |   | 2018                              |
|            |                       | S3   | Infrastructure   |        |   | 2018                              |
|            |                       | S4   | Economic conditions  |        |   | 2018                              |
|            |                       | S5   | Governance & Political stability   |        |   | 2018                              |
|            |                       | S6   | Business climate   |        |   | 2018                              |

**Colour Key**

 Updated with definition/source change

 Updated with latest available figures

 New series

 No change

### A.3 DEFINITION AND SIGNIFICANCE

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<sup>3</sup> 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.

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

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<sup>4</sup> 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<sup>5</sup>. 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**

#### **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. 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/m<sup>3</sup> of PM10 was made the threshold level for air pollution. Anything above 60ug/m<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> 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.

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

**E9 (+) GST productivity :**

The GST productivity ratio, also called the “efficiency ratio” was calculated in the following steps:

1. The composite GST revenue figures for each state were obtained by adding revenue collection for Centre GST and State GST (CGST and SGST).
2. The commercial GSVA series for each state were computed by subtracting from GSVA the Agriculture and Allied GSVA figures for the respective states.
3. GST productivity was obtained by dividing GST revenue by non-agriculture GSVA

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

**G1(-)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.

**Significance:** 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.

**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<sup>6</sup>. 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<sup>7</sup>. 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 ofLWE and insurgency in the state compared to all such cases reported across the country.

**Significance:** Increase in such activities can indicate

<sup>6</sup> 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.3  
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.

<sup>7</sup> 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.



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<sup>8</sup>.

**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 N-SIPI survey, 2018**

The N-SIPI 2018 sample survey of industrial/services units covered 20 States and the Union Territory of Delhi. The survey was carried out during May-June 2018

The list of states/UT covered in the survey is as follows: Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand, and West Bengal.

### **Sampling frame and design**

Manufacturing units having at least 10 crore of turnover and service units 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 data base is the source for the sampling frame in this survey. The companies qualifying in the above cut-off criteria were included in this frame. The CMIE Prowess was also used for preparing the sample frame for the N-SIPI survey in 2016 and 2017. All possible effort was made to retain the units selected earlier as a panel.

The survey combined a sample design of having 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, units & estimation procedure**

Total sample size of Industries/Companies was taken as 1049. The sample size was selected on the basis of cost and previous years' experience and was allocated to different states in proportion to the latest common availability of state-GDPs with a constraint that each state should get an allocation of at least 30 sampling units. As already mentioned, 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<sup>9</sup> .

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

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

<sup>9</sup> Distribution of sample size for all states is given in a table at the end of this note.

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

In the  $t^{\text{th}}$  selected district, consider a population of size  $N^t$ , partitioned into  $k$  categories of sizes

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

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

Let the sample in the  $t^{\text{th}}$  district be of size  $n^t$ , with  $n_i^t$  tunits belonging to  $i^{\text{th}}$  category. Define the sample proportion as

$p_i^t = n_i^t / N$ . 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  $P_i^t$ .

As the  $N_i^{1S}$  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  $\hat{P}_i$  is given as follows:

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

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

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

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

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

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

$$\widehat{SE}(\hat{P}_i) = \sqrt{\hat{V}(\hat{P}_i)}$$

And relative standard errors (%) are given by

$$\% R\widehat{SE}(\hat{P}_i) = \frac{\widehat{SE}(\hat{P}_i)}{\hat{P}_i} \times 100$$

### Parameters assessed

Parameters estimated in this survey are typically in the form of ratio and proportions. The responses to each question are explicit in nature. For example, in the case of questions relating to land, the responses are either in the form of Yes or 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 for each individual categories. For interpretation purposes, some of these categories have been pooled together. As like earlier years, in N-SIPI 2018, the categories were pooled into three major categories, viz, no problem, moderate problem and severe problem.

### Weighting of responses

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 2017 survey, the “severe” category was given the weight “0.75”, “moderate categories” was given the weight “0.25” while the “none” categories were given the weight zero. 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 N-SIPI 2017, the weights as zero, 0.25 and 0.75 was considered to be an improvement over N-SIPI 2016 criterion where it assigned 1 to the category linked only to the severe problem. The N-SIPI 2018 maintained the same categorisation but altered the magnitude of the weights - weights assigned to the three categories correspond to the number of the responses under these categories for the surveyed firms in a state as a proportion of total responses across all the surveyed firms in 21 states.<sup>10</sup>

In general, if  $w_i$  is the weight and  $y_i$  is the corresponding binary response for the  $i^{\text{th}}$  category, then the corresponding score is  $\sum_i w_i y_i$ .

10 E.g. in a response of 1000 units (across States) to a query, we have received Yes=400, No=600. Then the respective weight would be 0.4 for ‘Yes’ categories and 0.6 for ‘No’ categories, respectively

### State-wise distribution of sample units

|     | States and districts    | Sample Size |
|-----|-------------------------|-------------|
| 1.  | <b>Andhra Pradesh</b>   | <b>45</b>   |
|     | Visakhapatnam           | 26          |
|     | Guntur                  | 19          |
| 2.  | <b>Assam</b>            | <b>31</b>   |
|     | Kamrup                  | 25          |
|     | Tinsukia                | 6           |
| 3.  | <b>Bihar</b>            | <b>36</b>   |
|     | Patna                   | 32          |
|     | Muzaffarpur             | 4           |
| 4.  | <b>Chhattisgarh</b>     | <b>33</b>   |
|     | Raipur                  | 25          |
|     | Durg                    | 8           |
| 5.  | <b>Gujarat</b>          | <b>71</b>   |
|     | Ahmedabad               | 52          |
|     | Vadodara                | 19          |
| 6.  | <b>Haryana</b>          | <b>39</b>   |
|     | Gurgaon                 | 30          |
|     | Faridabad               | 9           |
| 7.  | <b>Himachal Pradesh</b> | <b>30</b>   |
|     | Solan                   | 24          |
|     | Shimla                  | 6           |
| 8.  | <b>Jharkhand</b>        | <b>30</b>   |
|     | Jamshedpur              | 25          |
|     | Ranchi                  | 5           |
| 9.  | <b>Karnataka</b>        | <b>66</b>   |
|     | Bengaluru               | 61          |
|     | Mysore                  | 5           |
| 10. | <b>Kerala</b>           | <b>38</b>   |
|     | Kochi                   | 30          |
|     | Thiruvananthapuram      | 8           |
| 11. | <b>Madhya Pradesh</b>   | <b>43</b>   |
|     | Indore                  | 29          |
|     | Bhopal                  | 14          |

|     | States and districts         | Sample Size |
|-----|------------------------------|-------------|
| 12. | <b>Maharashtra</b>           | <b>126</b>  |
|     | Mumbai                       | 112         |
|     | Pune                         | 14          |
| 13. | <b>NCT of Delhi</b>          | <b>41</b>   |
|     | New Delhi                    | 22          |
|     | South Delhi                  | 19          |
| 14. | <b>Odisha</b>                | <b>30</b>   |
|     | Bhuvneshwar                  | 21          |
|     | Sundargarh                   | 8           |
| 15. | <b>Punjab</b>                | <b>32</b>   |
|     | Ludhiana                     | 28          |
|     | Jalandhar                    | 4           |
| 16. | <b>Rajasthan</b>             | <b>52</b>   |
|     | Jaipur                       | 48          |
|     | Bhilwara                     | 4           |
| 17. | <b>Tamil Nadu</b>            | <b>84</b>   |
|     | Chennai                      | 67          |
|     | Coimbatore                   | 17          |
| 18. | <b>Telangana</b>             | <b>38</b>   |
|     | Hyderabad                    | 36          |
|     | Rangareddi                   | 2           |
| 19. | <b>Uttar Pradesh</b>         | <b>83</b>   |
|     | Kanpur Nagar                 | 63          |
|     | Lucknow                      | 20          |
| 20. | <b>Uttarakhand</b>           | <b>31</b>   |
|     | Udham Singh Nagar            | 13          |
|     | Dehradun                     | 10          |
|     | Hardwar                      | 8           |
| 21. | <b>West Bengal</b>           | <b>70</b>   |
|     | Kolkata + Howrah             | 67          |
|     | North 24 Parganas            | 3           |
|     | <b>TOTAL (all 21 states)</b> | <b>1049</b> |

## A.5 SURVEY QUESTIONS

The following questions were asked to the survey respondents across 20 States and one UT in order to assess the industrial/business climate in those states/UTs. 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**

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
- S4.3. Access to finance
- S4.4. Tax policy transition of the state to GST

#### **S5. Governance & political stability**

Three governance & political stability related questions are given below:

- S5.1. Getting approvals (including environmental clearance) before starting 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 year will be better, same or worse?

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

[Survey responses for first three Business Expectation Survey (BES) questions (given below) were reported in the form of the anticipated direction of change i.e. whether the condition will or has become better, same or worsen.]

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

S6.5. How the introduction of GST impacted business of the responding units, i.e., whether the condition has become better, same or worse. A corollary question has also been asked related to generating e-Way bill and how it has impacted business operations.

## Appendix B

# State Rankings

| Indicator | Description   |
|-----------|---|
| LN1       | Digitized Land Registration                             |
| 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        | GST 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 stability                |
| 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 Stability |      | Survey |      | Overall |      |
|                  | 2017  | 2018 | 2017   | 2018 | 2017           | 2018 | 2017     | 2018 | 2017                             | 2018 | 2017   | 2018 | 2017    | 2018 |
| Andhra Pradesh   | 54.1  | 57.5 | 65.7   | 66.6 | 33.8           | 28.3 | 36.1     | 48.6 | 56.3                             | 58.9 | 83.5   | 47.9 | 52.1    | 48.7 |
| Assam            | 25.0  | 48.3 | 43.5   | 43.7 | 28.2           | 21.0 | 28.3     | 38.3 | 50.2                             | 52.6 | 53.9   | 47.0 | 37.7    | 39.5 |
| Bihar            | 25.1  | 24.6 | 51.8   | 50.7 | 24.1           | 16.9 | 25.4     | 23.4 | 46.7                             | 47.9 | 38.5   | 47.1 | 34.5    | 32.9 |
| Chhattisgarh     | 14.6  | 18.3 | 48.8   | 49.2 | 30.2           | 29.6 | 37.5     | 45.9 | 64.7                             | 62.5 | 57.5   | 48.7 | 41.4    | 42.1 |
| Gujarat          | 54.6  | 55.7 | 54.5   | 53.8 | 43.8           | 32.5 | 51.5     | 54.2 | 68.3                             | 65.5 | 89.9   | 58.2 | 59.2    | 51.8 |
| Haryana          | 45.5  | 45.9 | 48.0   | 47.7 | 36.8           | 37.2 | 36.3     | 43.2 | 73.0                             | 72.8 | 83.1   | 57.0 | 51.6    | 49.8 |
| Himachal Pradesh | 36.1  | 55.5 | 43.7   | 43.9 | 32.0           | 30.5 | 31.7     | 35.9 | 42.3                             | 43.2 | 69.5   | 54.3 | 41.4    | 41.9 |
| Jharkhand        | 35.5  | 38.4 | 32.3   | 31.7 | 17.3           | 17.2 | 35.2     | 39.5 | 49.7                             | 50.1 | 56.8   | 47.8 | 35.4    | 35.2 |
| Karnataka        | 27.6  | 31.1 | 60.2   | 62.2 | 36.1           | 33.8 | 41.2     | 49.1 | 63.1                             | 62.9 | 47.1   | 41.7 | 46.0    | 46.7 |
| Kerala           | 45.3  | 64.2 | 58.5   | 58.3 | 37.7           | 36.9 | 29.9     | 34.3 | 57.0                             | 58.5 | 64.9   | 56.2 | 47.4    | 48.9 |
| Madhya Pradesh   | 71.7  | 72.4 | 39.8   | 39.4 | 27.0           | 22.7 | 33.4     | 38.4 | 62.5                             | 64.2 | 63.9   | 50.8 | 44.8    | 42.9 |
| Maharashtra      | 52.7  | 56.7 | 60.8   | 57.5 | 50.2           | 38.3 | 42.4     | 53.0 | 58.8                             | 58.9 | 25.8   | 40.1 | 46.2    | 49.3 |
| Odisha           | 36.6  | 21.1 | 48.9   | 46.8 | 34.5           | 29.2 | 32.1     | 43.0 | 56.4                             | 56.8 | 56.9   | 54.3 | 43.7    | 41.8 |
| Punjab           | 25.6  | 25.7 | 47.8   | 47.3 | 40.6           | 40.7 | 17.8     | 27.7 | 68.2                             | 70.7 | 59.4   | 54.5 | 40.7    | 43.6 |
| Rajasthan        | 37.4  | 55.2 | 54.1   | 53.0 | 29.4           | 24.4 | 34.0     | 47.0 | 46.3                             | 48.6 | 55.8   | 52.6 | 42.1    | 44.3 |
| Tamil Nadu       | 55.6  | 64.8 | 73.8   | 73.6 | 35.0           | 34.0 | 42.4     | 45.9 | 66.6                             | 73.9 | 39.7   | 53.0 | 49.8    | 54.6 |
| Telangana        | 58.9  | 76.9 | 60.8   | 57.2 | 28.8           | 29.4 | 42.1     | 54.8 | 53.2                             | 50.8 | 83.2   | 42.9 | 51.1    | 47.7 |
| Uttar Pradesh    | 55.1  | 56.0 | 58.4   | 58.4 | 19.9           | 19.0 | 18.9     | 32.2 | 55.8                             | 48.2 | 30.9   | 50.3 | 34.4    | 39.9 |
| Uttarakhand      | 21.5  | 24.2 | 49.0   | 49.3 | 31.3           | 30.9 | 44.0     | 32.7 | 68.3                             | 62.0 | 40.0   | 55.7 | 42.1    | 41.9 |
| West Bengal      | 39.4  | 54.5 | 45.8   | 45.7 | 34.3           | 30.5 | 37.4     | 41.0 | 60.3                             | 58.2 | 8.7    | 57.5 | 32.1    | 46.0 |
| Delhi            | 49.2  | 47.8 | 48.5   | 48.4 | 65.6           | 75.6 | 50.5     | 60.8 | 44.9                             | 48.3 | 68.6   | 55.5 | 54.3    | 56.0 |

**Table B.1.b N-SIPI 21: Ranks of States under Six Broad Pillars**

| State            | RANK |      |        |      |                |      |          |      |                                  |      |        |      |         |      |
|------------------|------|------|--------|------|----------------|------|----------|------|----------------------------------|------|--------|------|---------|------|
|                  | Land |      | Labour |      | Infrastructure |      | Economic |      | Governance & Political Stability |      | Survey |      | Overall |      |
|                  | 2017 | 2018 | 2017   | 2018 | 2017           | 2018 | 2017     | 2018 | 2017                             | 2018 | 2017   | 2018 | 2017    | 2018 |
| Andhra Pradesh   | 6    | 5    | 2      | 2    | 11             | 15   | 11       | 6    | 13                               | 9    | 2      | 17   | 3       | 7    |
| Assam            | 19   | 12   | 19     | 19   | 17             | 18   | 18       | 15   | 16                               | 14   | 14     | 16   | 17      | 19   |
| Bihar            | 18   | 18   | 10     | 10   | 19             | 21   | 19       | 21   | 18                               | 20   | 18     | 18   | 19      | 21   |
| Chhattisgarh     | 21   | 21   | 13     | 12   | 14             | 12   | 8        | 8    | 6                                | 7    | 10     | 14   | 14      | 14   |
| Gujarat          | 5    | 8    | 8      | 8    | 3              | 8    | 1        | 3    | 2                                | 4    | 1      | 1    | 1       | 3    |
| Haryana          | 9    | 14   | 15     | 14   | 6              | 4    | 10       | 10   | 1                                | 2    | 4      | 2    | 4       | 4    |
| Himachal Pradesh | 14   | 9    | 18     | 18   | 12             | 11   | 16       | 16   | 21                               | 21   | 5      | 9    | 15      | 16   |
| Jharkhand        | 15   | 15   | 21     | 21   | 21             | 20   | 12       | 13   | 17                               | 16   | 12     | 15   | 18      | 20   |
| Karnataka        | 16   | 16   | 5      | 3    | 7              | 7    | 7        | 5    | 7                                | 6    | 15     | 19   | 9       | 9    |
| Kerala           | 10   | 4    | 6      | 5    | 5              | 5    | 17       | 17   | 11                               | 11   | 7      | 4    | 7       | 6    |
| Madhya Pradesh   | 1    | 2    | 20     | 20   | 18             | 17   | 14       | 14   | 8                                | 5    | 8      | 12   | 10      | 13   |
| Maharashtra      | 7    | 6    | 4      | 6    | 2              | 3    | 5        | 4    | 10                               | 10   | 20     | 21   | 8       | 5    |
| Odisha           | 13   | 20   | 12     | 16   | 9              | 14   | 15       | 11   | 12                               | 13   | 11     | 8    | 11      | 17   |
| Punjab           | 17   | 17   | 16     | 15   | 4              | 2    | 21       | 20   | 4                                | 3    | 9      | 7    | 16      | 12   |
| Rajasthan        | 12   | 10   | 9      | 9    | 15             | 16   | 13       | 7    | 19                               | 17   | 13     | 11   | 13      | 11   |
| Tamil Nadu       | 3    | 3    | 1      | 1    | 8              | 6    | 4        | 9    | 5                                | 1    | 17     | 10   | 6       | 2    |
| Telangana        | 2    | 1    | 3      | 7    | 16             | 13   | 6        | 2    | 15                               | 15   | 3      | 20   | 5       | 8    |
| Uttar Pradesh    | 4    | 7    | 7      | 4    | 20             | 19   | 20       | 19   | 14                               | 19   | 19     | 13   | 20      | 18   |
| Uttarakhand      | 20   | 19   | 11     | 11   | 13             | 9    | 3        | 18   | 3                                | 8    | 16     | 6    | 12      | 15   |
| West Bengal      | 11   | 11   | 17     | 17   | 10             | 10   | 9        | 12   | 9                                | 12   | 21     | 3    | 21      | 10   |
| Delhi            | 8    | 13   | 14     | 13   | 1              | 1    | 2        | 1    | 20                               | 18   | 6      | 5    | 2       | 1    |

| Table B.2.a N-SIPI 21: Scores of states under LAND indicators |       |       |       |       |
|---|-------|-------|-------|-------|
| State   | SCORE |       |       |       |
|   | LN1   | LN2   | LN3   | LN4   |
| Andhra Pradesh  | 100.0 | 76.5  | 7.9   | 45.8  |
| Assam   | 93.3  | 100.0 | 0.0   | 0.0   |
| Bihar   | 96.8  | 0.0   | 1.7   | 0.0   |
| Chhattisgarh  | 2.2   | 66.7  | 2.5   | 1.7   |
| Gujarat   | 100.0 | 61.2  | 19.2  | 42.4  |
| Haryana   | 80.3  | 49.9  | 17.7  | 35.6  |
| Himachal Pradesh  | 100.0 | 21.9  | 100.0 | 0.0   |
| Jharkhand   | 100.0 | 46.8  | 4.9   | 1.7   |
| Karnataka   | 0.0   | 60.5  | 21.4  | 42.4  |
| Kerala  | 100.0 | 59.7  | 3.7   | 93.2  |
| Madhya Pradesh  | 100.0 | 96.9  | 2.7   | 89.8  |
| Maharashtra   | 98.8  | 82.1  | 35.7  | 10.2  |
| Odisha  | 0.5   | 41.6  | 32.0  | 10.2  |
| Punjab  | 15.6  | 52.7  | 29.3  | 5.1   |
| Rajasthan   | 98.3  | 94.0  | 11.6  | 16.9  |
| Tamil Nadu  | 82.0  | 86.9  | 7.1   | 83.1  |
| Telangana   | 100.0 | 88.1  | 19.5  | 100.0 |
| Uttar Pradesh   | 84.9  | 86.3  | 12.1  | 40.7  |
| Uttarakhand   | 10.5  | 50.9  | 35.5  | 0.0   |
| West Bengal   | 100.0 | 58.3  | 51.2  | 8.5   |
| Delhi   | 100.0 | 55.1  | 36.2  | 0.0   |

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

LN1: Digitized Land Registration

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  | 40.0  | 94.6  | 59.3  | 32.0  | 83.8  | 93.8  |
| Assam            | 28.0  | 18.6  | 0.0   | 1.8   | 51.7  | 93.7  | 6.8   | 95.5  | 97.3  |
| Bihar            | 25.7  | 0.0   | 4.3   | 40.9  | 96.5  | 100.0 | 17.0  | 89.6  | 82.1  |
| Chhattisgarh     | 100.0 | 7.1   | 17.4  | 9.1   | 95.5  | 22.9  | 0.0   | 90.2  | 100.0 |
| Gujarat          | 27.2  | 31.4  | 53.3  | 29.7  | 87.6  | 63.1  | 83.7  | 63.2  | 44.6  |
| Haryana          | 7.3   | 49.4  | 66.3  | 11.9  | 33.5  | 66.8  | 43.5  | 88.8  | 61.6  |
| Himachal Pradesh | 11.9  | 78.0  | 78.3  | 11.4  | 31.2  | 62.3  | 21.8  | 100.0 | 0.0   |
| Jharkhand        | 34.9  | 7.8   | 4.3   | 10.6  | 56.9  | 0.0   | 27.2  | 89.6  | 53.6  |
| Karnataka        | 52.5  | 43.5  | 58.7  | 78.5  | 69.0  | 54.1  | 55.1  | 55.7  | 92.9  |
| Kerala           | 31.4  | 70.5  | 100.0 | 28.2  | 59.2  | 69.1  | 54.4  | 27.0  | 84.8  |
| Madhya Pradesh   | 14.9  | 9.0   | 22.8  | 29.1  | 100.0 | 68.5  | 17.0  | 0.0   | 92.9  |
| Maharashtra      | 41.8  | 53.7  | 66.3  | 44.1  | 77.9  | 40.4  | 30.6  | 81.0  | 82.1  |
| Odisha           | 29.1  | 9.9   | 29.3  | 32.9  | 82.4  | 43.2  | 21.1  | 97.5  | 75.9  |
| Punjab           | 2.3   | 55.3  | 59.8  | 19.3  | 50.6  | 73.1  | 63.3  | 59.7  | 42.0  |
| Rajasthan        | 27.6  | 9.6   | 26.1  | 88.0  | 83.5  | 62.0  | 34.7  | 51.3  | 94.6  |
| Tamil Nadu       | 59.0  | 47.2  | 98.9  | 38.2  | 92.2  | 69.5  | 94.6  | 75.0  | 87.5  |
| Telangana        | 61.3  | 47.2  | 60.9  | 0.0   | 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   | 6.3   | 68.3  | 68.3  | 32.7  | 94.5  | 95.5  |
| West Bengal      | 34.5  | 16.1  | 12.0  | 6.1   | 64.1  | 62.4  | 100.0 | 45.3  | 70.5  |
| Delhi            | 0.0   | 100.0 | 46.7  | 4.1   | 0.0   | 58.5  | 93.9  | 92.1  | 40.2  |

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  | 6  | 4  | 15 | 13 | 11 | 5  |
| Assam            | 11   | 13 | 21 | 20 | 17 | 2  | 20 | 3  | 2  |
| Bihar            | 14   | 21 | 19 | 5  | 2  | 1  | 18 | 7  | 12 |
| Chhattisgarh     | 1    | 20 | 15 | 16 | 3  | 20 | 21 | 6  | 1  |
| Gujarat          | 13   | 11 | 10 | 9  | 7  | 11 | 4  | 15 | 18 |
| Haryana          | 19   | 7  | 5  | 13 | 19 | 10 | 9  | 9  | 16 |
| Himachal Pradesh | 17   | 2  | 4  | 14 | 20 | 13 | 16 | 1  | 21 |
| Jharkhand        | 7    | 19 | 19 | 15 | 15 | 21 | 15 | 7  | 17 |
| Karnataka        | 5    | 10 | 9  | 3  | 11 | 17 | 6  | 17 | 6  |
| Kerala           | 9    | 3  | 1  | 11 | 14 | 7  | 7  | 20 | 11 |
| Madhya Pradesh   | 16   | 18 | 14 | 10 | 1  | 8  | 18 | 21 | 6  |
| Maharashtra      | 6    | 6  | 5  | 4  | 10 | 19 | 14 | 13 | 12 |
| Odisha           | 10   | 16 | 12 | 8  | 9  | 18 | 17 | 2  | 14 |
| Punjab           | 20   | 5  | 8  | 12 | 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  | 21 | 16 | 3  | 10 | 11 | 8  |
| Uttar Pradesh    | 18   | 14 | 17 | 1  | 5  | 5  | 8  | 10 | 10 |
| Uttarakhand      | 15   | 4  | 18 | 17 | 12 | 9  | 12 | 4  | 3  |
| West Bengal      | 8    | 15 | 16 | 18 | 13 | 12 | 1  | 19 | 15 |
| Delhi            | 21   | 1  | 11 | 19 | 21 | 16 | 3  | 5  | 20 |

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   | 15.7  | 3.4   | 0.5   | 0.3 | 65.8  | 97.2  | 23.3  | 18.9  | 28.0  | 7.7   | 43.5  |
| Assam            | 21.8  | 31.2  | 2.4   | 0.0 | 65.5  | 0.0   | 78.9  | 12.1  | 30.9  | 0.0   | 12.4  |
| Bihar            | 28.9  | 13.3  | 0.7   | 0.0 | 28.1  | 36.1  | 64.4  | 15.6  | 18.6  | 3.2   | 0.0   |
| Chhattisgarh     | 3.1   | 0.0   | 0.4   | 0.0 | 81.2  | 94.4  | 17.3  | 81.8  | 47.9  | 0.2   | 19.1  |
| Gujarat          | 18.2  | 1.8   | 9.8   | 1.0 | 45.7  | 100.0 | 20.1  | 35.6  | 76.0  | 6.0   | 38.2  |
| Haryana          | 28.3  | 3.5   | 0.0   | 0.0 | 55.5  | 100.0 | 49.1  | 33.0  | 64.5  | 4.2   | 74.7  |
| Himachal Pradesh | 0.0   | 2.6   | 0.0   | 0.0 | 95.2  | 83.3  | 0.0   | 0.0   | 26.9  | 2.0   | 95.0  |
| Jharkhand        | 21.6  | 1.2   | 0.5   | 0.0 | 38.9  | 80.6  | 14.4  | 7.3   | 0.0   | 4.2   | 14.5  |
| Karnataka        | 10.6  | 9.8   | 36.4  | 0.1 | 45.1  | 86.1  | 14.9  | 10.4  | 73.5  | 4.9   | 59.1  |
| Kerala           | 18.3  | 39.9  | 12.9  | 0.1 | 56.9  | 94.4  | 29.9  | 0.0   | 56.5  | 1.7   | 73.6  |
| Madhya Pradesh   | 9.5   | 2.1   | 1.3   | 0.0 | 53.4  | 100.0 | 22.3  | 31.4  | 16.9  | 2.4   | 14.4  |
| Maharashtra      | 11.4  | 11.5  | 99.5  | 0.4 | 0.0   | 100.0 | 20.4  | 27.1  | 100.0 | 8.6   | 28.4  |
| Odisha           | 9.6   | 10.2  | 0.8   | 0.2 | 68.2  | 100.0 | 21.5  | 56.3  | 33.2  | 2.3   | 28.6  |
| Punjab           | 33.7  | 12.9  | 0.8   | 0.0 | 51.7  | 100.0 | 100.0 | 44.3  | 32.8  | 3.0   | 100.0 |
| Rajasthan        | 10.1  | 0.3   | 1.7   | 0.0 | 52.9  | 83.3  | 5.1   | 100.0 | 17.6  | 3.2   | 22.6  |
| Tamil Nadu       | 21.7  | 11.6  | 45.4  | 0.3 | 10.1  | 100.0 | 29.3  | 10.0  | 79.8  | 1.6   | 49.6  |
| Telangana        | 9.3   | 3.5   | 13.9  | 0.0 | 65.8  | 100.0 | 24.2  | 0.0   | 28.0  | 11.3  | 49.7  |
| Uttar Pradesh    | 27.7  | 9.3   | 0.8   | 0.0 | 9.9   | 52.8  | 63.2  | 85.1  | 1.8   | 2.7   | 11.1  |
| Uttarakhand      | 0.9   | 3.9   | 0.0   | 0.0 | 100.0 | 83.3  | 6.0   | 12.7  | 29.0  | 0.7   | 82.0  |
| West Bengal      | 35.0  | 25.6  | 17.5  | 0.1 | 33.9  | 91.7  | 63.7  | 0.0   | 46.7  | 6.1   | 17.0  |
| Delhi            | 100.0 | 100.0 | 100.0 | 0.0 | 58.0  | 97.2  | 43.9  | 0.0   | 85.7  | 100.0 | 93.1  |

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

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   | 21.8  | 23.9  | 31.3  | 86.7  | 37.7  | 100.0 | 94.0  | 73.6  | 69.3  | 5.3   | 11.2  |
| Assam            | 22.7  | 29.7  | 12.1  | 40.0  | 0.0   | 0.0   | 90.3  | 72.3  | 62.3  | 53.9  | 0.0   |
| Bihar            | 14.3  | 49.7  | 0.0   | 11.1  | 3.2   | 0.0   | 30.3  | 69.1  | 56.2  | 0.0   | 1.5   |
| Chhattisgarh     | 64.6  | 0.0   | 21.9  | 68.9  | 13.9  | 0.0   | 80.4  | 100.0 | 40.0  | 71.9  | 4.3   |
| Gujarat          | 78.8  | 0.4   | 50.6  | 100.0 | 28.0  | 66.7  | 82.6  | 64.5  | 47.2  | 57.0  | 13.6  |
| Haryana          | 43.2  | 33.1  | 53.9  | 60.0  | 6.5   | 33.3  | 79.4  | 81.4  | 46.6  | 0.0   | 14.5  |
| Himachal Pradesh | 78.0  | 11.7  | 48.6  | 66.7  | 0.0   | 0.0   | 90.5  | 46.9  | 16.7  | 0.0   | 0.1   |
| Jharkhand        | 46.8  | 18.1  | 12.8  | 40.0  | 14.9  | 0.0   | 47.8  | 80.1  | 40.6  | 100.0 | 1.0   |
| Karnataka        | 29.4  | 60.0  | 44.6  | 71.1  | 19.2  | 33.3  | 95.7  | 69.7  | 74.3  | 0.0   | 19.9  |
| Kerala           | 31.0  | 57.9  | 46.4  | 0.0   | 28.2  | 0.0   | 100.0 | 0.0   | 79.7  | 0.0   | 13.4  |
| Madhya Pradesh   | 24.2  | 15.8  | 11.8  | 4.4   | 10.4  | 0.0   | 90.2  | 72.3  | 78.7  | 72.7  | 8.8   |
| Maharashtra      | 42.3  | 44.7  | 50.4  | 48.9  | 43.3  | 66.7  | 78.6  | 51.1  | 74.5  | 35.6  | 49.4  |
| Odisha           | 42.5  | 16.1  | 17.5  | 33.3  | 0.0   | 33.3  | 86.3  | 76.5  | 41.5  | 94.5  | 4.8   |
| Punjab           | 27.9  | 29.1  | 37.8  | 11.1  | 8.4   | 0.0   | 71.9  | 9.1   | 64.9  | 0.0   | 20.7  |
| Rajasthan        | 20.7  | 19.1  | 21.3  | 48.9  | 13.2  | 66.7  | 50.1  | 98.0  | 73.1  | 93.1  | 5.7   |
| Tamil Nadu       | 51.1  | 39.8  | 44.2  | 28.9  | 31.3  | 66.7  | 91.9  | 41.7  | 54.1  | 34.2  | 23.7  |
| Telangana        | 15.5  | 60.6  | 42.3  | 46.7  | 31.5  | 33.3  | 95.5  | 78.2  | 78.8  | 66.9  | 31.1  |
| Uttar Pradesh    | 26.3  | 32.9  | 6.8   | 24.4  | 10.9  | 33.3  | 40.8  | 61.6  | 91.7  | 7.3   | 8.2   |
| Uttarakhand      | 100.0 | 2.4   | 51.3  | 48.9  | 0.0   | 33.3  | 59.9  | 47.6  | 0.0   | 0.0   | 0.0   |
| West Bengal      | 9.1   | 64.5  | 7.5   | 51.0  | 21.7  | 33.3  | 63.0  | 36.2  | 100.0 | 37.6  | 13.6  |
| Delhi            | 0.0   | 100.0 | 100.0 | 91.1  | 100.0 | 33.3  | 0.0   | 74.6  | 75.9  | 0.0   | 100.0 |

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

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: GST 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   | 72.4  | 44.8  | 62.9  | 39.8  | 8.2   | 93.0  | 69.5  | 39.3  | 100.0 |
| Assam            | 42.7  | 26.9  | 20.9  | 79.0  | 30.7  | 100.0 | 100.0 | 73.1  | 0.0   |
| Bihar            | 83.6  | 46.6  | 3.2   | 0.0   | 0.0   | 73.5  | 75.8  | 75.5  | 72.8  |
| Chhattisgarh     | 95.5  | 53.3  | 56.0  | 95.8  | 49.9  | 0.0   | 29.5  | 84.5  | 98.3  |
| Gujarat          | 93.4  | 46.4  | 13.5  | 50.2  | 14.7  | 100.0 | 79.7  | 92.0  | 99.3  |
| Haryana          | 47.6  | 66.6  | 51.9  | 100.0 | 29.2  | 100.0 | 91.6  | 70.3  | 97.8  |
| Himachal Pradesh | 87.8  | 13.9  | 11.6  | 60.7  | 48.8  | 100.0 | 0.0   | 5.6   | 60.6  |
| Jharkhand        | 80.4  | 78.8  | 29.9  | 30.4  | 32.5  | 32.7  | 55.0  | 13.6  | 97.4  |
| Karnataka        | 67.8  | 0.0   | 41.6  | 66.5  | 22.8  | 100.0 | 79.9  | 100.0 | 87.7  |
| Kerala           | 61.5  | 52.8  | 53.6  | 70.1  | 32.3  | 100.0 | 82.0  | 59.0  | 15.0  |
| Madhya Pradesh   | 100.0 | 68.4  | 47.7  | 69.3  | 16.4  | 99.2  | 48.6  | 30.1  | 97.9  |
| Maharashtra      | 74.8  | 63.5  | 7.0   | 5.7   | 36.2  | 81.5  | 68.9  | 99.1  | 93.0  |
| Odisha           | 81.8  | 53.3  | 10.6  | 59.9  | 18.8  | 78.3  | 56.4  | 59.5  | 92.8  |
| Punjab           | 61.5  | 64.6  | 54.6  | 85.5  | 64.9  | 100.0 | 91.2  | 23.4  | 90.9  |
| Rajasthan        | 0.0   | 23.2  | 31.2  | 89.9  | 15.2  | 100.0 | 62.9  | 17.8  | 97.2  |
| Tamil Nadu       | 95.1  | 61.0  | 100.0 | 70.3  | 35.5  | 100.0 | 72.3  | 73.6  | 57.4  |
| Telangana        | 24.5  | 36.2  | 35.7  | 9.6   | 19.3  | 98.7  | 93.6  | 39.3  | 100.0 |
| Uttar Pradesh    | 87.4  | 50.1  | 15.8  | 38.8  | 5.1   | 100.0 | 53.9  | 0.0   | 83.1  |
| Uttarakhand      | 70.3  | 100.0 | 44.8  | 81.8  | 36.1  | 100.0 | 18.5  | 10.0  | 96.9  |
| West Bengal      | 76.6  | 42.3  | 0.0   | 52.0  | 8.9   | 100.0 | 72.9  | 87.9  | 82.8  |
| Delhi            | 8.0   | 4.8   | 14.9  | 35.0  | 100.0 | 100.0 | 100.0 | 33.0  | 39.4  |

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

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   | 63.0  | 43.3 | 50.6 | 47.1 | 39.1 | 38.2 |
| Assam            | 60.5  | 46.9 | 40.1 | 43.6 | 37.8 | 53.0 |
| Bihar            | 34.9  | 54.5 | 60.1 | 49.0 | 36.2 | 46.2 |
| Chhattisgarh     | 58.8  | 48.5 | 56.7 | 45.7 | 33.0 | 44.2 |
| Gujarat          | 68.3  | 58.9 | 65.7 | 59.9 | 46.8 | 47.1 |
| Haryana          | 64.6  | 59.7 | 61.8 | 56.1 | 47.8 | 54.0 |
| Himachal Pradesh | 60.8  | 45.7 | 60.0 | 59.6 | 49.1 | 48.0 |
| Jharkhand        | 54.1  | 43.7 | 51.6 | 54.0 | 32.8 | 49.7 |
| Karnataka        | 46.1  | 39.4 | 45.9 | 35.3 | 31.7 | 53.2 |
| Kerala           | 66.2  | 53.3 | 65.1 | 59.3 | 46.0 | 48.8 |
| Madhya Pradesh   | 63.3  | 42.4 | 54.5 | 50.8 | 41.7 | 50.7 |
| Maharashtra      | 46.9  | 37.4 | 39.5 | 36.4 | 32.3 | 43.1 |
| Odisha           | 54.5  | 58.7 | 61.4 | 52.6 | 48.4 | 48.1 |
| Punjab           | 61.7  | 55.9 | 63.9 | 56.7 | 38.2 | 49.4 |
| Rajasthan        | 63.5  | 55.0 | 55.1 | 51.2 | 40.4 | 45.6 |
| Tamil Nadu       | 59.3  | 52.1 | 62.0 | 52.9 | 42.2 | 46.6 |
| Telangana        | 57.0  | 39.2 | 41.9 | 38.2 | 34.4 | 40.6 |
| Uttar Pradesh    | 64.0  | 47.9 | 51.5 | 47.6 | 38.6 | 48.8 |
| Uttarakhand      | 68.1  | 56.5 | 60.3 | 55.1 | 44.0 | 48.0 |
| West Bengal      | 64.0  | 60.0 | 66.0 | 60.3 | 45.4 | 44.4 |
| Delhi            | 67.4  | 52.9 | 60.8 | 57.8 | 44.1 | 49.1 |

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

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 |      |
|                        | 2017    | 2018 | 2017 | 2018 | 2017   | 2018 | 2017           | 2018 | 2017    | 2018 | 2017        | 2018 | 2017                 | 2018 |
| Andhra Pradesh         | 2       | 17   | 1    | 10   | 3      | 17   | 2              | 17   | 6       | 16   | 4           | 12   | 6                    | 21   |
| Assam                  | 14      | 16   | 11   | 13   | 17     | 14   | 18             | 20   | 13      | 18   | 16          | 15   | 2                    | 3    |
| Bihar                  | 18      | 18   | 17   | 21   | 6      | 8    | 11             | 10   | 15      | 14   | 18          | 16   | 21                   | 15   |
| Chhattisgarh           | 10      | 14   | 3    | 15   | 15     | 12   | 14             | 12   | 12      | 17   | 10          | 18   | 13                   | 18   |
| Delhi                  | 6       | 5    | 5    | 3    | 4      | 10   | 12             | 8    | 7       | 5    | 8           | 7    | 12                   | 7    |
| Gujarat                | 1       | 1    | 2    | 1    | 1      | 3    | 1              | 2    | 1       | 2    | 1           | 4    | 15                   | 13   |
| Haryana                | 4       | 2    | 7    | 5    | 2      | 2    | 3              | 6    | 2       | 7    | 3           | 3    | 8                    | 1    |
| Himachal Pradesh       | 5       | 9    | 8    | 12   | 10     | 15   | 13             | 11   | 9       | 3    | 5           | 1    | 5                    | 11   |
| Jharkhand              | 12      | 15   | 18   | 18   | 8      | 16   | 5              | 15   | 4       | 9    | 6           | 19   | 16                   | 5    |
| Karnataka              | 15      | 19   | 19   | 20   | 19     | 19   | 6              | 18   | 17      | 21   | 15          | 21   | 4                    | 2    |
| Kerala                 | 7       | 4    | 4    | 4    | 12     | 9    | 9              | 3    | 14      | 4    | 14          | 5    | 7                    | 8    |
| Madhya Pradesh         | 8       | 12   | 10   | 9    | 11     | 18   | 8              | 14   | 11      | 13   | 11          | 10   | 9                    | 4    |
| Maharashtra            | 20      | 21   | 16   | 19   | 18     | 21   | 20             | 21   | 20      | 20   | 9           | 20   | 20                   | 19   |
| Odisha                 | 11      | 8    | 14   | 17   | 9      | 4    | 7              | 7    | 10      | 11   | 7           | 2    | 14                   | 10   |
| Punjab                 | 9       | 7    | 9    | 11   | 5      | 6    | 15             | 4    | 3       | 6    | 12          | 14   | 18                   | 6    |
| Rajasthan              | 13      | 11   | 12   | 8    | 13     | 7    | 17             | 13   | 8       | 12   | 13          | 11   | 11                   | 16   |
| Tamil Nadu             | 17      | 10   | 15   | 14   | 16     | 11   | 10             | 5    | 18      | 10   | 19          | 9    | 17                   | 14   |
| Telangana              | 3       | 20   | 6    | 16   | 7      | 20   | 4              | 19   | 5       | 19   | 2           | 17   | 1                    | 20   |
| Uttar Pradesh          | 19      | 13   | 20   | 6    | 20     | 13   | 19             | 16   | 19      | 15   | 20          | 13   | 3                    | 9    |
| Uttarakhand            | 16      | 6    | 21   | 2    | 14     | 5    | 16             | 9    | 16      | 8    | 17          | 8    | 10                   | 12   |
| West Bengal            | 21      | 3    | 13   | 7    | 21     | 1    | 21             | 1    | 21      | 1    | 21          | 6    | 19                   | 17   |



| S. No. | Survey Pillar  | Description   | Reference 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 transition to GST   | 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       | 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.    | Environment    | 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            | 9.7         | 90.3        |
| Bihar            | 72.2        | 27.8        |
| Chhattisgarh     | 14.7        | 85.3        |
| Delhi            | 0.0         | 100.0       |
| Gujarat          | 4.2         | 95.8        |
| Haryana          | 7.7         | 92.3        |
| Himachal Pradesh | 13.3        | 86.7        |
| Jharkhand        | 20.0        | 80.0        |
| Karnataka        | 33.3        | 66.7        |
| Kerala           | 0.0         | 100.0       |
| Madhya Pradesh   | 9.3         | 90.7        |
| Maharashtra      | 31.7        | 68.3        |
| Odisha           | 29.0        | 71.0        |
| Punjab           | 6.5         | 93.5        |
| Rajasthan        | 0.0         | 100.0       |
| Tamil Nadu       | 14.3        | 85.7        |
| Telangana        | 2.6         | 97.4        |
| Uttar Pradesh    | 0.0         | 100.0       |
| Uttarakhand      | 0.0         | 100.0       |
| West Bengal      | 8.6         | 91.4        |
| <b>Total</b>     | <b>13.2</b> | <b>86.8</b> |

**Table C.3 Problem in getting permissions/ approvals for land from government departments before starting business**

| State            | No problem  | Moderate    | Severe      |
|------------------|-------------|-------------|-------------|
| Andhra Pradesh   | 44.4        | 44.4        | 11.1        |
| Assam            | 54.8        | 32.3        | 12.9        |
| Bihar            | 44.4        | 22.2        | 33.3        |
| Chhattisgarh     | 54.5        | 24.2        | 21.2        |
| Delhi            | 82.9        | 9.8         | 4.9         |
| Gujarat          | 97.2        | 2.8         | 0.0         |
| Haryana          | 79.5        | 15.4        | 5.1         |
| Himachal Pradesh | 70.0        | 16.7        | 13.3        |
| Jharkhand        | 36.7        | 43.3        | 20.0        |
| Karnataka        | 7.6         | 72.7        | 19.7        |
| Kerala           | 68.4        | 26.3        | 5.3         |
| Madhya Pradesh   | 81.4        | 7.0         | 7.0         |
| Maharashtra      | 23.8        | 40.5        | 34.9        |
| Odisha           | 61.3        | 29.0        | 9.7         |
| Punjab           | 58.1        | 25.8        | 16.1        |
| Rajasthan        | 42.3        | 55.8        | 0.0         |
| Tamil Nadu       | 58.3        | 29.8        | 11.9        |
| Telangana        | 18.4        | 47.4        | 34.2        |
| Uttar Pradesh    | 47.0        | 50.6        | 1.2         |
| Uttarakhand      | 83.9        | 12.9        | 3.2         |
| West Bengal      | 75.7        | 20.0        | 4.3         |
| <b>Total</b>     | <b>56.7</b> | <b>29.9</b> | <b>12.8</b> |

| Table C.4 Problem related to availability of skilled labour |             |             |             |
|---|-------------|-------------|-------------|
| State   | No problem  | Moderate    | Severe      |
| Andhra Pradesh  | 75.6        | 15.6        | 8.9         |
| Assam   | 45.2        | 41.9        | 12.9        |
| Bihar   | 66.7        | 16.7        | 16.7        |
| Chhattisgarh  | 78.8        | 12.1        | 9.1         |
| Delhi   | 68.3        | 22.0        | 9.8         |
| Gujarat   | 85.9        | 8.5         | 4.2         |
| Haryana   | 76.9        | 17.9        | 5.1         |
| Himachal Pradesh  | 36.7        | 43.3        | 20.0        |
| Jharkhand   | 40.0        | 40.0        | 20.0        |
| Karnataka   | 47.0        | 45.5        | 7.6         |
| Kerala  | 81.6        | 10.5        | 7.9         |
| Madhya Pradesh  | 48.8        | 23.3        | 23.3        |
| Maharashtra   | 54.0        | 26.2        | 18.3        |
| Odisha  | 80.6        | 19.4        | 0.0         |
| Punjab  | 77.4        | 12.9        | 9.7         |
| Rajasthan   | 92.3        | 7.7         | 0.0         |
| Tamil Nadu  | 61.9        | 20.2        | 17.9        |
| Telangana   | 57.9        | 34.2        | 7.9         |
| Uttar Pradesh   | 89.2        | 8.4         | 2.4         |
| Uttarakhand   | 90.3        | 9.7         | 0.0         |
| West Bengal   | 81.4        | 10.0        | 8.6         |
| <b>Total</b>  | <b>68.4</b> | <b>21.2</b> | <b>10.0</b> |

| Table C.5 Problem related to quality of skilled labour |             |             |             |
|--|-------------|-------------|-------------|
| State  | No problem  | Moderate    | Severe      |
| Andhra Pradesh   | 35.6        | 51.1        | 13.3        |
| Assam  | 32.3        | 41.9        | 25.8        |
| Bihar  | 66.7        | 19.4        | 13.9        |
| Chhattisgarh   | 69.7        | 15.2        | 15.2        |
| Delhi  | 61.0        | 17.1        | 22.0        |
| Gujarat  | 85.9        | 5.6         | 7.0         |
| Haryana  | 94.9        | 5.1         | 0.0         |
| Himachal Pradesh                                       | 40.0        | 33.3        | 26.7        |
| Jharkhand  | 20.0        | 60.0        | 20.0        |
| Karnataka  | 21.2        | 69.7        | 9.1         |
| Kerala   | 68.4        | 18.4        | 13.2        |
| Madhya Pradesh   | 44.2        | 18.6        | 32.6        |
| Maharashtra  | 34.1        | 45.2        | 17.5        |
| Odisha   | 83.9        | 16.1        | 0.0         |
| Punjab   | 74.2        | 19.4        | 6.5         |
| Rajasthan  | 55.8        | 44.2        | 0.0         |
| Tamil Nadu   | 53.6        | 29.8        | 16.7        |
| Telangana  | 39.5        | 55.3        | 5.3         |
| Uttar Pradesh  | 50.6        | 47.0        | 2.4         |
| Uttarakhand  | 77.4        | 22.6        | 0.0         |
| West Bengal  | 84.3        | 7.1         | 8.6         |
| <b>Total</b>   | <b>56.8</b> | <b>30.6</b> | <b>12.2</b> |

**Table C.6 Problem related to availability of unskilled labour**

| State            | No problem  | Moderate    | Severe     |
|------------------|-------------|-------------|------------|
| Andhra Pradesh   | 51.1        | 35.6        | 13.3       |
| Assam            | 74.2        | 16.1        | 9.7        |
| Bihar            | 83.3        | 8.3         | 8.3        |
| Chhattisgarh     | 72.7        | 18.2        | 9.1        |
| Delhi            | 82.9        | 7.3         | 9.8        |
| Gujarat          | 91.5        | 1.4         | 5.6        |
| Haryana          | 89.7        | 10.3        | 0.0        |
| Himachal Pradesh | 50.0        | 43.3        | 6.7        |
| Jharkhand        | 50.0        | 16.7        | 33.3       |
| Karnataka        | 81.8        | 12.1        | 6.1        |
| Kerala           | 92.1        | 7.9         | 0.0        |
| Madhya Pradesh   | 69.8        | 7.0         | 18.6       |
| Maharashtra      | 38.1        | 43.7        | 15.9       |
| Odisha           | 87.1        | 9.7         | 3.2        |
| Punjab           | 80.6        | 19.4        | 0.0        |
| Rajasthan        | 75.0        | 25.0        | 0.0        |
| Tamil Nadu       | 75.0        | 8.3         | 16.7       |
| Telangana        | 63.2        | 13.2        | 23.7       |
| Uttar Pradesh    | 50.6        | 44.6        | 4.8        |
| Uttarakhand      | 71.0        | 29.0        | 0.0        |
| West Bengal      | 100.0       | 0.0         | 0.0        |
| <b>Total</b>     | <b>72.8</b> | <b>18.0</b> | <b>8.8</b> |

**Table C.7 Problem related to labour relations**

| State            | No problem  | Moderate    | Severe     |
|------------------|-------------|-------------|------------|
| Andhra Pradesh   | 37.8        | 42.2        | 20.0       |
| Assam            | 74.2        | 16.1        | 9.7        |
| Bihar            | 86.1        | 11.1        | 2.8        |
| Chhattisgarh     | 69.7        | 18.2        | 12.1       |
| Delhi            | 82.9        | 7.3         | 9.8        |
| Gujarat          | 87.3        | 5.6         | 5.6        |
| Haryana          | 89.7        | 10.3        | 0.0        |
| Himachal Pradesh | 80.0        | 10.0        | 10.0       |
| Jharkhand        | 73.3        | 16.7        | 10.0       |
| Karnataka        | 19.7        | 71.2        | 9.1        |
| Kerala           | 63.2        | 21.1        | 15.8       |
| Madhya Pradesh   | 60.5        | 7.0         | 25.6       |
| Maharashtra      | 38.9        | 38.1        | 21.4       |
| Odisha           | 87.1        | 12.9        | 0.0        |
| Punjab           | 87.1        | 12.9        | 0.0        |
| Rajasthan        | 75.0        | 25.0        | 0.0        |
| Tamil Nadu       | 84.5        | 10.7        | 3.6        |
| Telangana        | 15.8        | 47.4        | 36.8       |
| Uttar Pradesh    | 49.4        | 38.6        | 12.0       |
| Uttarakhand      | 83.9        | 16.1        | 0.0        |
| West Bengal      | 91.4        | 4.3         | 4.3        |
| <b>Total</b>     | <b>68.5</b> | <b>21.1</b> | <b>9.9</b> |

| Table C.8 Problem related to labour laws |             |             |             |
|--|-------------|-------------|-------------|
| State                                    | No problem  | Moderate    | Severe      |
| Andhra Pradesh                           | 48.9        | 31.1        | 20.0        |
| Assam                                    | 67.7        | 19.4        | 9.7         |
| Bihar                                    | 83.3        | 8.3         | 8.3         |
| Chhattisgarh                             | 30.3        | 36.4        | 30.3        |
| Delhi                                    | 73.2        | 14.6        | 12.2        |
| Gujarat                                  | 88.7        | 4.2         | 5.6         |
| Haryana                                  | 92.3        | 5.1         | 2.6         |
| Himachal Pradesh                         | 83.3        | 6.7         | 10.0        |
| Jharkhand                                | 76.7        | 13.3        | 10.0        |
| Karnataka                                | 13.6        | 63.6        | 21.2        |
| Kerala                                   | 60.5        | 26.3        | 13.2        |
| Madhya Pradesh                           | 51.2        | 18.6        | 23.3        |
| Maharashtra                              | 31.7        | 36.5        | 29.4        |
| Odisha                                   | 87.1        | 12.9        | 0.0         |
| Punjab                                   | 74.2        | 25.8        | 0.0         |
| Rajasthan                                | 69.2        | 30.8        | 0.0         |
| Tamil Nadu                               | 83.3        | 8.3         | 7.1         |
| Telangana                                | 28.9        | 42.1        | 28.9        |
| Uttar Pradesh                            | 53.0        | 41.0        | 6.0         |
| Uttarakhand                              | 74.2        | 25.8        | 0.0         |
| West Bengal                              | 88.6        | 10.0        | 1.4         |
| <b>Total</b>                             | <b>64.8</b> | <b>22.9</b> | <b>11.4</b> |

| Table C.9 Problem related to availability of power |             |             |            |
|--|-------------|-------------|------------|
| State  | No problem  | Moderate    | Severe     |
| Andhra Pradesh                                     | 77.8        | 17.8        | 4.4        |
| Assam  | 41.9        | 32.3        | 25.8       |
| Bihar  | 80.6        | 11.1        | 8.3        |
| Chhattisgarh                                       | 90.9        | 9.1         | 0.0        |
| Delhi  | 87.8        | 9.8         | 2.4        |
| Gujarat  | 91.5        | 2.8         | 2.8        |
| Haryana  | 82.1        | 15.4        | 2.6        |
| Himachal Pradesh                                   | 93.3        | 6.7         | 0.0        |
| Jharkhand  | 66.7        | 13.3        | 20.0       |
| Karnataka  | 39.4        | 56.1        | 4.5        |
| Kerala   | 92.1        | 2.6         | 5.3        |
| Madhya Pradesh                                     | 76.7        | 4.7         | 16.3       |
| Maharashtra  | 57.9        | 34.1        | 7.1        |
| Odisha   | 80.6        | 6.5         | 12.9       |
| Punjab   | 90.3        | 6.5         | 3.2        |
| Rajasthan  | 90.4        | 9.6         | 0.0        |
| Tamil Nadu   | 86.9        | 7.1         | 6.0        |
| Telangana  | 60.5        | 39.5        | 0.0        |
| Uttar Pradesh                                      | 88.0        | 10.8        | 1.2        |
| Uttarakhand  | 93.5        | 6.5         | 0.0        |
| West Bengal  | 100.0       | 0.0         | 0.0        |
| <b>Total</b>                                       | <b>79.5</b> | <b>14.4</b> | <b>5.9</b> |

**Table C.10 Problem related to availability of water**

| State            | No problem  | Moderate    | Severe     |
|------------------|-------------|-------------|------------|
| Andhra Pradesh   | 46.7        | 48.9        | 4.4        |
| Assam            | 41.9        | 41.9        | 16.1       |
| Bihar            | 94.4        | 2.8         | 2.8        |
| Chhattisgarh     | 78.8        | 6.1         | 15.2       |
| Delhi            | 68.3        | 12.2        | 19.5       |
| Gujarat          | 91.5        | 2.8         | 2.8        |
| Haryana          | 87.2        | 10.3        | 2.6        |
| Himachal Pradesh | 83.3        | 10.0        | 6.7        |
| Jharkhand        | 80.0        | 6.7         | 13.3       |
| Karnataka        | 68.2        | 27.3        | 4.5        |
| Kerala           | 92.1        | 2.6         | 5.3        |
| Madhya Pradesh   | 72.1        | 9.3         | 16.3       |
| Maharashtra      | 48.4        | 35.7        | 15.9       |
| Odisha           | 80.6        | 9.7         | 9.7        |
| Punjab           | 93.5        | 6.5         | 0.0        |
| Rajasthan        | 50.0        | 48.1        | 1.9        |
| Tamil Nadu       | 75.0        | 13.1        | 11.9       |
| Telangana        | 28.9        | 50.0        | 21.1       |
| Uttar Pradesh    | 51.8        | 39.8        | 8.4        |
| Uttarakhand      | 77.4        | 22.6        | 0.0        |
| West Bengal      | 97.1        | 1.4         | 1.4        |
| <b>Total</b>     | <b>71.8</b> | <b>19.4</b> | <b>8.6</b> |

**Table C.11 Problem related to availability of net connectivity**

| State            | No problem  | Moderate    | Severe     |
|------------------|-------------|-------------|------------|
| Andhra Pradesh   | 66.7        | 28.9        | 4.4        |
| Assam            | 35.5        | 35.5        | 29.0       |
| Bihar            | 69.4        | 22.2        | 8.3        |
| Chhattisgarh     | 51.5        | 36.4        | 12.1       |
| Delhi            | 90.2        | 7.3         | 2.4        |
| Gujarat          | 93.0        | 2.8         | 1.4        |
| Haryana          | 82.1        | 7.7         | 10.3       |
| Himachal Pradesh | 76.7        | 16.7        | 6.7        |
| Jharkhand        | 30.0        | 23.3        | 46.7       |
| Karnataka        | 78.8        | 18.2        | 3.0        |
| Kerala           | 92.1        | 5.3         | 2.6        |
| Madhya Pradesh   | 65.1        | 14.0        | 18.6       |
| Maharashtra      | 42.9        | 41.3        | 13.5       |
| Odisha           | 87.1        | 9.7         | 3.2        |
| Punjab           | 87.1        | 9.7         | 3.2        |
| Rajasthan        | 67.3        | 28.8        | 3.8        |
| Tamil Nadu       | 82.1        | 13.1        | 4.8        |
| Telangana        | 44.7        | 44.7        | 10.5       |
| Uttar Pradesh    | 54.2        | 45.8        | 0.0        |
| Uttarakhand      | 74.2        | 22.6        | 3.2        |
| West Bengal      | 78.6        | 15.7        | 5.7        |
| <b>Total</b>     | <b>69.0</b> | <b>21.4</b> | <b>9.2</b> |

| Table C.12 Problem related to availability of sewage facility |             |             |             |
|---|-------------|-------------|-------------|
| State   | No problem  | Moderate    | Severe      |
| Andhra Pradesh  | 44.4        | 37.8        | 17.8        |
| Assam   | 51.6        | 41.9        | 6.5         |
| Bihar   | 63.9        | 19.4        | 16.7        |
| Chhattisgarh  | 69.7        | 9.1         | 21.2        |
| Delhi   | 80.5        | 7.3         | 12.2        |
| Gujarat   | 91.5        | 4.2         | 1.4         |
| Haryana   | 76.9        | 15.4        | 7.7         |
| Himachal Pradesh  | 80.0        | 6.7         | 13.3        |
| Jharkhand   | 66.7        | 10.0        | 23.3        |
| Karnataka   | 34.8        | 60.6        | 4.5         |
| Kerala  | 84.2        | 15.8        | 0.0         |
| Madhya Pradesh  | 72.1        | 11.6        | 16.3        |
| Maharashtra   | 26.2        | 46.0        | 25.4        |
| Odisha  | 77.4        | 16.1        | 6.5         |
| Punjab  | 90.3        | 6.5         | 3.2         |
| Rajasthan   | 73.1        | 26.9        | 0.0         |
| Tamil Nadu  | 84.5        | 8.3         | 6.0         |
| Telangana   | 28.9        | 23.7        | 47.4        |
| Uttar Pradesh   | 49.4        | 38.6        | 12.0        |
| Uttarakhand   | 74.2        | 19.4        | 6.5         |
| West Bengal   | 85.7        | 11.4        | 2.9         |
| <b>Total</b>  | <b>67.0</b> | <b>20.8</b> | <b>11.9</b> |

| Table C.13 Problem related to road / rail quality/ connectivity |             |             |            |
|---|-------------|-------------|------------|
| State   | No problem  | Moderate    | Severe     |
| Andhra Pradesh  | 62.2        | 35.6        | 2.2        |
| Assam   | 48.4        | 32.3        | 16.1       |
| Bihar   | 91.7        | 2.8         | 5.6        |
| Chhattisgarh  | 75.8        | 18.2        | 3.0        |
| Delhi   | 85.4        | 2.4         | 7.3        |
| Gujarat   | 91.5        | 2.8         | 0.0        |
| Haryana   | 87.2        | 12.8        | 0.0        |
| Himachal Pradesh  | 70.0        | 10.0        | 6.7        |
| Jharkhand   | 90.0        | 6.7         | 3.3        |
| Karnataka   | 36.4        | 59.1        | 4.5        |
| Kerala  | 86.8        | 7.9         | 5.3        |
| Madhya Pradesh  | 74.4        | 9.3         | 14.0       |
| Maharashtra   | 31.7        | 36.5        | 23.8       |
| Odisha  | 90.3        | 3.2         | 6.5        |
| Punjab  | 74.2        | 22.6        | 0.0        |
| Rajasthan   | 57.7        | 42.3        | 0.0        |
| Tamil Nadu  | 91.7        | 4.8         | 3.6        |
| Telangana   | 63.2        | 21.1        | 15.8       |
| Uttar Pradesh   | 59.0        | 38.6        | 2.4        |
| Uttarakhand   | 74.2        | 22.6        | 3.2        |
| West Bengal   | 91.4        | 5.7         | 1.4        |
| <b>Total</b>  | <b>73.0</b> | <b>18.9</b> | <b>5.9</b> |

| Table C.14 Problem related to industry policies |             |             |            |
|---|-------------|-------------|------------|
| State   | No problem  | Moderate    | Severe     |
| Andhra Pradesh                                  | 80.0        | 15.6        | 4.4        |
| Assam   | 54.8        | 38.7        | 6.5        |
| Bihar   | 58.3        | 13.9        | 25.0       |
| Chhattisgarh                                    | 42.4        | 24.2        | 33.3       |
| Delhi   | 70.7        | 17.1        | 9.8        |
| Gujarat   | 90.1        | 4.2         | 4.2        |
| Haryana   | 89.7        | 10.3        | 0.0        |
| Himachal Pradesh                                | 80.0        | 13.3        | 6.7        |
| Jharkhand                                       | 83.3        | 10.0        | 6.7        |
| Karnataka                                       | 21.2        | 54.5        | 24.2       |
| Kerala  | 81.6        | 13.2        | 5.3        |
| Madhya Pradesh                                  | 65.1        | 27.9        | 4.7        |
| Maharashtra                                     | 50.8        | 37.3        | 10.3       |
| Odisha  | 77.4        | 19.4        | 3.2        |
| Punjab  | 80.6        | 19.4        | 0.0        |
| Rajasthan                                       | 80.8        | 15.4        | 0.0        |
| Tamil Nadu                                      | 75.0        | 14.3        | 9.5        |
| Telangana                                       | 60.5        | 26.3        | 13.2       |
| Uttar Pradesh                                   | 75.9        | 15.7        | 0.0        |
| Uttarakhand                                     | 100.0       | 0.0         | 0.0        |
| West Bengal                                     | 84.3        | 11.4        | 4.3        |
| <b>Total</b>                                    | <b>71.6</b> | <b>19.1</b> | <b>8.2</b> |

| Table C.15 Problem in access to finance |             |             |            |
|---|-------------|-------------|------------|
| State                                   | No problem  | Moderate    | Severe     |
| Andhra Pradesh                          | 44.4        | 35.6        | 20.0       |
| Assam                                   | 51.6        | 32.3        | 16.1       |
| Bihar                                   | 63.9        | 19.4        | 16.7       |
| Chhattisgarh                            | 66.7        | 9.1         | 24.2       |
| Delhi                                   | 87.8        | 7.3         | 2.4        |
| Gujarat                                 | 90.1        | 4.2         | 4.2        |
| Haryana                                 | 87.2        | 10.3        | 2.6        |
| Himachal Pradesh                        | 96.7        | 3.3         | 0.0        |
| Jharkhand                               | 70.0        | 23.3        | 6.7        |
| Karnataka                               | 21.2        | 66.7        | 12.1       |
| Kerala                                  | 92.1        | 5.3         | 2.6        |
| Madhya Pradesh                          | 72.1        | 16.3        | 9.3        |
| Maharashtra                             | 42.9        | 42.9        | 13.5       |
| Odisha                                  | 77.4        | 16.1        | 6.5        |
| Punjab                                  | 83.9        | 12.9        | 3.2        |
| Rajasthan                               | 75.0        | 21.2        | 0.0        |
| Tamil Nadu                              | 65.5        | 16.7        | 17.9       |
| Telangana                               | 26.3        | 44.7        | 28.9       |
| Uttar Pradesh                           | 42.2        | 48.2        | 1.2        |
| Uttarakhand                             | 83.9        | 16.1        | 0.0        |
| West Bengal                             | 91.4        | 8.6         | 0.0        |
| <b>Total</b>                            | <b>68.2</b> | <b>21.9</b> | <b>9.0</b> |



| Table C.16 Problem related to availability of raw material |             |             |            |
|--|-------------|-------------|------------|
| State  | No problem  | Moderate    | Severe     |
| Andhra Pradesh   | 68.9        | 28.9        | 2.2        |
| Assam  | 58.1        | 32.3        | 9.7        |
| Bihar  | 72.2        | 13.9        | 13.9       |
| Chhattisgarh   | 72.7        | 15.2        | 12.1       |
| Delhi  | 95.1        | 4.9         | 0.0        |
| Gujarat  | 90.1        | 4.2         | 4.2        |
| Haryana  | 66.7        | 10.3        | 2.6        |
| Himachal Pradesh   | 90.0        | 3.3         | 6.7        |
| Jharkhand  | 73.3        | 20.0        | 6.7        |
| Karnataka  | 63.6        | 30.3        | 6.1        |
| Kerala   | 92.1        | 5.3         | 2.6        |
| Madhya Pradesh   | 67.4        | 23.3        | 7.0        |
| Maharashtra  | 33.3        | 44.4        | 19.0       |
| Odisha   | 58.1        | 9.7         | 6.5        |
| Punjab   | 77.4        | 12.9        | 6.5        |
| Rajasthan  | 75.0        | 23.1        | 1.9        |
| Tamil Nadu   | 82.1        | 11.9        | 6.0        |
| Telangana  | 55.3        | 31.6        | 13.2       |
| Uttar Pradesh  | 66.3        | 32.5        | 1.2        |
| Uttarakhand  | 67.7        | 32.3        | 0.0        |
| West Bengal  | 91.4        | 8.6         | 0.0        |
| <b>Total</b>   | <b>72.2</b> | <b>19.0</b> | <b>6.1</b> |

| Table C.17 Problem related to tax policy transition to GST |             |             |             |
|--|-------------|-------------|-------------|
| State  | No problem  | Moderate    | Severe      |
| Andhra Pradesh   | 37.8        | 31.1        | 31.1        |
| Assam  | 35.5        | 48.4        | 16.1        |
| Bihar  | 75.0        | 8.3         | 16.7        |
| Chhattisgarh   | 54.5        | 33.3        | 12.1        |
| Delhi  | 82.9        | 9.8         | 7.3         |
| Gujarat  | 84.5        | 7.0         | 7.0         |
| Haryana  | 82.1        | 15.4        | 2.6         |
| Himachal Pradesh   | 83.3        | 10.0        | 6.7         |
| Jharkhand  | 70.0        | 23.3        | 6.7         |
| Karnataka  | 18.2        | 54.5        | 27.3        |
| Kerala   | 76.3        | 23.7        | 0.0         |
| Madhya Pradesh   | 72.1        | 16.3        | 11.6        |
| Maharashtra  | 19.0        | 35.7        | 40.5        |
| Odisha   | 93.5        | 3.2         | 0.0         |
| Punjab   | 80.6        | 19.4        | 0.0         |
| Rajasthan  | 23.1        | 69.2        | 7.7         |
| Tamil Nadu   | 71.4        | 13.1        | 15.5        |
| Telangana  | 18.4        | 23.7        | 57.9        |
| Uttar Pradesh  | 50.6        | 42.2        | 7.2         |
| Uttarakhand  | 35.5        | 61.3        | 3.2         |
| West Bengal  | 85.7        | 11.4        | 2.9         |
| <b>Total</b>   | <b>59.5</b> | <b>26.7</b> | <b>13.3</b> |

**Table C.18 Problem in getting approvals before starting business**

| State            | No problem  | Moderate    | Severe      |
|------------------|-------------|-------------|-------------|
| Andhra Pradesh   | 53.3        | 46.7        | 0.0         |
| Assam            | 41.9        | 32.3        | 25.8        |
| Bihar            | 52.8        | 33.3        | 13.9        |
| Chhattisgarh     | 39.4        | 33.3        | 27.3        |
| Delhi            | 85.4        | 7.3         | 7.3         |
| Gujarat          | 87.3        | 5.6         | 5.6         |
| Haryana          | 79.5        | 15.4        | 5.1         |
| Himachal Pradesh | 80.0        | 10.0        | 10.0        |
| Jharkhand        | 50.0        | 26.7        | 23.3        |
| Karnataka        | 12.1        | 42.4        | 45.5        |
| Kerala           | 78.9        | 18.4        | 2.6         |
| Madhya Pradesh   | 65.1        | 16.3        | 16.3        |
| Maharashtra      | 28.6        | 44.4        | 23.8        |
| Odisha           | 67.7        | 29.0        | 3.2         |
| Punjab           | 45.2        | 45.2        | 9.7         |
| Rajasthan        | 57.7        | 40.4        | 1.9         |
| Tamil Nadu       | 61.9        | 25.0        | 13.1        |
| Telangana        | 28.9        | 47.4        | 21.1        |
| Uttar Pradesh    | 36.1        | 50.6        | 13.3        |
| Uttarakhand      | 71.0        | 29.0        | 0.0         |
| West Bengal      | 65.7        | 21.4        | 12.9        |
| <b>Total</b>     | <b>56.6</b> | <b>29.5</b> | <b>13.4</b> |

**Table C.19 Problem related to corruption in the state**

| State            | No problem  | Moderate    | Severe      |
|------------------|-------------|-------------|-------------|
| Andhra Pradesh   | 31.1        | 51.1        | 17.8        |
| Assam            | 41.9        | 19.4        | 38.7        |
| Bihar            | 25.0        | 50.0        | 25.0        |
| Chhattisgarh     | 24.2        | 39.4        | 36.4        |
| Delhi            | 43.9        | 36.6        | 19.5        |
| Gujarat          | 62.0        | 9.9         | 26.8        |
| Haryana          | 74.4        | 20.5        | 5.1         |
| Himachal Pradesh | 86.7        | 13.3        | 0.0         |
| Jharkhand        | 20.0        | 23.3        | 56.7        |
| Karnataka        | 16.7        | 62.1        | 21.2        |
| Kerala           | 65.8        | 26.3        | 7.9         |
| Madhya Pradesh   | 51.2        | 18.6        | 27.9        |
| Maharashtra      | 47.6        | 27.0        | 20.6        |
| Odisha           | 80.6        | 16.1        | 3.2         |
| Punjab           | 3.2         | 35.5        | 61.3        |
| Rajasthan        | 34.6        | 25.0        | 40.4        |
| Tamil Nadu       | 48.8        | 19.0        | 32.1        |
| Telangana        | 23.7        | 57.9        | 18.4        |
| Uttar Pradesh    | 37.3        | 44.6        | 18.1        |
| Uttarakhand      | 38.7        | 19.4        | 41.9        |
| West Bengal      | 65.7        | 27.1        | 7.1         |
| <b>Total</b>     | <b>44.0</b> | <b>30.6</b> | <b>25.1</b> |

**Table C.20 Problem related to law and order situation in the state**

| State            | No problem  | Moderate    | Severe      |
|------------------|-------------|-------------|-------------|
| Andhra Pradesh   | 42.2        | 44.4        | 13.3        |
| Assam            | 54.8        | 25.8        | 19.4        |
| Bihar            | 27.8        | 55.6        | 16.7        |
| Chhattisgarh     | 21.2        | 54.5        | 24.2        |
| Delhi            | 63.4        | 26.8        | 9.8         |
| Gujarat          | 83.1        | 9.9         | 5.6         |
| Haryana          | 79.5        | 20.5        | 0.0         |
| Himachal Pradesh | 90.0        | 6.7         | 3.3         |
| Jharkhand        | 23.3        | 40.0        | 36.7        |
| Karnataka        | 24.2        | 72.7        | 3.0         |
| Kerala           | 68.4        | 26.3        | 5.3         |
| Madhya Pradesh   | 65.1        | 23.3        | 9.3         |
| Maharashtra      | 27.8        | 32.5        | 31.0        |
| Odisha           | 90.3        | 9.7         | 0.0         |
| Punjab           | 61.3        | 35.5        | 3.2         |
| Rajasthan        | 50.0        | 46.2        | 3.8         |
| Tamil Nadu       | 70.2        | 14.3        | 15.5        |
| Telangana        | 39.5        | 34.2        | 26.3        |
| Uttar Pradesh    | 51.8        | 38.6        | 9.6         |
| Uttarakhand      | 71.0        | 29.0        | 0.0         |
| West Bengal      | 78.6        | 15.7        | 5.7         |
| <b>Total</b>     | <b>56.4</b> | <b>31.5</b> | <b>11.5</b> |

**Table C.21 Perception on business conditions one year ahead**

| State            | Better      | Same        | Worse      |
|------------------|-------------|-------------|------------|
| Andhra Pradesh   | 42.2        | 42.2        | 15.6       |
| Assam            | 87.1        | 12.9        | 0.0        |
| Bihar            | 61.1        | 22.2        | 16.7       |
| Chhattisgarh     | 45.5        | 39.4        | 15.2       |
| Delhi            | 73.2        | 19.5        | 7.3        |
| Gujarat          | 47.9        | 45.1        | 7.0        |
| Haryana          | 84.6        | 15.4        | 0.0        |
| Himachal Pradesh | 63.3        | 30.0        | 6.7        |
| Jharkhand        | 90.0        | 10.0        | 0.0        |
| Karnataka        | 80.3        | 16.7        | 1.5        |
| Kerala           | 34.2        | 63.2        | 2.6        |
| Madhya Pradesh   | 51.2        | 46.5        | 2.3        |
| Maharashtra      | 36.5        | 55.6        | 5.6        |
| Odisha           | 64.5        | 32.3        | 3.2        |
| Punjab           | 58.1        | 38.7        | 3.2        |
| Rajasthan        | 53.8        | 44.2        | 1.9        |
| Tamil Nadu       | 54.8        | 38.1        | 7.1        |
| Telangana        | 34.2        | 60.5        | 5.3        |
| Uttar Pradesh    | 36.1        | 63.9        | 0.0        |
| Uttarakhand      | 61.3        | 38.7        | 0.0        |
| West Bengal      | 64.3        | 25.7        | 10.0       |
| <b>Total</b>     | <b>58.3</b> | <b>36.2</b> | <b>5.3</b> |

**Table C.22 Perception on firm's own financial position one year ahead**

| State            | Better      | Same        | Worse      |
|------------------|-------------|-------------|------------|
| Andhra Pradesh   | 31.1        | 55.6        | 13.3       |
| Assam            | 80.6        | 16.1        | 3.2        |
| Bihar            | 61.1        | 27.8        | 11.1       |
| Chhattisgarh     | 45.5        | 42.4        | 12.1       |
| Delhi            | 73.2        | 22.0        | 4.9        |
| Gujarat          | 46.5        | 47.9        | 5.6        |
| Haryana          | 82.1        | 17.9        | 0.0        |
| Himachal Pradesh | 66.7        | 26.7        | 6.7        |
| Jharkhand        | 86.7        | 13.3        | 0.0        |
| Karnataka        | 86.4        | 7.6         | 6.1        |
| Kerala           | 52.6        | 42.1        | 5.3        |
| Madhya Pradesh   | 53.5        | 44.2        | 2.3        |
| Maharashtra      | 33.3        | 61.1        | 4.0        |
| Odisha           | 61.3        | 35.5        | 3.2        |
| Punjab           | 54.8        | 41.9        | 0.0        |
| Rajasthan        | 51.9        | 46.2        | 1.9        |
| Tamil Nadu       | 51.2        | 46.4        | 2.4        |
| Telangana        | 39.5        | 44.7        | 15.8       |
| Uttar Pradesh    | 50.6        | 48.2        | 1.2        |
| Uttarakhand      | 48.4        | 51.6        | 0.0        |
| West Bengal      | 65.7        | 30.0        | 4.3        |
| <b>Total</b>     | <b>58.2</b> | <b>36.6</b> | <b>4.9</b> |

**Table C.23 Perception on present investment climate as compared with a year ago**

| State            | Better      | Same        | Worse      |
|------------------|-------------|-------------|------------|
| Andhra Pradesh   | 35.6        | 40.0        | 24.4       |
| Assam            | 67.7        | 29.0        | 3.2        |
| Bihar            | 47.2        | 38.9        | 13.9       |
| Chhattisgarh     | 36.4        | 54.5        | 9.1        |
| Delhi            | 36.6        | 41.5        | 22.0       |
| Gujarat          | 40.8        | 54.9        | 4.2        |
| Haryana          | 53.8        | 46.2        | 0.0        |
| Himachal Pradesh | 56.7        | 40.0        | 3.3        |
| Jharkhand        | 83.3        | 13.3        | 3.3        |
| Karnataka        | 36.4        | 59.1        | 4.5        |
| Kerala           | 44.7        | 55.3        | 0.0        |
| Madhya Pradesh   | 41.9        | 58.1        | 0.0        |
| Maharashtra      | 34.1        | 50.0        | 14.3       |
| Odisha           | 51.6        | 48.4        | 0.0        |
| Punjab           | 51.6        | 45.2        | 3.2        |
| Rajasthan        | 42.3        | 53.8        | 3.8        |
| Tamil Nadu       | 25.0        | 54.8        | 20.2       |
| Telangana        | 39.5        | 39.5        | 21.1       |
| Uttar Pradesh    | 41.0        | 57.8        | 1.2        |
| Uttarakhand      | 64.5        | 35.5        | 0.0        |
| West Bengal      | 48.6        | 47.1        | 4.3        |
| <b>Total</b>     | <b>46.6</b> | <b>45.9</b> | <b>7.4</b> |

| <b>Table C.24 Current level of operation of the firm relative to installed capacity</b> |             |              |             |
|---|-------------|--------------|-------------|
| <b>State</b>  | <b>Less</b> | <b>Equal</b> | <b>More</b> |
| Andhra Pradesh  | 64.4        | 33.3         | 2.2         |
| Assam   | 3.2         | 87.1         | 9.7         |
| Bihar   | 11.1        | 72.2         | 16.7        |
| Chhattisgarh  | 6.1         | 66.7         | 27.3        |
| Delhi   | 19.5        | 78.0         | 2.4         |
| Gujarat   | 11.3        | 74.6         | 14.1        |
| Haryana   | 7.7         | 87.2         | 5.1         |
| Himachal Pradesh  | 13.3        | 70.0         | 16.7        |
| Jharkhand   | 20.0        | 60.0         | 20.0        |
| Karnataka   | 7.6         | 87.9         | 4.5         |
| Kerala  | 0.0         | 89.5         | 10.5        |
| Madhya Pradesh  | 4.7         | 90.7         | 4.7         |
| Maharashtra   | 26.2        | 62.7         | 11.1        |
| Odisha  | 35.5        | 61.3         | 3.2         |
| Punjab  | 19.4        | 80.6         | 0.0         |
| Rajasthan   | 3.8         | 57.7         | 38.5        |
| Tamil Nadu  | 14.3        | 72.6         | 13.1        |
| Telangana   | 18.4        | 55.3         | 26.3        |
| Uttar Pradesh   | 2.4         | 85.5         | 12.0        |
| Uttarakhand   | 0.0         | 71.0         | 29.0        |
| West Bengal   | 60.0        | 37.1         | 2.9         |
| <b>Total</b>  | <b>16.6</b> | <b>70.5</b>  | <b>12.9</b> |



