



LEADS 2019

Logistics Ease Across Different States

Contents

Foreword by Hon'ble Minister of Commerce and Industry	03
Foreword by Special Secretary (Logistics)	04
Acknowledgement	06
Acronyms	07
LEADS: Triggering Logistics Ease	10
LEADS 2019: Demystifying Logistics Ease	22
LEADIng from Ease to Excellence	56
Annexure 1: Technical note on measuring logistics ease	120
Annexure 2: Summary of objective data available in the Indian context	130
Annexure 3: LEADS Questionnaire	136
Annexure 4: LEADS 2018	150
References	154





FOREWORD

मंत्री
वाणिज्य एवं उद्योग;
एवं
नागर विमानन मंत्रालय
भारत सरकार, नई दिल्ली
MINISTER
COMMERCE & INDUSTRY;
AND
CIVIL AVIATION
GOVERNMENT OF INDIA, NEW DELHI

Logistics is the lifeline of a nation's industry and economy. India's vision of being a manufacturing giant will ride on the backbone of logistics, helping its small and medium businesses tap into the huge market, generate employment and boost farmers' income.

A World Economic Forum report said that India is poised to become the third-largest consumer market behind only the US and China. Sustaining domestic consumption story and at the same time, enabling integration with global value chain is critical for economic growth for India and logistics holds the key to both.

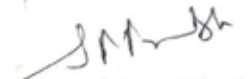
The Government has taken a concerted view on logistics sector and is in various stages of preparing policies and plans to enable the sector to flourish. Logistics Division in the Department of Commerce has prepared a draft National Logistics Policy and is working on a National Integrated Logistics Plan.

The Government has taken cognizance of the issues inhibiting logistics performance across the country including fragmented nature of the industry, varied performance standards, lack of skilled manpower and poor adoption of technology, and intends to enable an environment where these issues are adequately addressed. The draft logistics policy aims to achieve defined objectives including creating a single point of reference for all logistics and trade facilitation matters, reducing logistics cost, doubling employment, and encouraging industry, academia and Government to come together to create a logistics Center of Excellence.

Last year, the Government released the study 'Logistics Ease Across Different States' (LEADS) to benchmark logistics performance across States. The Report was well-received by both the Government and the private sector. Various State Governments have recognized the importance of logistics, bringing in policy reforms and other interventions to enhance their logistics ease.

In its second edition, LEADS 2019 intends to take this initiative forward and provide a sustained mechanism for assessment of logistics ease across States. This edition has attempted to capture specific improvements indicated by industries for improving logistics performance. The States may further examine these and take suitable actions.

I am confident that all the stakeholders will find useful takeaways in the Report and inform their policies and plans.


(Suresh Prabhu)



FOREWORD

The first edition of the annual survey on the 'Logistics Ease Across Different States in 2018', popularly known as the LEADS REPORT, has enthused the States to specifically employ Logistics for the purpose of improving the business environment and making the State attractive for doing business. Several States have initiated the process of preparing State Logistics Plans.

M/s Deloitte has been our knowledge partner in the preparation of the LEADS Reports. We have analysed the comments received from stakeholders on the first LEADS REPORT and improved upon the maiden effort. The norms that formed the basis of the first report however remain the same, and hence the reports are comparable.

This second report, LEADS - 2019, analyses domestic trade from the point of view of the logistics eco-system. The Government of India has created the Logistics Division with a view of integrating and improving efficiencies in the Logistics sector. The Logistics Division stays committed to developing a truly integrated, seamless, efficient, reliable and cost effective logistics network, based on best in class technologies, processes and skilled manpower, working and actively associating with the industry stakeholders and State Governments.

Logistics has seen tremendous growth in the last decade. The Indian logistics industry is presently valued at nearly US\$200 billion and is poised to grow at a compounded annual growth rate of 10.50%. With increase in mechanization and adoption of new technology, this industry integrates national, regional, and global value chains, improves trade competitiveness and boosts economic growth through enhancing access and improving affordability of access.

With the implementation of the Goods and Services Tax (GST), the nation has been transformed into a unified market, ensuring smoother inter-state trade. GST reform has opened up many new logistic opportunities of significance. Infrastructure Initiatives such as Bharatmala and Sagarmala; policy initiatives such as the Agri Export policy and Air Cargo policy; process initiatives such as simplification of Customs' procedures and substantial

digital processing efforts in SWIFT, ICEGATE and PCS, have all been commended by the stakeholders for improving the 'ease of doing business'. These are beginning to show results. Yet several bottlenecks that were hitherto not very prominent have come centre stage. The process of improvement is relentless! That we are more than up to the challenge is evident from the results!

In the Division we are working on the first version of the National Integrated Logistics Action Plan, which defines annual action plans, continuously monitors improvements in key logistics parameters and resolves key bottlenecks. The plan adopts an integrated approach towards resolving logistics issues.

We are developing a National Logistics e-Marketplace to improve access of stakeholders in the sector to a multi-modal platform. The hallmark is transparency and digitization of processes by simplifying documentation and compliance needs, along with the integration of all regulatory, certification and service provider organizations on one platform.

The LEADS REPORT 2019 promises to energise the States into action on State-specific recommendations in the Report. The proposed Center of Trade Facilitation and Logistics Excellence (CTFL) at IIFT, Delhi may provide a platform to coordinate the efforts of the Government, Industry and Academia to improve the State's score on the Logistics parameters.

I am hopeful that the LEADS REPORT 2019 will give a fillip to increased efforts in the States to improve Logistics efficiency and effectiveness.

11-03-2019



N Sivasailam
Special Secretary

Acknowledgement

The second edition of the LEADS report has been prepared by a team of Transportation & Logistics professionals at Deloitte and academics under the aegis of India Logistics, Department of Commerce, Ministry of Commerce and Industry, Government of India.

The team is thankful to senior officials at the Ministry for their time and inputs on all aspects of the overall trade logistics scenario in the country, and the framework developed for LEADS index under this study. Their continued commitment towards the holistic development of the sector by placing emphasis on interventions by all categories of stakeholders, inspired the team to undertake this enormous effort to delve deeper into focus areas for states and broadly suggest a way forward.

The team would like to acknowledge the generous support provided by the Federation of Indian Export Organizations (FIEO) and Director General of Foreign Trade (DGFT) in identifying and facilitating connect with stakeholders for seeking their feedback.

The team is also thankful to officials and nodal officers of various state governments who facilitated the survey and shared their invaluable inputs; representatives of various state chapters of Chambers of Commerce and Industry, industry associations, and associations/boards of various goods and commodities manufacturers.

This report would not have been possible without the inputs of hundreds of respondents from all over the country for their enthusiastic participation in the survey. Their participation was the foundation of this report and their inputs will contribute to the logistics growth story of the country in the years to come.

It has been our privilege to assist the Ministry yet again on this critical initiative of the Government of India.

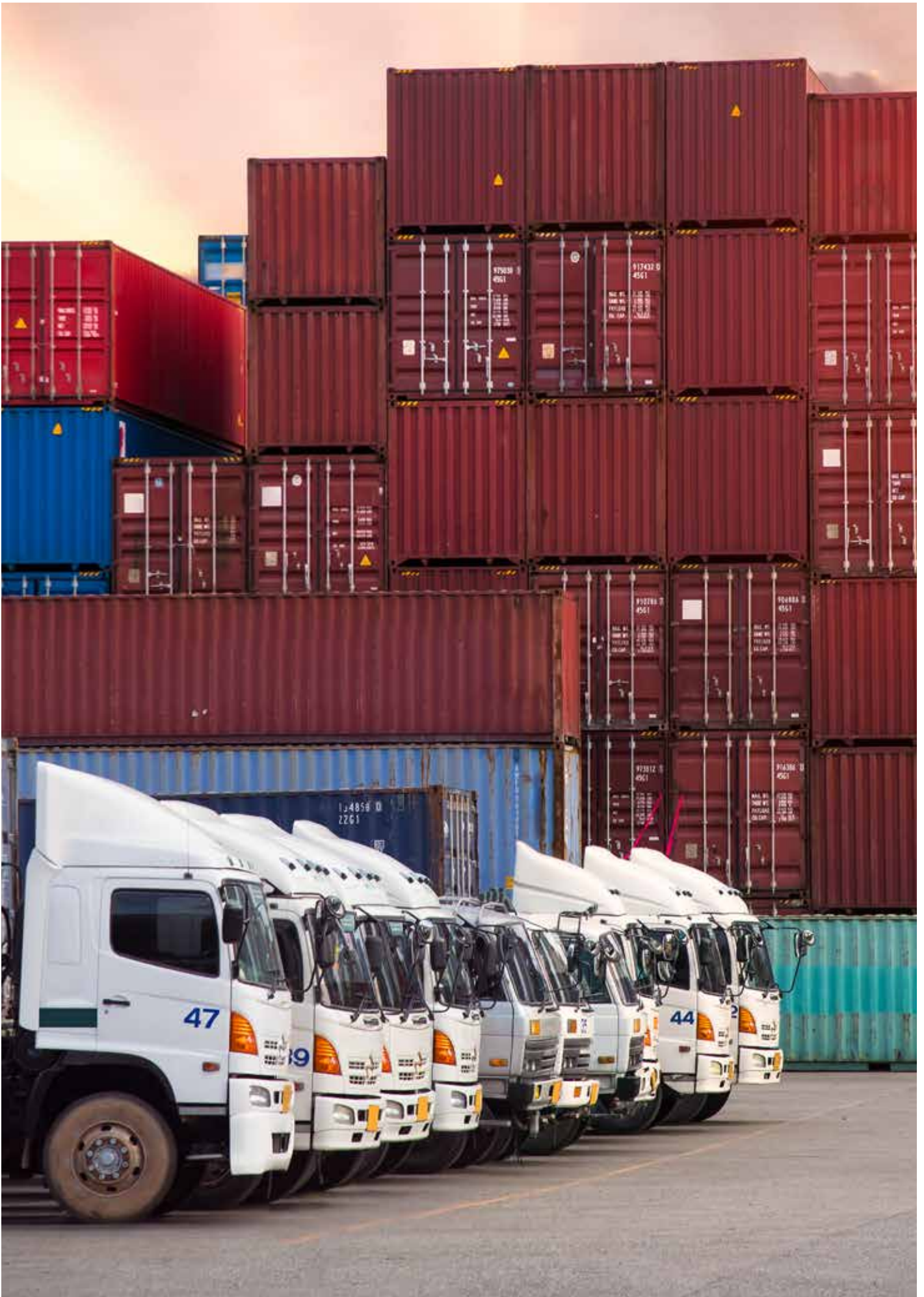
Peeyush Naidu

Partner,
Deloitte Touche Tohmatsu India LLP

Acronyms

3PL	Third Party Logistics
4PL	Fourth Party Logistics
5PL	Fifth Party Logistics
AAI	Airports Authority of India
AFS	Air Freight Station
APEDA	Agricultural and Processed Food Products Export Development Authority
CBIC	Central Board of Indirect Taxes and Customs
CFS	Container Freight Station
CHA	Customs House Agent
CHIAL	Chandigarh International Airport Limited
CIDCO	City and Industrial Development Corporation of Maharashtra Limited
CIPHET	Central Institute of Post-Harvest Engineering and Technology
CIS	Commonwealth of Independent States
CONCOR	Container Corporation of India Limited
C-TPAT	Customs-Trade Partnership Against Terrorism
CTFL	Center of Trade Facilitation and Logistics Excellence
CWC	Central Warehousing Corporation
DFC	Dedicated Freight Corridor
DFCCIL	Dedicated Freight Corridor Corporation of India Limited
DGCI&S	Directorate General of Commercial Intelligence and Statistics
DGFT	Directorate General of Foreign Trade
DMCC	Dubai Multi Commodities Centre
EGM	Export General Manifest
EIC	Export Inspection Council
ETC	Electronic Toll Collection
e-way Bill	Electronic Way bill
EXIM	Export and Import
FCI	Food Corporation of India
FTL	Full Truck Load
FIEO	Federation of Indian Export Organisations
FSSAI	Food Safety and Standards Authority of India
FY	Financial Year
GCV	Goods Commercial Vehicle
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GMADA	Greater Mohali Area Development Authority
GoI	Government of India
GPS	Global Positioning System
GST	Goods and Services Tax
GSDP	Gross State Domestic Product
GSVA	Gross State Value Added
GVA	Gross Value Added

HS	Harmonized Systems
HUDA	Haryana Urban Development Authority
ICD	Inland Container Depot
ICP	Integrated Check Post
ICT	Information and Communication Technologies
IGST	Integrated Goods and Services Tax
IMC	Inter-Ministerial Committee
IoT	Internet of Things
JNPT	Jawahar Lal Nehru Port Trust
JRC	Joint Research Centre, European Commission
LADIS	Least Available Depth Information System
LCL	Less than Container Load
LGBI	Lokpriya Gopinath Bordoloi International Airport
LPAI	Land Ports Authority of India
LPI	Logistics Performance Index
LSP	Logistics Service Provider
BM	Bituminous Macadam
MCAR	Missing Completely at Random
MIDC	Maharashtra Industrial Development Corporation
MMLP	Multi Modal Logistics Park
MoRTH	Ministry of Road Transport and Highways
MoU	Memorandum of Understanding
MPT	Mormugao Port Trust
MSME	Micro, Small and Medium Enterprises
NCDC	National Cooperative Development Corporation
NH	National Highway
NHAI	National Highway Authority of India
OECD	Organisation for Economic Co-operation and Development
PCA	Principal Component Analysis
PFT	Private Freight Terminal
PGA	Participatory Government Agency
PGC	Public Grievance Committee
PPP	Public Private Partnership
RFID	Radio Frequency Identification
RTIS	Real-Time Train information system
RTO	Regional Transport Office
SEZ	Special Economic Zone
SH	State Highways
SICOP	Small Scale Industries Development Corporation Limited
SIIDCUL	State Infrastructure and Industrial Development Corporation of Uttarakhand Limited
SPS	Sanitary and Phytosanitary
SWC	State Warehousing Corporation
TEU	Twenty-foot equivalent unit
TIES	Trade Infrastructure for Export Scheme
TREC-STEP	Tiruchirappalli Regional Engineering College Science and Technology Entrepreneurs Park
UT	Union Territory
VAT	Value Added Tax
VCTPL	Visakha Container Terminal Private Limited
WDRA	Warehousing Development and Regulatory Authority



LEADS: Triggering Logistics Ease

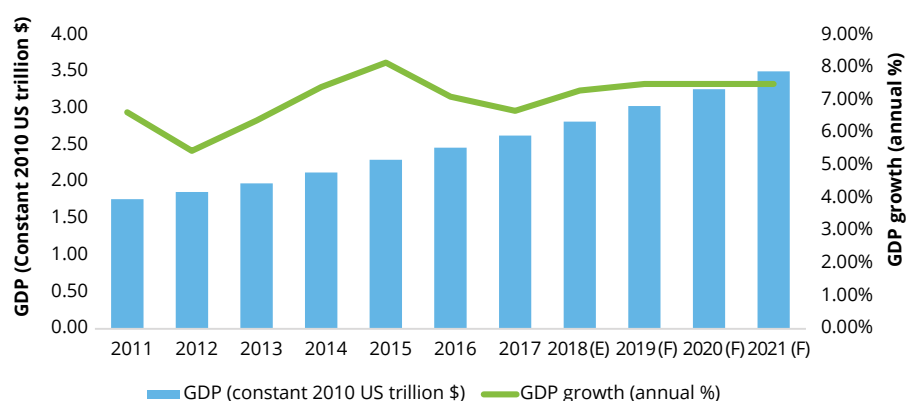
Logistics: Game changer of trade

In the past few decades, the discourse on international trade and globalisation has gone through several plot twists. In recent times, protectionism is becoming a growing trend and countries across the globe have largely moved towards a hyper-globalised world. This steadily boosts international trade, cross-border investment, and economic integration beyond national borders. As products increasingly become “Made in the World” rather than being made in a specific location, linkage with global value chains is critical to any economy aspiring for a step-up in growth (World Trade Organization, 2019). In the era of such increasing integration, a seamlessly functioning domestic and international logistics ecosystem is clearly a precondition of global competitiveness.

India aspires to become the third largest economy in the world by 2030. It has accordingly set an ambitious target of being a \$10-trillion economy by 2030 (Dhasmana, I, 2018). Such aspirations are realisable only through sustained economic growth over the long term requiring strong competitive edge and ease of access to large markets. The World Bank (2019) has projected a strong annual growth of 7.5 percent for India in the next three financial years (up to 2022).

India is proactively seeking to give a thrust to manufacturing and services sectors to continue on this growth path. Policies of the government to boost domestic industry, increased investment in infrastructure creation, and easing regulations to facilitate business are all intended to help strengthen India’s manufacturing sector. This has heightened the focus on the logistics

Exhibit 1: India’s GDP Forecast



Source: The World Bank (2019)

1. E: Estimate, F: Forecast 2. Aggregates are based on constant 2010 USD

sector and the need to bring it to the centre stage of reforms.

Indian logistics sector is evolving rapidly due to demand-side factors such as growing e-commerce, emerging business models involving specialised third-party operators (3PL, 4PL, and 5PL players), technological disruptions (e-marketplace), and policy interventions. The traditional approach towards logistics has changed entirely from it being treated as a support function to being strategic today, which not just enables the competitiveness of an industry but also of the country.

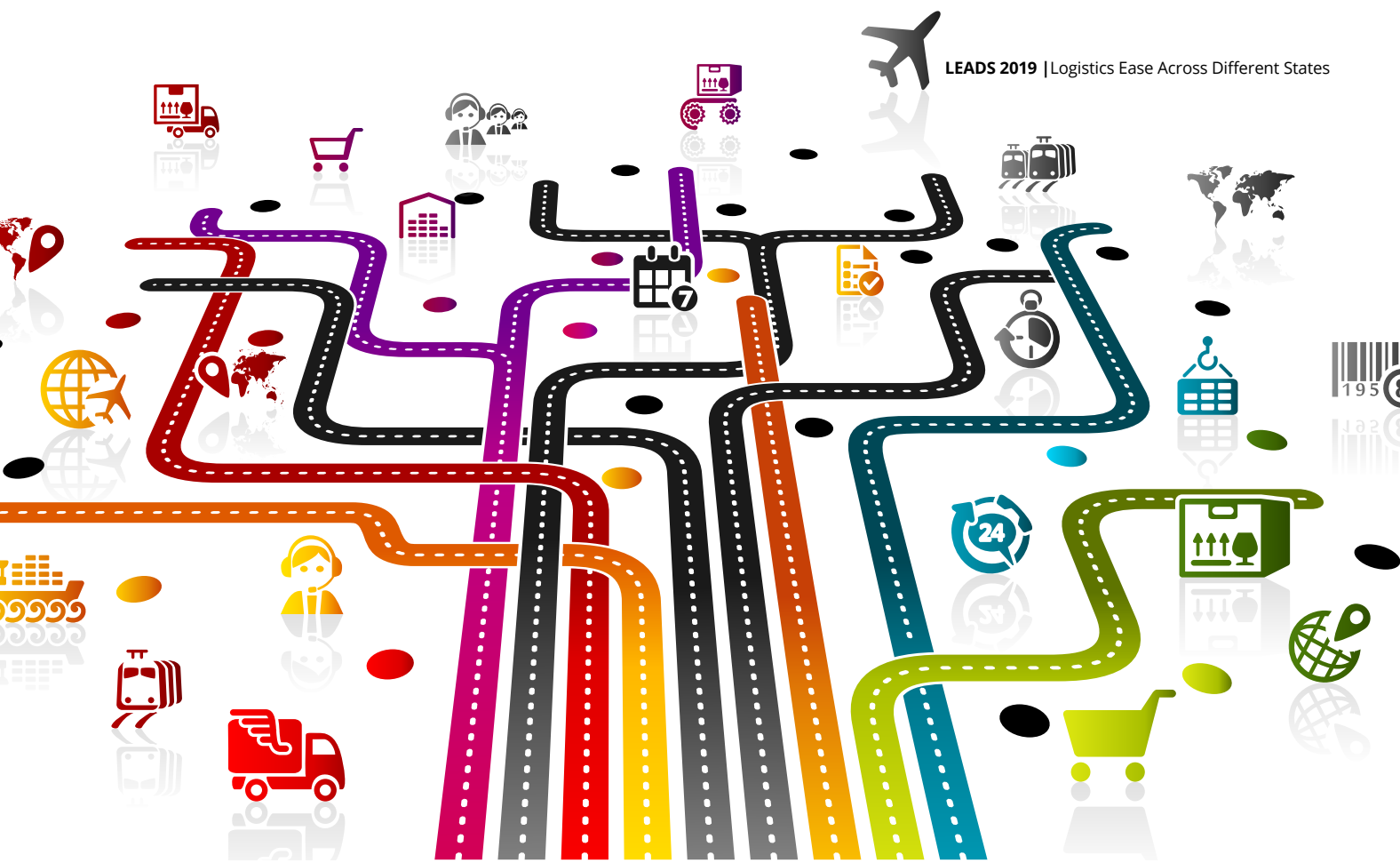
India’s annual exports grew by ~10 percent, registering the highest growth in the last five years, as per the provisional estimates for FY 2017-18 released by the Directorate General of Commercial Intelligence and Statistics (2018). To boost it further, the

government has taken several measures including those to enable an efficient and effective logistics ecosystem.

Indian Logistics: Snapshot of interventions

Measures undertaken by the government to enhance logistics performance can be broadly placed in four categories: policy, integrated infrastructure development, skilling and technology.

The newly set up Logistics Division in the Ministry of Commerce and Industry has launched a draft National Logistics Policy to provide an enabling policy environment. It is also in the process of designing and rolling out a national logistics action plan to foster cost-effective and seamless movement of goods across the country. The policy sets a vision to drive economic growth and trade competitiveness of the country



through an integrated, seamless, efficient, reliable, and cost-effective logistics network.

There is a continuous endeavour by the government to ease implementation of the Goods and Services Tax (GST), by providing a uniform tax on the supply of goods and services. It is seen to have helped reduce transit times of freight vehicles, ease documentation complexities, and enable consolidation of warehouses to optimise inventory costs. The data from the Ministry of Road Transport and Highways (2017) indicate that trucks are covering 300-325 km a day on an average against about 225 km a day before GST was introduced. While the government seems to have mostly addressed the teething troubles, it is seen to now working towards further rationalisation and simplification of the system to enhance ease of operations.

From piecemeal infrastructure projects to large national infrastructure development programmes, government has significantly upscaled its efforts to make the infrastructure available for a robust economic growth. Programmes such as Bharatmala, Sagarmala, and Dedicated Freight Corridors (DFCs)

exemplify this shift. A key element of these recent programmes or initiatives has been the focus on integration across the supply chain to ensure a seamless movement of freight.

There is clear emphasis on an integrated approach to logistics infrastructure development. There are significant initiatives in this direction. Some of them include planned development of 35 Multi Modal Logistics Parks (MMLPs) under Bharatmala Pariyojana, a number of port connectivity projects under Sagarmala,

renewed focus on national waterways with inland terminals, and a number of industrial and dedicated freight corridors being planned across key production and consumption clusters in the country (Refer Box 1).

Skill enhancement for logistics sector has also come into focus. The draft National Logistics Policy takes note of the boost required in the logistics ecosystem. It aims at doubling employment in the logistics sector by generating additional 10-15 million jobs with an equal focus

Box 1: Focus on integrated infrastructure planning

- Making considerable progress, Inland Waterways Authority of India operated its maiden container vessel movement since Independence and forayed into PPP for the first time handing over the operation and management of its terminals in Kolkata (Press Information Bureau, 2018).
- Dedicated Freight Corridor Corporation of India Limited (DFCCIL) has carried out trial run of its freight trains on its completed sections like double stack container freight train on sections of 190 km and 306 km on Western DFC and a trial run on 194 km section on Eastern DFC (Rail Analysis India, 2018).
- While Bharatmala set a construction target of 12,000 km of roads for FY19 (including port connectivity projects of 2,000 km), it has achieved over 9,000 km of roads until Dec 18 (National Highways Authority of India, 2018).
- Sagarmala has enabled 21 port connectivity projects (Ministry of Shipping, 2018).

on enhancing skills in the sector. The government created the Logistics Sector Skill Council, which introduced the “First Apprenticeship” programme in 2017, to address this need. Launched under the National Apprenticeship Promotion Scheme, its objective is to formalise apprenticeships in the logistics sector with sub-sector specific trainings.

The role of technology cannot be over-emphasised in logistics for reliable, faster, and cost-effective movement of goods. There has been a rise in adoption of technology by both public and private sector agencies in logistics. The focus is to enable seamless exchange of information, informed decision-making through data analytics, and cost competitiveness in services and operations. Digital innovation has played a significant role in mitigating several complex problems. These problems have plagued the transport and logistics value chain for years, from subpar fleet optimisation causing cost accretion to delayed delivery times and lack of transparency. Several start-ups have tried to capitalise

on the potential in logistics sector by using advanced technologies such as fleet visualisation, geocoding, route deviation engines, and internet of things (IoT) to improve operational efficiencies (Refer Box 3 and Box 4).

Box 3: Technological disruptions revolutionising performance across the logistics value chain

- Use of common platforms or freight marketplaces, which connect key players of the logistics ecosystem, including truck drivers, fleet owners, consignors and consignees.
- Use of machine learning, automatic rider scheduling and location geo-fencing to improve on end-to-end freight movement visibility.
- Addressing the key problem of a highly fragmented industry, by managing the entire goods transportation cycle on one platform resulting in - improved transparency for the consignor and improved tracking mechanism for the transporter. Here, predictive analytics are helping to estimate delay in freight movement.
- Developing load sharing applications and platforms matching available loads to trucks already on the road to address the “empty miles” problem. These applications place load requirements received onto the platform, and make them visible to all trucks near the pick-up point. Similar technologies have been implemented by start-ups like 4TiGO, Locus, Shadowfax, FarEye, and Vaahika, which have improved asset utilisation for the trucker while also increasing earnings of fleet owners.

Box 2: Facilitating the logistics ecosystem technologically

- National Logistics e-marketplace is under implementation by the Logistics Division, which aims at bringing together all the logistics stakeholders for promoting ease of logistics. The online marketplace intends to facilitate not just better price discovery, but also helps in streamlining the regulatory processes.
- New portal called “LADIS” by the Inland Waterways Authority of India – Least Available Depth Information System to ensure optimum use of national waterways.
- Smart rolling stock, satellite-based real-time train information system (RTIS), and GPS-enabled tracker system to identify location of its fleet of trackmen for enhanced safety by Indian Railways



Box 4: Customised and advanced storage solutions leveraging IoT

A significant hurdle faced by supply chain infrastructure of India's agriculture is that of a lack of serviceable storage mechanisms - particularly for fruits and vegetables. The total post-harvest losses of fruits and vegetables (on an annual basis) during transportation, farm operations, and storage are in the range of 5 – 16 percent (CIPHET, 2015). Inadequacy is more acute in terms of storage units being in close proximity to farms. Multiple challenges such as road access to farms, power availability and initial capex have historically made it unattractive for farmers to afford such an investment.

Now, sophisticated technology has enabled the use of portable and distributed cold storage units by individual farmers/ group of small farmers to provide storage solutions for perishable agricultural commodities such as fruits and vegetables. Key features of such units addressing the conventional problems are:

- Smaller unit size enabling movement in different road conditions allowing greater access in farms
- Smaller unit size enabling appropriate utilisation despite typical farm-level loads
- Mobility enabling shared use and ownership across farmers or farmer groups
- Dual power options (grid power and solar power) minimising dependency on grid supply and also reducing operating cost
- Use of IoT to enhance its user-friendliness and to share regular updates with operators (typically farmers)
- Simpler user interface enabling daily operation by farmers

Several private initiatives such as Ecozen, Promethean, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and TREC – STEP have experimented with such innovations, using user-friendly business models to bring in efficiencies while ensuring reduced costs for farmers/users. These have resulted in operating costs that are ~50 percent lower than other grid-powered units and ~80 percent lower than equivalent diesel-powered units.

For informed policy making and planning for improving logistics performance, the Ministry of Commerce and Industry launched an annual study, "Logistics Ease Across Different States (LEADS)" in 2018. Through a pan-India assessment of the perceptions of users and service providers of logistics, the first edition of this study, "LEADS 2018" helped initiate dialogue among all the stakeholders, including the Central and State Governments and the private sector. In a few cases, it has also led to policy interventions in states. For instance, Chhattisgarh released its Logistics Park Policy 2018-2023, which analysed the issues identified in LEADS 2018 and assessed ways to address them. Similarly, Gujarat is also working on drafting its logistics policy to ensure a favourable operating environment for logistics and trade in the state.

To provide for a sustained mechanism for assessment of logistics ease and in

line with its commitment to improve the logistics ecosystem in the country, Logistics Division continued with the second edition of the study – "LEADS 2019".

LEADS 2019

"LEADS 2019" has expanded its focus to look at both domestic and international trade. While it largely carries forward the overall construct adopted in 2018, it also addresses aspects pertaining to domestic trade and informs policy or action planning by states.

As extent of international trade and range of commodities influencing logistics requirements varies across states, this edition aims at a more holistic assessment of logistics ease across all states and Union Territories in India by including domestic trade. For instance, top five states contribute 70 percent of the country's total exports (Economic Survey 2017-18).

Domestic and international logistics value chains in India have several overlaps. Typically, infrastructure facilities (except ICDs), rolling stock, and logistics services (except customs brokering) are commonly used for both domestic and international trade. In fact, majority of the regulations, especially those pertaining to transportation and taxation, influence both domestic and international trade alike, and only regulations regarding Customs and Participatory Government Agencies (PGAs) influence the latter. Logistics service providers in both value chains have similar visibility of the chain and in many cases, perform functions across the value chains in compliance with respective regulations.

Construct for LEADS 2019, in the context of definition of logistics presented in Box 5, takes cognizance of such overlaps.

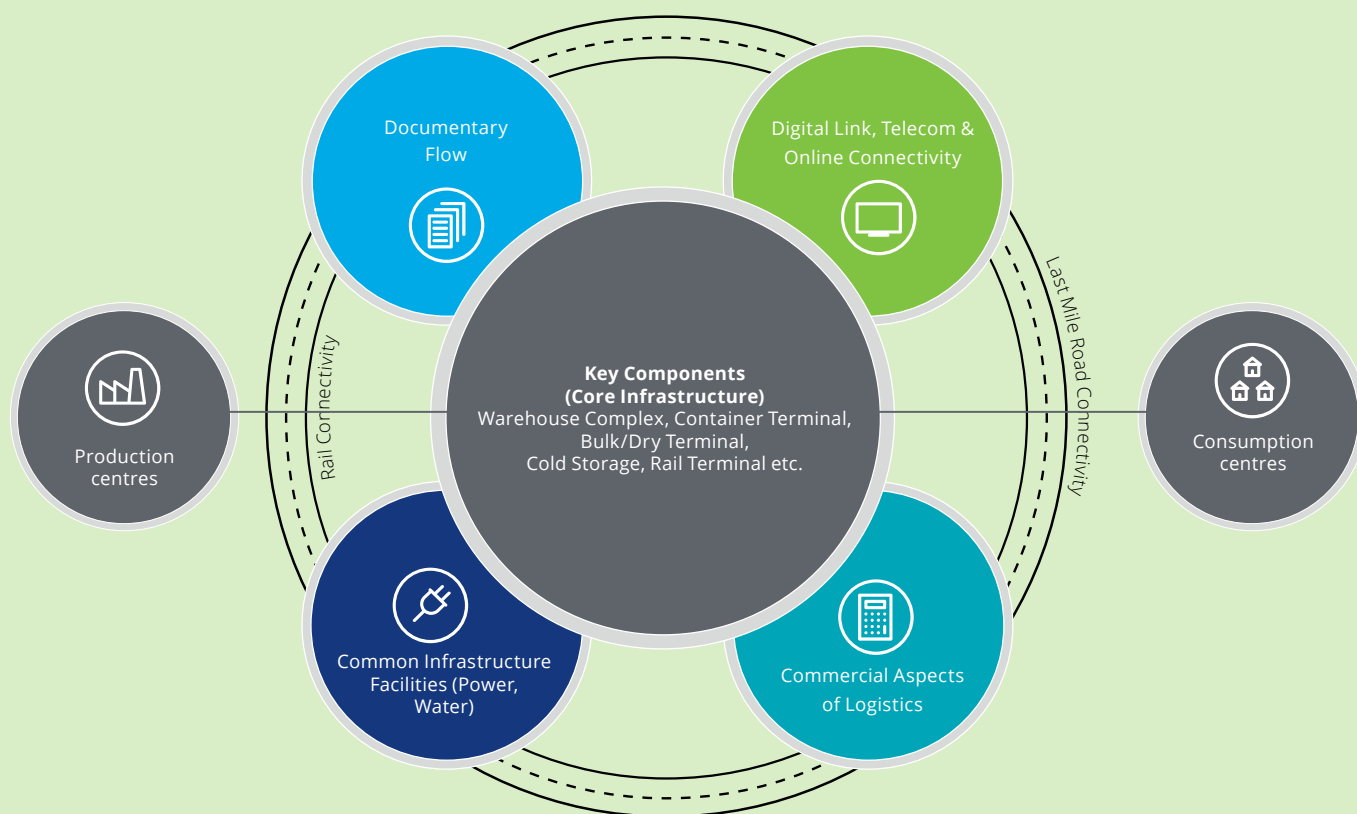
Box 5: Logistics definition and the ecosystem

The logistics function pertains to the management of the flow of resources including cargo, documents, information and funds through a series of activities and services influenced by certain regulatory processes from a point of production to a point of consumption.

Logistics is characterised by a complex interplay of multiple stakeholder groups, varied nature of infrastructure across modes of transport, and a wide range of processes / services that enable movement of goods under respective regulations. Accordingly, the logistics performance is influenced by various factors such as policy and regulations, cross-border protocols, infrastructure availability, service delivery, changing technology, and importantly, evolving consumer requirements and preferences. This complexity requires a set of measures to be identified across parameters for assessment of logistics ease rather than relying on a single measure.

Dimensions collectively influencing logistics ease are (a) Infrastructure, (b) Services, and (c) Operating and regulatory environment.

Exhibit 2: The Logistics Ecosystem



The composite indicator – LEADS – comprising nine indicators is presented in Box 6.

Box 6: Indicators of LEADS 2019			
	Indicators	Definition	Coverage
Infrastructure	Availability of logistics infrastructure	Capacity in relation to demand, and adequacy of infrastructure facilities	<ul style="list-style-type: none"> • Road network • Rail network • Ports, airports, dry ports • Warehouses/cold storages
	Quality of logistics infrastructure	Operating and maintenance protocols, efficiency of infrastructure facilities/ equipment and rolling stock	<ul style="list-style-type: none"> • Road network • Rail network • Ports, airports, dry ports • Warehouses/cold storages
Services	Quality of logistics services provided by service providers	Ease of access to competent service providers, where competency refers to skill level of workforce and level of technology adoption for service provision	<ul style="list-style-type: none"> • Haulage by different modes • Handling and storage of cargo • Freight forwarding • Customs broking
	Ease of arranging logistics at competitive rates	Shipment prices in chosen state compared to price expectations, assessment of costs, prices elsewhere	Shipment prices include those for transportation, handling, storage, value added services
	Timeliness of cargo delivery	Timeliness of cargo delivery	<ul style="list-style-type: none"> • Unscheduled stoppages during transit • Average detention at borders • Documentary compliance check
	Ease of track and trace	Ability to obtain frequent, consistent & accurate information regarding cargo movement and condition	Real time information availability when cargo is in transit, in storage, awaiting regulatory approval, etc.
	Safety and security of cargo	Consistency in delivery without damage/ pilferage/ deterioration of cargo due to logistics inefficiencies accidents or thefts)	Loss/ damage of cargo: <ul style="list-style-type: none"> • During transit • Handling at terminals • During inspection
Operating & Regulatory Environment	State facilitation and coordination	Existence & effectiveness of logistics/labour/land policies, law and order, tax breaks, liaising with central agencies	<ul style="list-style-type: none"> • Law and order • City restrictions • Trade and transporter union • Labour laws
	Efficiency of regulatory processes	Speed, simplicity, transparency in processing approvals and clearances, ease of documentation	<ul style="list-style-type: none"> • Customs • PGAs • GST • RTOs / Traffic Police

LEADS 2019 is based on perceptions of relevant stakeholders in logistics domain on the identified indicators processed and aggregated through standard statistical techniques into a composite index.

Perceptions were captured through a survey instrument with a five-point scale. The respondent set included the users and service providers including traders and shippers, transport operators, terminal operators, and logistics service providers across domestic and international trade.

Sample of respondents was based on stratified random sampling for adequate representation of all categories of stakeholders across all states and UTs. The sample respondent set was selected with an assumption of 80 percent confidence interval and a margin of error of 0.10 for administration of the survey.

Respondents provided perceptions for the states / UTs, where they perform logistics operations and/or are familiar with ground realities of logistics.

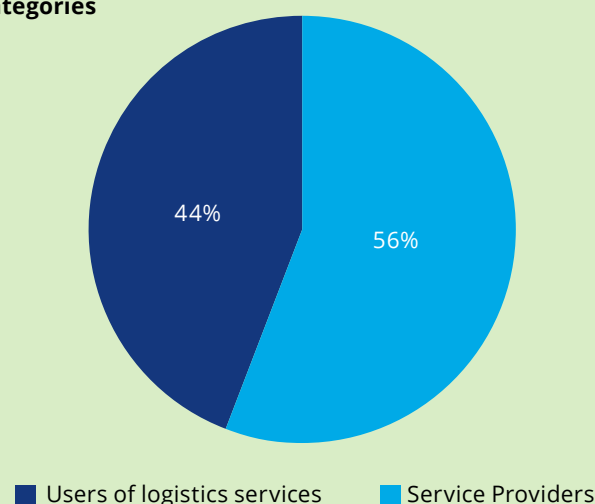
The responses were processed through statistical tools for imputation, normalisation, and aggregation to arrive at the LEADS Index (See Annexure 1 for detailed methodology).

It is important to note that stakeholders' perceptions are not static. In fact, given their exposure to developments happening in other states and across different countries, their expectations are rapidly evolving. In such a scenario, both the government and private stakeholders in each state need to take note that policy reforms and other interventions cannot

Box 7: Administration of survey instrument

The survey administration exercise undertaken through both a web-enabled portal and on-ground field visits garnered >3,000 responses from respondents located across all 36 states and UTs.

Exhibit 3: Distribution of survey responses by respondent categories



be a one-off exercise. Instead, it needs to be a continuous exercise for the state to remain at the top of the table. In this context, based on the survey findings, the final chapter of this report presents a broad list of interventions specific to each state, which may be undertaken by different stakeholders in the short and long term.




Box 8: Key considerations of the LEADS Index

- In view of the enmeshed integrated play of logistics stakeholders, the composite indicator would reflect relative performance “across” these units (states and UTs) rather than performance “of” these units themselves.
- This study does not provide for direct comparison of logistics performance with the World Bank’s LPI, as the construct of these two studies are not fully equivalent.
- It aims to enhance the focus on improving logistics performance across states and focused action by states on logistics which is expected to lead to improvement of India’s trade logistics performance.
- Local operating contexts, varying levels of expectations or needs of different stakeholders, or geographical/economic conditions can all influence perceptions, which informs the LEADS Index.
- The fragmented and largely unorganised nature of the Indian logistics industry can also lead to different experiences for users in different instances leading to varying perceptions, as firms can have varying levels of service standards.
- LEADS does not assign higher or lower weightage to states with more or less evolved logistics ecosystem.
- It does not identify / establish “frontiers of logistics performance” for states / UTs, nor does it attempt to diagnose their pain points.
- It provides a basis for states / UTs to look at other states / UTs operating in similar operating contexts / other relevant conditions to study / compare performance and identify focus areas for planning and improving logistics performance.
- Methodology for the LEADS Index will continue to evolve and get refined with the availability of reliable and comprehensive data in future. In order to enable an objective assessment of logistics ease in the context of India, a framework for consideration, improvement, and adoption over subsequent editions of LEADS is presented in **Annexure 1**. Appropriate institutional set up and emphasis on importance of assessment of logistics performance will drive agencies to invest in collection of necessary data.



Exhibit 4: LEADS scores for 22 states

Rank order	States	Availability of logistics infrastructure	Quality of logistics infrastructure	Quality of logistics services provided by service providers	Ease of arranging logistics at competitive rates	Timeliness of cargo delivery	Ease of track and trace
1	GUJARAT	3.92	3.80	3.80	3.45	3.70	3.53
2	PUNJAB	3.64	3.65	3.58	3.29	3.35	3.50
3	ANDHRA PRADESH	3.59	3.50	3.51	3.37	3.54	3.37
4	MAHARASHTRA	3.64	3.51	3.66	3.21	3.50	3.48
5	TAMIL NADU	3.63	3.52	3.53	3.30	3.48	3.45
6	HARYANA	3.62	3.53	3.44	3.16	3.45	3.46
7	KARNATAKA	3.51	3.44	3.49	3.29	3.42	3.51
8	TELANGANA	3.34	3.29	3.27	3.00	3.43	3.13
9	MADHYA PRADESH	3.30	3.13	3.45	3.23	3.23	3.30
10	ODISHA	3.36	3.20	3.23	3.04	3.30	3.33
11	KERALA	3.18	3.27	3.29	2.92	3.27	3.27
12	RAJASTHAN	3.33	3.20	3.32	2.99	3.34	3.32
13	UTTAR PRADESH	3.22	3.17	3.17	3.13	3.17	3.20
14	CHHATTISGARH	3.08	2.97	3.08	3.25	3.03	2.79
15	ASSAM	3.00	3.00	3.11	2.72	2.98	3.11
16	WEST BENGAL	3.15	3.00	3.12	2.95	2.93	3.11
17	JHARKHAND	2.93	2.80	3.00	3.10	3.10	2.96
18	JAMMU & KASHMIR	3.09	2.97	3.06	2.56	2.76	2.68
19	UTTARAKHAND	2.78	3.00	3.08	2.84	3.14	2.78
20	BIHAR	2.87	2.89	2.96	2.91	2.89	2.93
21	GOA	2.76	2.61	2.79	2.73	2.89	2.87
22	HIMACHAL PRADESH	2.69	2.52	2.71	2.17	3.00	2.60

 No change in rank order
  Increase in rank order
  Decrease in rank order

Note: For states appearing with the same scores, the rank ordering is based on their scores up to four decimal places


















Safety /Security of cargo movement	State facilitation and coordination	Efficiency of regulatory processes	LEADS Index	Lower bound	Upper Bound	Change in rank order
3.57	3.31	3.41	3.62	3.57	3.67	
3.70	3.15	3.27	3.46	3.37	3.55	
3.52	3.14	3.27	3.42	3.35	3.50	
3.47	3.11	3.20	3.42	3.38	3.46	
3.48	3.05	3.18	3.40	3.35	3.45	
3.46	3.10	3.09	3.37	3.29	3.45	
3.50	2.98	3.15	3.37	3.31	3.42	
3.35	2.96	3.18	3.22	3.10	3.33	
3.19	3.03	2.98	3.21	3.12	3.30	
3.21	2.93	3.03	3.18	3.04	3.33	
3.47	2.78	2.99	3.16	3.07	3.25	
3.18	2.78	2.94	3.16	3.05	3.27	
3.08	2.74	2.87	3.08	3.00	3.16	
3.12	2.87	2.94	3.01	2.87	3.16	
3.31	2.85	2.92	3.00	2.91	3.09	
3.17	2.72	2.79	2.99	2.91	3.07	
3.13	2.39	2.57	2.88	2.74	3.02	
3.09	2.71	2.82	2.87	2.73	3.00	
3.13	2.35	2.56	2.85	2.73	2.98	
2.96	2.49	2.75	2.85	2.71	2.99	
3.13	2.49	2.81	2.78	2.62	2.94	
3.31	2.45	3.06	2.72	2.61	2.84	

Exhibit 5: LEADS scores for states in Hilly North-East




Rank Order	States	Availability of logistics infrastructure	Quality of logistics infrastructure	Quality of logistics services provided by service providers	Ease of arranging logistics at competitive rates	Timeliness of cargo delivery
1	TRIPURA	2.46	2.31	3.23	2.69	2.92
2	SIKKIM	2.62	2.85	3.08	3.09	2.78
3	ARUNACHAL PRADESH	2.55	2.64	2.82	2.45	2.73
4	MEGHALAYA	2.46	2.23	2.69	2.38	2.69
5	MANIPUR	2.08	2.08	2.58	2.25	2.17
6	MIZORAM	2.10	1.70	2.80	2.30	2.20
7	NAGALAND	2.38	2.46	2.46	1.92	2.23

Note: Sikkim and Arunachal Pradesh have been incorporated in this year's Index due to adequacy of stakeholder responses. Hence, their change in rank order has not been indicated.






Exhibit 6: LEADS Scores for Union Territories






Rank Order	States	Availability of logistics infrastructure	Quality of logistics infrastructure	Quality of logistics services provided by service providers	Ease of arranging logistics at competitive rates	Timeliness of cargo delivery
1	CHANDIGARH	3.67	3.67	3.61	3.28	3.58
2	DELHI	3.57	3.47	3.56	3.23	3.37
3	PUDUCHERRY	3.50	3.45	3.32	2.91	3.18
4	DADRA & NAGAR HAVELI	3.00	3.13	3.31	2.94	3.63
5	DAMAN & DIU	3.15	3.20	3.40	3.05	3.50

Note: For states appearing with the same scores (up to two decimal places), the rank ordering is based on their scores up to four decimal places

 No change in rank order
  Increase in rank order
  Decrease in rank order

Note: For states appearing with the same scores, the rank ordering is based on their scores up to four decimal places

Ease of track and trace	Safety /Security of cargo movement	State facilitation & coordination	Efficiency of regulatory processes	LEADS Index	Lower bound	Upper Bound	Change in rank order
3.00	3.23	3.12	3.54	2.95	2.89	3.02	
2.83	3.06	2.83	2.94	2.90	2.79	3.01	-
2.82	3.09	2.91	2.91	2.77	2.61	2.94	-
2.38	2.69	2.62	2.77	2.56	2.46	2.66	
2.75	2.83	2.45	2.59	2.42	2.29	2.55	
2.20	2.60	2.20	2.60	2.31	2.24	2.39	
2.31	2.15	2.19	2.38	2.28	2.11	2.44	

Ease of track and trace	Safety /Security of cargo movement	State facilitation and coordination	Efficiency of regulatory processes	LEADS Index	Lower bound	Upper Bound	Change in rank order
3.64	3.86	2.77	2.88	3.45	3.39	3.50	
3.45	3.33	2.98	3.17	3.36	3.34	3.37	
3.14	3.59	3.14	3.19	3.28	3.24	3.31	
3.06	3.44	3.09	3.44	3.23	3.19	3.26	
2.85	3.45	2.80	2.98	3.16	3.13	3.18	

LEADS 2019: Demystifying Logistics Ease

Overview

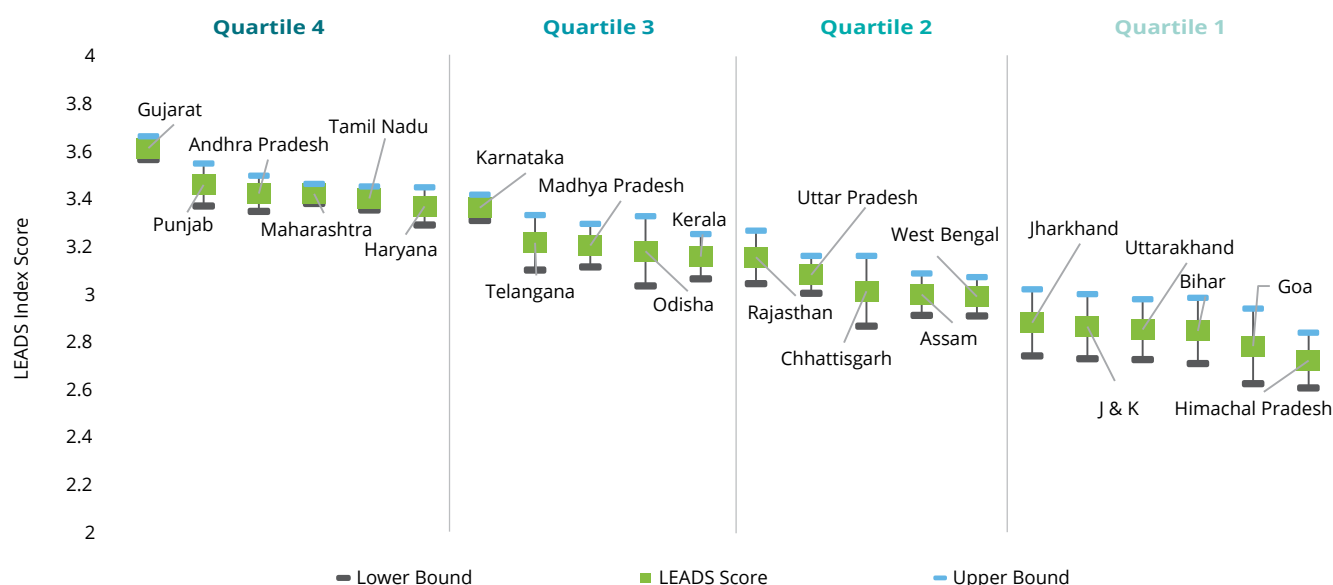
The logistics industry is evolving and beginning to make headway towards maturity across the globe. The second edition of LEADS confirms this encouraging trend even for India. While the availability and quality of infrastructure continues to be the defining element of the state of logistics in India, as the industry evolves in response to the changing customer needs – growing ecommerce is a case in point – the quality and reliability of services too has emerged as an important aspect of logistics ease. This finding is significant as the perception of logistics ease is now more broad-based.

When compared with positions of states in LEADS 2018, changes in positions are of mixed nature – some have retained their positions, some have undergone minor movements, while the rest have moved by quite a few positions. States in the top half of rank ordering have showed lesser movements as compared to those in the bottom half. More particularly, the top three performers, i.e., Gujarat, Punjab, and Andhra Pradesh have retained their positions on the LEADS Index indicating stronger performance base and improvements.

Rank order in LEADS 2019 broadly aligns with rank order in the previous edition with a rank correlation of 0.9. However, differences in the construct for measuring logistics ease across the two editions, discussed in Annexure 1, render the scores across these two editions non-comparable.

The LEADS 2019 scores for 22 states (excluding the states in the Hilly North-East cluster) are arranged in descending order, divided into quartiles, and are presented along with upper and lower bounds in Exhibit 7.

Exhibit 7: Logistics Ease Across 22 States



Box 9: Interpreting and analysing LEADS

LEADS Index score of a state may be considered significantly better than that of the other state only if the lower bound of the former's score is higher than the upper bound of the latter. Therefore, instead of rank ordering of states, the study recommends a higher degree of focus on LEADS scores.



Confidence intervals for a majority of states have narrowed compared to the previous edition and this is especially the case for the states ranking low on the Index – potentially on account of expanded respondent base with domestic players and increased awareness among stakeholders.

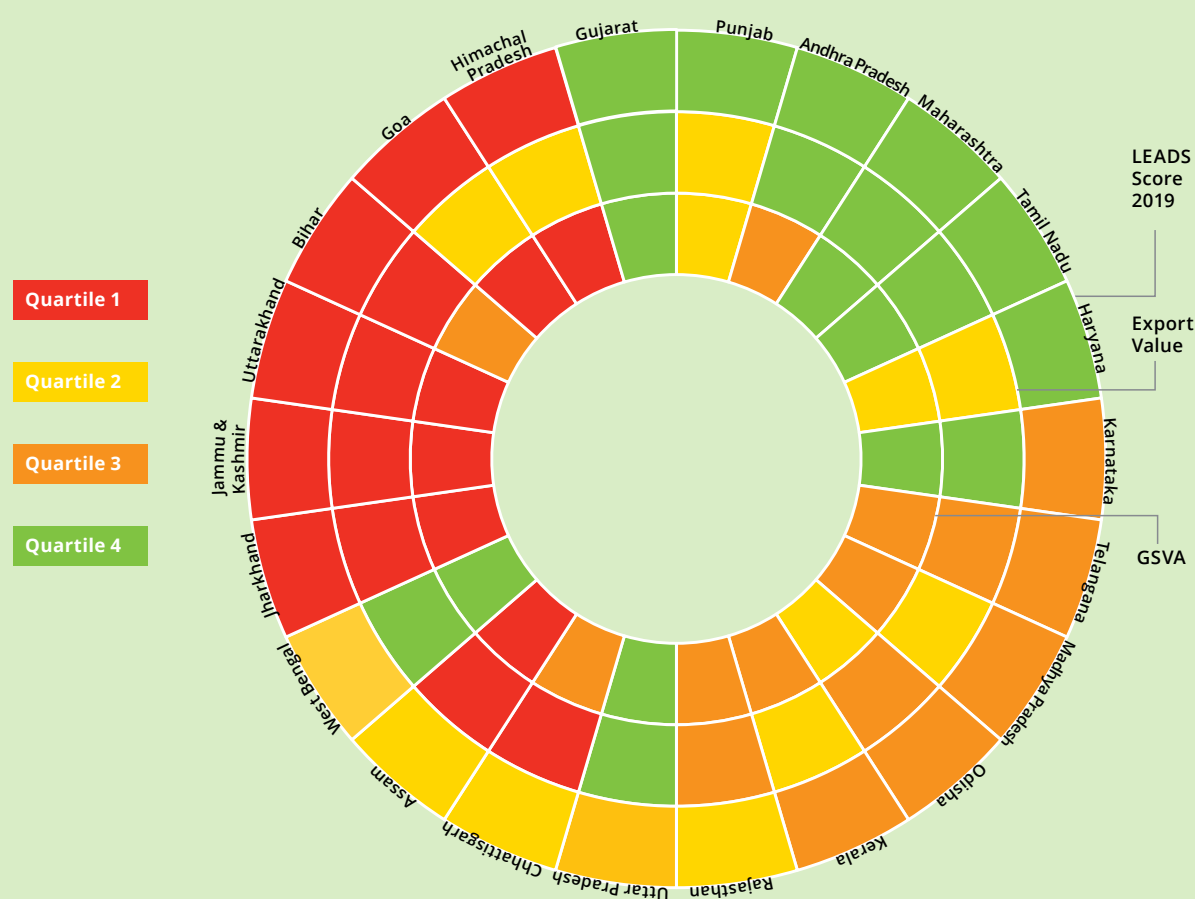
The LEADS survey data brings out critical insights about what enables or impedes logistics ease across states and UTs, as perceived by stakeholders. In the subsequent sections of the chapter, there is a discussion on the insights in the context of state groupings – performance quartiles, and logistics clusters.

Box 10: Logistics ease is related with economic growth

The Exhibit 8 shows a mapping of the LEADS quartiles against export quartiles (which is a categorisation of states based on their exports by value averaged for the past three years) and income quartiles, i.e., Gross State Value Added (GSVA). Rank correlation between states' LEADS rank ordering and their corresponding position with respect to export values is 0.64, thereby indicating a positive relationship. This signifies that states contributing relatively high to the country's exports also tend to have a relatively stronger logistics ecosystem. Further, as states move down the Index their exports value also declines. While the relationship cannot imply causality, the presence of a strong logistics ecosystem can be seen as an enabling condition for a strong (non-services) export performance. It is also observed that there exists a positive rank correlation between LEADS rank ordering of states and their respective rank ordering of GSVA of 0.62, which further validates the importance of logistics contribution to a country's economic development.

Given the addition of domestic trade to the assessment of logistics ease across states, the study also tried to examine the rank correlation between states' LEADS rankings and their corresponding ranks with respect to their inter-state movement of goods (including arm's length and intra-firm trade). However, due to inadequacy of data with respect to the trade being excluding agricultural commodities and being available for only 23 states, the exercise could not be undertaken.

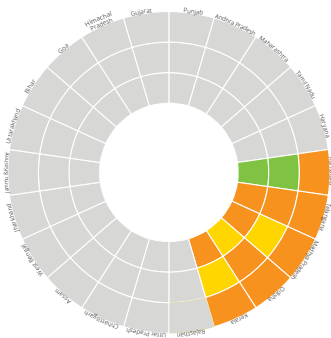
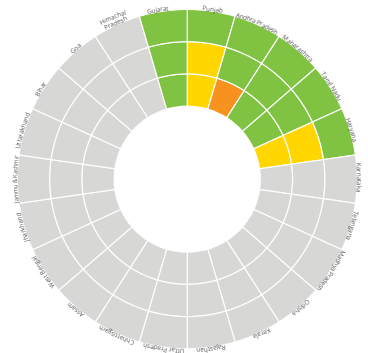
Exhibit 8: Mapping rank ordering of states' LEADS performance, Export values, and GSVA values



Source: Directorate General of Commercial Intelligence and Statistics (2018) and Ministry of Statistics and Programme Implementation (2017)

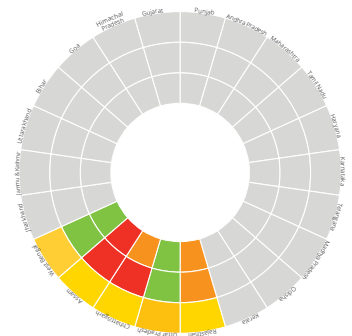
The country's top production and consumption centres such as Gujarat, Punjab, Andhra Pradesh, Maharashtra, Tamil Nadu and Haryana appear in the top performing quartile. The four coastal states within this quartile also emerge as the major gateway ports in the country having handled ~78percent of the total cargo traffic handled at the ports in India in the past three years (Indian Ports Association, 2017 and 2018; Lok Sabha, 2017).

The top quartile's front-runner, Gujarat, is perceived to be the state wherein it is the easiest to get logistics rolling. The state emerges as the best performer across all indicators, except on ensuring safe and secure delivery of cargo. Punjab, on the other hand, has been acknowledged as having the lowest incidence of cargo theft and damage; but it has been reported as the state witnessing highest delays in cargo delivery within the top quartile.

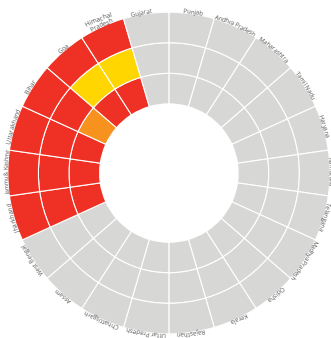


The study also revealed that as one moves down the performance quartiles, the proportion of coastal states goes down, with the bottom two quartiles comprising only one coastal state each. While this may prompt the argument that availability of coastal infrastructure and its attendant ecosystem does enhance logistics ease, a direct significant causality appears to be a simplistic conclusion. Closer access to port infrastructure generally becomes an advantage only when the sea and land side characteristics are favourable, the terminal is efficiently constructed and operated, the connected hinterland has economic potential and the regulatory environment is business friendly.

Positioned in order of performance, the next two quartiles includes some of country's largest states, including Karnataka, Telangana, Madhya Pradesh, Odisha, Uttar Pradesh, Rajasthan and Chhattisgarh. States falling in these two quartiles and bordering with the top and bottom quartiles are Karnataka, and West Bengal, which are extremely close in their scores with their respective bordering states of Haryana (from top quartile) and Jharkhand (from bottom quartile) and exhibit strikingly similar performance.



Logistics ecosystem for states in the second and third quartiles is governed by conventional practices and infrastructure and needs to make a leap towards advancement to help move to higher quartiles.



States stacking at the bottom of the Index are the country's middle/lower income states of Bihar, Jharkhand, Uttarakhand, Himachal Pradesh, Jammu and Kashmir, and Goa. Some of these states are affected by unrest, geographically difficult terrains, and natural disasters, which are likely causes that disrupt their logistics ease. These states contribute only approximately 9 percent of the country's manufacturing output by value, and the logistics industry in the states placed in this quartile is only now evolving.

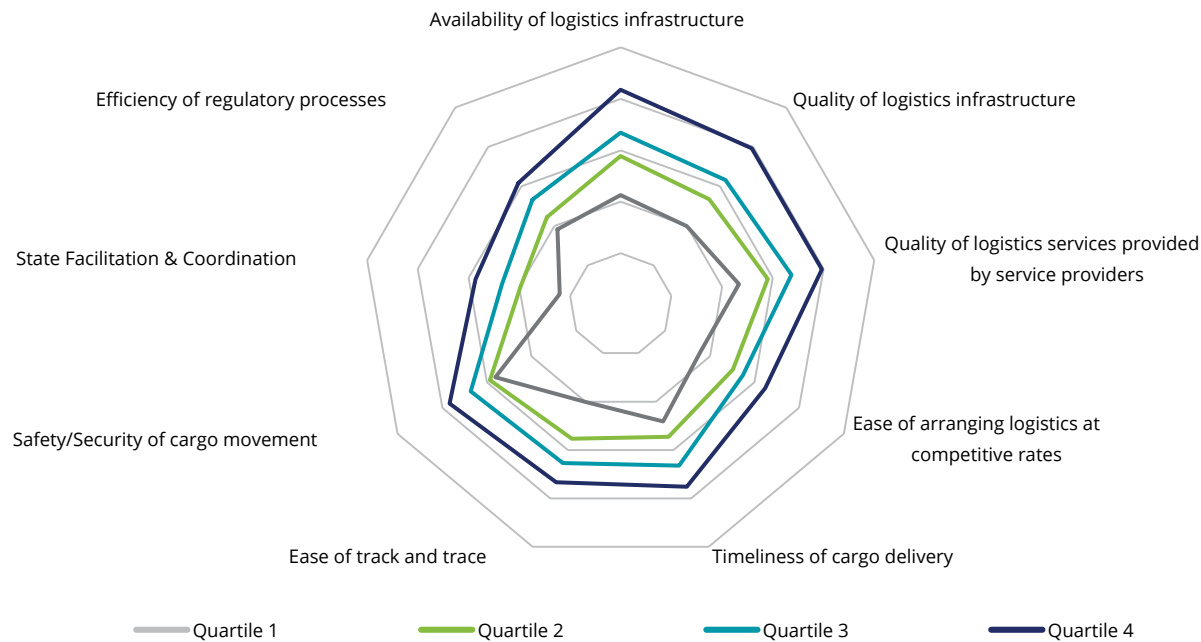
Himachal Pradesh, in the bottom quartile, has emerged as the state with relatively higher complexities for arranging logistics. While cargo movement in the state is perceived as the most safe across the quartile, stakeholders flagged the need for significant improvements in the provision of adequate and quality transportation and logistics infrastructure and quality service delivery at competitive prices with better visibility of cargo in the state (Refer Box 11).

Box 11: Unions in Himachal Pradesh

Himachal Pradesh is reported to have a strong cartelisation of truckers in major industrial regions of Baddi, Parvanoo, Bilaspur and Solan. The truckers' union restricts participation of transporters from other markets. Lack of a rail link at the ICD in Baddi only worsens the situation, thereby leaving road transport as the only mode available for cargo movement from the state.

As a result, shippers and traders are constrained to rely on freight transportation services provided by the union at exorbitant charges. Industries suffer due to inadequate supply of freight vehicles by the union leading to delays.

Exhibit 9: Indicator-wise Comparison of Performance across LEADS Quartiles¹



¹. Radar chart depicts performance across indicators on radial axes. Centre of the chart marks the score at 0 and the value increases radially outwards. So better the performance, more distant from the centre will the point on the chart be.

An indicator-wise comparison of the four quartiles Exhibit 9 reveals a marked difference in logistics ease across Quartile 4 and Quartile 1. This is particularly stark on the indicators of “Availability and Quality of Infrastructure”, “Ease of Arranging Logistics at Competitive Rates”, “Ease of Track and Trace”, and “State Facilitation and Coordination”.

In general, “State facilitation and coordination” needs improvement for

all states included in the study as this gets the lowest score. This is especially true for Quartile 1 states for which the scores are distinctly lower. This is followed by the perception about “Efficiency of regulatory processes”, where again all states emerge with lower scores.

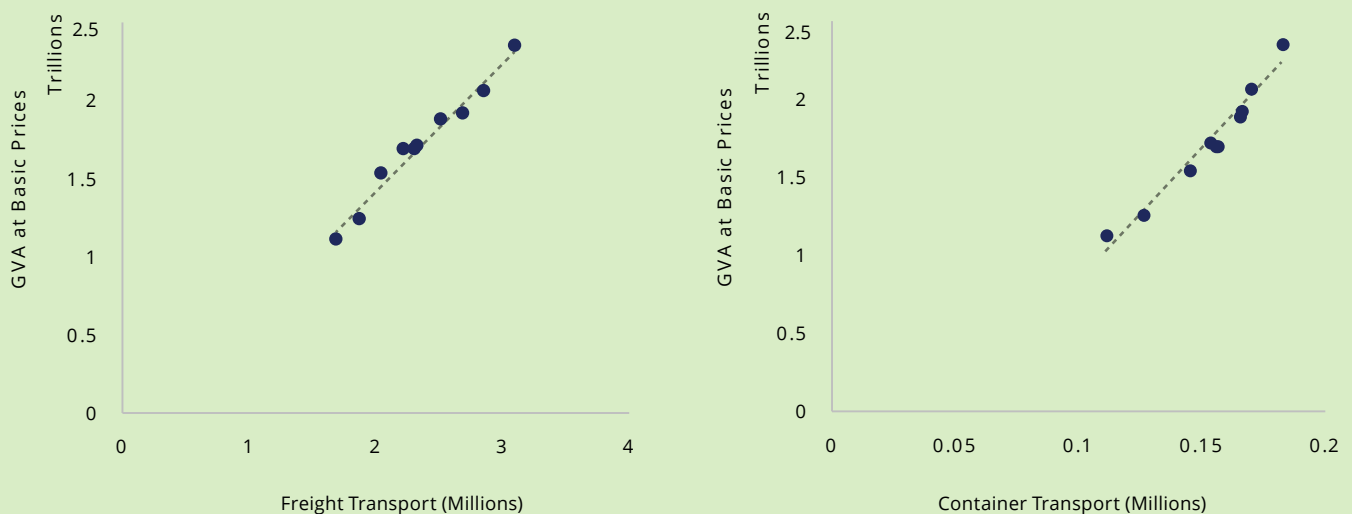
On the other hand, Quartile 3 and Quartile 2 states have exhibited consistent performance across all indicators with a very narrow margin

between the two. Safe and secure cargo movement has been perceived as the least problematic area with industry stakeholders reporting the reduction in incidents of thefts, damage and pilferage across all states. This may be attributed to the improvement in quality of physical infrastructure such as road surfacing quality, and improvements in the quality of fleet/rolling stock and containers carrying cargo to name a few.

Box 12: Infrastructure development drives economic progress

Investments in infrastructure are at the core of developing a strong logistics ecosystem, which in turn facilitates trade. The importance of logistics infrastructure is further validated by the fact that there is a strong dependency of economic development on investment in transportation and logistics infrastructure (**Refer Exhibit 10**).

Exhibit 10: Spending on freight and container transport infrastructure in India vis-à-vis India's Gross Value Added



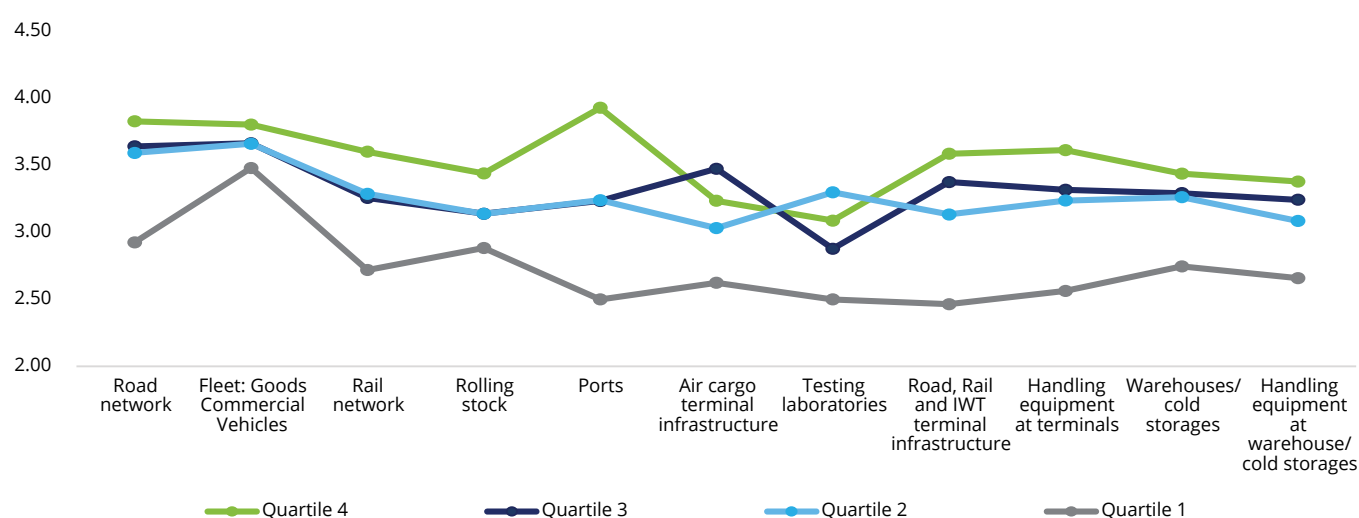
Source: Organisation for Economic Co-operation and Development (2019) and The World Bank (2019)

Availability and quality of infrastructure: A key performance differentiator

Compared to the other performance dimensions of services and operating and regulatory environment, the gap among the top and bottom quartiles is the widest on the infrastructure dimension. Respondents have rated infrastructure availability in the top quartile states much higher than other states.

Difference among top and bottom quartiles is highest in the case of physical infrastructure – ports, road, rail, surface-based terminals, and cargo and container handling equipment. It is also pertinent to note that for all rolling assets (road vehicles, rail wagons among others) that are not specific to states and are used to transport cargo across the country, differentiation in users' perception across quartiles is less acute (Refer Exhibit 11).

Exhibit 11: Quartile-wise comparison of availability of transportation and logistics infrastructure



Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

Box 13: Need for intermodal terminals at hilly states figuring in Quartile 1

The ICD in Baddi, Himachal Pradesh is constrained because of lack of rail connectivity, and hence cargo moves by road from Baddi to Ludhiana ICD.

Similarly, in the case of Jammu and Kashmir, the only ICD at Bari Brahamana (Samba) has been converted into a coal depot a few years ago. A CFS had been established in Srinagar, but it stays unutilised. Again, the nearest ICD being used by the shippers is in Ludhiana.

In addition, despite concentration of industries in Haridwar, Uttarakhand, cargo moves all the way to ICD Pantnagar or Tughlakabad via road in the absence of a terminal facility in Haridwar.

Another striking differentiator in the performance arises with respect to availability of air cargo terminals. Here, Quartile 3 takes the lead owing to the presence of better air cargo facilities in these states. Ground reports also corroborate this with stakeholders reporting capacity constraints at the air cargo terminals across the Quartile 4 states, lack of availability of handling and scanning equipment, and lack of technical staff.

The lack of availability of regulatory infrastructure i.e. testing facilities and labs is a recurring theme across all four quartiles, especially in the case of the top two quartiles. On the other hand, respondents perceived the states constituting Quartile 2 to be performing high with respect to regulatory infrastructure (Refer Box 14). The requirement is understood to be commodity-specific with states having abundant production of a particular commodity requiring certain types of quality certifications and clearances.

Box 14: Limited availability of regulatory infrastructure

Inadequate availability of testing labs has been highlighted in more than ten states.

Few such instances include requirement of additional drug testing facilities in Gujarat, need for FSSAI, Drug Controller and Animal Quarantine related testing facilities in Uttar Pradesh, Aquatic Quarantine offices in Andhra Pradesh, and drug testing labs catering to the pharma products in Himachal Pradesh.

While transportation and logistics infrastructure is considered to be available to a large extent across the top three quartiles, there is scope for improvement in regular maintenance and upkeep of infrastructural facilities across all four quartiles (Refer Exhibit 12).

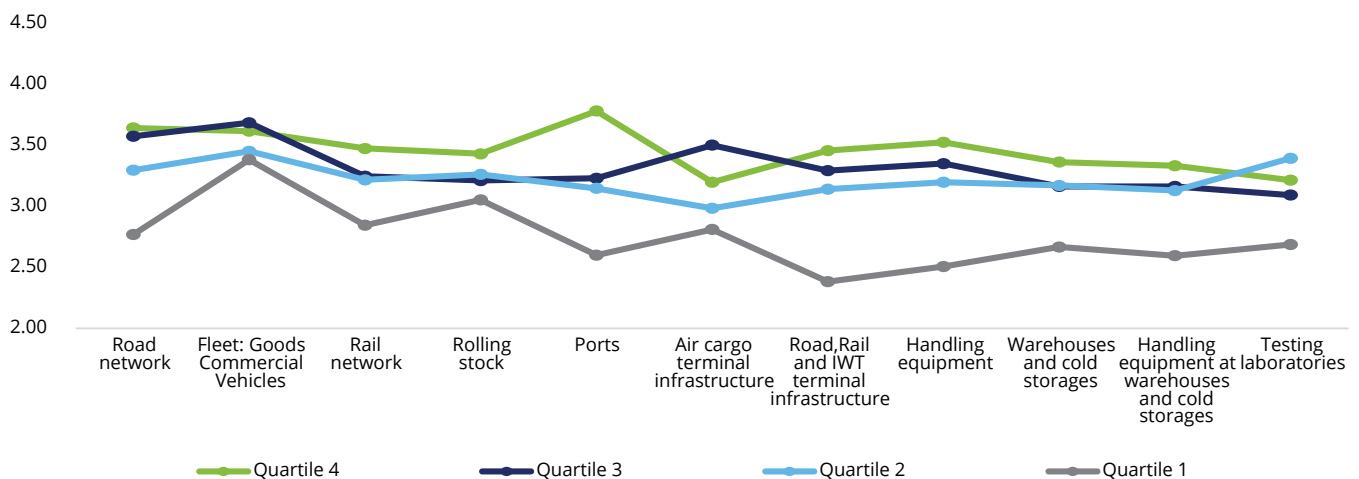
Stakeholders' perception and focus on segments of infrastructure already developed has shifted to quality of such infrastructure. For instance, stakeholders reported several instances

of inadequate maintenance of surface quality of roads, especially on approach roads to industrial areas and terminals and on the roads connecting to interior areas of the states. The quality of commodity specific storage facilities has consistently been recognised as needing urgent attention across all quartiles.

For other temperature sensitive products such as pharmaceuticals, shippers/traders acknowledged quality concerns at third party storage facilities and indicated their preference for using

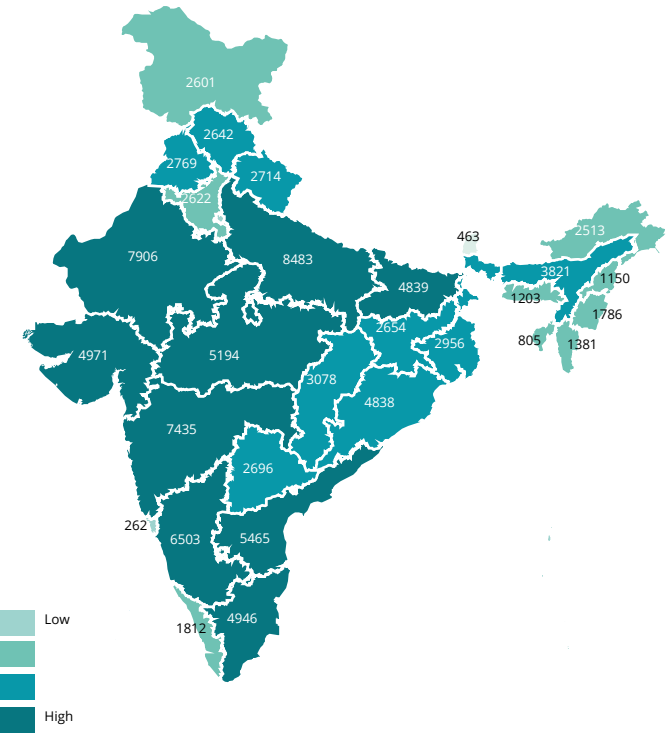
their own facilities for storage. It is however, the quality of Inland Container Depots (ICDs), Container Freight Stations (CFSs) and Private Freight Terminals (PFTs) that is perceived to be the biggest concern amongst respondents for Quartile 1. Further, even the unavailability and poor quality of handling equipment at these terminals contributed to the poor perception on surface-based terminals in this quartile.

Exhibit 12: Quartile-wise comparison of quality of transportation and logistics infrastructure



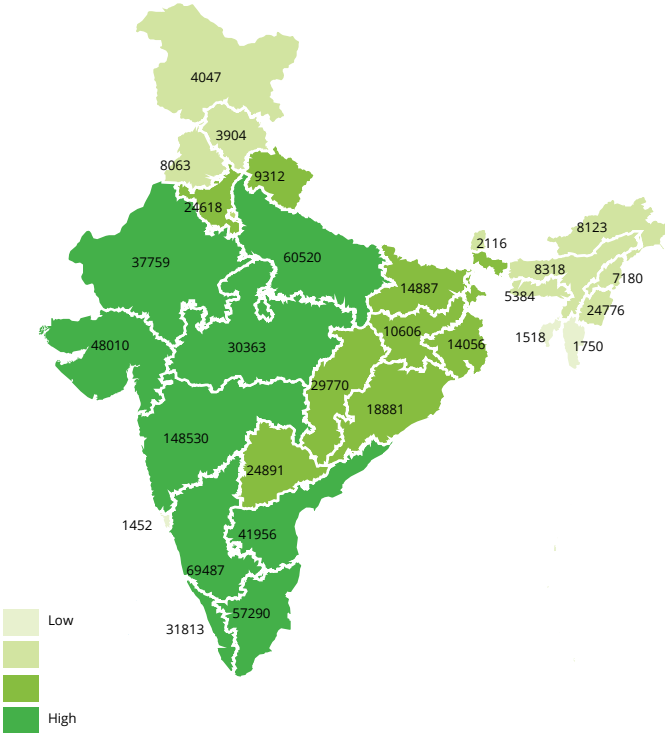
Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

Exhibit 13 Total National Highway Network



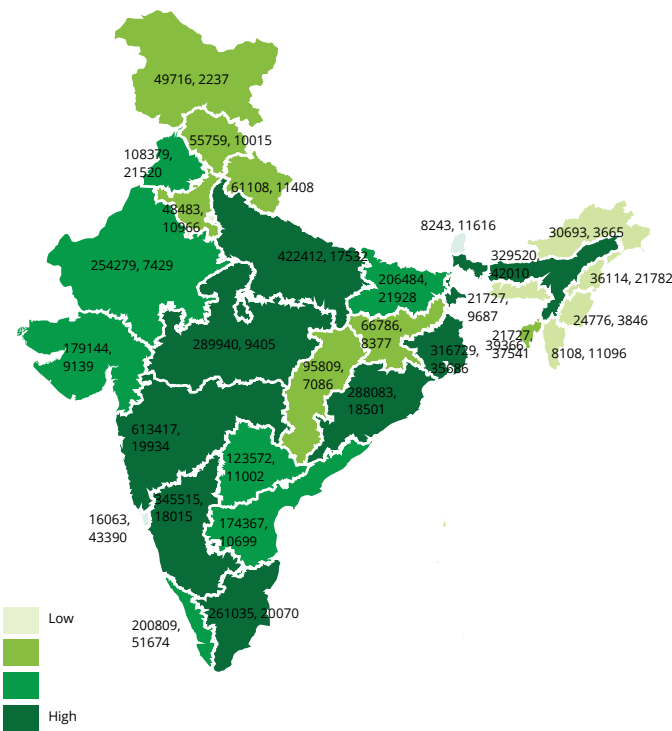
Source: Ministry of Road Transport and Highways, 2016

Exhibit 14: Total Network of State Highways and Other State Roads



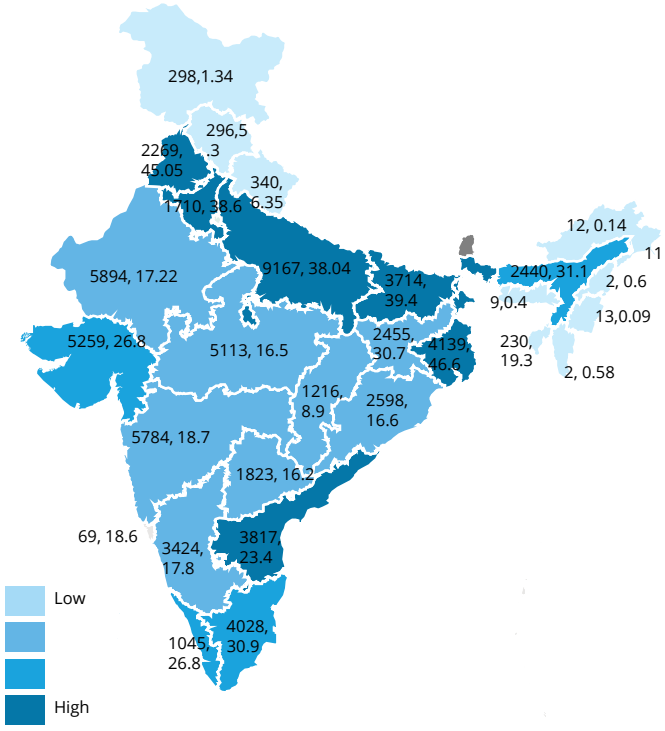
Source: Ministry of Road Transport and Highways, 2016

Exhibit 15: Total Road density (km/ '000 sq.km)



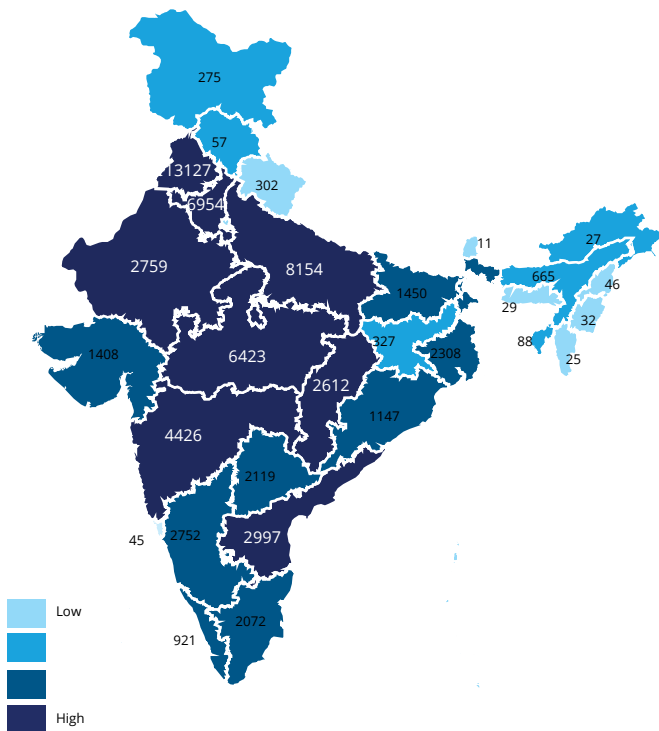
Source: Ministry of Road Transport and Highways, 2016

Exhibit 16 Total Rail Route density (km/ '000 sq.km)



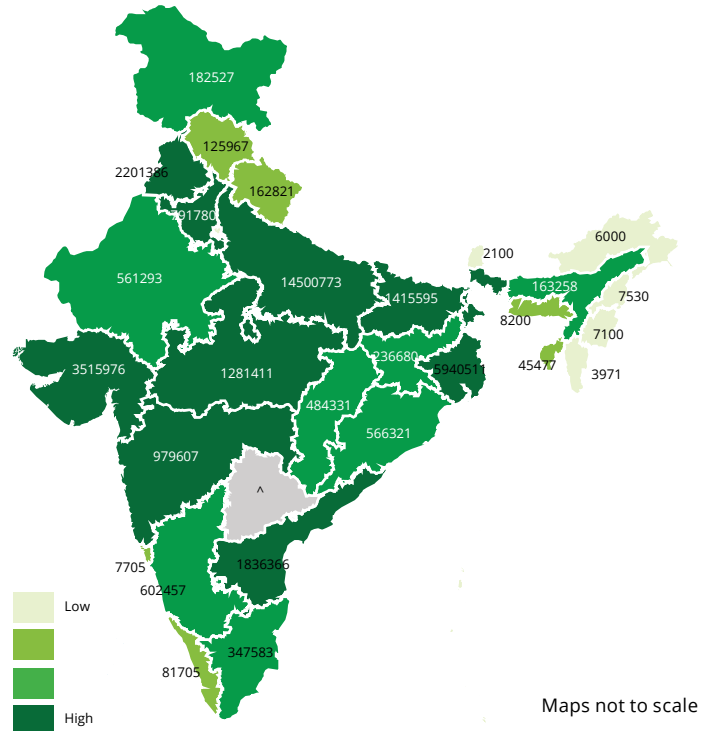
Source: Indian Railways, 2018

Maps not to scale

Exhibit 17: Total Number and Capacity of Warehouse Infrastructure* (in '000 metric tonnes)

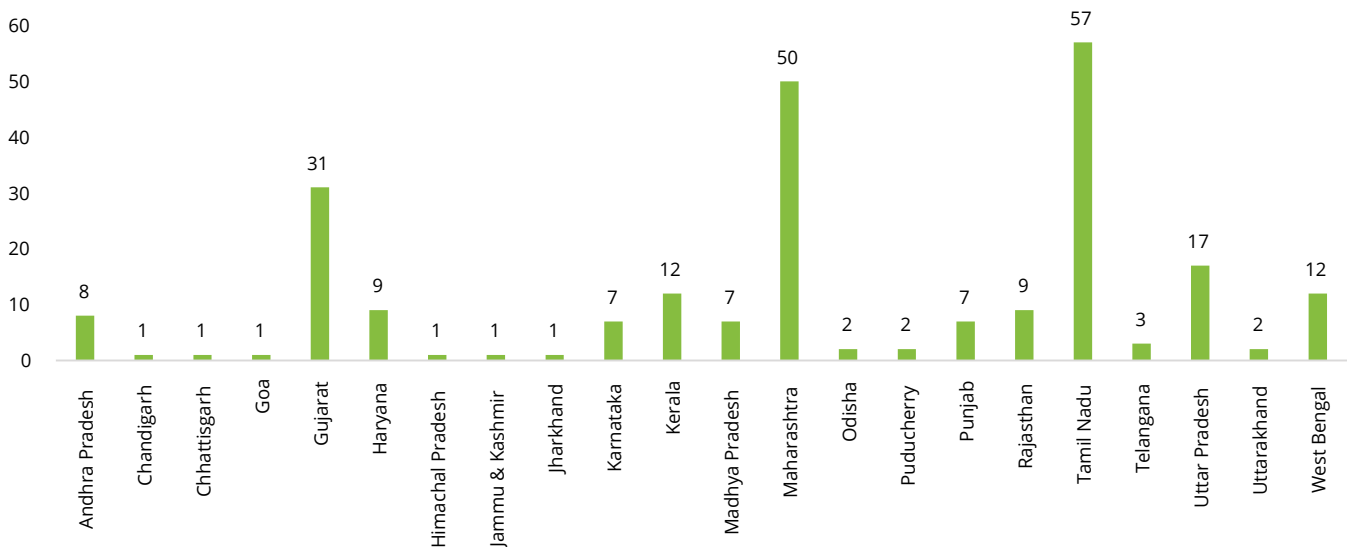
*Only includes warehouse facilities owned and operated by CWC, SWC and FCI

Source: The Fertilizer Association of India; Ministry of Consumer Affairs, Food & Public Distribution; Ministry of Agriculture and Farmers Welfare, 2018

Exhibit 18: Total Number and Capacity of Cold Storage Infrastructure (in metric tonnes)**

^Data not available for the state.

Source: Ministry of Agriculture and Farmers Welfare, 2018

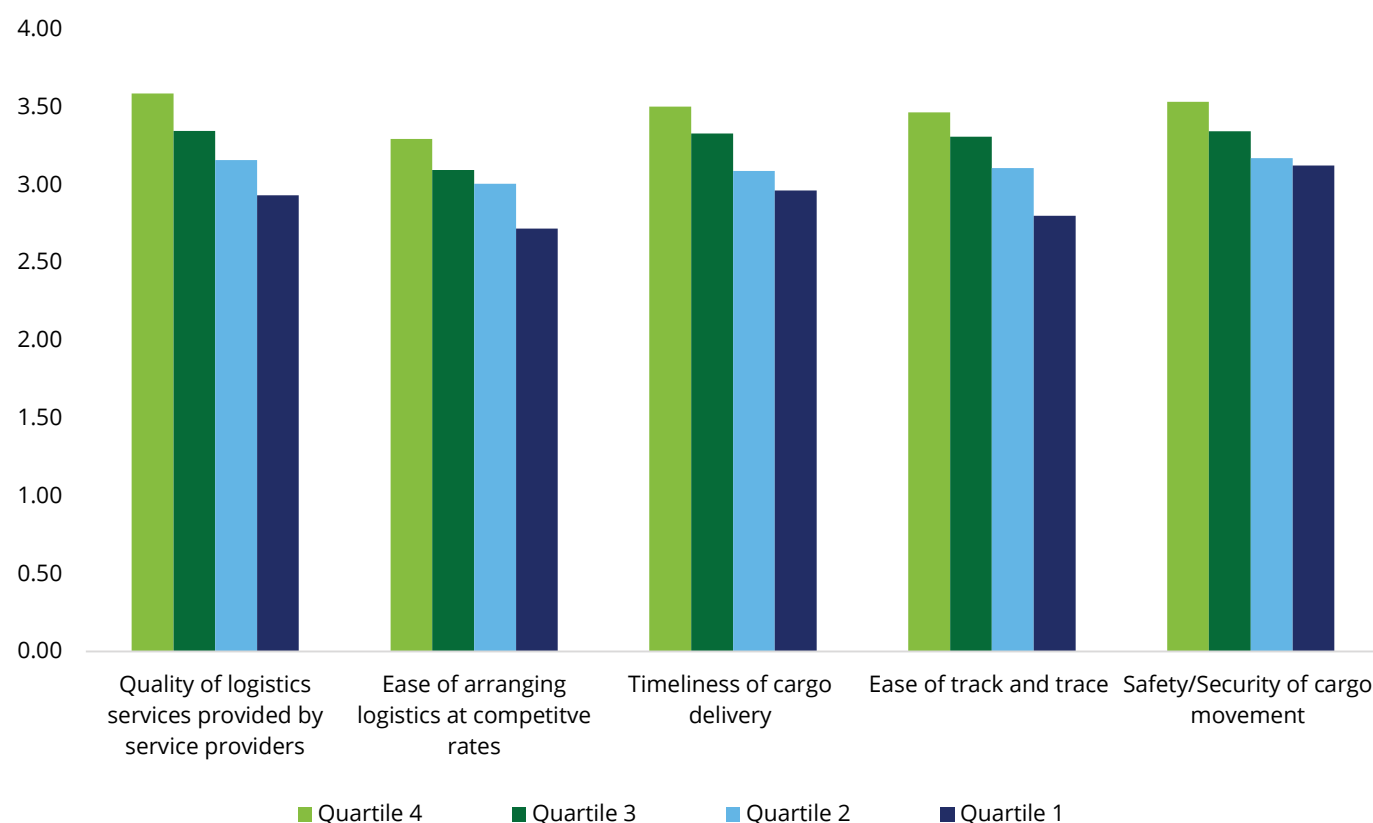
Exhibit 19: Total Number of Surface-based Terminals#

#List of ICDs/CFSS/PFTs/AFSS as approved by IMC, which have commenced operations (As on 01-01-2018)

Source: List of operational ICDs/CFSS/AFSS as approved by IMC (As on 01-01-2018)

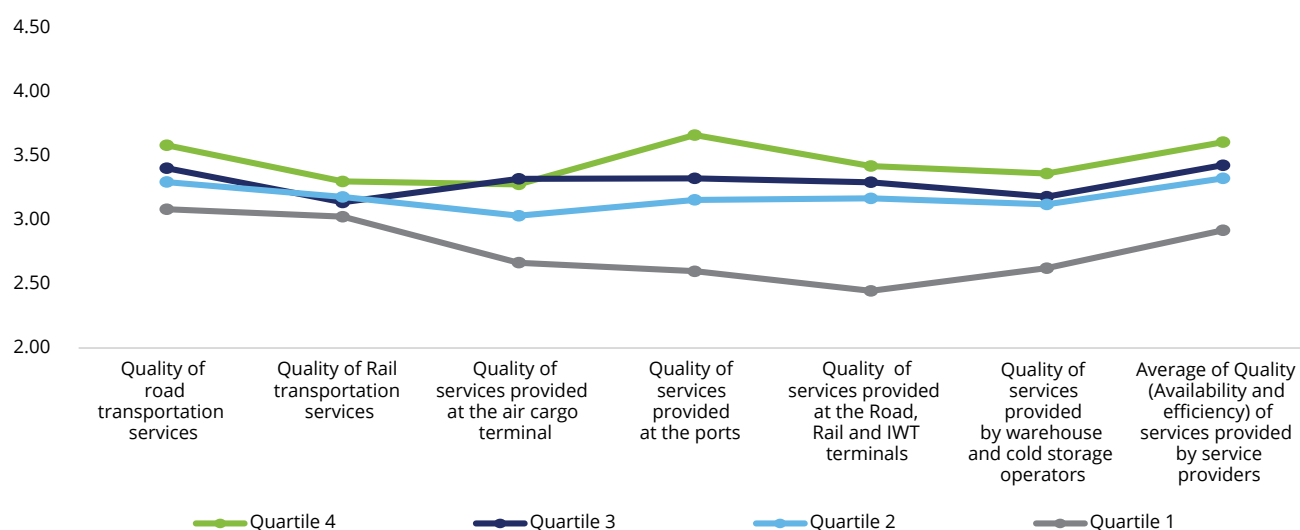
Logistics Services: Logistics Services: Quality and reliable services gaining momentum

Exhibit 20: Quartile-wise comparison of indicators within the services dimension



With customer demands continuously evolving and becoming more sophisticated, ensuring high quality and reliability of services has emerged as an important aspect of logistics ease. Deep dive into the services dimension highlights that users have indicated varied importance on its different indicators (i.e., quality, timeliness, safety and security, pricing and track and trace) as also to have differentiated performance on these indicators.

Exhibit 21: Quartile-wise comparison of quality of transportation and logistics services





A modal comparison across all quartiles reveals that while service quality influences logistics performance across quartiles, the Index is still mostly driven by the availability and efficiency of road transportation services.

The quality of rail transportation services, on the other hand, is reported as a problem everywhere due to the poor time reliability of its services. Detailed findings from the survey administration exercise revealed that due to the unscheduled movement of freight trains and lack of adequate frequency of movements, road transportation has been a preferred medium for timely delivery of cargo (Refer Exhibit 21).

Users across quartiles have expressed concerns on time reliability of rail transportation services. Unscheduled movement of freight trains and lack of adequate frequency of movements has tilted users in favour of road transportation as a preferred medium for timely delivery of cargo.

Also, the performance gap between the top and bottom quartiles is wide on the quality of services provided at port terminals, highlighting the operational inefficiencies and poor quality of

services at the Goa port, the only coastal state in the bottom quartile.

Further, while there is not much of a perceived difference in the quality of services provided at surface-based terminals and storage terminals among the top three quartiles, there is a perceived lack in quality of services provided at these terminals in Quartile 1.

On the other hand, exorbitant prices of logistics services, followed by poor visibility of cargo movement, emerged as the reasons pulling down the performance of quartiles (Refer Exhibit 20).

Interestingly, road transportation emerged as a cheaper mode as compared to rail across all quartiles barring Quartile 1 belying the common notion that freight movement by road is expensive. Additionally, limited adoption of RFID tags / GPS devices by the industry, and limited installation along the routes and terminals are reasons that the industry cites as affecting real-time information availability to the end customers across all the four quartiles.

All the quartiles exhibit a consistent performance with respect to ensuring

safe movement and handling of cargo. Stakeholders perceive an efficient law and order system in place to provide a safe environment for freight movement.

With respect to service providers, the industry continues to remain fragmented and the participation of large-scale organised private players offering integrated and sophisticated offerings is yet to catch up. In addition, a common underlying problem reported by the survey participants across all quartiles has been the lack of skilled workforce in the logistics sector.

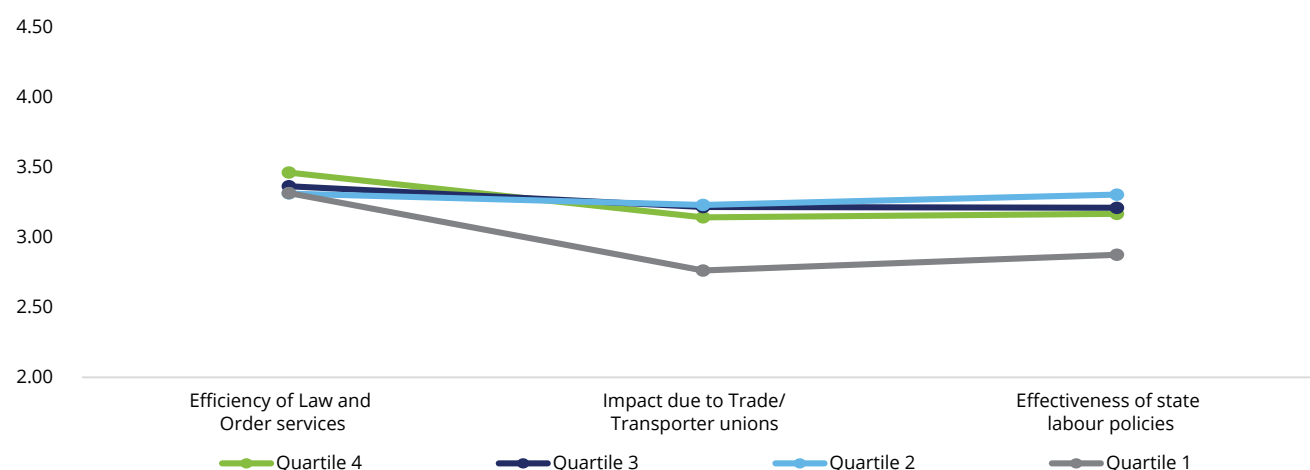
Operating and regulatory environment: Emerging enabler of logistics ease

Developments in the manufacturing sector through adoption of state-specific industrial policies across the country is proof that proactive state governments can go a long way in developing a flourishing trade environment. Hence, the slow pace of logistics development across the country is a reflection of the lack of adequate initiative on the part of the state governments to enable logistics.

As pointed out at the start, lack of state facilitation and coordination is the foremost problem running across

all four quartiles. In fact, with the exception of trade and transporter unions impeding logistics and trade, wherein the bottom quartile has been perceived as clearly worst affected, stakeholders have not been able to differentiate the quartiles much on efficiency of law and order in enhancing logistics (Refer Exhibit 22)

Exhibit 22: Quartile wise performance – Extent of state facilitation and coordination



Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

It is further observed that the three states, Uttarakhand, Jharkhand and Himachal Pradesh, are majorly influencing the performance of Quartile 1. The issue of truckers' union in Himachal Pradesh highlighted above reiterates the same (Refer Box 11).

The detailed assessments also revealed that the major factor influencing the performance of state governments' facilitating and coordinating role across all the four quartiles is with respect to issue of informal payments during road transit.

Stakeholders have perceived the need for state governments to encourage a conducive logistics environment in

their respective states by developing appropriate policies, facilitating ease of availing land and ancillary facilities, maintaining law and order, and providing breaks/subsidies/access to credit in addition to providing capacity and infrastructure.

Further, recognising that holistic development cannot be planned and executed by the state government alone, the stakeholders also pointed towards the need for promoting dialogue with other central agencies and private sector.

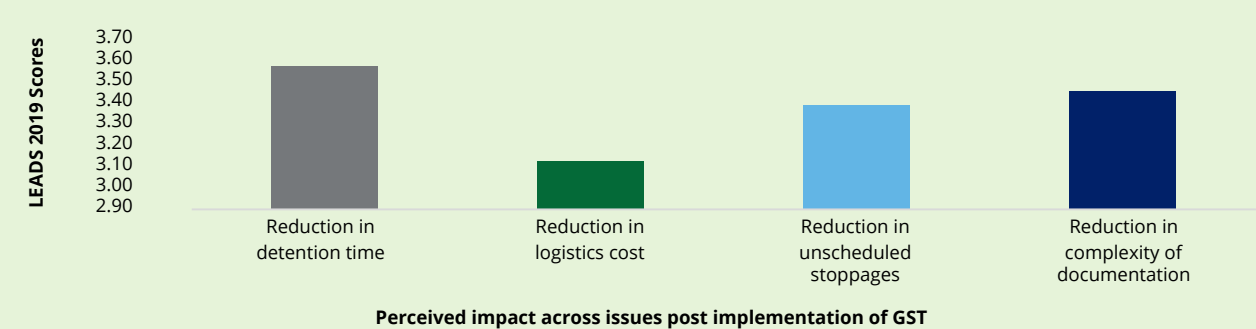
In addition to lack of facilitation and coordination being undertaken by the state government, the redundancies and

duplication in regulatory processes has also been highlighted as an impediment to logistics ease across all the four quartiles. This is perceived to be majorly influenced by difficulty in obtaining licenses / permits from RTOs and limited extent of technology adoption by RTOs for the submission, processing and clearances of applications. On the other hand, it is interesting to note that the online portal for document sharing and seeking approvals from customs is positively received by the industry. Further, in spite of its teething troubles, a regulatory change that has been hailed by the industry, as an enabler of trade and logistics nearly two years after its implementation, is the Goods and Services Tax (Refer Box 15)



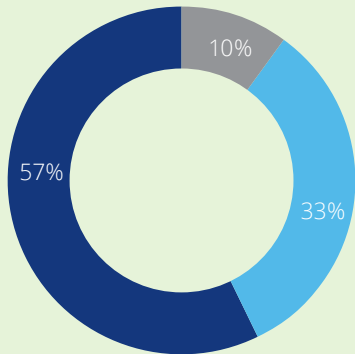
Box 15: Tracking the Goods and Services Tax story

The implementation of Goods and Services Tax (GST) has been perceived to play a positive role in promoting timely delivery of cargo. For 72 percent of the responses, GST was reported as a game changer for the industry with major impact in terms of reduction in the turnaround time of trucks due to removal of inter-state check posts, reduction in documentation complexity and unscheduled stoppages during transit. However, the expected change has not been observed in the users perception of reduction in logistics cost. Further, 77 percent of the responses reported the continuity of informal payments during road transit.

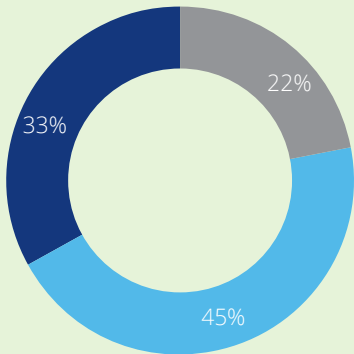


The study further analyzed that for majority of the responses received, stakeholders displayed a positive perception about the implementation of GST and its overall impact on logistics.

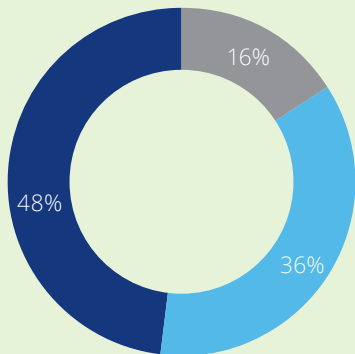
Extent of reduction in detention time at border check points post implementation of GST



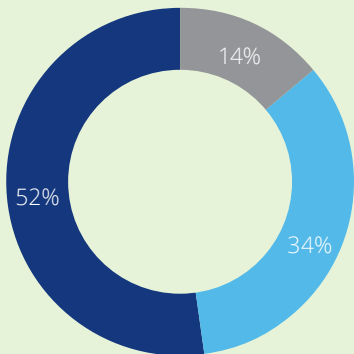
Extent of reduction in logistics cost post implementation of GST



Extent of reduction in unscheduled stoppages post implementation of GST



Extent of reduction in complexity of documentation post implementation of GST



- Poor
- Average
- Good

With respect to its implementation, however, certain issues were highlighted in relation to the modification of the e-way bill, minimum distance requirement for generating the e-way bill, and lack of regulation for express carriers.

Box 16: Ground reports on GST and Electronic Way (e-way) bill**Unscheduled stoppages at check points that lead to delays and increased costs**

The GST rules allow transporters to generate e-way bills online and carry this online version during transit. In many cases, stakeholders have reported incidents of unscheduled stoppages by authorities at state borders that demand the stamped copy of the e-way bill. Despite the rules allowing computerised copy of the bill to be considered for all legal purposes, such incidents happen.

In transit stoppages with GST and rising issues for parcel industry

Unlike transporters who deal with full truck loads, courier businesses have small consignments/parcels. e-way bill for consignments valued above INR 50,000 need to be checked. Therefore, a vehicle carrying parcels can be stopped and made to wait for e-way bill checking even if it contains one such parcel. Hence, there is a delaying in the delivery of the rest of the parcels.

Generation of Part B of e-way bill for transportation beyond 50 km

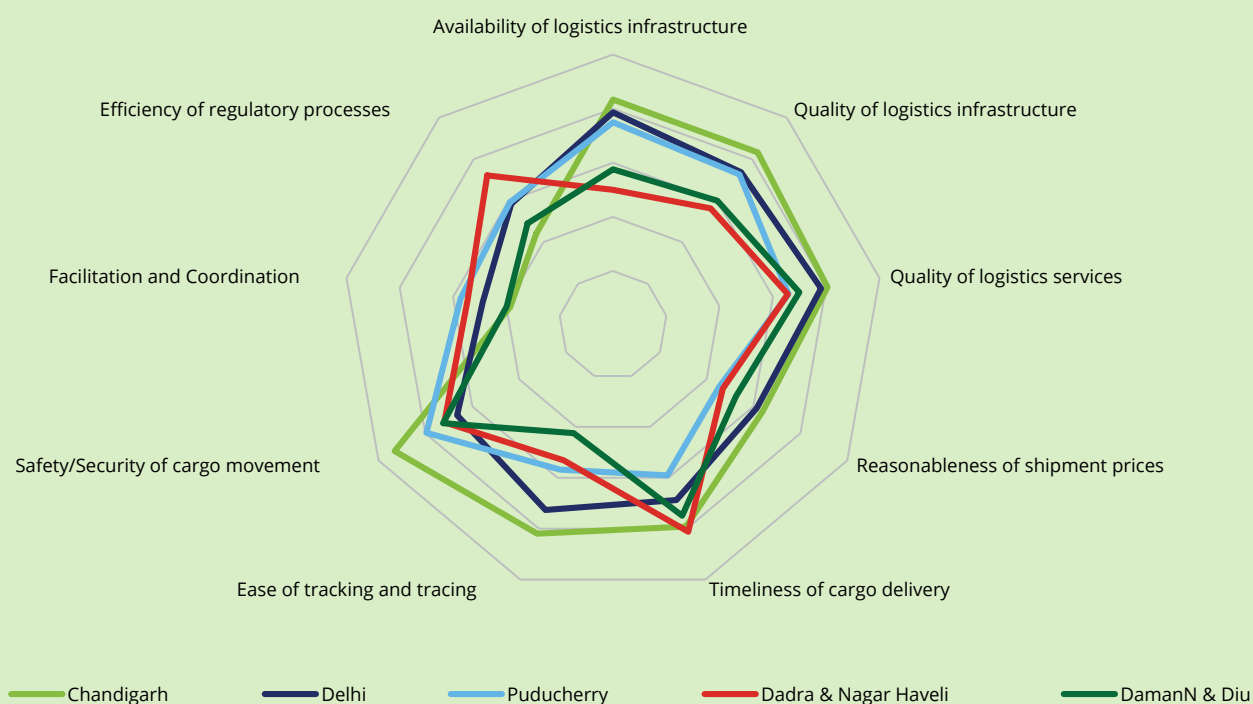
Stakeholders who dealing with the parcel industry and operate on a hub and spoke model, proposed to increase the minimum distance threshold of 50 km for generation of Part B of the e-way bill. The industry perceives this as an additional burden to generate the e-way bill multiple times for movements from main hubs to sub-hubs, to branches, and finally to the end-user.

Delays in receiving IGST claims for refunds

The current provision requires businesses to pay the IGST upfront and then get a claim refunds from the government. A majority of the stakeholders reported that owing to delays in processing of these claims, many small and medium businesses have run out of working capital forcing them to terminate operations.



Box 17: Comparison of logistics performance across Union Territories on LEADS scores



The overall LEADS scores for UTs are in line with the overall LEADS scores of states they are adjacent to. This seems to reflect the fact that due to their small geographical boundaries, they essentially rely upon and use the logistics ecosystem of their adjacent states. This is with the exception of Dadra and Nagar Haveli and Daman and Diu. This may be on account of several issues including major congestion between the road connecting Vapi and Daman, lack of rail infrastructure in the region and poor quality approach roads to industrial areas that are reported to be lowering the performance of the two UTs.

For the top performing UT i.e. Chandigarh, safety and security of cargo delivery is perceived to be a significant differentiator in addition to its high performance with respect to logistics infrastructure and other aspects of services. However, the stakeholders have pointed towards the need for significant improvement in the UT administration's facilitation and coordination role, as compared to performance of other UTs on this aspect.

An indicator-wise comparison across all UTs revealed that Dadra and Nagar Haveli followed by Daman and Diu need to undertake significant improvements pertaining to logistics infrastructure creation and delivery of quality services, as highlighted by industry stakeholders. Interestingly, it is observed that Dadra and Nagar Haveli is perceived to ensure high efficiency in their regulatory processes, when compared with the remaining four UTs.

Also, while the stakeholders perceived active state facilitation and coordination role for logistics ease in Puducherry, the UT needs to make considerable progress for reducing shipment prices and delays in cargo delivery.

Logistics Performance Across Sub-regional Clusters

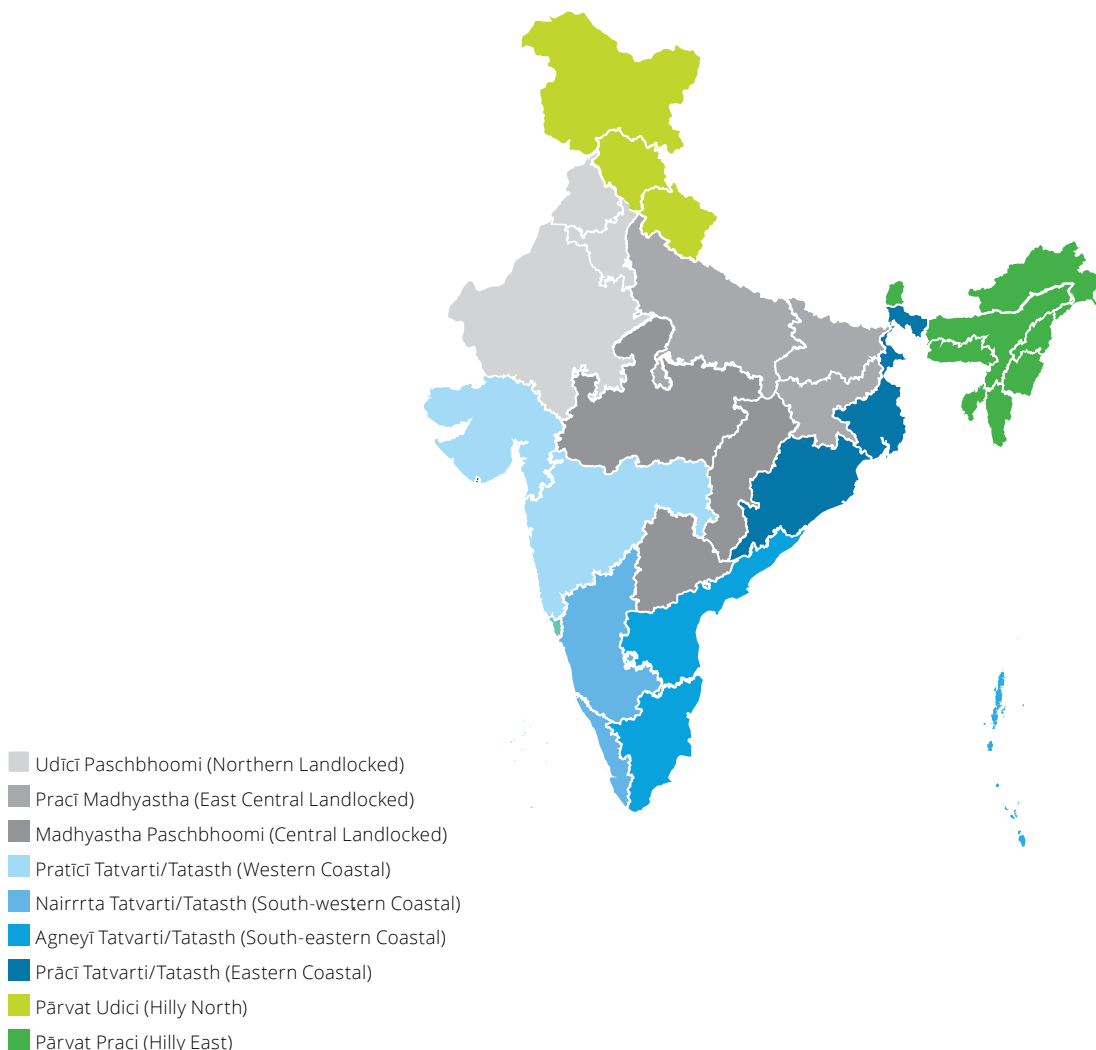
Creating administrative entities called states serves a purpose in a federal system of governance with permits initiative at the state level in specific domains. In the field of logistics infrastructure, states do have a significant influence, some directly (state-controlled logistics infrastructure, land and labour laws, regulatory clearances, law and order among others) and others through proactive facilitation of the private sector, coordination with the centre and its agencies as also with the neighbouring states.

Insights from stakeholders show that state boundaries may not always be the best geographical units from a logistics infrastructure and performance standpoint. Adjacent states exhibiting similar characteristics allow for regional clustering that can be meaningful and useful. While action-points will

remain state-specific, the regional cluster-divide describes the logistics world differently presenting new analytical tools allowing for assessment of logistics needs at a market or production / consumption cluster level.

The cluster analysis that follows describes cluster characteristics in respect of their logistics performance, and is able to provide broad differentials between a) coastal and landlocked states b) east, west and south coastal states, c) differently located landlocked states, and d) hilly and plain land masses. While this itself is educative, the more potent advantage of such an exercise is that states in a cluster with common features can be encouraged to co-ordinate with each other, and avoid investment in infructuous competing infrastructure that can easily be shared. Such integration across natural logistics boundaries is a national need.

Exhibit 23: Sub-regional clusters

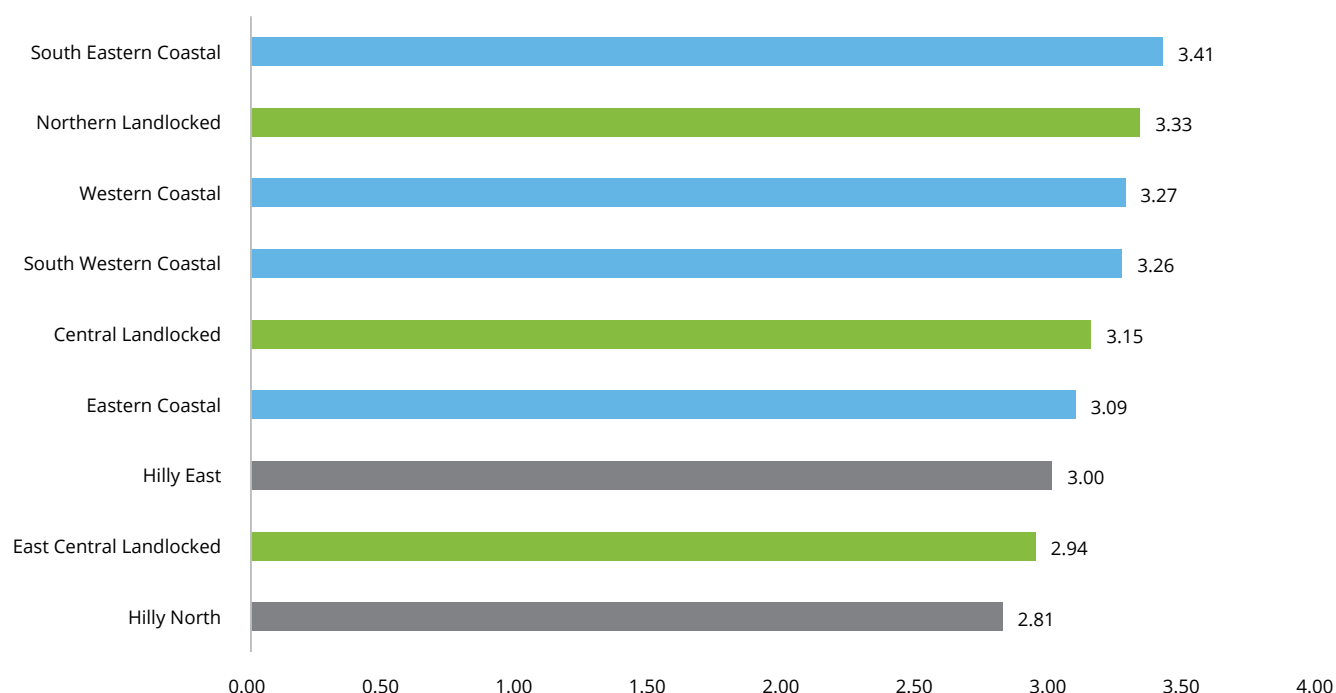


Maps not to scale

Source: Deloitte Analysis

The South Eastern Coastal cluster is perceived to be the top performer on the LEADS 2019 Index based on an inter-cluster comparison. The Hilly North cluster has been reported as requiring improvement on many fronts. The two clusters retain their position even when compared within their respective groups of coastal and hilly clusters (Refer Exhibit 24). In the landlocked cluster category, it is the northern landlocked cluster that emerges as the highest performer

Exhibit 24: Cluster-wise performance on LEADS Index



The overall performance of coastal clusters is perceived to be consistent across all the nine indicators, with Western Coastal and South Western Coastal clusters not showing stark differences in their performance. However, for the Eastern Coastal cluster, stakeholders have highlighted the need for improvement across all the nine indicators of logistics ease.

In the case of landlocked clusters, infrastructure and service related dimensions including "Availability and Quality of Logistics Infrastructure", "Quality of logistics services provided by service providers" and "Ease of track and Trace" emerged as key differentiators for

Northern Landlocked cluster, which is the top performing cluster. In contrast, the East Central Landlocked cluster, comprising the low per capita income states of Uttar Pradesh, Bihar and Jharkhand, is perceived to be consistently performing low across all indicators.

It is also noted that with respect to logistics infrastructure, availability of infrastructure is perceived to have a higher influence on performance of clusters, as compared to the maintenance and upkeep of infrastructure. This is echoed across all the nine geographical clusters, except for South Western Coastal cluster, which is perceived to be performing consistently

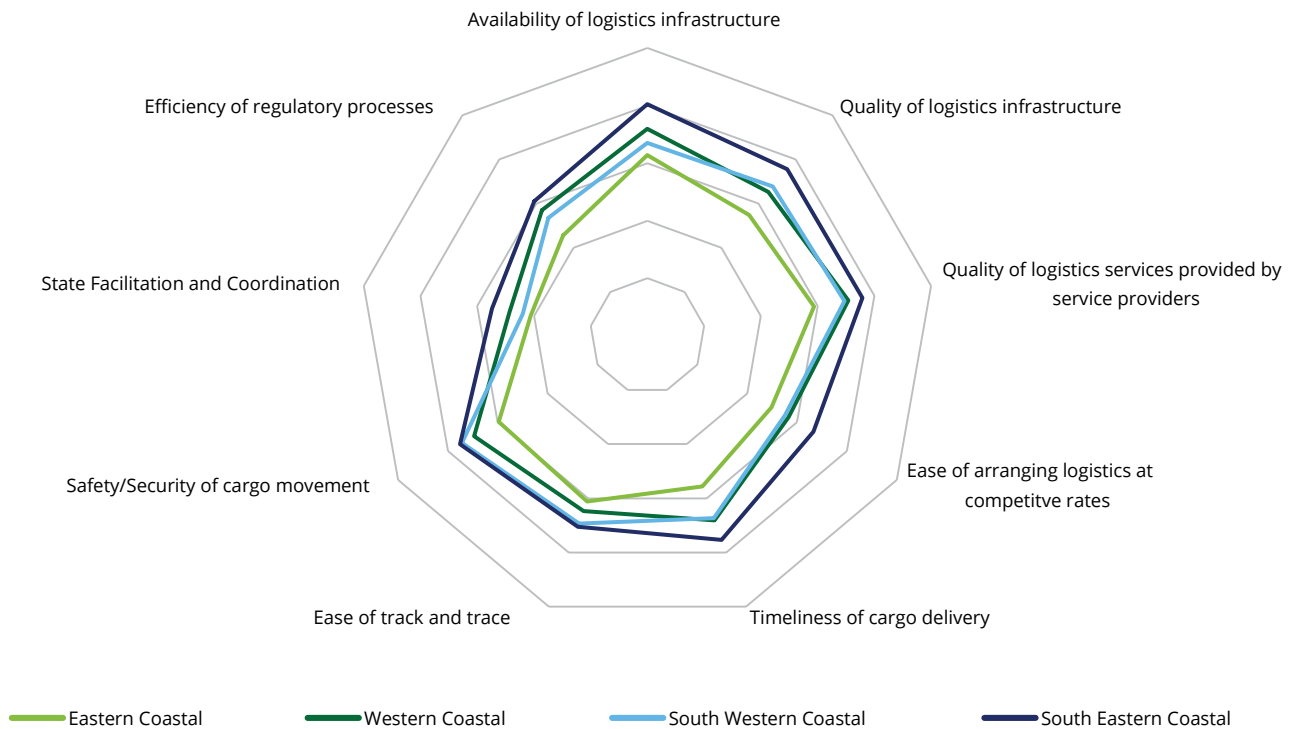
on both these aspects of infrastructure.

On logistics services, the performance of most clusters is determined by their perceived performance on both quality of services provided by the logistics service providers, and the safety and security of cargo delivery. At the same time, reduction of shipment prices has been highlighted as an area of improvement for the ease of logistics.

As in the earlier discussion on quartiles, the need for improvement in the role of state governments in ensuring a conducive environment for logistics in their respective states has been highlighted across clusters.

Coastal Clusters

Exhibit 25 Indicator-wise comparison of mean scores for coastal clusters



An inter-coastal cluster comparison (Refer Exhibit 25) reveals that the South Eastern Coastal cluster is the top performer, while respondents perceived several issues impeding the logistics ease in the Eastern Coastal cluster. Almost all coastal clusters are perceived to perform well on ensuring adequate availability of infrastructure, but the South Western Coastal cluster is perceived to be the best on reliable cargo delivery to ensure safe movement and handling of cargo.

Among the various types of logistics infrastructure, adequate availability of port terminal infrastructure guides the perception of stakeholders across all coastal clusters, with the exception of the South Western Coastal, where air cargo terminal infrastructure is perceived to create a major positive impact.

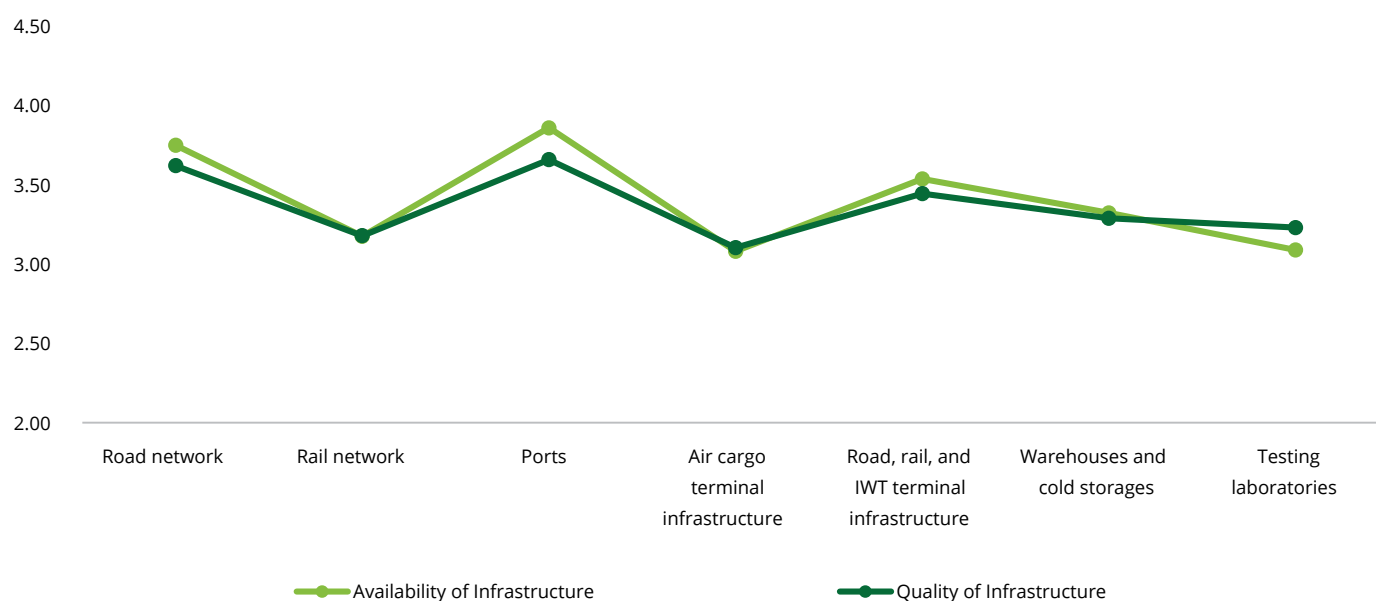
With respect to logistics services, stakeholders point to the lack of real-time information as a challenge for all clusters. Despite satisfactory quality of mobile and internet connectivity across these clusters, the adoption of RFID readers / GPS devices for tracking of cargo is perceived as being inadequate.

In terms of effectiveness of regulatory processes, informal payments in road transit is highlighted as a major issue across all clusters, barring the South Western Coastal Cluster where it is considered marginally lower. Additionally, while obtaining approvals from Regional Transport Offices (RTOs) and PGAs is considered a hassle, the Customs' technology platform for online submission/clearance of documents and applications is appreciated in all coastal clusters.

South Eastern Coastal Cluster (Andhra Pradesh and Tamil Nadu)

This cluster has emerged as the best across all categories of clusters. It is perceived to perform high on all the indicators of logistics ease, but scores a notch low in providing frequent, consistent and accurate information regarding movement, storage and condition of cargo. The perceived lack of facilitation and coordination measures on the part of the states in this cluster is the dominant factor that lowers the cluster's overall performance.

Exhibit 26 South Eastern Coastal Cluster's performance on availability and quality of infrastructure



Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

Detailed assessments (Refer Exhibit 26) revealed that with respect to logistics infrastructure, the cluster is seen as ensuring adequate port terminal infrastructure that is also well maintained. The road network too is sufficient and of good quality.

Box 18: Growing port sector promoting ease for the South Eastern Coastal cluster

For the past three years, Andhra Pradesh consistently ranks third largest state in terms of cargo traffic handled at the ports, after Gujarat and Maharashtra (Indian Port Association, 2017-2018). The Vizag Port and other private ports including Krishnapatnam, Gangavaram and Kakinada ports have been reported to be sufficient to cater to the state and adjoining areas. Similarly, stakeholders also lauded the Kattupalli and Ennore ports for catering to inbound and outbound cargo traffic of Tamil Nadu and consequently easing the already congested Chennai Port. The recent major developments in Andhra Pradesh include completion of 14 projects under the Sagarmala initiative with the investment amounting to INR 1,807 crore and development of a greenfield multi-cargo commercial port to the north of the Kakinada port (Ministry of Shipping, GoI, 2018). Additionally, the terminal operator has played a major role in development of infrastructure and cargo handling services (including ICT) at the Ennore Container terminal and Kattupalli port.

At the same time, however, availability and quality of air cargo terminal infrastructure and rail network emerged as a constraint for the cluster. For instance, it is reported that the air cargo terminal at Vizag airport in Andhra Pradesh faces severe capacity constraints as a result of which majority of the air cargo moves to either Chennai or Hyderabad airport from the state. The respondents have also highlighted the problem of congestion at the cargo terminal in Chennai airport. However, the planned expansion of the airports in Tamil Nadu in the coming years is expected to improve the air cargo movement in the state. The stakeholders also reported a dearth of commodity-specific testing labs and PGA offices in Andhra Pradesh, leading to time over runs. Cargo from North Andhra is moved to Hyderabad, while cargo originating from Southern Andhra is moved to Chennai for testing.

The services provided at port facilities in the cluster play a major role in influencing the perception of stakeholders on the overall quality of logistics services. Stakeholders were satisfied with the services provided at the ports in these states owing to the competency levels of service providers, ensuring timely turnaround of cargo at competitive prices (Refer Box 18). The quality of road transportation services also positively influenced the stakeholders' assessment of the cluster. Another key characteristic of the cluster is the efficiency of law and order systems in both the states, which ensures safe and secure movement of cargo.

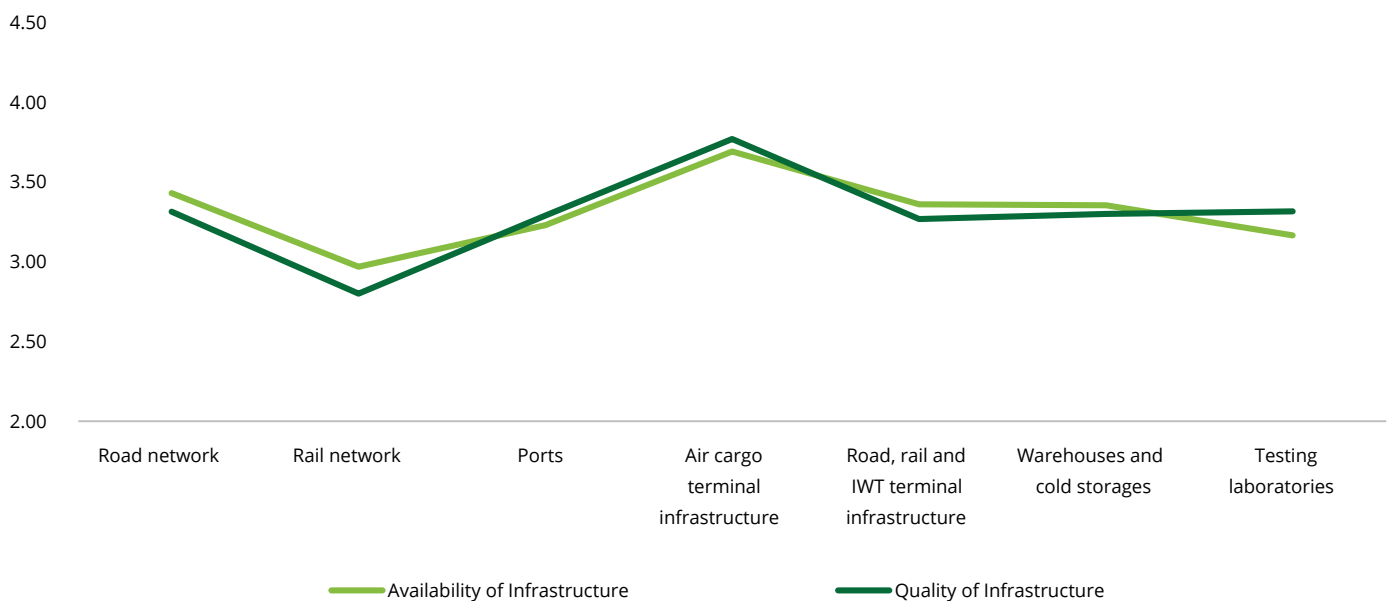
South Western Coastal Cluster (Kerala and Karnataka)

For the South Western Coastal cluster, the key performance differentiator, as perceived by stakeholders, to enable ease of logistics is the reliability of cargo delivery. As mentioned earlier,

this is a departure from the trend exhibited by other coastal clusters, where robust logistics infrastructure makes the difference. Again, this cluster too is marred by the lack of proactive initiatives by state governments. The other major issue that pulls down the cluster's performance is the highly priced logistics services, particularly rail transportation.

In contrast to the South Eastern Coastal cluster, the South Western Coastal Cluster is perceived as having adequate and good quality air cargo terminal infrastructure. This boosts the performance of this cluster with respect to logistics infrastructure. With respect to logistics services too, the cluster fares at the top across all three categories of clusters for services provided at the air cargo terminal. This is on account of improved facilities for air cargo being provided at Bengaluru airport (Refer Box 19).

Exhibit 27 South Western Coastal Cluster's performance on Availability and Quality of Infrastructure

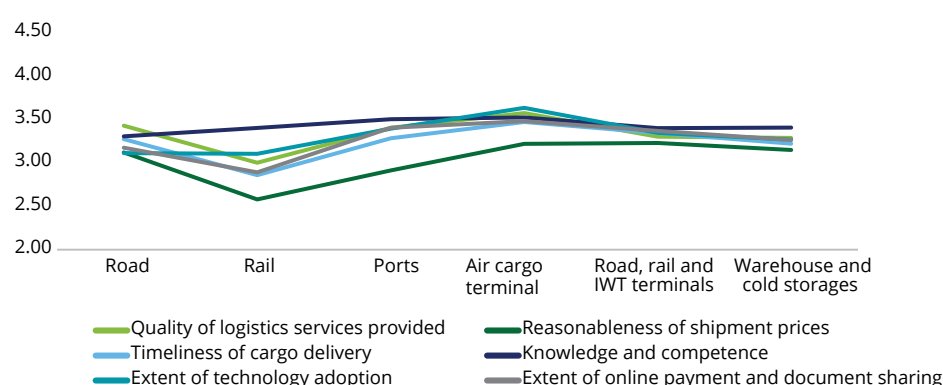


Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

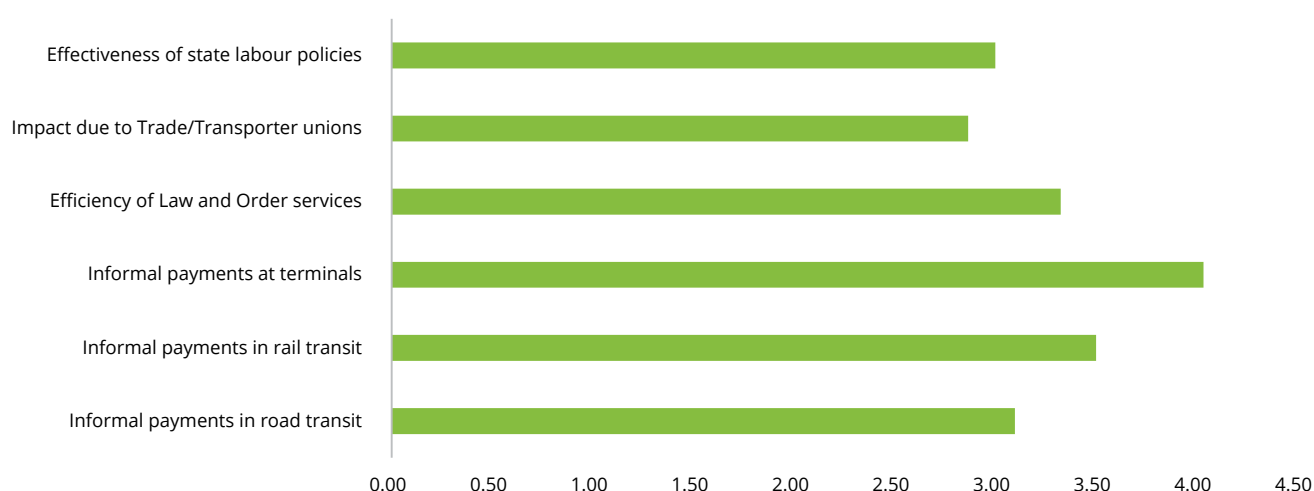
Box 19: Efficient and upgraded services attract air freight traffic in Bengaluru airport

The share of Kempegowda International Airport in the international and domestic air freight volumes has increased by approximately ten percent during the previous year. In addition, the airport contributes 30 percent to the overall air freight traffic movement from the southern region (Airports Authority of India, 2018). The major factors contributing to the growing traffic handled at the airport reported by stakeholders includes airport having efficient cargo handling facilities with a separate centre to cater to perishables. Further, the Bengaluru airport emerged as the first airport in India to adopt RFID technology for track and trace of cargo (AISATS, 2018).

However, stakeholders believe further development of rail network and improvement in the condition of rail tracks in the state is a pressing need. Respondents highlighted the problem of huge congestion on the existing railway lines in Karnataka. At present, the Whitefield region is a major choke point impeding smooth movement of railways in the state. The need for development of railway connectivity to the industrial hubs of Hubli, Dharwad, Belgaum, Bijapur and Mysore has also been identified as an industry demand. As a result, cargo is mostly transported via road through Bengaluru city, leading to congestion within the city and delays in cargo delivery.

Exhibit 28 South Western Coastal Cluster's performance on logistics services

Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

Exhibit 29: South Western Coastal Cluster's performance on extent of state facilitation and coordination

However, the problem of informal payments during road transit is not reported to be as acute in this cluster (Refer Exhibit 29). Core issue is the existence of a dominant trade / transport union, especially in Kerala, which once again highlights the lack of facilitative role on the part of the state government. Frequent strikes called by various unions at the Cochin Port disrupt business, compelling industries to divert their cargo towards Tuticorin from where it is shipped out.

Western Coastal Cluster (Gujarat, Maharashtra and Goa)

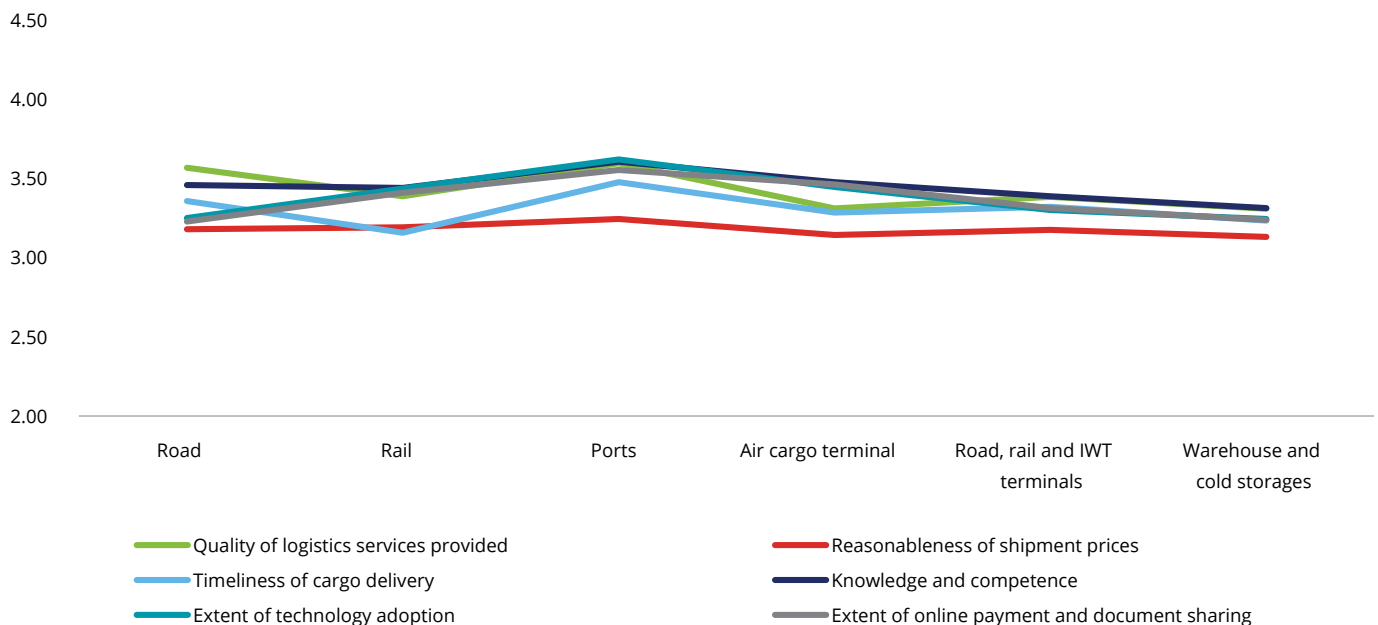
Gujarat, which emerges as the highest performer on the Index, is part of this cluster and is also perceived to be the better performing state within this cluster across all the nine indicators. In the context of infrastructure facilities, similar to the South Eastern Coastal cluster, the Western Coastal cluster is reported to have adequate availability and quality of port infrastructure to service the demand. The cluster's low point is the development and maintenance of regulatory infrastructure, including testing laboratories. For instance, there is only one drug testing lab in Vadodara and even that is not sufficient to undertake different kinds of examinations for all kinds of samples. Samples have to be sent to Indore or Delhi for testing.

Interestingly, the quality of logistics services provided by road transporters and port operators is perceived to be the highest for the cluster, but services provided by air cargo terminal operators and rail transport operators are reported as being insufficient.

Box 20: Capacity expansion to cater to demand for air cargo movement in Gujarat

With the increasing volumes of inward and outward cargo movement across Gujarat, stakeholders reported the need for development of other airports in the state in addition to the Ahmedabad airport. The air cargo terminal in Ahmedabad is perceived to be facing severe capacity constraints and is unable to cater to the ever increasing demand. For instance, despite being a trading hub, there is no air cargo terminal facility even for domestic cargo movement from Surat. Additionally, stakeholders did not experience any increase in the warehousing space at the air cargo terminal in Ahmedabad airport for the past 15 years. Insufficient handling equipment, lack of parking space for trucks and poor quality of approach road to the air cargo terminal are some of the other major issues which were cited by stakeholders. The location of the terminal in the middle of the city also leads to restricted entry of heavy vehicles into the terminal during the day when the city movement restrictions are in place.

Exhibit 30 Western Coastal Cluster's performance on extent of logistics services

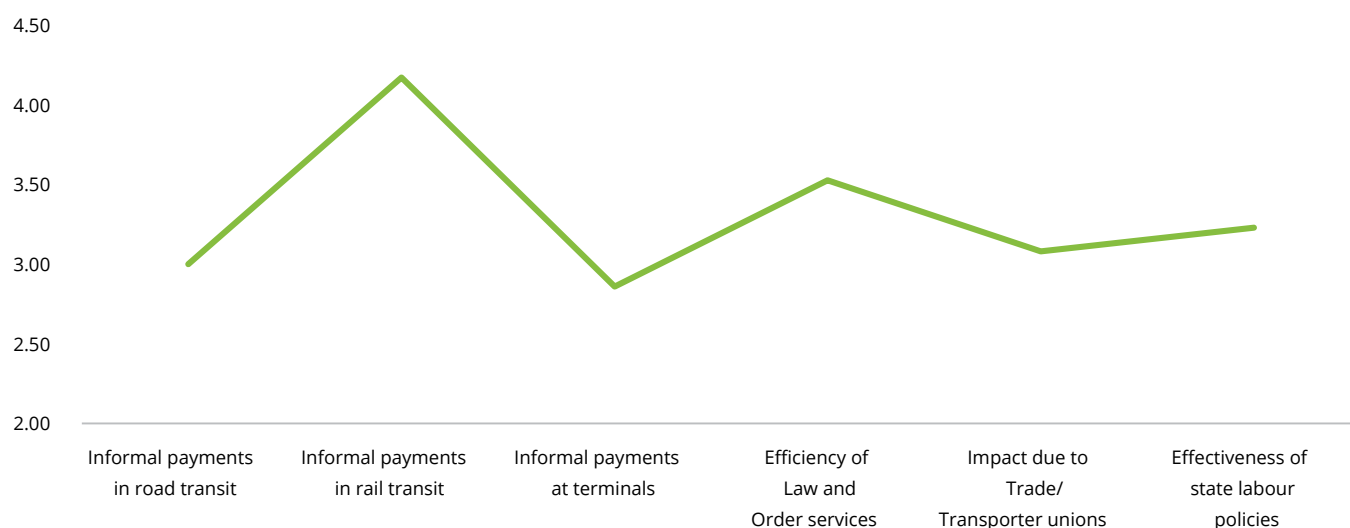


Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

Exhibit 30 reveals that with respect to logistics services, stakeholders perceived reduction in shipment prices as a major focus area across all transportation and logistics infrastructure facilities. In addition, time over runs in cargo delivery through rail transportation has been also highlighted. The quality of service offerings and turnaround time at ports is perceived to be better over other modes of transport. Corresponding to the need for improvement in the associated air cargo terminal infrastructure, stakeholders have highlighted the requirement for boosting service levels at the air cargo terminal.



Exhibit 31: Western Coastal Cluster's performance on extent of state facilitation and coordination



Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

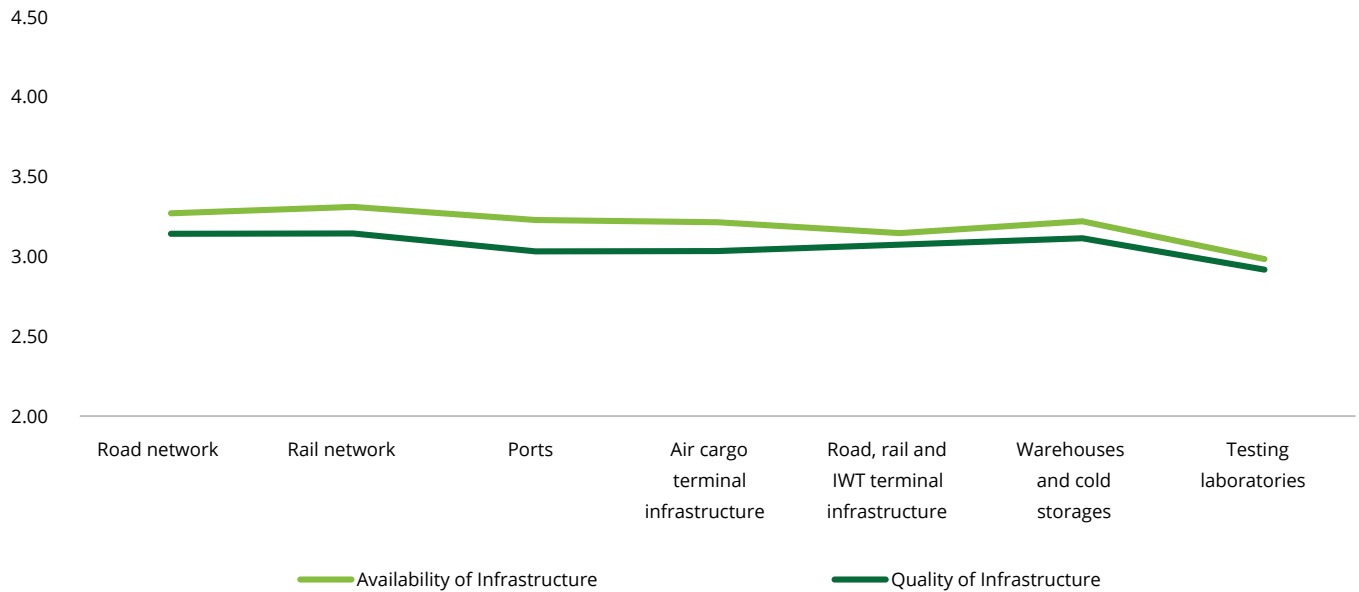
The issue of informal payments has been highlighted as a critical bottleneck by stakeholders, especially in the case of terminals and during road transit, but is almost negligible during transit by rail. The other issue negatively skewing the stakeholders' perceptions has been the high influence of the activity of trade/transporter unions, especially in the case of the Mathadi labour in Maharashtra (Refer Exhibit 31)

Eastern Coastal Cluster (Odisha and West Bengal)

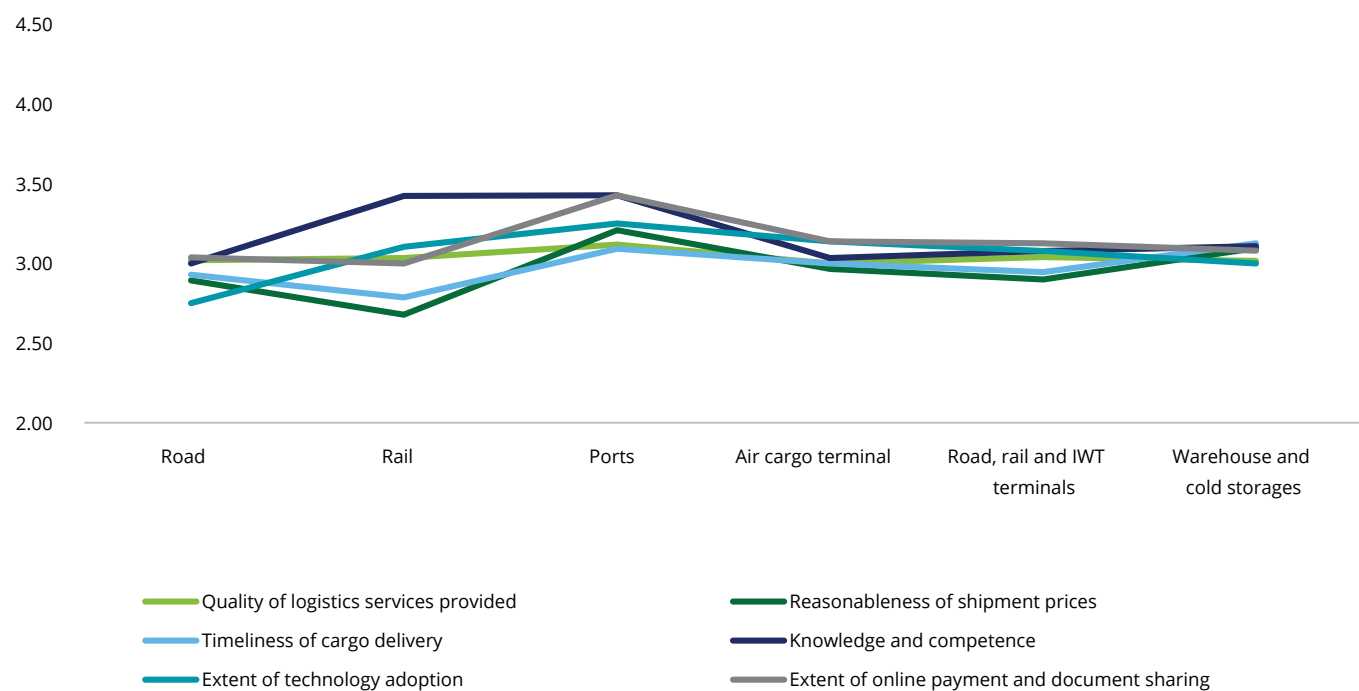
As compared to other coastal clusters, stakeholders indicated the need for the Eastern Coastal cluster to improve across all the nine indicators of logistics ease. Across all modal and terminal infrastructure, the performance divide is stark between the quality and maintenance levels of such infrastructure and its availability, especially in the case of ports (Refer Exhibit 32).

Box 21: Constrained port operations compromising quality of services at Kolkata Port

The reported quality issues are mainly attributed to the perceived bottlenecks at Kolkata Port. Stakeholders revealed that the port operations are constrained owing to the lack of quality of the terminal and the cargo/container handling equipment. Further, the port systems have been reported as being outdated. Also, the lack of an integrated ecosystem for seamless interaction between the port operator and customs further worsens the situation at the port. In spite of all these constraints, users admitted paying exorbitant charges further impeding logistics ease.

Exhibit 32: Eastern Coastal Cluster's performance on Availability and Quality of Infrastructure

Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

Exhibit 33: Eastern Coastal Cluster's performance on Quality of Services

Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

With respect to logistics services (Refer Exhibit 33), exorbitant shipment prices and delays in delivery through rail transportation has been highlighted as a major improvement area for the cluster.

The survey has also highlighted the need for boosting the level of competency, especially in the case of road hauliers and increasing awareness about adoption of technology. For instance, in Kolkata, transporters reported that despite the adequate supply of vehicles, there is limited supply of skilled drivers for long haulage. Consequently, transporters have to rely on less qualified drivers, which make the cargo transit more accident-prone.

Landlocked Clusters

Among the landlocked clusters, the Northern Landlocked cluster has emerged at the top. It scores high primarily on account of its robust infrastructure. In comparison the East Central Landlocked cluster is performing low on the LEADS Index and varying aspects of logistics services seem to weigh it down.

Among the various infrastructural facilities, the adequate availability and quality of road and rail infrastructure is seen to be influencing the perception of stakeholders with respect to logistics ease across landlocked clusters.

However, the quality of infrastructure with respect to road and rail network needs improvement in the case of East Central Landlocked cluster, as perceived by the industry stakeholders. (Refer Exhibit 34)

Northern Landlocked Cluster (Punjab, Haryana and Rajasthan)

Punjab emerges as the cluster leader registering the best performance across all nine indicators except on timely delivery of cargo. The cluster is perceived to have adequate and quality infrastructure facilities, albeit requiring quality upgradations in the road and rail network in the state (Refer Exhibit 35). Further, in the case of regulatory infrastructure, stakeholders have flagged the availability of commodity-specific testing facilities and labs as a concern. (Refer Box 22).

Box 22: Lack of testing labs in the Northern Landlocked Cluster

The limited number of drug testing labs in Haryana has been reported to cause delays in obtaining clearances from the regulatory authorities. Samples have to be sent to Delhi for testing which leads to time inefficiencies. What makes the problem more acute is the sub-standard quality of the services being offered by these testing centres in the state.

Further, the testing and inspection services provided by Export Inspection Council are not available for key export items in Ludhiana. Different testing facilities are present in different places. For instance, while Plant Quarantine is located at Amritsar, Animal Quarantine, Wildlife Crime Control Bureau, and Additional Drug Controller General are based in Delhi, and FSSAI labs are based in Gurgaon.

Exhibit 34 Indicator wise comparison of mean scores for landlocked clusters

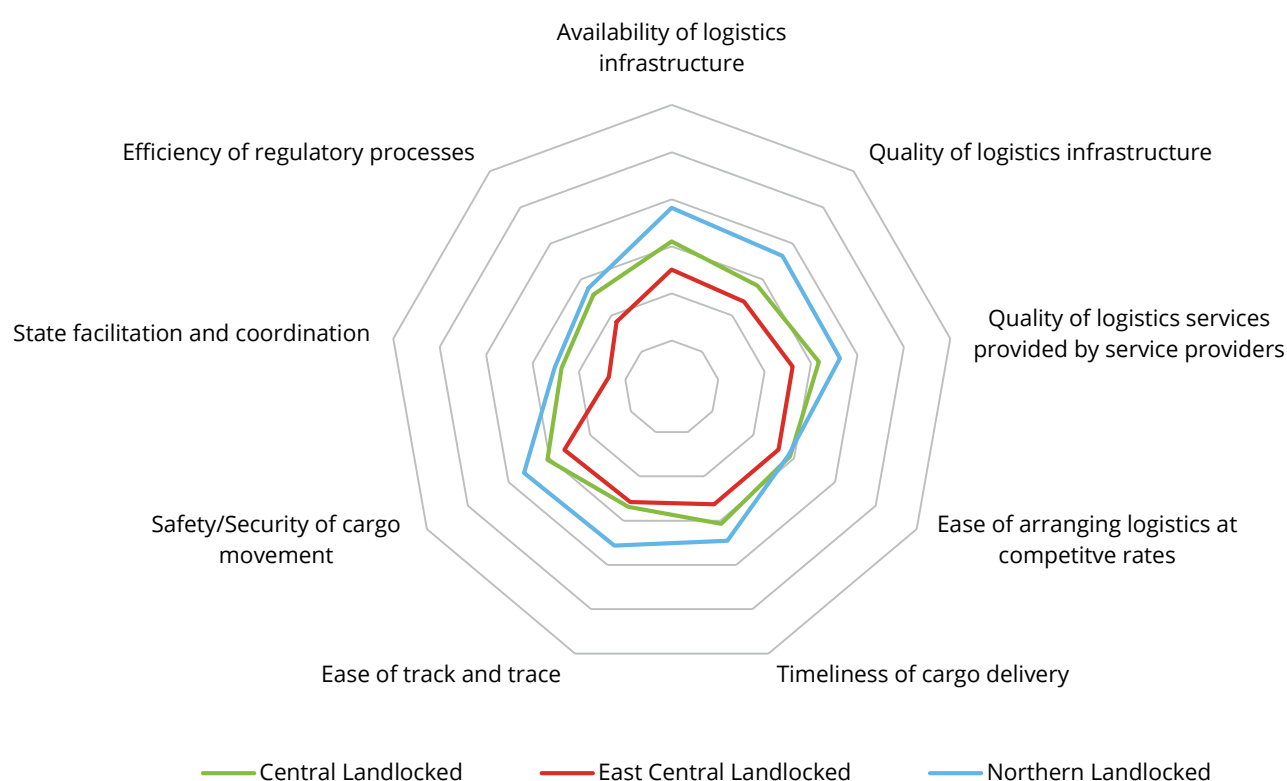
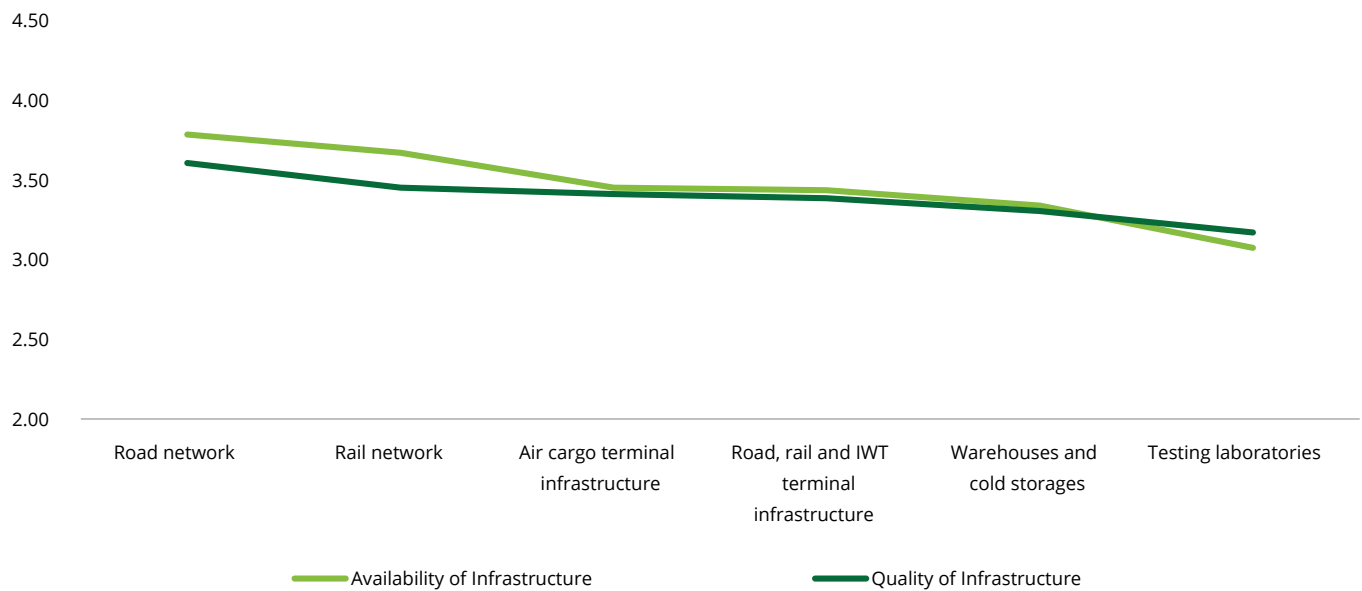
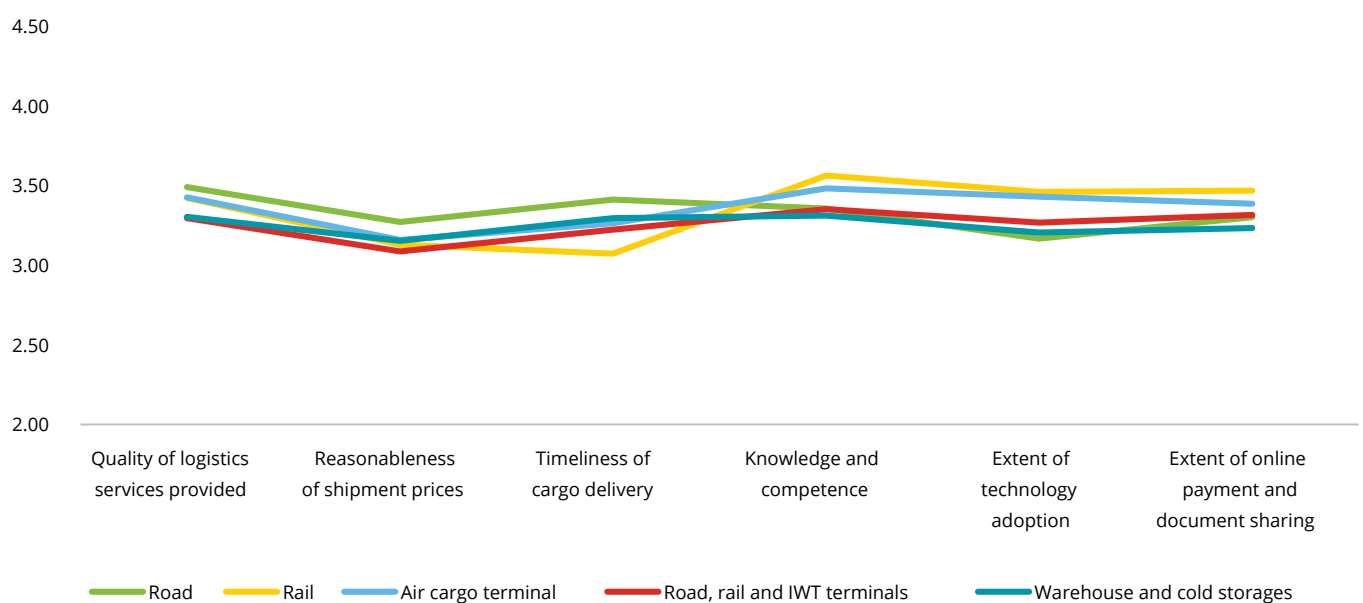


Exhibit 35 Northern Landlocked Cluster's performance on Availability and Quality of Infrastructure

Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

Exhibit 36: Northern Landlocked Cluster's performance on Logistics Services

Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

Amongst the logistics service providers including transporters, terminal operators, and storage infrastructure providers, the quality of services provided by road hauliers to ensure timely delivery of cargo have been perceived as better across all landlocked. Owing to the volume of cargo movement in this cluster and the perceived issues in rail transportation with respect to quality of services, timelines of delivery, and high prices, the industry depends on road transportation heavily. However, the knowledge and competence of drivers and the extent of technology upgrade with respect to adoption of RFID readers and GPS devices by the road transport operators has been reported as being low. Stakeholders also flagged the need for setting up driver training centres across the cluster to enhance logistics ease.

On comparison of shipment prices across all the infrastructure facilities, surface based terminals are perceived to

be charging exorbitantly, which seems to weigh down the cluster's performance (Refer Exhibit 36).

Additionally, inefficiency of law and order services has also been highlighted as an issue affecting the safety and security of cargo movement in the cluster.

Central Landlocked Cluster (Chhattisgarh, Madhya Pradesh and Telangana)

When compared on all aspects of logistics services, the quality of logistics services provided by freight forwarders and customs brokers is seen to be the biggest contributor to the cluster's logistics ease. However, stakeholders acknowledged that the adoption of GPS devices / RFID readers by the industry for providing complete visibility across the logistics value chain is still to catch up. Users reported the lack of availability of real-time information through an online platform and admitted to making calls for tracking cargo.

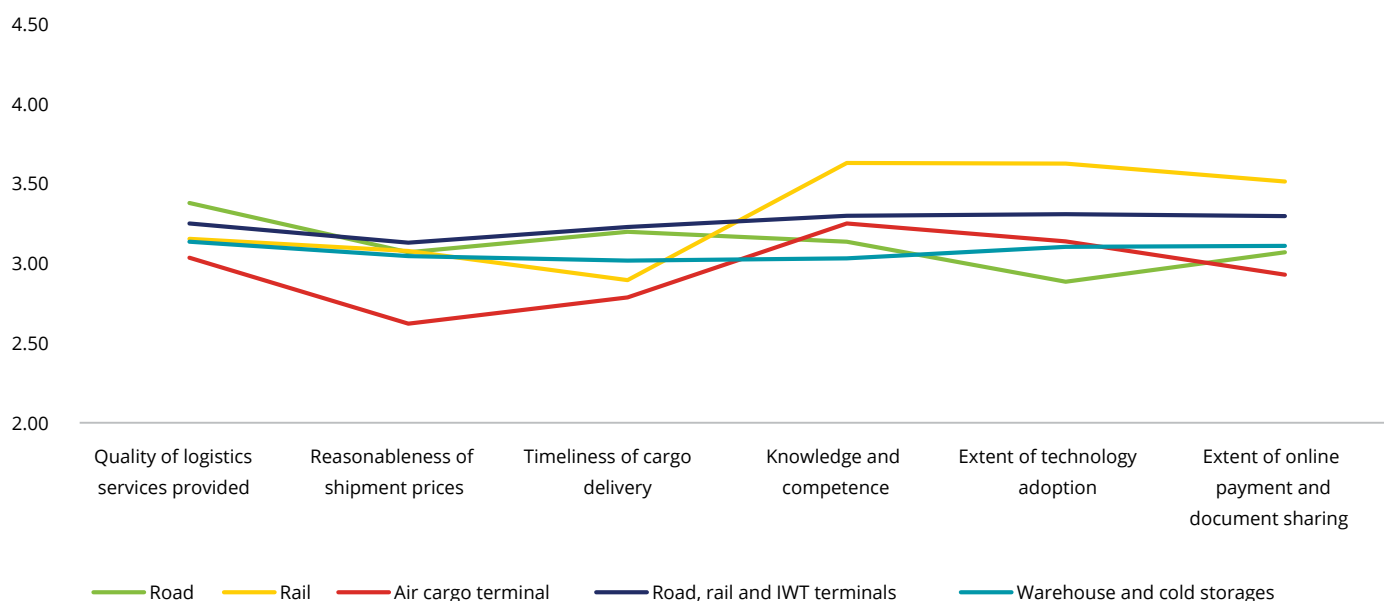
Another area of focus for this cluster is the services provided at the air cargo terminal, especially in Madhya Pradesh, Chhattisgarh and Telangana which need improvement (Refer Box 23). Like other clusters, rail transportation services were highlighted as being insufficient, characterised by time and cost overruns, thereby lowering the cluster's performance.

Box 23: Capacity constraints affecting service levels at airports

The stakeholders highlighted the issue of limited terminal capacity for domestic cargo, lack of adequate cold storage facilities at the air cargo terminal and insufficient truck bays at Hyderabad airport.

Similarly, Indore airport has inadequate infrastructure facilities for handling heavy cargo. Also, direct connectivity to different states is also a major challenge due to which cargo is first sent to Mumbai airport from where it is then flown to the rest of the world.

Exhibit 37 Central Landlocked Cluster's performance on Logistics Services



Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

With respect to infrastructure, stakeholders acknowledged the adequate availability and quality road network in the cluster, but state-of-the-art storage infrastructure equipped with sophisticated technologies for handling and managing cargo is lacking. For instance, the older warehouses spread across Madhya Pradesh and Chhattisgarh are characterised by poor quality of approach roads and facilities that require maintenance and repair. Respondents also highlighted that without latest technology, infrastructure at warehouses still relies on manual labour for most handling activities, including stacking (Refer Exhibit 37)

The survey also flags off the law and order problem, especially in the isolated forest areas of Chhattisgarh, which is seen as affecting the cluster's performance on state facilitation. Further, the persistence of high informal payments at border check posts is an issue raised by majority of the stakeholders for Madhya Pradesh.

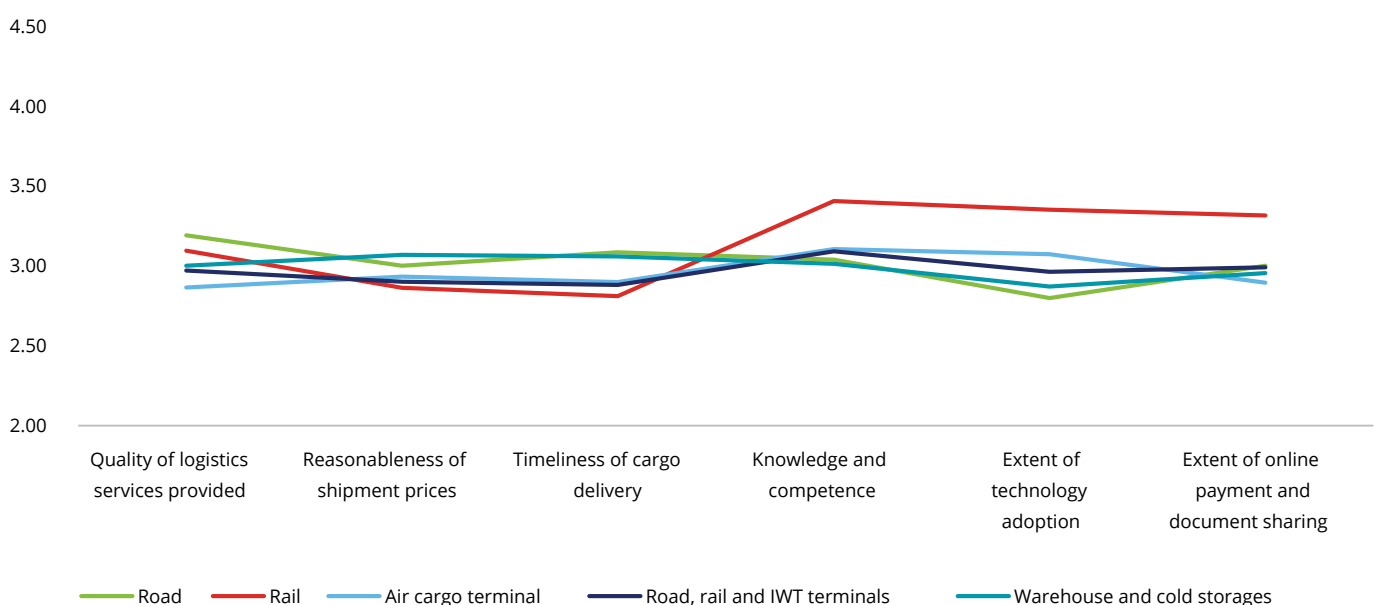
East Central Landlocked (Bihar, Jharkhand, and Uttar Pradesh)

Stakeholders perceived the East Central Landlocked cluster as the lowest performing landlocked cluster. The cluster is the most affected on the safety and security of cargo and efficiency of regulatory processes across all the three geographic categories.

While the availability of road network in the cluster is perceived to be better than the rail network, respondents felt that the quality of rail infrastructure was superior to road. This could be attributed to the newly built railway infrastructure connecting east central states with Nepal and other recent infrastructural upgradations such as gauge conversion, creation of new railway lines among others.

Additionally, stakeholders perceived the need for improvement in availability and quality of testing laboratories followed by air cargo terminal infrastructure. The services provided at different

Exhibit 38: East Central Landlocked Cluster's performance on Logistics Services



Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

infrastructure facilities in the cluster are perceived to be consistently problematic across all the service aspects with delays in rail transport services being even more acute, especially in Bihar (Refer Box 24). Uttar Pradesh emerged as the best performer within the East Central Landlocked cluster across all the indicators of logistics ease. However, the state suffers when it comes to reliable cargo delivery. This is further validated by stakeholders highlighting cases of thefts in and around the areas of Moradabad, Aligarh, and Etawah. Instances of local villagers in and around Dadri disrupting trade have been reported.

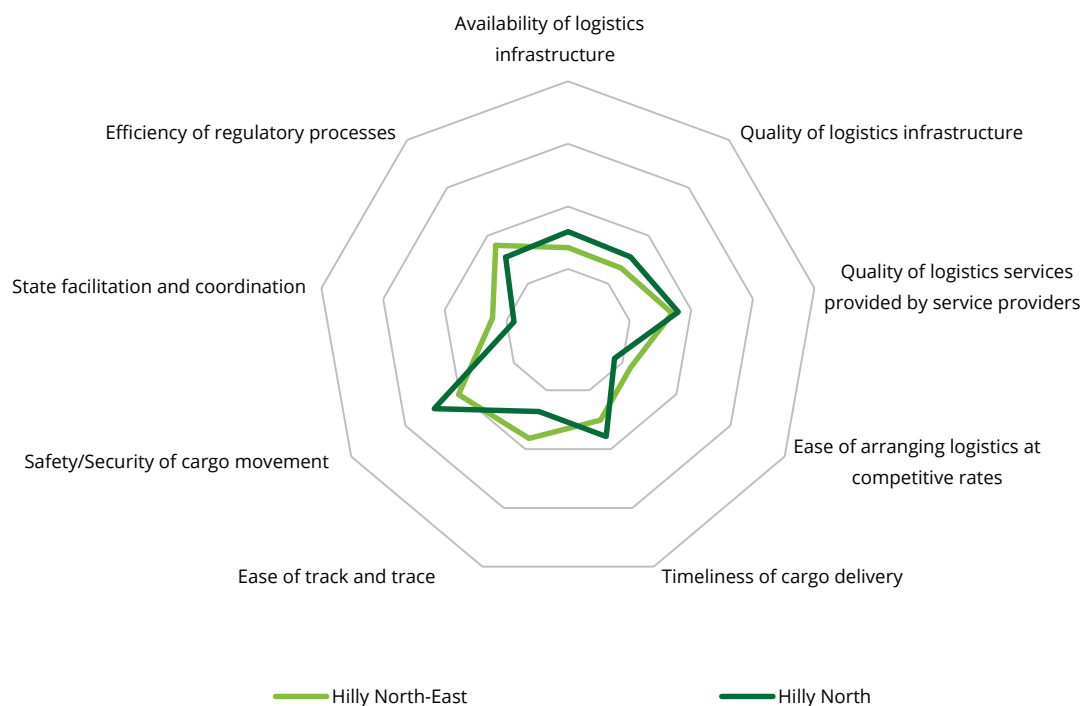
On the other hand, Bihar is consistently perceived as performing low across six of the nine indicators, which pulls down its logistics ease.

Box 24: Lack of outward movement of cargo leading to delayed rail movement in Bihar

Owing to limited outward movement of goods from Bihar, waiting time is considerably high for aggregating full trainload of cargo, thereby leading to delays in train movement. Further, several small traders deal with limited volume of goods and hence, prefer road movement. In such a scenario, they do not have to wait for a long period for aggregating cargo volumes.

Hilly Cluster

Exhibit 39: Indicator wise comparison of mean scores for hilly clusters



Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

Hilly Cluster comprising Hilly North and Hilly East Clusters has been perceived as the worst performing cluster group in terms of logistics ease with stakeholders reporting issues in seven of the nine indicators. The task of infrastructural development is obviously difficult because of the geographic terrain leading to higher prices. Logistics market in the cluster is still nascent and unorganised, marked by lack of adequately trained professionals and poor rate of technology adoption.

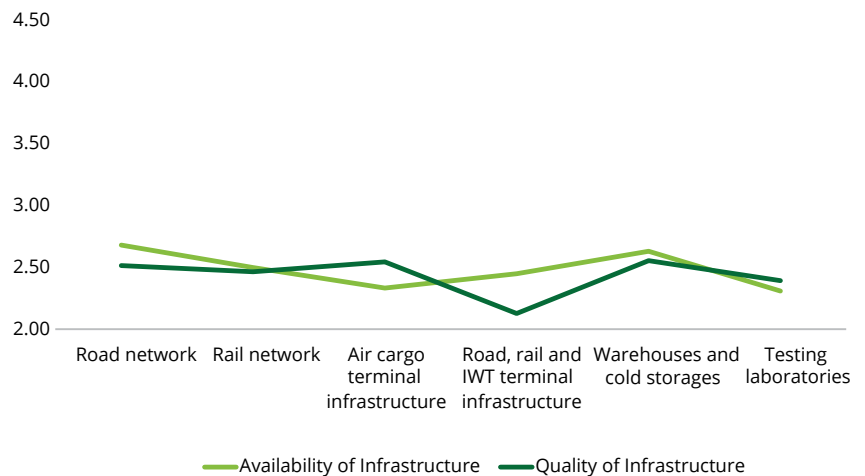
Hilly North Cluster (Uttarakhand, Himachal Pradesh and Jammu & Kashmir)

The Hilly North cluster is perceived as requiring significant reforms across all the indicators of logistics ease, with the exception of safety and security of cargo and efficiency of regulatory processes. The performance of Himachal Pradesh, for example, lags behind on six out of the nine indicators, bringing down the cluster's overall performance and also reported the need for urgent attention.

With respect to logistics infrastructure, it is perceived that across all the states within the cluster, respondents flag off the urgent requirement for investment in terminal infrastructure expansion and upgradation (Refer Box 13).

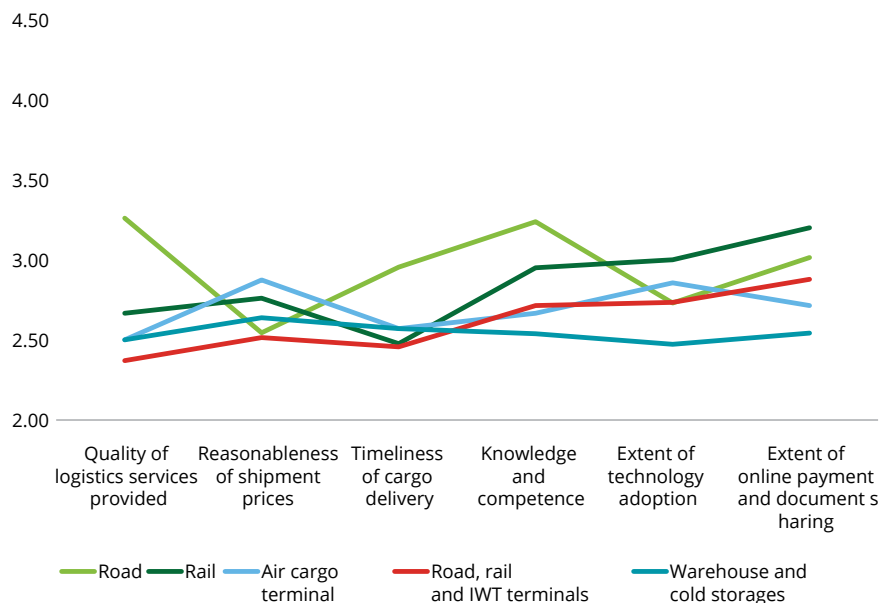
Further, in the context of logistics services, the quality and reliability of road transportation services is not reported as much of a problem. However, the study found that technology adoption and provision of online payments has still not caught up among road hauliers within the cluster. The surface-based terminals require significant improvement in this cluster, especially for their handling charges and timeliness in cargo turnaround. In line with the findings across other clusters, the rail transportation delays are also crippling the logistics ease in the Hilly North cluster (Refer Exhibit 41).

Exhibit 40: Hilly North Cluster's performance on Logistics Infrastructure



Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

Exhibit 41: Hilly North Cluster's performance on Logistics Services



Note: Assessment appropriately considers the applicability of transport modes and infrastructure facilities to respective states

With respect to state facilitation and coordination, the cluster is perceived to have efficient law and order services with the exception of the truck union hindering the logistics ecosystem in Himachal Pradesh, as already discussed.

Further, informal payments during road transit is also reported as an impediment to seamless freight movement within the cluster.

Hilly North-East Cluster (Assam, Tripura, Assam, Tripura, Sikkim, Arunachal Pradesh, Meghalaya, Manipur, Mizoram, Nagaland)

The Hilly North-East cluster is perceived to be facing several challenges in all aspects of logistics ease. In fact, in five out of the nine indicators, the cluster is reportedly performing even below Himachal Pradesh, which appears at the bottom of the Index. This difference is

particularly glaring in terms of losses/thefts and time over runs of cargo delivery.

Even with respect to creation of infrastructure and its regular upkeep, stakeholder perception has highlighted a dire need for radical improvements in this cluster. Stakeholders highlighted the issues of inadequate availability and poor quality of road infrastructure across all the states in this cluster. The poor maintenance of state highways, narrow and ill constructed inner city roads, and ill-maintained national highways are the major impediments leading to delays in cargo delivery.

One contributing factor to this situation is the lack of adequate cargo volumes in these states, which does not encourage development of a full-fledged market-based logistics

infrastructure and services ecosystem in these states.

This highlights the complexities plaguing the logistics ecosystem of the cluster and the need for urgent interventions across stakeholder categories to bring in improvements.

It is also understood that the neighbouring state of Assam has a major influence on the overall logistics performance of this cluster. Despite not having a well-developed logistics ecosystem, the cargo movement to / from these states has become conducive only with the presence of a somewhat established logistics ecosystem in Assam. However, in the context of operating and regulatory environment, the top performing state in this cluster, i.e., Tripura is performing better than Assam.

Exhibit 42: Comparison of Logistics Ease Across States in the North-East Cluster

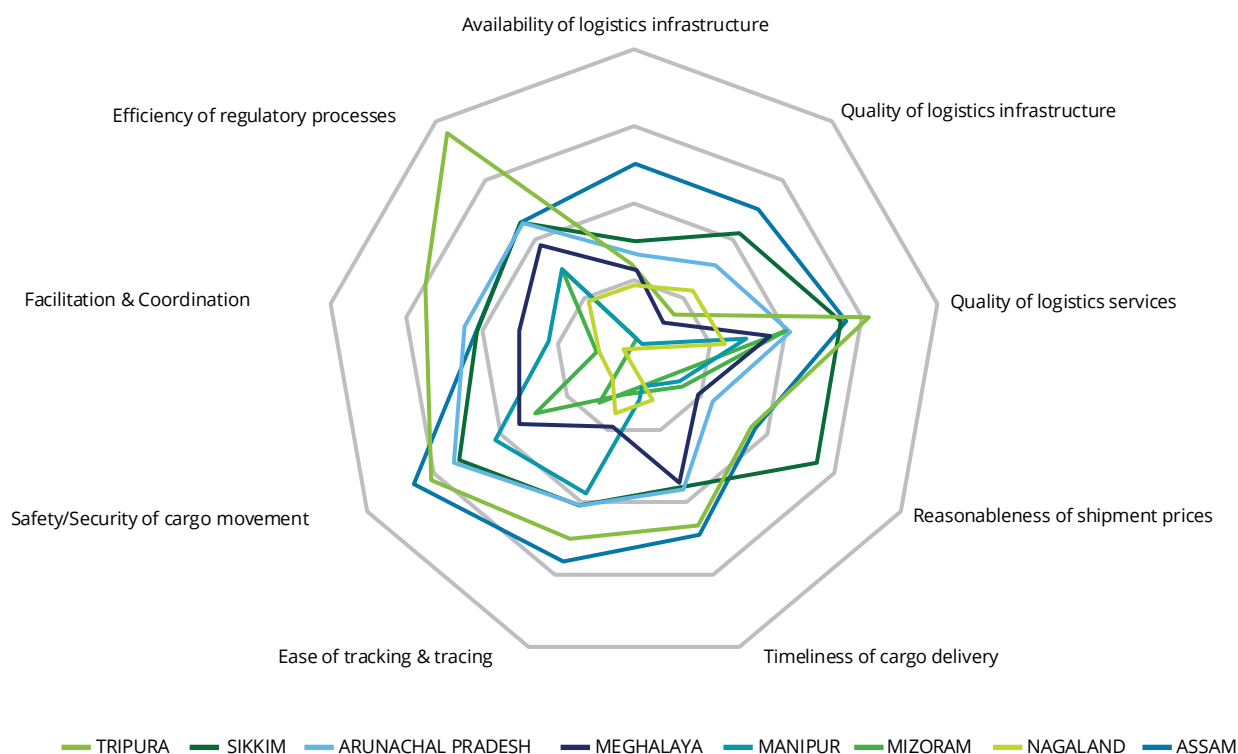


Exhibit 43: Cluster wise LEADS summary assessment

		Landlocked			Coastal				Hilly	
		Northern	Central	East Central	Western	South Eastern	South Western	Eastern	North	North-East
Infrastructure	Road									
	Rail									
	Air Cargo Terminal									
	Port Terminal									
	Surface Based Terminals									
	Storage									
	Mobile and Internet Connectivity									
Services	Road									
	Rail									
	Air Cargo Terminal									
	Port Terminal									
	Surface Based Terminal									
	Storage									
	Track and Trace									
	Safety and Security									
Operating and Regulatory Environment	Efficiency of Regulatory Environment									
	RTOs									
	Customs									
	PGAs									
	GST									
	Extent of Informal Payments									



LEADing from Ease to Excellence

Enabling ease of arranging logistics has been recognised as a catalyst of trade and economic development. It has emerged as a critical area for policy reform in recent years. With the logistics landscape evolving across the globe, the expectations of industry players are also rapidly changing. Any reform can not be a one time effort; it has to both grow and mutate on a continuum.

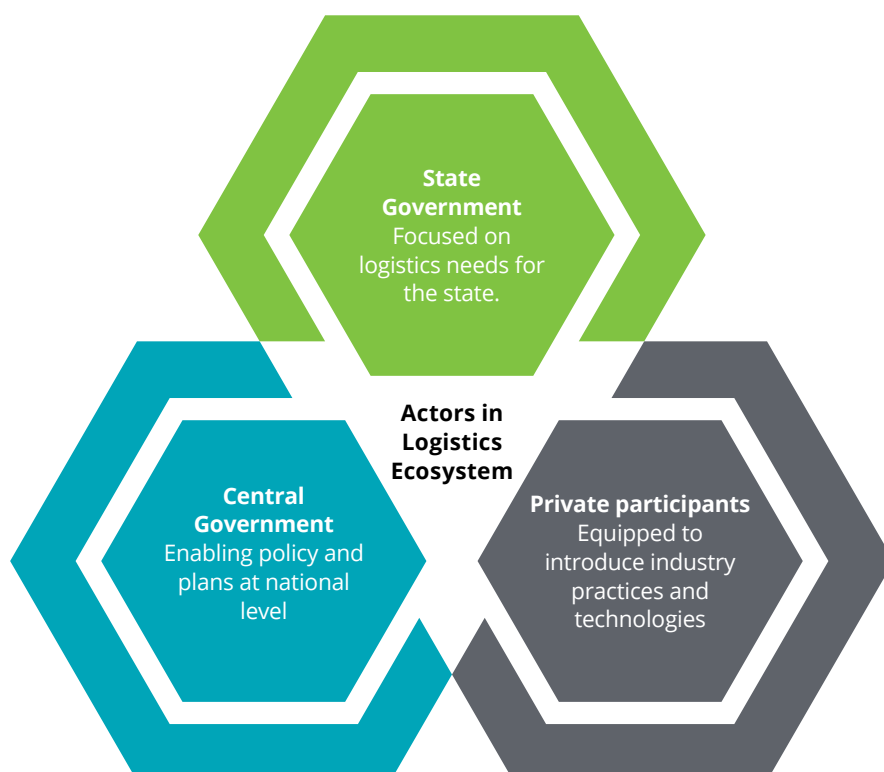
Enhancing logistics ease across the country requires stakeholders across the logistics value chain to take collective action. Stakeholders span across central and state governments, and private players. Nature of interventions also

varies with the nature of stakeholders. For instance, while central government is better placed to enable a country wide policy framework and planning in line with national priorities, state governments are closer to local conditions and are better placed to coordinate identification and resolution of ground level issues. Private players influence and are in turn influenced by ground realities, but they also bring in best practices by way of advanced technology and innovative solutions.

Synergy across these stakeholders has the potential to transform the logistics ecosystem in the country. This synergy

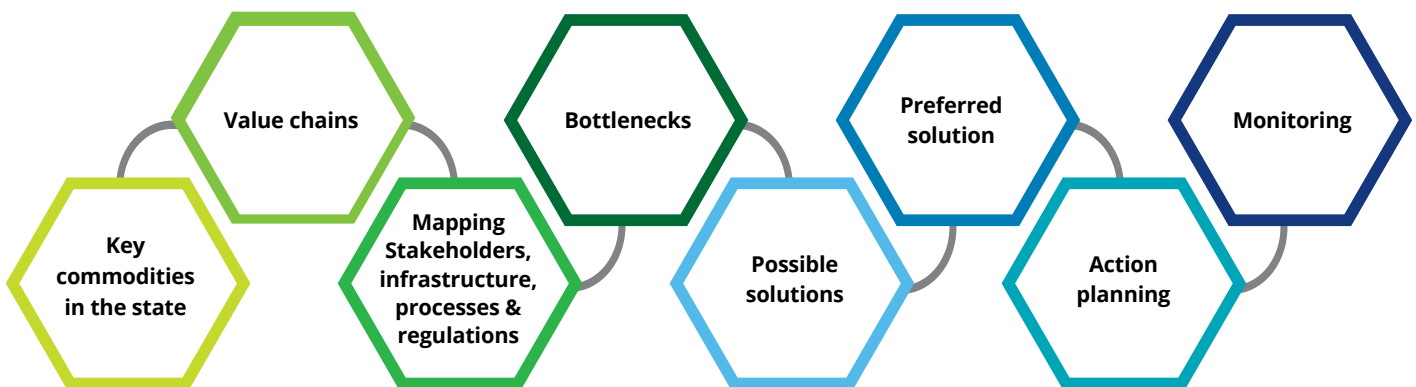
will be best realised when stakeholders across the entire ecosystem come together to develop a common goal with a common agenda for improvement in logistics performance. While most enablers for logistics performance are governed / facilitated / managed / operated by central government and private players, state governments may provide the right interface to assimilate issues across the logistics ecosystem of the state and coordinate with central agencies for addressing them. If definitive interventions are coordinated and implemented at state level, collectively logistics performance across the country can be expected to improve.

Exhibit 44: Actors in Logistics Ecosystem



Each state has its own operating context and needs to have an in-depth understanding of its production and consumption patterns to identify the right set of logistics needs. In-depth assessment of logistics needs is critical to plan actions or interventions for addressing them, which will also be specific to the commodities being produced or consumed in the state.

Exhibit 45: Action Planning Framework



Framework for action planning for states would commence with identification of key commodities for the state followed by an in-depth assessment of commodity value chains, mapping of relevant stakeholders, processes, infrastructure, and regulations, identification of bottlenecks, and developing actions / solutions.

Stakeholder inputs are important means to inform the logistics needs and challenges for a state or its commodity value chain. These highlight on-ground realities and specific issues need to be resolved. However, these inputs need a holistic assessment to allow incorporation of a wider perspective, and insights from analysis of relevant information to develop more informed solutions. This study collected a wide range of stakeholder inputs across states and UTs through responses in online survey and through interactions during ground visits. These inputs highlight their experiences in performing logistics operations in these states and indicate issues that, in their assessment, affect logistics performance of states. Collation and analysis of the responses has revealed some common and some specific challenges that different states and UTs encounter which need to be

dealt with. Areas of strength have typically not been captured.

While inputs for certain states has been limited to specific areas – potentially due to these being important enough across stakeholders, inputs for others is on a wider set of areas depending upon the role played by respective stakeholders and issues experienced by them. Range of experiences shared also depends upon extent of active stakeholders operating out of respective states.

These responses are then used to develop high level action plans for considerations of the states and UTs. Such action plans have been developed through a broad review of all stakeholder inputs by a team of experts from the logistics industry. The team evaluated all the responses from the view point of their relevance and importance, and removed stakeholder biases to a large extent. (Refer Box 25).

Box 25: Interpreting the suggested way forward

- An annual study like this is not a substitute for a full-fledged state-wise diagnostic study based on inter alia, specific cargo routes and all their link nodes, in detail assessed through field surveys
- The issues capture isolated experiences or pain points expressed by the stakeholders and are not from comprehensive or in-depth assessment of commodity value chains
- The issues have been captured as it is and have not been independently verified or examined for accuracy
- State governments/UT administrations are encouraged to revalidate these issues through detailed independent studies before implementation
- Given the focus of the study, nature of solutions attempted and presented for these issues is exploratory and needs to be duly examined by concerned agencies
- The study recognises that the concerned public agencies are in a stage of continual improvement and may already have been/are currently in the process of implementing solutions addressing the stakeholders' inputs

Analysis of stakeholder inputs reveals that some issues are more specific to a certain state/UT, while others cut across a wider set of states. Those specific to a state/ UT include, for instance, unavailability or poor quality of approach roads to terminals in states such as West Bengal, Haryana, Goa, Chhattisgarh, logistics service disruptions and high costs due to presence of unions in the states of Himachal Pradesh, Maharashtra, Kerala, and West Bengal, and higher frequency of unscheduled stoppages at state borders in states such as Madhya Pradesh, Jharkhand, Bihar, Uttar Pradesh among others.

A few impediments like process issues with respect to Customs and PGAs, inadequacy of testing laboratories, low availability of skilled labour and poor planning of logistics facilities among others, cut across geographical boundaries. In fact, the absence of a focused logistics policy and nodal authority within the state government/UT administration has emerged as a common theme across most states thereby begging immediate attention.

Key issues identified through survey responses and stakeholder interviews revolve around the three broad dimensions of logistics ease including:

- availability and quality of fixed physical infrastructure,
- availability, competence and reliability of logistics services, and
- an enabling operating and regulatory environment for the logistics ecosystem

This chapter aims to present action planning recommendations in two parts. The first section relates to the actions required in respect of the issues that cut across states. The second section details issues specific to states and UTs. State governments/ UT administrations are encouraged to revalidate these issues through detailed independent studies before implementation.

Exhibit 46: Issues reported across multiple states



Exhibit 47: State-specific issues reported by stakeholders

Infrastructure

- Approach road to intermodal terminals
- Commodity specific storage solutions
- Regulatory infrastructure like testing labs, weighbridges
- Rail connectivity

Operating and Regulatory Environment

- Planning city freight logistics addressing restrictions
- Consistency in interpretations in Customs and PGA provisions
- Standardization of warehousing services through WDRA



Services

- Access to skilled service providers
- Adoption of RFID technology
- Labour unions impacting costs
- 24x7 availability of online portals



Enablers cutting across states





Operating and regulatory environment: Customs and Participatory Government Agencies

While the change in the regulatory environment with respect to technology upgrade and process simplification was appreciated by stakeholders, they still reported the need for improvement in several aspects. Concerns regarding discretionary powers of officials, uncoordinated systems across regulatory agencies, inadequacy of testing laboratories, and lack of a grievance redress mechanism were flagged across multiple states in the country thereby needing action at the national level by relevant agencies.

Process improvement

- To develop seamless integration across regulatory portals, enabling real-time information sharing between stakeholders; this should help address the issues with respect to duplication of processes as in the case of double filing of EGM, and a reduction in wait time for seeking regulatory approvals/benefits from multiple authorities.
- To reduce discretionary use of powers by officials, CBIC to rationalise classification of commodities under the Harmonised System (HS) codes with sharper clarity on applicable customs duties.
- CBIC to conduct regular training of customs officials to ensure consistent interpretation and implementation of regulations across the country.
- To reduce dependence on physical presence of customs officials and facilitate time-bound action, CBIC to establish an online process for escalation of issues.

Capacity enhancement

- State governments, in coordination with relevant central ministries governing PGAs, to undertake profiling of commodities being produced/aggregated within their respective states and accordingly examine the need for testing facilities. Based on assessment, state governments to directly invest in setting up additional and/or new commodity-specific testing

facilities, or authorise private testing labs/universities having "requisite infrastructure" as pre-defined by the respective central ministries to perform tests and award certifications/clearances. For any differential in the testing fee at such private authorised labs/centres vis-à-vis government laboratories subsidies/funds available under existing schemes (like TIES) of the Government of India to be leveraged.

Technology upgrade

- CBIC to mandate complete digitisation of applications, document submission, and approvals including permissions for movement of empty containers filed by shipping lines. In addition, CBIC to mandate complete digitisation of shipping bill records maintained by custodians and allow disposal of physical copies.
- Standardisation of e-seal technology across vendors to ensure use of common readers across terminals.

Grievance redress and dispute resolution mechanism

- CBIC to mandate regular Public Grievance Committees (PGCs) at terminals across India with the accountability on the Customs Chief Commissioner. The minutes of the PGCs to be uploaded on the CBIC website within a week of the meeting with an option of inviting stakeholder feedback and grievances/queries for resolution within a fixed time period.



“

Despite the systems having gone online through e-Sanchit, in majority of the cases physical copies of documents are sought for provision of clearances. Also, in the case of shipping lines discharging empties from ports to ICDs, there is a need to seek permission from Customs through submission of hard copies of documents

”

“

A major hassle is the mandatory requirement of filing two EGMs – one is the local EGM to be filed by the terminal operator and the gateway EGM needs to then be filed by the shipping line. Further, the requirement is such that unless the local EGM is filed, the gateway EGM cannot be filed

”

“

Unavailability of an Assistant Drug Controller (ADC) at Vishakhapatnam port causes delays as the samples have to be sent to Hyderabad or Chennai for testing and acceptance

”

“

There are no phytosanitary laboratories in Kumaon region, thus, cargo moves to Delhi for testing which amounts to INR 7,000-8,000. There is a University in Rudrapur, which has a license to do the testing (in which case, the testing will cost INR 1,100-1,200) but they are only recently being pushed to implement this

”

“

Across all the airports, there is no consistency in the rules followed by the customs officials. Because of difference in the interpretation of the rules, speedy clearances becomes a major challenge

”

“

There is inadequate number of testing labs in Bhopal. Plant quarantine tests have to be done from Indore. Also, there are no testing labs of FSSAI and ADC in Madhya Pradesh, as a result of which samples have to be sent to Mumbai. This leads to time overruns of up to four days

”

“

There is only one Plant Quarantine officer available in Goa leading to delays in clearances

”

City freight logistics

Due to increasing congestion around existing city-based freight terminals/warehouses, stakeholders have reported difficulties in cargo movement to/from these facilities. This brings to focus the urgent need to ensure adequate planning of logistics facilities through coordination among various stakeholders. This would help in the development of facilities for the future and in earmarked zones.

Integrated city master planning

- The state government to ensure coordination among the city development authorities and the transport department for city master planning to include transport and logistics facilities. This would ensure inter alia, improved access to terminals, traffic demand management, and circulation networks among others.

- State governments to conduct freight flow assessment and invest in the development of dedicated freight lanes connecting logistics facilities to highways/railways/other prime network to foster access and seamless cargo movement.
- In parallel, the state government to examine the phasing out of existing facilities in congested locations and identify potential for planning new facilities outside city limits.

Development of dedicated parking space

- The state government to enforce strict compliance of norms for parking facilities, especially those that might be used for various unplanned activities. The state government may also consider amending existing norms with respect to the development of new parking facilities.
- Examine the concept of bay like planning wherein additional lanes are developed with facilities of checking/weighing and space for parking on the left side of the lane.

Facilitating land acquisition

- The state government may explore various options including the Land Bank Model or the annuity payment model to negotiate with locals for the speedy acquisition of land.
- The government may also invest in organising training and skilling programmes for locals giving up their land to make them more employment ready, instead of simply offering jobs.



“

A vehicle moving from Vizag to Vijayawada (around 400 - 500 km) has no parking facility in between, thus, driver has the only option to park the truck on highway itself. In addition, there are no facilities even on toll plazas. There is a truck plaza, which the port has given but beyond that, there is nothing within Vizag city

”

“

The biggest problem with the ICD Juhi Rail Yard is that it is located in the heart of the city, which not only leads to congestion on the roads of regular traffic but also chokes the movement of commercial vehicles in and out of the terminal

”

“

There is an imperative need of parking areas around Kolkata. At present, trucks carrying goods to port wait along the roadside during city restriction time. This causes huge traffic congestion around port and in the city

”

“

To reduce pollution and decongest Bangalore city, state government to allocate land parcels of 100 acres each for truck terminals at Old Madras road, Hosur road, Bellary road, Tumkur Road, Hyderabad road

”

“

Road connectivity to the port is still pending. Flyover construction, required for port connectivity, has been pending for long. If the flyover to Mormugao Port Trust gets cleared, then no entry zones to the port will get eased out. Locals are posing a challenge towards its completion on account of pollution/congestion

”

“

Not all weighbridges in Jharkhand have amenities like parking, utilities, which lead to congestions on the highways

”



State Facilitation

State governments need to play a more proactive role in boosting the logistics ecosystem through focused policy reforms. To create a more enabling ecosystem, the need is to ensure development and implementation of a logistics policy through a dedicated authority within the state government.

Process improvement and streamlining

- Setting up a nodal department/authority within state governments dedicated to the logistics sector and responsible for the design and implementation of a logistics policy, issuing permits for logistics related facilities in coordination with city planning authorities, incentives/subsidies for improving the quality of logistics services, among others. Typically, based on freight traffic assessment, any policy dedicated to logistics should cover the following elements:

Infrastructure planning

- “Priority status” to be given to construction/upgrading of ports, storage facilities, transport hubs, freight stations, and logistics parks in terms of:
 - Facilitating land identification
 - Land acquisition and registration
 - Speedy provision of permits and clearances
 - Access to credit
- Based on industry growth, earmarking land for logistics facilities as part of the city master planning to ensure decongested and smooth movement of traffic
 - Identification of zones (for setting up logistics facilities) based on factors such as transport connectivity and, well established road/rail network among others
 - Pre-planning or provision of supporting infrastructure such as state highways, last mile-connectivity, and utilities
 - Earmarking land parcel near gateways for setting up offices of regulatory agencies including Customs and PGAs (such as SPS)
- Signing of Memorandum of Understanding (MoU) with central government (Ministry of Railways, MoRTH, NHAI, etc) for the expansion of infrastructure and regular checks to know implementation status
- Development of dedicated truck corridors for unhindered movement of goods throughout the day, thereby, segregating freight and passenger traffic

Capability enhancement

- Invest directly and/or incentivise the private sector to set up centres of excellence for logistics related courses (driving, forklift operations, loading/unloading of cargo, packaging, operation supervision, among others)
- Subsidising or providing preferential treatment or marketing support to LSPs/terminal operator possessing certification of quality service provision such as CT-PAT
- Provision of subsidies and tax breaks to LSPs providing integrated service offerings to deal with the issue of limited number of end to end 3PL service providers
- Financial assistance as a proportion of the eligible fixed capital investment for technology-enabled plant and machinery in warehouse storage, godowns, silos, cold storage, container depots, and other logistic facilities subject to a ceiling amount

Improving the operating and regulatory environment

- Mandate guidelines to encourage adoption of standardised equipment/new and efficient rolling stock, and equipment by logistics companies by providing them financial support and preferential treatment
- Mandate effective labour policies specific to logistics defining minimum working conditions, work shifts, and minimum wages to ensure minimal disruption to service due to labour union issues
- Specific guidelines for setting up logistics facilities and issuance of separate permit (building and operating) for a logistics building
- Control mechanism encompassing the issuance of a compliance certificate to ascertain that the building complies with all building standards and regulations for creating robust logistics-related infrastructure
- Development of an online single window platform for issuing clearances/permits and resolving queries related to the logistics sector under the aegis of the state logistics department/authority.

“

Dissemination of information and response to queries raised on call or via email is also a challenge. A representative has to be sent to the offices of the PGAs to get the queries cleared. There is a need for creation of an effective information dissemination portal and training of officials for resolving queries

”

“

Lack of single window mechanism for regulatory changes poses a challenge. Whenever any regulatory change is introduced by the customs, CHAs/ Shippers get to know about it only when they are on field or whenever that particular change is related to the goods they export. This is a challenge as it delays the export of goods and further increases the overall cost of movement of goods

”

“

There is no designated platform where the customer must go for resolving a particular problem incurred while dealing with the custom officials

”

“

No state government support to promote industries in Dehradun – industries are mostly motivated to move to Kashipur or Baddi. Industrial area, Selaqui has become more of commercial area with no specific support from the government

”

“

There is no support from the state government to facilitate setting up of cold storages in UP, thereby leading to low levels of investments

”

“

Lack of proactive facilitation for development of infrastructure by the state government. On multiple occasions, CWC had requested the state government to provide land to set up warehouses. However, land was availed in the regions that either was affected by Naxalism or had poor road and rail connectivity.

”

Storage Infrastructure

In majority of Indian states, especially in the southern region, the availability of storage infrastructure was flagged as being inadequate and inefficient. Further, stakeholders reported the lack of quality of infrastructure and services at the existing storage terminals, thereby highlighting the need for a systemic overhaul across the country.

Policy/Regulatory intervention and quality control through certification

- Need for implementing a national warehousing policy (through agencies such as WDRA) covering the development of all kinds of storage facilities. The policy could include incentivisation of private investors to set up such facilities in a pre-determined proportion by the centre and state governments. The policy to guide business decision for the identification of location of warehouse infrastructure, mandate specification for maintaining minimum quality of infrastructure and services at the storage terminal, among others.
- Meanwhile, state governments to assess warehousing requirements for agricultural and industrial produce separately (both dry, cold, and specialised) through its own State Warehousing Corporation and in coordination with WDRA. They can also assist WDRA in monitoring the construction of new warehouses for necessary per-determined compliances, and in upgrading older ones.
- State governments to ensure compliance in operations of private warehouses as well.

“

Majority of cold storages in Madhya Pradesh are equipped only to cater to potatoes and fruits. Other perishables are sent to the market directly and have to be sold at the earliest

”

“

Adequate warehouses in Goa is not available. Verna is an industrial cluster but has no land for warehouse/MMLP

”

“

Large volumes of pharmaceutical products move out of Gujarat but the number of cold storage facilities available in the market to service the demand is insufficient. In fact, only some facilities are available in Ahmedabad whereas cities like Baroda, Rajkot, etc have no such facilities at all

”

“

In UP, the shortage of electricity supply has resulted in dwindling investments in cold storage facilities

”

“

There is an imperative need of cold storage facilities in Bihar to cater to the agricultural goods produced in the state (especially Onions) which are exported to other countries. Due to lack of cold storage facilities, every year, 30% of the overall agricultural produce becomes stale, which results in unnecessary price hike.

”

Skill Development

Across the country, there is a need for improvement of knowledge and competence of manpower involved in various activities across the logistics value chain. Some of the issues reported include lack of courses and institutes for driver training, warehouse management, technical capability for use of sophisticated handling equipment, among others.

Capability Improvement

- Creation of infrastructure for skill development including driver training institutes, vocational institutes, institutes imparting warehouse related courses, and cargo handling, through private sector participation.
- State governments to coordinate with the Logistics Sector Skill Council and industry stakeholders for the identification of courses to be imparted and providing degrees/certification programmes on such courses. Also, mandate logistics related courses as part of the curriculum in government institutes/colleges.
- Promote research by funding research institutes and universities that specialise in logistics
- Subsidise or provide preferential treatment to LSPs/ terminal operator possessing certification of quality service provision, e.g. CT-PAT
- Provision of tax breaks/incentives to LSPs providing technology-enabled integrated service offerings. Additionally, provide financial assistance as a proportion of the eligible fixed capital investment (subject to a ceiling amount) for technology-enabled warehouse, cold storage, container depots, and other logistic facilities

“

Lack of skill of loading and unloading staff is also a major challenge. Majority of times, containers/trucks are loaded less than capacity because the staff are not aware of proper techniques to ensure optimum utilisation of space

”

“

In Kolkata, there are ample number of trucks available, but very limited skilled drivers for long haulage. Therefore, transporters are left with no choice but to hire less qualified drivers. This risks the movement of goods

”

“

There is a shortage of the trained professionals at the ground level which is evident from the fact there are cases being reported where even after labelling the consignment as fragile, it was delivered in broken state because the staff at the ground level had no knowledge about how to handle the consignment while the loading and the unloading process

”

“

Warehouses face a shortage of labour having technical knowledge about the quality control of agro-products (regular fumigation, sample checks), handling and stacking of goods. Most of the labour is contractual and learn during the job

”

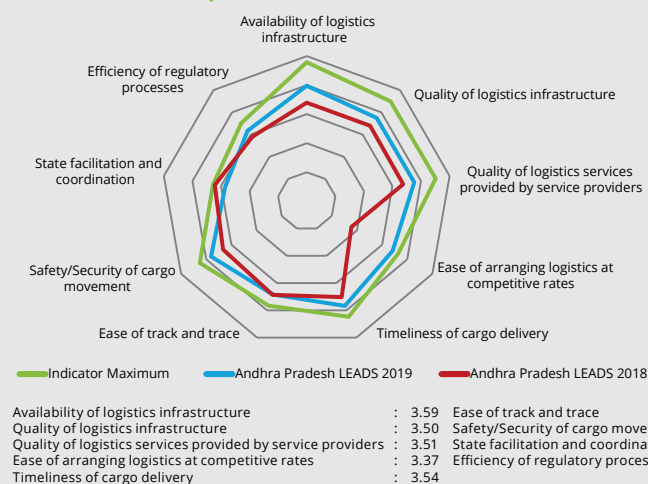
Enablers specific for states





Andhra Pradesh

Performance Snapshot



Rank order 2019

3

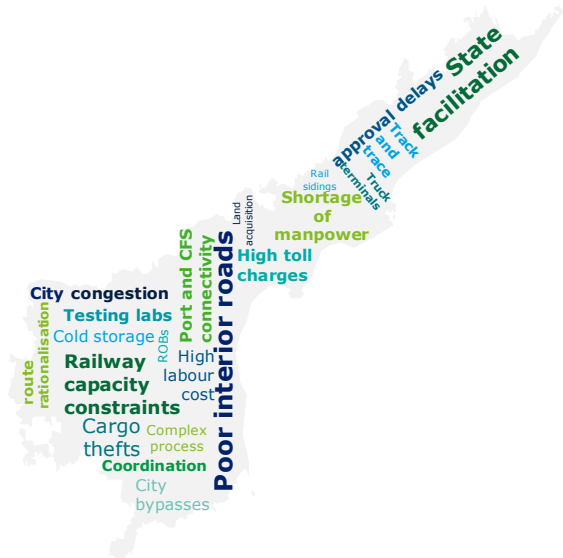
Change in rank order

1

A state with an emerging economy is perceived positively by respondents. This is reflected in an improved performance across indicators. Given its focus on improving the economy, industrial growth and correspondingly, transport demand is expected to increase rapidly.

Industry inputs accordingly flag the need for interventions to improve infrastructure segments, which might come under capacity constraints soon.

Industry Speak



“Currently, over 1000 trucks pass through Gajuwaka and Vizag leading to city congestions. Further, the 13 km stretch from the Gangavaram Port to Kurmannapalam is highly congested and needs to be connected separately through a flyover”

Way Forward

Short term

- The state government to **examine and invest in widening and surfacing of interior roads** to foster seamless connectivity. Some of the interior roads that were reported as problematic include:
 - Road stretch connecting NH16 with Rajam, Nellimarla and Narsipatnam
 - Road connecting Gajuwaka and Vizag
 - Interior roads of Vazianagaram and Shikarpur districts
 - Vazianagaram to Bobbili
 - Pendurthi to Purushothapuram
 - Tanku to Vizag
- To ease congestion and reduce transit time, the concerned state department to **examine and invest in widening the Ankapally-Anandapuram bypass**, which is currently two-lane.
- Due to the issue of extreme congestion on the stretch connecting Gangavaram Port to Kurmannapalam (~13 km), the state government to **examine** the affected road and accordingly **coordinate** with the concerned agency to identify the possibility of:
 - widening the stretch, and
 - connecting the road separately through a flyover

“

Under Route Rationalisation Scheme, the route from Vizag to Nagpur/Delhi (via Raipur) was discontinued for freight movement. The movement was directed backward towards Vijayawada (extra 400 km) and then to Nagpur/Delhi, which has increased cost

”

“

There is no proper connectivity from port to CFSs in Vizag and the movement is from within the city, which is already very congested. In fact, the approach road to VCTPL is very narrow and is just 20 feet wide

”

“

As compared to the other developed states, industry adoption of technologies for track and trace is very low due to the absence of too many large scale players

”

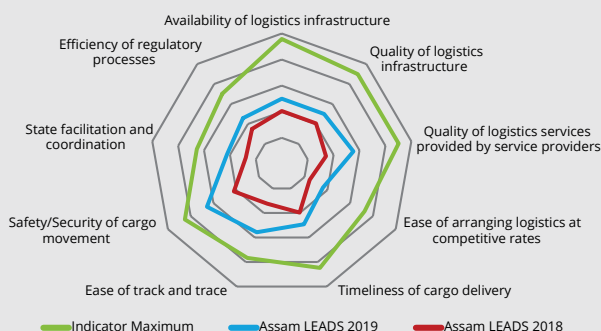
- To reduce the cases of thefts in the state, especially on Hyderabad–Vijayawada route, the state government **to facilitate safe movement of cargo** by increasing patrolling in the isolated areas of the state. Further, regular interaction with transporters can help identify such pockets where incidence of thefts is higher. On such stretches, the state government may also **examine the feasibility of investing in authorised truck/trailer parking areas** to control the menace and provide facilities such as rest rooms and canteens.
- The state government to provide financial incentives to local transporters in the state for adoption of RFID / GPS devices in their fleet and providing track and trace facilities to users.

Long term

- On account of huge congestion issues, the rail route connecting Vizag to Nagpur/Delhi via Raipur was discontinued and diverted backwards via Vijayawada for freight movement under the Route Rationalisation Scheme. This is leading to higher costs of operations for logistics because of longer distance. The state government **to coordinate with Indian Railways for augmentation of its infrastructure on the direct route.**
- The state government to undertake freight flow analysis **to determine congested roads near railway crossings, and accordingly prioritise and allocate funds** for the construction of road over bridges in the state.
- Examination of toll points across the state and their optimisation by the state government **in coordination with NHAI to bring in cost and time savings.**
- The state government **to facilitate the acquisition of land and speed-up the process of environmental clearances** to support Indian Railways for the development of additional rail terminals, railway tracks, among others.

Assam

Performance Snapshot



Availability of logistics infrastructure	: 3.00	Ease of track and trace	: 3.11
Quality of logistics infrastructure	: 3.00	Safety/Security of cargo movement	: 3.31
Quality of logistics services provided by service providers	: 3.11	State facilitation and coordination	: 2.85
Ease of arranging logistics at competitive rates	: 2.72	Efficiency of regulatory processes	: 2.92
Timeliness of cargo delivery	: 2.98		

Rank order 2019

15

Change in rank order

5

Assam remains the hub of the North-East, and yet does not have adequate terminal infrastructure for the aggregation and handling of cargo. Moreover, while the business potential is high, the law and order situation continues to be a deterrent.

Further, the state is far from a seaport, and the nearest facility is in Kolkata, which is also inefficient. Therefore, there is a need to push the development of terminal infrastructure in the state to improve logistics ease, which would give a fillip to trade in the region.

Industry Speak



“There is limited availability of temperature controlled storage infrastructure for frozen products, especially in the southern part of Assam i.e. Barak Valley Region.”

Way Forward

Short term

- To examine the requirement of temperature controlled storage infrastructure for frozen products in the Barak Valley Region in co-ordination with the Regional Agricultural Research Station. Accordingly, to invest or incentivise the private sector to set up cold storages by facilitating land acquisition, and speedy provision of permits/clearances.
- To coordinate and assist the central government for the speedy development of the Centre of Perishable Cargo at Lokpriya Gopinath Bordoloi International (LGBI) Airport. This would enable transportation of agricultural produce (fruits, cut flowers, ginger, etc) to different domestic and international locations.

No change in rank order



Increase in rank order



Decrease in rank order

“

There is no domestic air cargo service to cater to the agricultural produce in the state (fruits, cut flowers, ginger)

”

“

There is a need for a storage terminal in Guwahati catering to inward movement of cargo including steel, food grains, salt, among others. Existing goods shed facilities are also poor.

”

Long term

- **To coordinate with Indian Railways and industry stakeholders to examine the technical and financial feasibility of a direct shipment from ICD Amingaon in Assam to Nhava Sheva port in Maharashtra.** This would promote tea exports from Assam to Iran, and CIS member countries at lesser time and cost.
- **To examine the requirement of a PFT in Guwahati for the handling and storage of inward rakes** of products such as steel, food grains, salt among others. Based on the examination, the state government **to either directly invest or incentivise the private sector** for development of the facility by facilitating land acquisition at suitable locations and registration at lower rates, speedy provision of permits and clearances and other financial incentives.
- **To coordinate with Indian Railways to invest in upgrading railways goods sheds** in the state.

Indicator	Indicator Maximum	Bihar LEADS 2019	Bihar LEADS 2018
Availability of logistics infrastructure	100	85	65
Quality of logistics infrastructure	100	85	65
Quality of logistics services provided by service providers	100	85	65
Ease of arranging logistics at competitive rates	100	85	65
Timeliness of cargo delivery	100	85	65
Ease of track and trace	100	85	65
Safety/Security of cargo movement	100	85	65
State facilitation and coordination	100	85	65

20

A broad-based logistics policy needs to focus specifically on the road network, including city bypasses, quality of vehicles, unscheduled stoppages and illegal collection of charges on roads, and cold chain infrastructure for catering to the state's perishable produce.

A word cloud of transportation-related terms. The words are arranged in a circular pattern, with some terms appearing more frequently than others. The words include: Capacity of roads, Lack of road and rail bridges, GST, Lack of bypass, congestions, availability, Power, Delayed offers, Road quality, Time, Railway bottlenecks, City, movement, upload, document, obsolescence, infrastructure, Rail, and Road. The words are in various colors (blue, green, yellow, orange, red) and sizes, indicating their relative frequency or importance in the dataset.

“ Due to the lack of bypass infrastructure in the state, commercial vehicles carrying cargo are forced to move through congested cities and towns leading to time overruns ”

Short term

- To **invest in widening and maintenance of roads** in the state to foster seamless connectivity. Additionally, the state government **to invest in maintenance of the approach road to Raxaul ICP**, which has been experienced as having sub-par infrastructure at present.
- To **examine and invest in the development of adequate road and rail bridges connecting northern Bihar to southern Bihar**, which is presently experienced as severely constrained.
- To **coordinate with Indian Railways and facilitate the augmentation of railway infrastructure** on the Patna and Mughal Sarai stretch to address delays experienced on freight movement due to lack of line capacity.
- To **invest in the development of bypasses in the state across select cities** for the timely delivery of cargo.

No change in rank order

 Increase in rank order

↓ Decrease in rank order

“

There is very poor quality and connectivity of roads especially for movement of bulk products. It therefore only leaves railways as the only available means of transportation despite the lines being congested.

”

“

Initially, EXIM movement used to take place from the state to Nepal and Bangladesh but was discontinued due to various challenges including lack of storage infrastructure, limited support from the state government in trade facilitation etc.

”

- To **implement CCTV monitoring of unwarranted stoppages and collection of illegal toll taxes**. Additionally, the state government **to facilitate the development of a grievance redress mechanism** for the industry to report any such issues.

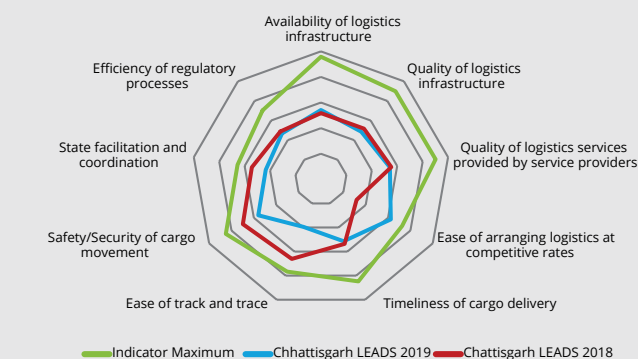
Long term

- To **encourage and incentivise the adoption of distributed cold storage solutions using advanced technologies for climate-controlled transportation of perishables such as litchi** for the export markets of Nepal and Bangladesh.



Chhattisgarh

Performance Snapshot



Availability of logistics infrastructure	: 3.08	Ease of track and trace	: 2.79
Quality of logistics infrastructure	: 2.97	Safety/Security of cargo movement	: 3.12
Quality of logistics services provided by service providers	: 3.08	State facilitation and coordination	: 2.87
Ease of arranging logistics at competitive rates	: 3.25	Efficiency of regulatory processes	: 2.94
Timeliness of cargo delivery	: 3.03		

Rank order 2019

14

Change in rank order

4

Primarily dependent on its minerals production for economic growth, Chhattisgarh has a greater contribution in the country's domestic trade as compared to its share in international trade. The state has witnessed increasing demand for the creation of rail-based infrastructure.

Going by indicator-wise scores, track and trace is clearly a focus area, which goes in line with the industry input for the urgent need to improve internet connectivity. Respondents have perceived the performance to be lower than that in the past year.

Industry Speak



“In Chhattisgarh, the warehouses are located in the fields, which are away from the city and there is no initiative by the state government to link the warehouses to the traders and manufacturing hubs situated within the city via an effective road network”

Way Forward

Short term

- To invest in upgrading and maintenance of the following road stretches which were reported as problematic
 - Road connecting Raigarh to Palasa in Andhra Pradesh,
 - Road connecting Raipur to Bilaspur, and
 - Stretch connecting Dantewada to Raipur.
- To coordinate with the Weights and Measures department for frequent inspection of calibration of weighing scales across all weighbridges in the state. This would help solve the widely reported issue of varying weights across weighbridges. Also, the government to invest in the development of more weighbridges, including dedicated parking spaces to ease congestion on highways.
- To examine and invest in development of good quality approach roads connecting warehouses to industries.
- In line with the order of the Honorable Chhattisgarh High Court, the state government to coordinate with the Department of Telecommunications to increase the minimum broadband speed to 2 Mbps. This would help reduce disruptions in internet connectivity in the rural, hilly and forest areas, thereby, improving track and trace of cargo in the state.

No change in rank order

Increase in rank order

Decrease in rank order

“

The biggest hurdle to providing track and trace in Chhattisgarh is the disruptions in internet connectivity in the rural, hilly and forest areas

”

“

Significant length of Raipur – Vizianagaram section is currently single line and non-electrified leading to severe bottlenecks. For speedier evacuation of the coal cargo, there is an imminent need for doubling and electrification of this line

”

“

Instances of theft and cargo damage are very high in Chhattisgarh. Organised crime is very high, wherein vehicles are stopped and the entire containers are stolen

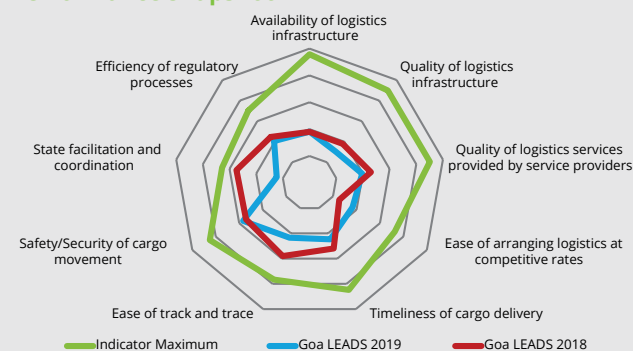
”

Long term

- For the speedier evacuation of coal, the state government **to facilitate doubling of Vizianagaram – Titlagarh – Jharsuguda/Titlagarh-Raipur (RV line) railway line** by identifying land and facilitating its acquisition for Indian Railways. Additionally, Indian Railways to invest in the electrification of the stretch.
- As part of the MoU signed between Ministry of Railways and Government of Chhattisgarh for development of railway infrastructure in the state, the state government to facilitate **faster augmentation of infrastructure, especially with respect to development of a broad gauge rail network and railhead** to boost the movement of rice from Dhamtari via rail.
- The state government to **assess the possibility of the creation of aggregation points in Raipur and invest directly or incentivise the private sector to set up such centres** by facilitating land acquisition and registration at lower rates to improve viability of the project, speedy provision of permits and clearances and financial incentives for setting up such facilities (including easy access to credit, relaxation in stamp duty, subsidised power, water and other utilities)
- With a view of reducing the safety concerns on the stretch connecting Palasa in Andhra Pradesh to Raigarh in Chhattisgarh, and Titlagarh in Odisha to Raipur in Chhattisgarh, the state government **to facilitate safe movement by increasing patrolling / police check-posts in the isolated areas of the stretch**. Further, regular interaction with transporters can help identify such pockets where the incidence of thefts is higher. On such stretches, the state government may also **examine the feasibility of investing in authorised truck/trailer parking areas** to control the menace and provide facilities such as rest rooms and canteen.

Goa

Performance Snapshot



Rank order 2019

21

Change in rank order

5

Known for its perishable and iron based cluster, demand for infrastructure in Goa varies significantly in line with permissions to export iron ore. Industry inputs indicate need for commodity specific storage solutions particularly because each perishable commodity has its own specific needs.

Users seek better-skilled service providers. One key asset to the state - its port - is not utilised to its best potential due to constraints on evacuation and availability of storage infrastructure in proximity to the port.

Industry Speak



“Goa doesn't have approved pack house for perishable cargo therefore exporters are not able to move fresh vegetables/fruits and other such cargo to Europe which has a high demand for these commodities”

Way Forward

Short term

- To provide financial incentives in the form of tax breaks to logistics service providers providing integrated service offerings to attract large scale service providers and boost the quality of logistics services as experienced by users in the state. Further, the state government to invest in setting up institutes and courses for imparting training to locals under various sub-sectors of logistics.
- To examine the requirement of commodity specific warehousing facilities in the state. Based on the assessment, the state government to liaise with industry stakeholders to identify their business requirements and provide support.

No change in rank order



Increase in rank order



Decrease in rank order

“Storage challenges at MPT with limited closed storage area. Warehousing is a major challenge outside port premises as Vasco area hardly has warehouses, which is resulting in less cargo being handled as well”

“Due to lower draft mother vessels are not being docked at MPT resulting in cargo moving out of MPT.”

“Only two berths available for serving all kinds of cargo general, break bulk, POL, containers etc., which is heavily short of the required number of berths”

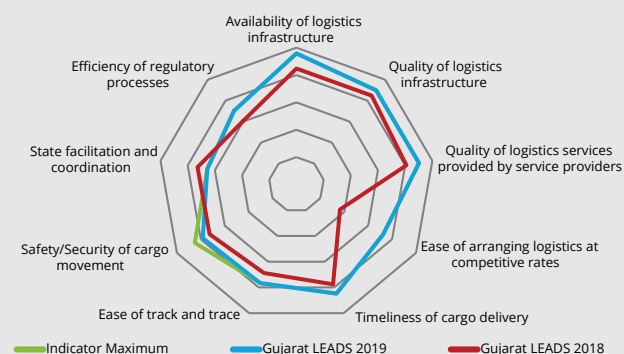
“Further, despite the lesser distance between Belgaum to MPT, cargo moves to Nhava Sheva as there are no proper/6-lane road connecting industries to MPT.”

Long term

- **To examine and invest in developing a six-lane road and flyover connecting industrial areas in Belgaum to the Mormugao Port.** Further, the state government **to undertake a social impact assessment to identify the most feasible development option with least environmental externalities** to ensure that the issues highlighted by local residents are addressed. This will help boost exports from the state that are currently being diverted to Mumbai.
- **To liaise with Mormugao Port Authority for infrastructure improvement** including:
 - Speed up the process of dredging at the port to cater to medium / mother vessels
 - Expansion of storage infrastructure, especially for sensitive cargo such as urea and pharma products
 - Procurement of state of the art cargo and container handling equipment at the port for efficient operations, especially to boost availability of mobile harbour cranes and specialised vehicles such as trailers
 - Development of commodity specific berths to separately handle general and liquid cargo in addition to the existing two berths at the port which is reported as inadequate as compared to demand.
 - Explore coastal shipping possibilities with JNPT
- **To examine the feasibility of setting up processing centres / pack houses near the airport** to deal with the issue of inadequate space on the airport landside for the consolidation and packaging of cargo and to boost exports of perishables (including pomegranate, mangoes, mixed vegetables, and medicines/pharma products) from the state.

Gujarat

Performance Snapshot



Availability of logistics infrastructure	: 3.92	Ease of track and trace	: 3.53
Quality of logistics infrastructure	: 3.80	Safety/Security of cargo movement	: 3.57
Quality of logistics services provided by service providers	: 3.80	State facilitation and coordination	: 3.31
Ease of arranging logistics at competitive rates	: 3.45	Efficiency of regulatory processes	: 3.41
Timeliness of cargo delivery	: 3.70		

Rank order 2019

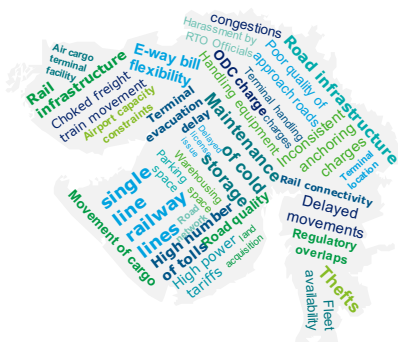
1

Change in rank order



Gujarat ranks first yet again, but for that reason alone expectations keeps rising. While specific road links need widening, rail network capacities also require enhancement. There are issues around security of cargo on specific stretches, power tariffs, toll rates and the terminal capacity of the Ahmedabad airport.

Industry Speak



“While highway from Baroda to Mumbai is six-lane, the flyovers on this route are only two-lane, causing congestions & road hazards”

“Cases of thefts of copper are common in Vapi and Silvassa, and in Baroda and on the Viramgam-Gandhidham-Kandla stretch there have been a high number of thefts of pharma and chemical consignments”

Way Forward

Short term

- To **examine and invest in the widening of roads** to reduce congestion and promote the seamless movement of cargo. Some of the roads that were experienced as congested include:
 - Road stretch connecting Ahmedabad and Pipavav via Bhavnagar, currently only two lane
 - Road stretch connecting Hazira to Surat, which is currently only two lane
 - Flyovers on the route connecting Baroda to Mumbai
 - Approach roads to ports, especially Pipavav, Amreli, Una
 - Approach road to Ahmedabad air cargo terminal
- To **implement CCTV monitoring** for reducing safety concerns in the state, particularly areas of Vapi, Silvassa, and Viramgam-Gandhidham-Kandla stretch, where several incidents of thefts have been experienced. In addition, the state government **to consider increasing patrolling and / or setting up of police check posts in these areas.**
- To **examine power tariffs in the state for industrial use** (in comparison with similar states) and explore possibilities to **reduce charges or subsidising rates so as to support the existing cold storages as well as attract more investments** to cater to demand in the state.

No change in rank order



Increase in rank order



Decrease in rank order

“

Rail tracks in Palanpur are very old and cannot withstand the load of double stack trains. Instead of the standard time of seven days to get to the Gateway Rail ICD, trains are currently taking a fortnight to get there

”

“

Costs of setting up storage infrastructure and maintaining it are very high in the state, which discourages investment

”

“

With the increasing volumes across the state, need to develop other air cargo terminals in addition to the one in Ahmedabad, which is facing capacity constraints and is unable to cater to the ever increasing demand

”

- To **facilitate the development of a grievance redress mechanism** for the industry to report any issues with respect to unscheduled stoppages by RTOs, especially with respect to issuing licenses/permits.
- To **provide financial incentives to local transporters** in the state to invest in higher tonnage vehicles and install RFID / GPS devices in their fleet. This would improve the quality of road transportation services in the state and also provide track and trace to users.

Long term

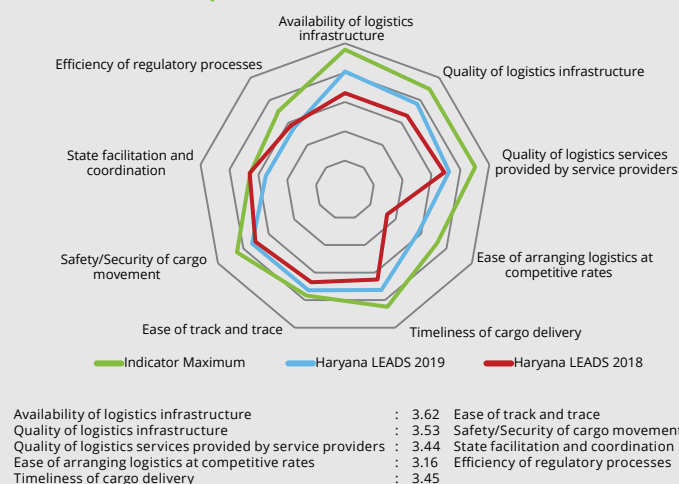
- To examine need for expanding rail connectivity, and accordingly coordinate with Indian Railways/DFC for:
 - Speeding up the ongoing projects of doubling of lines and electrification of tracks in the state. Additionally, Indian railways to invest in improving the quality of railway tracks to withstand the load of double stack trains in Palanpur.
 - Upgrading feeder routes especially those connecting the DFC with the Kandla, Mundra and Pipavav ports

To **facilitate the acquisition of land and speed-up the process of environmental clearances to support the development of direct rail link to Hazira port**. This will help attract cargo from the northern states of India.

- To **coordinate with relevant authority to examine existing concessionaire agreements of toll operators** to optimise the high number of toll points on the stretch connecting Halol and Hazira.
- Due to the increasing volumes of cargo being handled at the air cargo terminal of Ahmedabad, the state government to coordinate with Airports Authority of India (AAI) to examine and accordingly AAI to invest in:
 - **Modular expansion of the terminal** to handle high freight volumes from the region
 - **Expansion of warehousing capacity** and procurement of additional technologically advanced cargo and container handling equipment for efficient operations
 - **Development of additional truck parking spaces within the terminal** to avoid choking of approach roads

Haryana

Performance Snapshot



Rank order 2019

6

Change in rank order



With concentrated production and consumption clusters around Delhi, Haryana benefits from improved industry practices. However, the state needs to enable better logistics ease in these clusters. Going by indicator-wise scores, logistics services and regulatory processes need further improvement.

Stakeholders indicate the need for proactive initiatives by state government to engage with the industry.

Industry Speak



“The approach roads to terminals in Faridabad are in extremely poor condition and there is no effort by the authorities to improve the condition of these roads”

Way Forward

Short term

- To address the issue of poor availability and quality of approach roads connecting terminals, especially in Faridabad and Panipat, to highways (which fall within the purview of state government), the state government **to invest in the widening and surfacing of these road stretches** to ensure better connectivity and reduce delays in freight movement. Further, the provision of approval to set up a terminal to be made contingent on the operator committing to ensuring proper road connectivity.

No change in rank order



Increase in rank order



Decrease in rank order

“

The state government announces new policies for the logistics sector, but they do not get properly communicated to the users. For instance, the policy related to the frequency of fitness checks of vehicles is not known to transporter community.

”

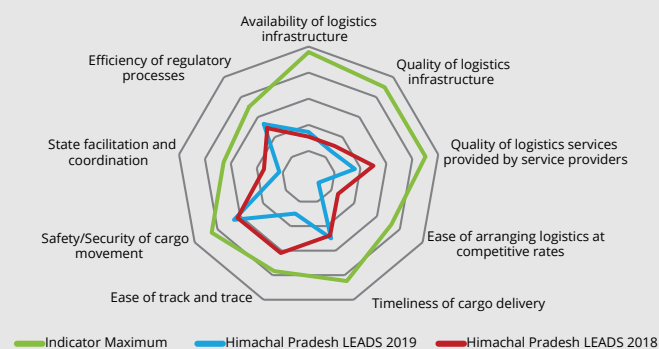
Long term

- The state government to coordinate with Indian Railways to improve the quality of railway tracks at the Pinjore railway crossing. The state government **to undertake freight flow analysis to identify congested roads** near the railway crossings and accordingly prioritise and allocate funds for the construction of road over bridges in the state.
- Due to the inadequate availability of warehousing facilities, the state government **to examine the requirement of warehouses and accordingly either directly invest or incentivise the sector** to undertake investments by facilitating land acquisition and registration at lower rates to improve viability of the project, speedy provision of permits and clearances and financial incentives for setting up such facilities.
- To create awareness across the logistics industry with respect to any new policy implemented, the state government **to invest in the creation of a web portal for all logistics policy changes**. The state government to keep it updated based on periodic stakeholder interactions.
- State transport department **to facilitate consistent implementation of rules at the ground level** by imparting web-based trainings for up to six months after the amendment of rules and guidelines.



Himachal Pradesh

Performance Snapshot



Rank order 2019

22

Change in rank order

5

Himachal Pradesh, with a strong perishable product base, depends on other states to address its logistics needs in terms of air cargo and intermodal facilities. Poor performance across indicators of infrastructure, services, pricing, among others is echoed by the industry inputs citing lack of rail and air connectivity, unions, and above market pricing for its services. Holistic improvement is required for the state to enhance logistics ease.

Industry Speak



“

Baddi truck union has a cartelisation in this region. All industries have to take commercial vehicles from the union, which are provided at 40 – 50% higher prices than the market rates. Additionally, there are other cartels also at Parvanu, Bilaspur, Ghandhla ghat and Solan

”

Way Forward

Short term

- To **invest in repair and maintenance of the interior road stretches**, especially the one **connecting Baddi to Barotiwala**, wherein the poor quality of the stretch leads to severe congestions.
- To **strictly implement labour laws in industrial units and terminals** operating in the state for addressing the perception of poor working hours, lack of incentives and unreasonable pay experienced by stakeholders.

No change in rank order



Increase in rank order



Decrease in rank order

“

Inordinate delay in 4 Laning Project of NH 21A (New No. 105) Pinjore (Haryana) to Nalagarh (Himachal Pradesh) due to issues in land acquisition

”

“

Availability of commercial vehicles to move cargo to far locations such as states in South India is difficult. Quality of commercial vehicles also needs to be improved in the state. Only nine-tonne and fifteen-tonne vehicles are available in Baddi.

”

“

The rail link project is important for sustainability of industries in Baddi-Barotiwala-Nalagarh industrial belt due to unavailability of any alternate mode of transport. Land acquisition process for this rail link project is at halt as no land has been acquired either in Haryana portion or in Himachal Pradesh

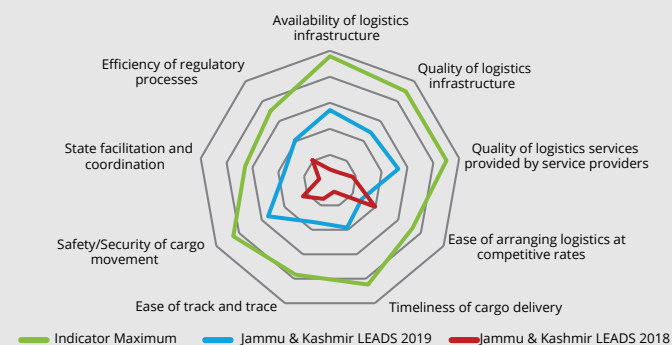
”

Long term

- To deal with the issue of trade and transporter union in Baddi, region of Himachal Pradesh that has been reported as a major hindrance to trade, the state government to facilitate dialogue between industry and unions to create an enabling ecosystem.
- To **develop plan to manage city freight logistics and invest in improving public transportation facilities**, including local bus services connecting towns and industrial areas.
- To **speed up the process of land acquisition to widen the Baddi – Nalagarh highway and coordinate with NHAI for repair and maintenance**.
- To **speed up the social impact assessment of the proposed rail line from Pinjore to Baddi**, which has been in the works for the past several years. Further, the state government may explore various options, including the **Land Bank Model or annuity payment model to negotiate with locals**. This would enable the land acquisition process in nine villages. Finally, the government may **also invest in organising training and skilling programmes for locals** giving up their land to make them more employment ready, instead of simply offering jobs.

Jammu & Kashmir

Performance Snapshot



Rank order 2019

18

Change in rank order

4

The development of both modal and terminal infrastructure in Jammu & Kashmir has suffered on account of security issues. The industry has also not prospered and the private sector has hesitated to invest, or even to use facilities on a sustained basis.

The state government needs to take initiatives to develop a multi-pronged strategy to drive business growth in the state.

Industry Speak



“The approach roads to major industrial areas of SICOP such as industrial estates in Kathua are not well maintained.”

“Safety environment in the state affecting business”

Way Forward

Short term

- To invest in maintenance of roads connecting industrial areas, especially those in Bari Brahmana, Kathua, Samba, Lakhanpur, Birpur, and Udhampur to promote seamless movement of cargo.
- To extensively engage with the industry to explore commercial incentives or structures enabling business propositions or ventures to come to the state.
- To coordinate with the State Electricity Board to deal with the issue of shortage of electricity supply in industrial areas, especially the GATI industrial area
- To facilitate development of a grievance redress mechanism for the industry to report any issues with respect to unscheduled stoppages by RTO and GST officials, especially on Lakhenpur border.

No change in rank order



Increase in rank order



Decrease in rank order

“

The state lacks warehousing infrastructure. The manufacturers have to arrange for storage within their industries. There are no cold storage even for apples. LSPs have hesitated to build on account of law and order issues and low business

"

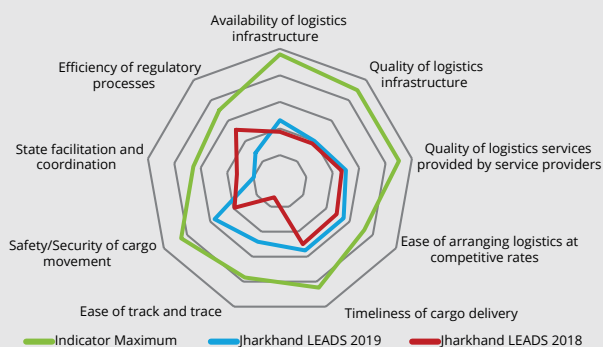
Long term

- To **examine the need for storage solutions in industrial areas of the state, particularly in Kathua** and based on the examination, **invest or attract private sector investment or facilitate investment through public sector undertakings** to address the need



Jharkhand

Performance Snapshot



Availability of logistics infrastructure	: 2.93	Ease of track and trace	: 2.96
Quality of logistics infrastructure	: 2.80	Safety/Security of cargo movement	: 3.13
Quality of logistics services provided by service providers	: 3.00	State facilitation and coordination	: 2.39
Ease of arranging logistics at competitive rates	: 3.10	Efficiency of regulatory processes	: 2.57
Timeliness of cargo delivery	: 3.10		

Rank order 2019

17

Change in rank order

1

Jharkhand is beset with security concerns, which affects logistics performance.

The state needs to encourage the buildup of an efficient warehousing infrastructure, widen its roads, enhance safety of cargo movement, and plan for terminal hub facilities in select areas.

Industry Speak



“On multiple occasions, CWC had requested the state government to provide land to set up warehouses. However, land was availed in the regions that either was affected by Naxalism or had poor road and rail connectivity.”

Way Forward

Short term

- To **facilitate the identification of appropriate land parcels within the state for development of warehousing infrastructure**, preferably in the areas with proper road and rail connectivity. Additionally, **to support private investors in terms of acquisition of identified land, subsidised power and water charges, among others** to address demand for storage infrastructure in the state.
- To **provide capital incentives for encouraging the adoption of technology in warehouses** to ensure quality and efficient services.
- To **facilitate initiatives to increase awareness regarding the minimum warehousing standards** (including ceiling heights, flooring capacity among others) **as prescribed, and encourage the conduct of compliance checks.**
- To **examine and identify poor quality road stretches** in the state, and accordingly **invest in the widening and surfacing of the affected stretches.**

No change in rank order



Increase in rank order



Decrease in rank order

“

There is an imperative requirement of a transport hub in the state. Many small traders need to send goods to other states and even within Jharkhand. However, as their cargo is LCL, they are forced to wait for 10-15 days until trucks are available. Traders as well as transporters in the state have been requesting the state government to set up a Transport Nagar since last 15 years. However, no action has been taken yet.

”

“

Not all toll points in the state have amenities like parking, utilities etc. Hence, a driver involuntarily stops at random isolated locations thereby increasing risk of theft

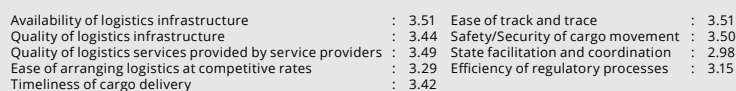
”

- **To implement CCTV monitoring for** addressing safety concerns in the state for freight movement and check unscheduled stoppages by authorities. Further, to **examine the feasibility of increasing patrolling or setting up police check posts along isolated stretches in the border areas of the state to bring down the incidence of thefts.**
- **To facilitate the development of a grievance redress mechanism** for the industry to report any issues with respect to unscheduled stoppages, and delays in the issuance of clearances/permits by authorities.

Long term

- To **conduct an assessment of all the weighbridges** in the state and **invest in the development of supporting infrastructure such as dedicated parking spaces and other utilities** at these points. To also **invest in setting up of authorised driver rest areas along state and national highways** to ensure safety of drivers and cargo.
- To **examine the feasibility of setting up a transport hub in the state and accordingly invest in development of the facility to ensure speedy agglomeration of full truck load (FTL) cargo volumes.** Further, **to incentivise transporters to set up their businesses in the transport hub** by providing them appropriate incentives such as tax breaks, subsidised utilities charges among others. This would help ensure timely availability of trucks, leading to improved turnaround time of cargo delivery.

3



“ Approach roads to the pharma hubs in Nelamangala and Dabaspeta are not well maintained which causes delays in cargo movement ”

 Decrease in rank order

“

Highway robberies have become more frequent. Approximately Rs 150 crores theft of goods have occurred on National Highways in recent time.

”

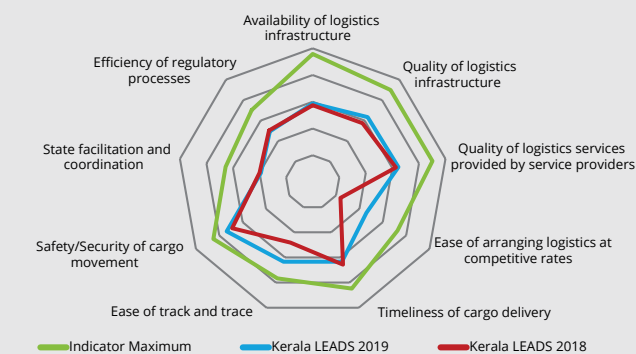
Long term

- To **facilitate regular interactions between the industry and transporter unions** to jointly address issues, thereby enabling logistics ease.
- To **coordinate with the Indian Railways and the Weights and Measures department to ensure regular inspection of the calibration of weighing scales** across all terminals. This will help address the issue of varying weights being reported across different weighbridges at rail terminals.
- To coordinate with Indian Railways to examine better rail evacuation from terminals in Whitefield.
- To facilitate by increasing patrolling in the isolated areas of the state with a view to reduce cases of thefts, especially along the national highways. Further, regular interaction with transporters can help identify such pockets where the incidence of thefts is higher. On such stretches, the state government may also examine the feasibility of investing in authorised truck/trailer parking areas to control the menace and provide facilities such as rest rooms and canteen, among others.



Kerala

Performance Snapshot



Availability of logistics infrastructure	: 3.18	Ease of track and trace	: 3.27
Quality of logistics infrastructure	: 3.27	Safety/Security of cargo movement	: 3.47
Quality of logistics services provided by service providers	: 3.29	State facilitation and coordination	: 2.78
Ease of arranging logistics at competitive rates	: 2.92	Efficiency of regulatory processes	: 2.99
Timeliness of cargo delivery	: 3.27		

Rank order 2019

11

Change in rank order



Kerala's logistics efficiency suffers broadly on account of labour union, which is detrimental to efficient service provision at the port and on the road network. Further, road networks connecting to the port also require attention.

Industry Speak



“

At Cochin port, frequent strikes by different self-proclaimed Unions is affecting business. During these strikes, EXIM cargo need to be shipped from other ports, such as Tuticorin

”

Way Forward

Short term

- Given the experience of deteriorating quality of road network connecting the industrial areas in the state to the port terminals, the state government **to examine and accordingly invest in the widening and surfacing of these road stretches to facilitate cargo movement.**

Long term

- To address the excessive influence of labour union in the state, which leads to an increase in logistics costs and the diversion of cargo to ports in other states, state government **to facilitate regular interactions between the industry and unions** to jointly address issues and create an enabling logistics ecosystem.

No change in rank order



Increase in rank order

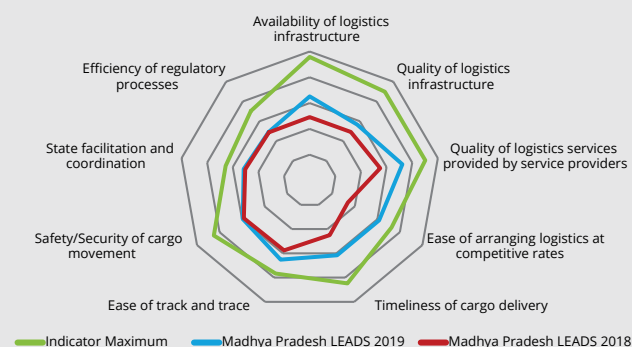


Decrease in rank order



Madhya Pradesh

Performance Snapshot



Availability of logistics infrastructure	: 3.30	Ease of track and trace	: 3.30
Quality of logistics infrastructure	: 3.13	Safety/Security of cargo movement	: 3.19
Quality of logistics services provided by service providers	: 3.45	State facilitation and coordination	: 3.03
Ease of arranging logistics at competitive rates	: 3.23	Efficiency of regulatory processes	: 2.98
Timeliness of cargo delivery	: 3.23		

Rank order 2019

9

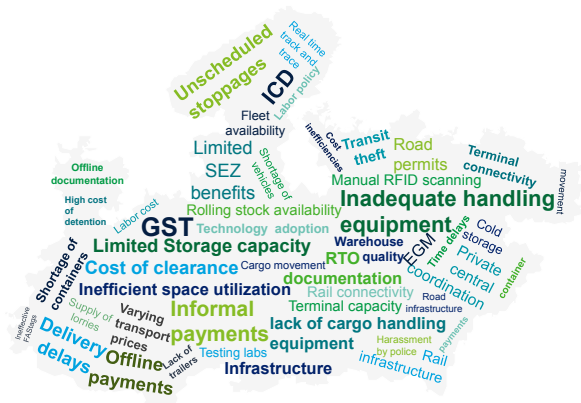
Change in rank order

5

Wide ranging inputs on the inadequacy of logistics infrastructure reflect the lower score on this indicator. Perceptions on account of unscheduled stoppages among others influence the score as well.

The state has concentrated industrial cluster and wider agri-belt requiring careful planning of infrastructure to suitably address availability and utilisation.

Industry Speak



“There is poor road connectivity between Bhopal and Hoshangabad as the roads are single lane. Cities like Gwalior have poor quality single lane roads. Mandideep, Raisen district have single approach roads and no bypass has been constructed. The approach to ICD Mandideep is in abysmal condition.”

Way Forward

Short term

- **To invest in widening and maintenance of roads.** Some of the roads that were experienced as congested include:
 - Approach road to ICD Mandideep
 - Approach roads to warehouses
 - Approach roads and interior roads of Mandideep, Raisen and Gwalior
 - Road connecting Bhopal and Hoshangabad
- Due to the shortage of commercial vehicles in the state, the state **may explore incentives to encourage local transport service providers** to invest in the procurement of such vehicles to cater to the increasing demand from the industry. The state government **to also provide financial incentives to local transporters** to invest in installing RFID / GPS devices in their fleet. This would improve the quality of road transportation services in the state and also facilitate track and trace to the users.
- To **implement CCTV monitoring of unwarranted stoppages** especially at the Sendhwa Border in the Barwani district, the Nayagaon border and the Ichhapur border. Additionally, to **facilitate the development of a grievance redress mechanism** for the industry to report any concern with respect to any such issues.

No change in rank order



Increase in rank order



Decrease in rank order

“ There are lots of informal stoppages and harassment of drivers at the Sendhwa Border in Barwani district, Nayagaon border, Ichhapur border ”

“ The capacity of ICD Mandideep is 2000 TEUs which is drastically short of the business of 4500 TEUs per month. There is a need for planned expansion of the terminal capacity. Also, there is shortage of empty containers at the ICD in relation to the demand as a result of which, cargo (especially agro-products) from factories moves to Mumbai ports. ”

“ Movement of LCL cargo through Close Body Trucks had been stopped at the CONCOR ICD in Pithampur. This has led to a lot of time and cost inefficiencies in LCL movement owing to increase in the involvement of multiple players including consolidators, clearance agents, freight forwarders among others ”

“ In Indore, air cargo terminal is short of cargo-handling equipment, has a lack of storage capacity and poor international connectivity ”

- To facilitate safe movement of cargo by increasing patrolling during transit from Indore to Bhopal, Indore to Ujjain, Indore to Harda, Indore to Mandsaur, the stretch connecting Dewas-Biavra-Ghoona, and Dahod area in the Raisen district. On such stretches, **the state government may also implement CCTV monitoring**. Further, the state government to also invest in setting up of authorised driver rest areas and parking spaces along state and national highways to ensure safety of drivers and cargo.
- To **enforce strict implementation of labour laws** in the industrial units and terminals operating in the state to address the experiences of poor working hours, lack of incentives and unreasonable pay reported by stakeholders.
- To **direct the state's Electricity Board to address the issue of shortage of electricity supply** to cold storages and warehouses in the state.

Long term

- To **coordinate with Indian Railways to speed up the development of rail line from Indore in Madhya Pradesh to Manmad in Maharashtra** to reduce transit time. Additionally, Indian Railways to invest in development of a direct rail connectivity from Madhya Pradesh to ports in Gujarat and broad gauge conversion of rail track from Gwalior towards Shivpurkala, Jabalpur, and in the Bundelkhand areas.
- To **coordinate with CONCOR to examine the need for expansion of terminal at ICD Mandideep**.
- Due to the high cargo turnaround time at the air cargo terminal in Indore, the state government to coordinate with Airports Authority of India (AAI) to examine and accordingly AAI to invest in:
 - **Upgrading the terminal infrastructure** to handle heavy and over-dimensional cargo
 - **Expansion of storage capacity and procurement of additional technologically advanced cargo and container handling equipment** for efficient operations

Change in rank order



Availability of logistics infrastructure	: 3.64	Ease of track and trace	: 3.48
Quality of logistics infrastructure	: 3.51	Safety/Security of cargo movement	: 3.47
Quality of logistics services provided by service providers	: 3.66	State facilitation and coordination	: 3.11
Ease of arranging logistics at competitive rates	: 3.21	Efficiency of regulatory processes	: 3.20
Timeliness of cargo delivery	: 3.50		

Way Forward



Non-availability of quality roads in the state is a major challenge, especially approach road connecting to Nhava Sheva and JNPT. There is huge congestion due to queuing outside the port

Short term

- To **invest in the widening and maintenance of roads.** Some of the roads that were experienced as congested include:
 - Approach road to the JNPT port
 - Roads connecting farms in Satar gaon to mandi in Tiosa
 - Roads connecting Amla Vishweshwer to Chandur Railway
 - Roads connecting Karjagaon to Achalpur
 - Roads connecting highways to industrial areas including interiors of Maharashtra Industrial Development Corporation (MIDC)
 - Roads connecting Nhava Sheva to the Ambernath industrial area
- To **coordinate with CIDCO and NHAI and facilitate maintenance and development of the approach road to the JNPT port.**
- To **conduct an assessment of toll points in the state and invest in the development of supporting infrastructure** such as dedicated parking spaces, driver rest areas, and other utilities at these toll plazas to ensure safe and timely delivery of cargo.

No change in rank order

 Increase in rank order

↓ Decrease in rank order

“

Labour unions have made it a practice to go on strike at least once or twice a year, mostly during peak season. During this time as the cargo handled at the ports is high compared to other months, Unions go on strike and make exuberant demands to resume operations

”

“

Between Delhi-Mumbai, on an average, a transporter has to pay INR 12k-14k as toll tax (back and forth). This substantially increases the overall cost of movement of goods

”

“

When goods move from Bhopal to Mumbai by rail, while there is no problem within MP, there is loss in transit time at Igatpuri ghat section where there is congestion.

”

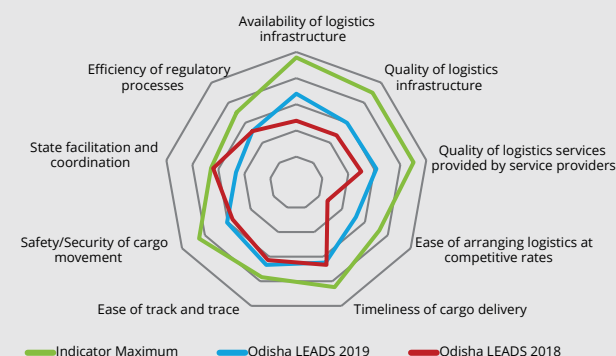
- To **facilitate dialogue between Mathadi labour union and industry**, thereby, keeping a check on regular strikes / bandhs affecting the overall ecosystem.
- To **examine fines/penalties at all the RTO check posts** in Maharashtra, including the ones near Umar Gaon, especially with respect to over dimensional cargo and accordingly, take necessary actions. Additionally, **to facilitate the development of a grievance redress mechanism** for the industry to report any issues with respect to such cases of high penalties.

Long term

- To **invest in the development of dedicated freight lanes to the JNPT port to ease congestion near the port.** Additionally, the rail connectivity from the port to the DFC needs to be facilitated particularly once DFC is operational.
- To **coordinate with other state governments and NHAI to examine the existing concessionaire agreements of toll operators to optimise the number of toll points** on the Delhi-Mumbai Highway.

Odisha

Performance Snapshot



Availability of logistics infrastructure	: 3.36	Ease of track and trace	: 3.33
Quality of logistics infrastructure	: 3.20	Safety/Security of cargo movement	: 3.21
Quality of logistics services provided by service providers	: 3.23	State facilitation and coordination	: 2.93
Ease of arranging logistics at competitive rates	: 3.04	Efficiency of regulatory processes	: 3.03
Timeliness of cargo delivery	: 3.30		

Rank order 2019

10

Change in rank order

1

Actively pursuing economic growth, Odisha has focused on developing infrastructure across modes. Odisha is resource rich, but its terminal infrastructure is not adequately developed.

The road network is underdeveloped and of poor quality. Services, infrastructure facilities, and service providers for cold chain logistics are inadequate and inefficient. The state can help in streamlining policy that incentivises the private sector.

Industry Speak



“The roads in the Balasore region are narrow and single lane which cause high congestion and traffic and leads to the delay in the cargo movement”

Way Forward

Short term

- To invest in the widening and maintenance of approach roads, especially in the Somnathpur and Ganeshwar industrial estate in the Balasore region.
- To invest in upgrading the drainage system in the state to reduce the issues of road blocks and depletion of road quality due to water logging in and around industrial areas.
- To direct Central Electricity Supply Utility of Odisha for providing a separate commercial line for industrial users.
- To provide financial incentives to local transporters in the state to adopt RFID / GPS devices in their fleet and provide track and trace facilities to users.

No change in rank order



Increase in rank order



Decrease in rank order

“

Prawn farming picking up in Balasore, hence reefer would be required

”

“

The main issue in Balasore district is of ill planned drainage mechanism which creates a lot of problem for the industrial areas. During monsoon, the water gets into the factories and blocks the roads, which ultimately leads to depletion of road conditions.

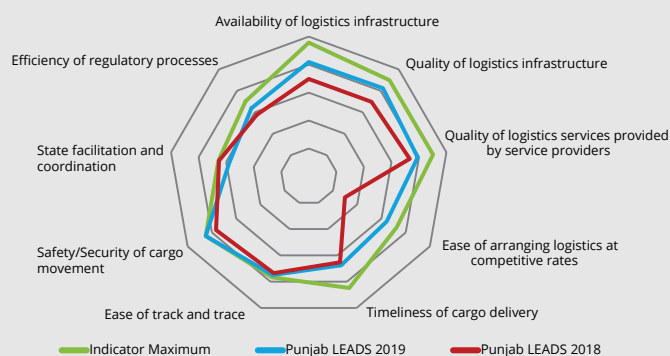
”

Long term

- To **encourage and incentivise the adoption of** reefer containers and trucks to cater to the increasing requirements of prawn farming in the state.
- To **examine the feasibility of setting up a transport hub in the state** and accordingly invest in development of the facility. Further, the state government **to incentivise transporters to set up their businesses in the transport hub** by providing them appropriate incentives such as tax breaks, subsidised utilities charges, etc. This would help ensure the timely availability of trucks leading to improved turnaround time of cargo delivery.

Punjab

Performance Snapshot



Availability of logistics infrastructure	: 3.64	Ease of track and trace	: 3.50
Quality of logistics infrastructure	: 3.65	Safety/Security of cargo movement	: 3.70
Quality of logistics services provided by service providers	: 3.58	State facilitation and coordination	: 3.15
Ease of arranging logistics at competitive rates	: 3.29	Efficiency of regulatory processes	: 3.27
Timeliness of cargo delivery	: 3.35		

Rank order 2019

2

Change in rank order



With a sustained focus on the development of inter-modal facilities and national highways, Punjab has enabled connectivity with key gateway ports although having a resultant impact on the cost of transit due to toll taxes.

Inputs from stakeholders are primarily around need for improving internal connectivity within the state, i.e., to its terminals, industrial areas and markets. The LEADS score points to an all-round improvement across indicators with a need for improvement on the timely delivery of cargo.

Industry Speak



“Export Import imbalance in Punjab area increases cost of haulage as ERR high. Also, import more in 20' containers and export in 40'. So container imbalance”

“Roads in industrial areas are in bad conditions”

Way Forward

Short term

- To address the issue of poor quality of interior roads affecting connectivity to industrial areas, especially in Ludhiana and Jalandhar, the state government to **examine** and accordingly **invest in the widening and surfacing of these road stretches**.
- To **examine** requirement for surfacing the road connecting Ropar to Baddi and accordingly, **invest in the repair and maintenance of the affected stretch** (~ 3-4 km) to ensure seamless movement.
- To **facilitate the development of a grievance redress mechanism for the industry to report any issues with respect to lack of compliance of vehicle standards**. This would help in reducing the risk of cargo damage due to using outdated fleet.

No change in rank order



Increase in rank order



Decrease in rank order



Extreme congestion and significantly high toll cost on Jalandhar-Ludhiana highway leading to delays.

"

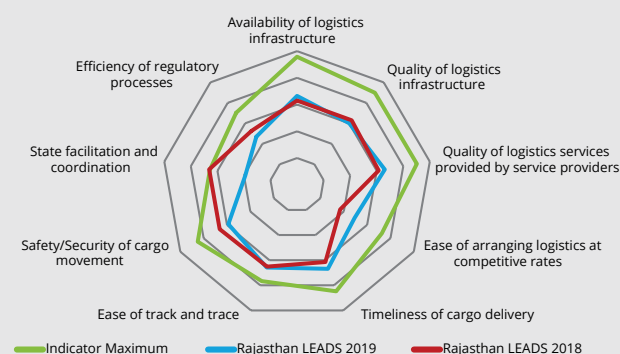
Long term

- To deal with the issue of extreme congestion and significantly high toll cost on the Jalandhar-Ludhiana highway, the state government to **coordinate with NHAI to examine the existing concessionaire agreements of toll operators** to:
 - identify the possibility of widening the highway
 - optimise the number of toll points



Rajasthan

Performance Snapshot



Availability of logistics infrastructure	: 3.33	Ease of track and trace	: 3.32
Quality of logistics infrastructure	: 3.20	Safety/Security of cargo movement	: 3.18
Quality of logistics services provided by service providers	: 3.32	State facilitation and coordination	: 2.78
Ease of arranging logistics at competitive rates	: 2.99	Efficiency of regulatory processes	: 2.94
Timeliness of cargo delivery	: 3.34		

Rank order 2019

12

Change in rank order

5

Rajasthan has large EXIM traffic, which moves on rail but has now shifted pre-dominantly to the improved and less costly road network, which is connected to the ports in Gujarat. Rail terminals are inefficient and not suitably certified to provide requisite services.

Industry Speak



Lack of C-TPAT warehouses causes US-bound LCL consignments to be sent first to certified warehouses in Dadri after which it is sent to ports in Gujarat

Way Forward

Short term

- **To examine and invest in the widening and surfacing of the approach roads to industrial areas, especially in the Jhotwara district** to ensure better connectivity and reduce delays in freight movement.
- **To facilitate improvement of infrastructure and other ancillary requirements** of the existing terminals in the state to comply with requirements to become C-TPAT certified. This will help reduce time and cost over runs due to current movement of goods to Dadri ICD for C-TPAT compliance for onward movement to Mundra.
- **To engage with its Electricity Board to address the issue of shortage of electricity supply** in industrial areas of Rajasthan. This would help improve industrial productivity, and thereby increase trade from the state.

No change in rank order



Increase in rank order



Decrease in rank order

“

The export and import cargo terminal at Jaipur airport is constrained for storage space. The terminal does not allow for overnight storing of cargo due to inadequacy of space. Also, the airport does not have any facility for temperature controlled storage.

”

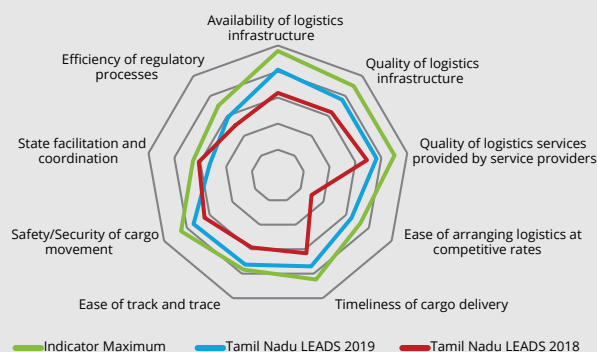
Long term

- **To examine the feasibility of setting up an ICD in Udaipur and accordingly attracting investments from private sector** by facilitating land acquisition and registration, and the speedy provision of permits and clearances.
- To coordinate with Airports Authority of India (AAI) **to examine the need for expansion of air cargo terminal and the development of temperature-controlled storage facilities** at the Jaipur airport. Accordingly, **facilitate investment in the expansion and development of the terminal** for its efficient operations.



Tamil Nadu

Performance Snapshot



Availability of logistics infrastructure	: 3.63	Ease of track and trace	: 3.45
Quality of logistics infrastructure	: 3.52	Safety/Security of cargo movement	: 3.48
Quality of logistics services provided by service providers	: 3.53	State facilitation and coordination	: 3.05
Ease of arranging logistics at competitive rates	: 3.30	Efficiency of regulatory processes	: 3.18
Timeliness of cargo delivery	: 3.48		

Rank order 2019

5

Change in rank order

3

Tamil Nadu's position on the State Facilitation and Coordination indicator deteriorated over the past year. This has been reflected in the condition of roads, frequent transporter union strikes, and poor service levels across the state.

However, a reduction in volumes at the Chennai Port has led to easing of congestion around it. This has improved the overall perception around performance.

Industry Speak



“There is no bypass for towns like Tirunelveli and Tenkasi leading to delay in cargo movement. Madurai-Tuticorin stretch is in poor condition.”

Way Forward

Short term

- To reduce congestion and promote seamless cargo movement, the state government **to invest in maintenance of roads in the state**, especially the stretch connecting Madurai to Tuticorin. Additionally, the state government to examine the requirement of bypass for towns such as Tirunelveli and Tenkasi and accordingly invest in such projects.
- The state government **may explore options for providing financial incentives to local transporters in the state to adopt RFID/ GPS devices** in their fleet and providing track and trace facilities to users.
- To facilitate dialogue between transporter unions, especially in Coimbatore, and industry associations or user groups** to jointly address issues, thereby enabling logistics ease.
- To direct the state electricity board to examine and accordingly re-work on the positioning of electricity poles on state roads** to reduce the frequency of accidents happening due to low hanging cables touching the container roofs during transit.

No change in rank order



Increase in rank order



Decrease in rank order

“

Tolls leads to a lot of delay in truck movements

”

“

Additional exclusive air cargo facility is perceived to be urgently required for Chennai.

”

“

ICD Irugur experiences labour issues, inadequate infrastructure, and poor cargo flow plan. A lot of cargo therefore moves on bonded trucks to Cochin

”

Long term

- Due to high volumes of air cargo handled at the Chennai airport, the state government to coordinate with Airports Authority of India to examine and AAI to invest in:
 - Modular expansion of the air cargo terminal
 - Development of truck bays at the terminal
- To **represent the issues reported by the industry regarding lack of quality labour, inadequate infrastructure, and poor cargo flow plan at ICD Irugur to CONCOR**. Accordingly, the state **to coordinate with CONCOR for improving the terminal layout and operations to attract more cargo** diverted to Cochin.
- To **coordinate with NHAI and other responsible agencies to review concession agreements of toll operators for optimising the number of toll points** in the state.

The radar chart displays the performance of Telangana LEADS 2019 and 2018 across eight logistics indicators. The chart compares the two years against a maximum indicator scale. The 2019 performance is generally higher than the 2018 performance across most indicators.

Indicator	Telangana LEADS 2019	Telangana LEADS 2018
Availability of logistics infrastructure	High	Medium-High
Quality of logistics infrastructure	Very High	High
Quality of logistics services provided by service providers	High	Medium-High
Ease of arranging logistics at competitive rates	Medium-High	Medium
Timeliness of cargo delivery	Medium-High	Medium
Ease of track and trace	Medium-High	Medium
Safety/Security of cargo movement	High	Medium-High
State facilitation and coordination	High	Medium-High
Efficiency of regulatory processes	High	Medium-High



Improved planning of city freight logistics can ease some current issues as industry inputs indicate a need for better access to its existing logistics terminals.

A word cloud visualization showing various factors related to port operations. The words are arranged in a circular pattern, with larger words indicating higher frequency or importance. Key terms include:

- Congested**
- Integrated logistics**
- Customs**
- Security**
- Labour charges**
- Thefts**
- Parking facility**
- AFS**
- Processing centres**
- Marine processing**
- Single line railway lines**
- GST**
- City plan**
- Export**
- Limited air**
- E-governance**
- Toll points**
- Movement restriction**
- Terminal capacity**
- Poor calibration**
- Paper based processes**
- Approach roads**
- Congested**
- Air freight charges**
- Track and trace**
- Manpower shortage**
- Supporting facilities**
- Insufficient truck bays**
- Domestic air cargo**
- High quality controlled warehouses**
- Agglomeration**
- Cargo**
- High transit time**
- Availability of empty containers**
- High congestion**
- Cold storage facility**
- Rail connectivity**
- Integrated terminal**
- Poor response time**
- Testing centres**

- To **examine and invest** in the widening and surfacing of roads to foster seamless connectivity. Some of the stretches that were experienced as congested include stretches connecting:
 - Adilabad in Telangana to Hinganghat in Maharashtra
 - Tandur to Hyderabad
 - Adilabad to Karimnagar
 - Narayankhed to Hyderabad
- **To invest in the widening and surfacing of** poor quality and congested approach roads, especially the second entries to Kurnool and Nizamabad railway stations, ICD Sanathnagar, and industrial areas in Hyderabad.
- The Government of Telangana as a shareholder of GMR Hyderabad International Airport to **coordinate/invest** with the airport authorities for:
 - **Modular expansion of the terminal** basis the approved master plan to handle high freight volumes from the region especially with respect to the handling of domestic cargo movement.
 - **Expansion of cold storage capacity** within the terminal to handle perishable cargo, which is currently being diverted to the Bengaluru airport.
 - **Development of truck bays at the terminal**, in addition to the existing six bays, to cater to the increasing parking demand for vehicle fleet moving in and out of the airport.

Decrease in rank order

“

When Hyderabad air cargo terminal was developed, market size was about 2500 tonnes. Today, when the market size is around 5,000 tonnes, the terminal has the same capacity and so it is not able to cater to the market demands especially for domestic cargo.

”

“

Perishable cargo from Hyderabad is being diverted to Bangalore Airport due to lack of proper cold storage facilities at the Hyderabad Airport

”

“

In Hyderabad, restriction on movement of heavy goods vehicles in the city is considered high. Movement is restricted between 07:00 hours to 23:00 hours in general – on some routes goods vehicles can only move between 11:30 hours to 15:30 hours during the day. The extent of restriction hampers the movement of empty containers to the factory and subsequent movement of the loaded containers to the ICD. The situation is worse for the parcel industry.

”

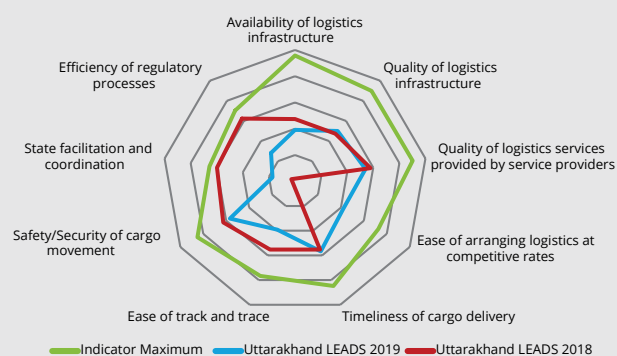
- To **coordinate with the Weights and Measures department to frequently inspect the calibration of weighing scales** across all weighbridges to solve the issue of varying weights being reported across such facilities in the state.
- To **reduce the cases of thefts in the state, especially on Hyderabad – Bangalore and Hyderabad – Vijayawada routes, the state government to facilitate safe movement of cargo by increasing patrolling in the isolated areas** of the state. Further, **regular interaction with transporters can help identify such pockets where the incidence of thefts is higher.** On such stretches, the state government may also examine the feasibility of investing in authorised truck/trailer parking areas to control the menace and provide facilities such as rest rooms and canteens.

Long term

- To **examine the feasibility of marine processing centres / pack houses for agro products near the airport** for the consolidation of such products and to make them “ready for export” by air and **accordingly invest directly or incentivise private sector** for setting up the same
- To examine the **feasibility and invest directly or incentivise the private sector** to set up an AFS near the airport for providing one-stop shop to freight forwarders and other logistics players.
- To ease the city movement restrictions for goods commercial vehicles in Hyderabad through **in-depth assessment of city transport needs and appropriate planning for city freight logistics identifying freight aggregations and disaggregation centres in the city.**
- To **coordinate with Indian Railways to examine the need for additional lines to move imported raw materials from Chennai via rail instead of road.**

Uttarakhand

Performance Snapshot



Availability of logistics infrastructure	: 2.78	Ease of track and trace	: 2.78
Quality of logistics infrastructure	: 3.00	Safety/Security of cargo movement	: 3.35
Quality of logistics services provided by service providers	: 3.08	State facilitation and coordination	: 2.13
Ease of arranging logistics at competitive rates	: 2.84	Efficiency of regulatory processes	: 2.56
Timeliness of cargo delivery	: 3.14		

Rank order 2019

19

Change in rank order

4

Continuing to emerge out of their geographical constraints, logistics facilities in Uttarakhand is understood to be underutilised. Seamless road connectivity between the two most habituated regions of the state has been a long-standing demand and it continues to influence the perception of users. Therefore improvement, is required across the board.

Industry Speak



Lack of proper road connectivity between Kumaon and Garhwal region. There should be an expressway to connect the two regions to ease the movement of cargo

Way Forward

Short term

- To **invest in upgrading and maintenance of roads** connecting Rudrapur and Dehradun via Kashipur (Rudrapur -> Kashipur -> Jaspur -> Haridwar -> Dehradun) facilitating movement of commercial vehicles on the stretch.
- To deal with the issue of trade and transporter unions, especially in Selaqui region that has been reported as a major hindrance to trade, **the state government to facilitate stakeholder interaction with unions to create an enabling ecosystem.**
- To **implement CCTV monitoring of unwarranted stoppages by police and RTO officials and facilitate the development of a grievance redress mechanism** for the industry to report such issues.
- To **facilitate CSR initiatives, in collaboration with agencies such as State Infrastructure and Industrial Development Corporation of Uttarakhand Limited (SIIDCUL),** to increase awareness regarding the sector to attract local talent. To **invest in imparting training through specialised courses and centres** to improve the availability of skilled workforce in the state.

No change in rank order



Increase in rank order



Decrease in rank order

“

There are transporter unions in Garhwal region of Uttarakhand - Selaqui (Dehradun), Doewala, Rishikesh and some other places with Selaqui transporters union comparatively stronger. A vehicle that should be available for Rs. 5,000 at market rates is made available for around Rs. 10,000 by the union.

”

“

Unscheduled stoppages by police and RTO officials during road transit leading to delays with situation getting worse in case of EXIM movement

”

“

Rail freight is being charged on basis of rationalised route for imports for ICD Kashipur, which is 1464 km from Mundra. The shortest route however, is 1323 km. Similar disconnect is there for Pipavav.

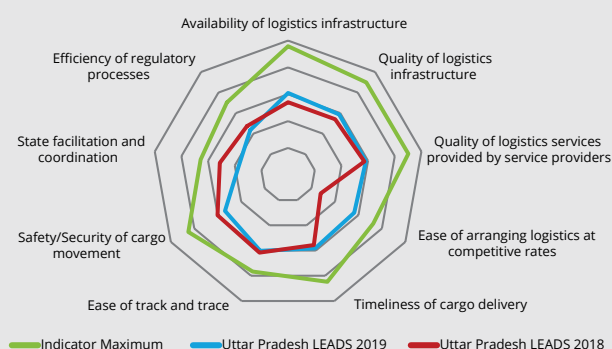
”

Long term

- **To examine the feasibility of setting up an ICD in Haridwar, in coordination with SIIDCUL, and accordingly incentivise the private sector to undertake investments** by facilitating land acquisition and registration at lower rates to improve viability of the project, ensure speedy provision of permits and clearances and provide financial incentives for setting up such facilities (including easy access to credit, relaxation in stamp duty, subsidised power, water and other utilities).
- **To coordinate with Indian Railways for the augmentation of infrastructure on the direct route from ICD Kashipur to Mundra.**

Uttar Pradesh

Performance Snapshot



Rank order 2019

13

Change in rank order

The industry's perception about Uttar Pradesh's logistics performance is positive. However, it provides inputs for continued improvement. While connectivity with key destination – Delhi has been focused upon; need has been expressed for improving internal connectivity.

Given the presence of agri-belt in the state, need for agri-logistics for specific commodities has emerged. User experience of inadequate safety of cargo adversely affects perception.

Industry Speak



“The approach road to ICDs are narrow and surface quality is poor. Last mile connectivity is an issue in the state. The roads are not developed enough to accommodate heavy loads.”

Way Forward

Short term

- To bring down congestion and promote seamless movement of cargo, the state government **to invest in the widening and maintenance of roads**. Some of the roads that were reported as problematic include:
 - Entry road to ICD Moradabad
 - Approach roads to industrial areas in Kanpur, Moradabad, and Dadri
 - Interior roads, especially within Kanpur, Naini and beyond Aligarh
 - Old G.T. road connecting Kanpur to Aligarh
 - Road connecting Sambhal and Muradabad
 - Road connecting Anand Vihar, Etah, Mainpuri, Farrukhabad, Hardoi, Shahjahanpur and Aligarh
 - Road connecting Meerut and Muzaffarnagar
- The state government **to simplify the regulations for licensing/renewal of licences of cold storage operators** including increasing their validity and ensuring a thorough verification or inspection of these facilities in the state. Further, state agencies to ensure adequate supply of electricity to boost investment in cold storages, which may include providing capital subsidies to cold storage operators for procuring solar panels.
- To deal with the issue of extreme congestion on Kanpur-Varanasi highway, the state government to coordinate with NHAI **to examine the existing concessionaire agreements of toll operators and identify the possibility of widening the highway**.

No change in rank order



Increase in rank order



Decrease in rank order

“

In Allahabad, Varanasi, Mirzapur and Baraich, the harassment by RTO officials is very high.

”

“

There are additional regulations imposed by the state government on setting up and running of a cold storage. Despite being a green belt industry, the cold storage operators in the state have to take annual clearance from the Pollution control board for the generators that have been used due to lack of supply of electricity

”

“

The entire movement of refined sugar happens from UP to West Bengal through road transportation due to lack of aggregation of cargo to move via rail. Despite UP being the largest food producer in the country, there is a dearth of mandis

”

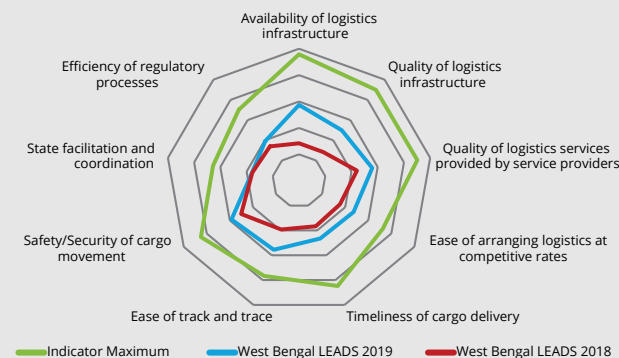
- To **facilitate safe movement of cargo by increasing patrolling in the isolated areas** of the state with a view **to reduce thefts in the state, especially in and around the areas of Aligarh, Etawah, Moradabad and Bareilly**. Further, regular interactions with transporters can help identify such pockets where the incidence of thefts is higher.
- To **enforce laws regulating the age of commercial vehicles** and **facilitate the development of a grievance redress mechanism for the industry** to report any issues with respect to the lack of compliance of vehicle standards. This would help reduce the risk of cargo damage due to using outdated fleet.
- To **implement CCTV monitoring of such unwarranted stoppages** to reduce unscheduled stoppages by RTO officials during road transit, especially in the areas of Allahabad, Varanasi, Mirzapur, Baraich, Moradabad, Meerut and Mujaffarnagar. Additionally, the state government to facilitate development of a grievance redress mechanism for industry to report any such issues.
- To **coordinate with the Weights and Measures department to increase the frequency of inspections of calibration of weighing scales** across all facilities to deal with the issue of varying weights being reported across different weighbridges in the state.

Long term

- To **invest in development of aggregation centres (mandis) in the state to foster movement of cargo via rail in the Rae Bareli, Pratapgarh and Sultanpur areas**. The creation of such aggregation points will help bring in time and cost efficiencies.
- To **coordinate with the relevant authority to examine the existing concession agreements of toll operators to optimise the number of toll points along highways**.
- To **coordinate with Airports Authority of India (AAI) to examine and accordingly AAI to invest in expansion of storage facility** at the Lucknow Airport.

West Bengal

Performance Snapshot



Availability of logistics infrastructure	: 3.15	Ease of track and trace	: 3.11
Quality of logistics infrastructure	: 3.00	Safety/Security of cargo movement	: 3.17
Quality of logistics services provided by service providers	: 3.12	State facilitation and coordination	: 2.72
Ease of arranging logistics at competitive rates	: 2.95	Efficiency of regulatory processes	: 2.79
Timeliness of cargo delivery	: 2.93		

Rank order 2019

16

Change in rank order

3

West Bengal has shown some improvement, but there is still much ground to be covered particularly at the Kolkata port, ICP Petrapole, cargo warehousing at the Kolkata airport and in general on the state's road network.

The state needs to encourage development of infrastructure for more ICPs and, a Tea Park, and by way of modern cargo and container handling equipment.

Industry Speak



“The widening and strengthening of road exiting from ICP Petrapole towards Benapole Land Port is still incomplete”

Way Forward

Short term

- To **examine and accordingly invest in the widening and maintenance of roads** to bring down congestion and promote seamless movement of cargo. Some of the roads that were experienced as congested include:
 - Road stretch connecting ICP Petrapole and Benapole Land Port (to be made fourlane)
 - Road stretch connecting Barasat to Bongaon
 - Road stretch connecting Bongaon to Petrapole
- The state government (Kolkata Municipal Corporation) to **liaise with the port operator for development and maintenance of approach road to the Kolkata Port** that has been reported to be in an extremely poor condition.
- To provide **financial incentives to local transporters in the state to adopt RFID / GPS devices** in their fleet and provide track and trace facilities to users.
- To **understand transport patterns and needs and suitably inform its plan for city freight logistics allowing more hours for movement of freight vehicles**. It may alternatively consider development of dedicated freight lanes.

No change in rank order



Increase in rank order



Decrease in rank order

“

New ICP's have been proposed by LPAI in suitable locations on Indo-Bangladesh international border to reduce the load on ICP Petrapole

”

“

There is a desperate need for a Tea Park in Kolkata for warehousing, blending, packaging, testing, customs clearance, etc. in Kolkata in line with the Dubai facility (DMCC)

”

“

Kolkata port has very poor infrastructure. Cargo handling equipment at port are also obsolete. In addition, the systems at the port are outdated

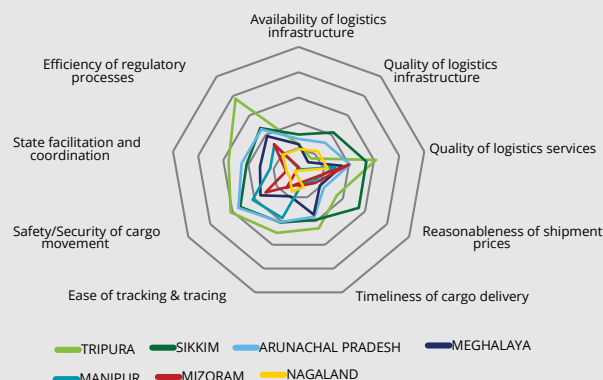
”

Long term

- To **coordinate with Land Port Authority of India (LPAI) to increase the capacity of the cargo terminal of ICP Petrapole** to address congestion issues in and around Bongaon.
- To **identify suitable locations on the Indo-Bangladesh international border and facilitate land acquisition for development of an ICP** as proposed by Land Port Authority of India (LPAI). This would help reduce congestion at ICP Petrapole.
- To **coordinate with Airports Authority of India for expansion of customised storage solutions at the Kolkata airport** and provision of quality services to cater to the increasing demand.
- To **earmark land for the development of a tea park (including facilities for warehousing, blending, packaging, testing, customs clearance, among others)** to cater to the large volumes of exports from the state and neighbouring regions. The state government may **directly invest or incentivise the private sector to set up facilities** within the park **by providing financial incentives** including easy access to credit, relaxation in stamp duty, subsidised power, water and other utilities among others.
- To **liaise with Kolkata Port Authorities for infrastructure expansion** including procurement of state-of-the-art cargo and container handling equipment at the port for efficient operations.
- To **approach Indian Railways for coordination with the Government of Myanmar to conduct a feasibility study for the development of a rail link between Kolkata and Sittwe port** in Myanmar to reduce time and cost overruns.

North-Eastern Region

Performance Snapshot

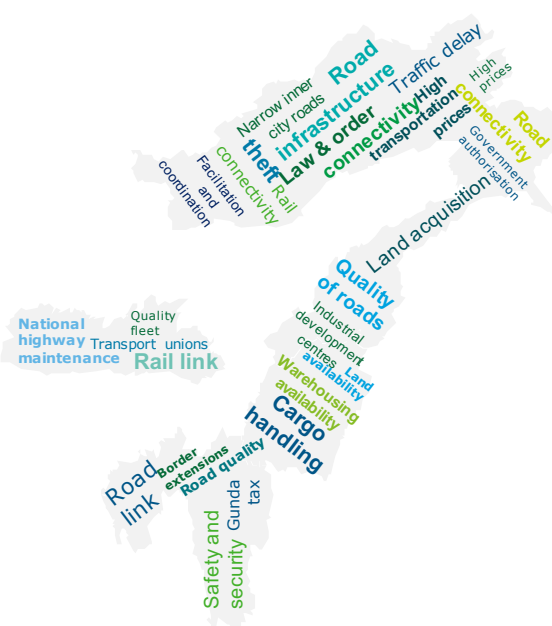


The states in north-eastern region (excluding Assam) are consistently performing low with respect to availability and quality of infrastructure with Mizoram performing the lowest on the two indicators.

When compared across states, Tripura has emerged to be the high performing state across all indicators, except for the quality of logistics infrastructure. However, Nagaland, which is the least performing state on the LEADS Index, exhibits better performance with respect to addressing the infrastructure requirements of the industry.

At the same time, Tripura is perceived to be performing significantly higher than other states in the cluster for all indicators with the exception of availability and quality of infrastructure.

Industry Speak



“The road joining Tripura and Assam is in poor condition resulting in long delays and traffic”

Way Forward

Short term

- To **examine and invest in the widening and surfacing of roads** to foster seamless connectivity. Some of the stretches that were reported as problematic include:
 - Churaibari road in Tripura
 - Road connecting Thenzawl and Lunglei in Mizoram
 - Sirang road in Mizoram
 - Khamrang in Mizoram
 - Road connecting Silchar in Assam to Jiribam in Manipur
- To **coordinate with NHAI for the examination and maintenance of highways** reported as congested by stakeholders including:
 - NH 39, especially the stretch connecting Manipur
 - Highway connecting Agartala to Guwahati
 - Highway connecting Mizoram to Assam
- To reduce safety concerns in Manipur, the state government to coordinate with transporters to identify pockets / road stretches of high distress. Accordingly, the state government **to facilitate safe movement by increasing patrolling / police check-posts in the identified areas**. One such reported area is the Churaibadi road.
- Government of Mizoram **to incentivise the development of the manufacturing sector by facilitating the establishment of industrial hubs** through schemes and possibly subsidised land, power, among others.

“

There is absolutely no safety of road transporter. There is also a high degree of extortion which ultimately leads to reluctance of transporters to operate in the state and those that do, charge very high prices

”

“

There is a Gunda Tax, which is levied on the vehicles coming from other states by the transport union which causes unnecessary delays and problems for the shippers who are forced to use the vehicles at the charges determined by the Transport unions which are quite high

”

- Government of Nagaland **to facilitate dialogue between the industry and unions to create an enabling ecosystem.**

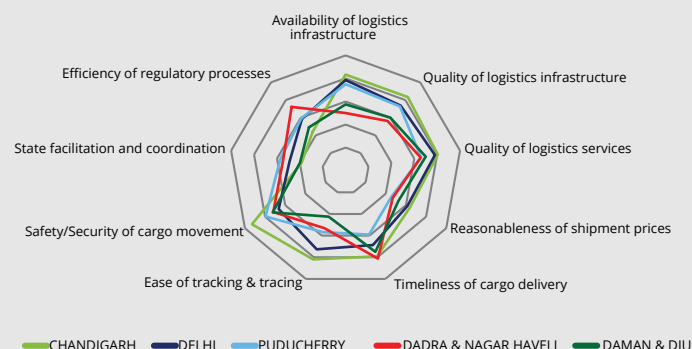
This is to check the tax levied by unions in the state of Nagaland, which discourages other transporters from operating in the state and hinders trade.

Long term

- Government of Assam to coordinate with Government of Tripura and Government of Bangladesh to examine the feasibility of establishing a road link from Tripura and Silchar through Bangladesh. Based on assessment, the concerned authorities to invest in the development of the road link which would facilitate efficiency in cargo movement, especially with respect to movement of tea

Union Territories

Performance Snapshot



Across all UTs, Chandigarh has emerged as the top performer on the LEADS Index exhibiting higher performance across all the indicators of logistics ease except for operating and regulatory environment.

Meanwhile, the remaining four UTs are highlighted as the better performer in ensuring a facilitative operating and regulatory environment when compared to Chandigarh.

Daman and Diu, the lowest performer on the LEADS Index is reported to be lower than the UTs' average across all indicators with lack of track and trace services emerging as the key focus area.

Industry Speak



The road connecting Vapi and Daman face major congestion and transporters move through Bhimpore area to avoid delays

The approach roads to industrial areas in Dadra are in poor condition with the problem being acute during monsoon

Way Forward

Short term

- The UT administration of Daman and Diu to examine and invest in widening and surfacing of roads **to foster seamless connectivity and reduce congestion**. Some of the interior roads that were reported as problematic include:
 - Widening and surfacing of road connecting Daman and Diu to Vapi
 - Approach roads to industrial areas in Dadra & Nagar Haveli
- To ease congestion, Delhi government **to invest in widening of below reported roads stretches**:
 - Roads in Mahipalpur area,
 - Road stretch connecting Dhaula kuan to Gurgaon
 - Rao Tula Ram Marg (single lane roads)
- To deal with the issue of trade and transporter union in Silvassa region of Daman and Diu, which has been reported as hindrance to trade, Daman UT administration **to facilitate and liaison with the unions to create an enabling ecosystem**.
- To deal with the issue of labour strikes at Delhi airport, the airport authority **to have regular interactions with the user and providers of logistics services** to mitigate the occasions and bring down frequencies of such occurrences.

“

The movement of cargo via rail has to be done through Vapi, which is 12 km from Daman

”

“

There is a need to develop air cargo terminal in Chandigarh for cargo moving from Himachal Pradesh and Punjab

”

“

Mahipalpur in Delhi is a cluster of warehouses with huge truck movements leading to congestion. Adding to this delay is the unscheduled stoppages by the RTO officials in the area

”

Long term

- Owing to the lack of rail connectivity between Dadra and Nagar Haveli and Daman and Diu, rail movement has to be done through Vapi, which is at the distance of 16 km from Silvassa. UT administrations **to examine the requirement of rail connectivity in Dadra and Nagar Haveli and Daman and Diu**, and further examine the feasibility of investing in the rail infrastructure in coordination with Indian Railways.
- The UT administration of Chandigarh **to examine the need for cargo terminal at the airport and assess the feasibility of such a terminal in co-ordination Airport Authority of India (AAI)**, Greater Mohali Area Development Authority (GMADA) and Haryana Urban Development Authority (HUDA) or Chandigarh International Airport Limited (CHIAL). This would facilitate movement of cargo from Baddi in Himachal Pradesh to Chandigarh instead of Delhi, thereby, reducing cost and time overruns.
- **Delhi UT Administration to understand transport patterns and needs and suitably inform its plan for city freight logistics** allowing more hours for movement of freight vehicles. It may **alternatively consider development of dedicated freight lanes**.
- With a view to reducing unscheduled stoppages by police during road transit in Mahipalpur area in Delhi and Delhi-Gurgaon border, the state government **to legislate CCTV monitoring of such unwarranted stoppages**. Additionally, the state government **to facilitate the development of a grievance redress mechanism** for the industry to report any such issues.

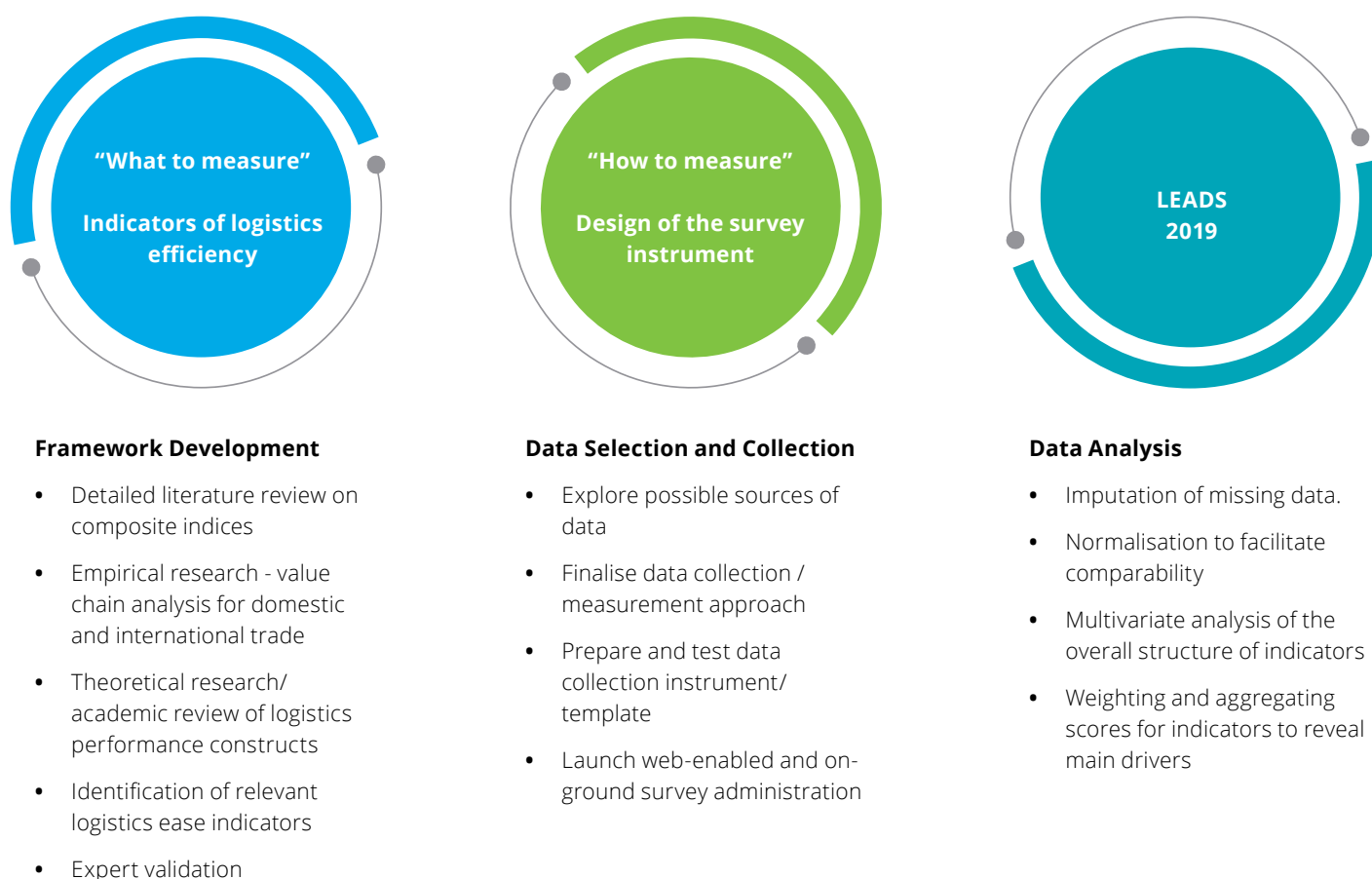
Annexure 1:

Technical note on measuring logistics ease

Constructing the LEADS Index

Globally, several approaches and frameworks have emerged for constructing such a composite indicator. The exhibit below details out the process undertaken in constructing the LEADS Index 2019.

Exhibit 48 Construct of the LEADS Index



Identifying the indicators of logistics ease

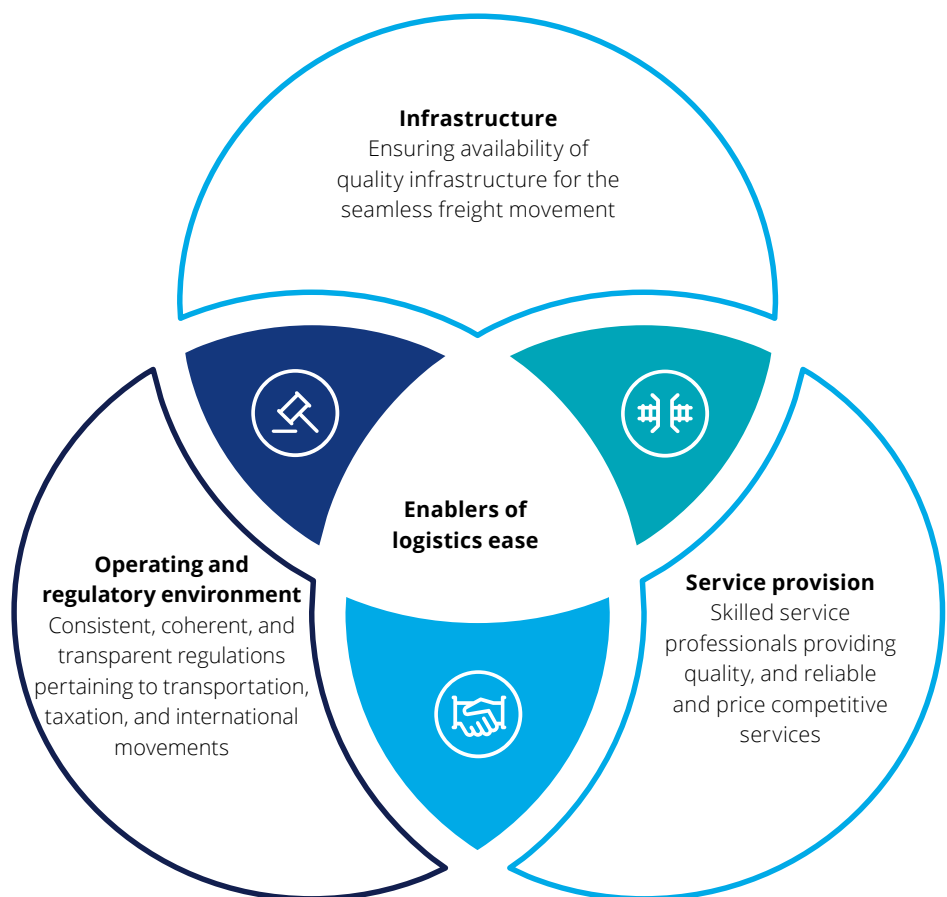
An empirical review of logistics value chains for domestic and international trade was conducted for a number of commodities to identify potential measures of logistics ease. It revealed three key enablers:

- Fixed physical infrastructure facilities for the transportation, handling and storage of goods across modes of transport including road network, railway track, port/airport/dry port terminals, trucks, wagons, vessels.
- Services or service providers either operating logistics infrastructure, or providing other allied services such as freight forwarders and customs house agents.
- Operating and regulatory environment, being provided by both the central and state governments, influences the processes and systems within the entire ecosystem.

Logistics value chains were also assessed for possible differences in measures relevant for assessing logistics ease in domestic versus international trade logistics value chains. These chains exhibit large extent of overlaps across the three key enablers with a few differences primarily governed by regulatory requirements.

- Unlike domestic trade, international trade is governed by regulations of Customs and Participatory Government Agencies as well as certifications required by certain foreign destinations mandating the use of specific infrastructure or handling procedures. These require use of specific nature of infrastructure and services such as bonded area, certified storages, customs brokers, and bonded trucking.
- Except for such requirements, market participants work towards developing economies of scale across assets and resources and deploy them commonly across domestic and international trade.

Exhibit 49: Enablers of Logistics Ease



Indicators for assessment of logistics ease were identified along these three enablers keeping both domestic and international logistics value chains in consideration.

Following the empirical review, academic literature available on constructs for assessment of logistics performance as well as internationally accepted performance / competitiveness benchmarking studies relevant to trade and transportation were also reviewed to inform the construct for LEADS Index.

The empirical and academic literature reviews informed the identification of indicators used for the assessment of logistics ease.

Finally, identified indicators were validated through industry experts comprising key players in logistics value chain. Compared with the set of indicators adopted for LEADS 2018, while broad construct remains the same, a few modifications have been made to bring sharper focus on such aspects.

- 'Quality of Transport and Logistics Infrastructure', used in LEADS 2018, has been split into two indicators, which are 'Availability of Transport and Logistics Infrastructure' and 'Quality of Transport and Logistics Infrastructure' to enable a clearer inputs on these two aspects.

- ‘Favourability of Operating Environment’, used in LEADS 2018, was expanded to emphasize the importance of the state government’s role in boosting logistics ease through either direct investments / actions or through coordination with other stakeholders including the central agencies and private sector stakeholders, thereby, renamed as ‘State Facilitation and Coordination’.

Exhibit 50 Framework for identification of LEADS indicators

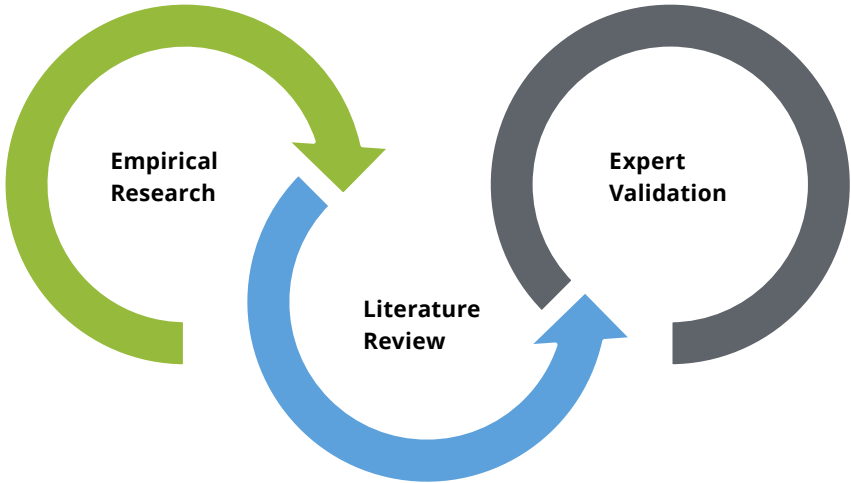
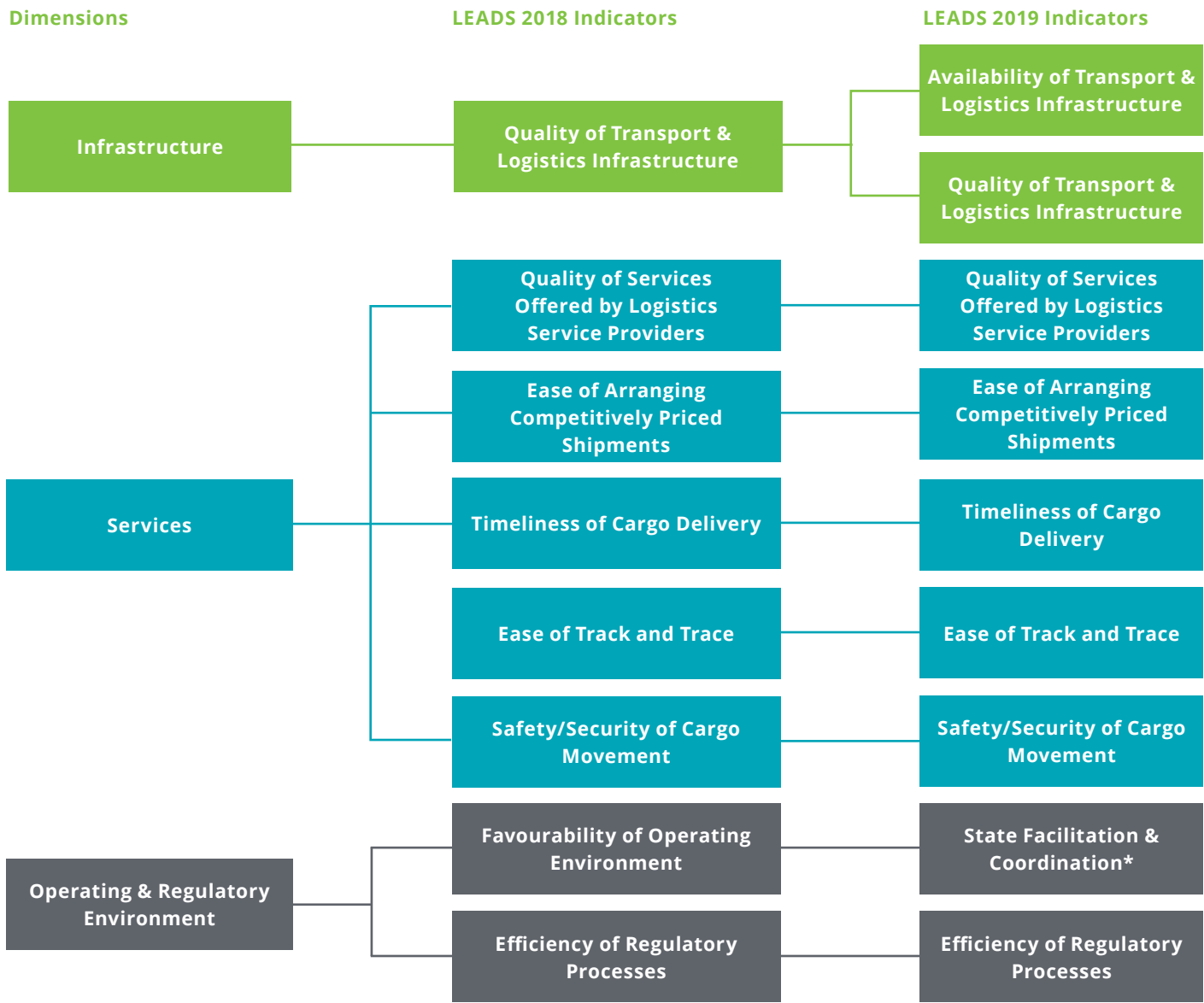


Exhibit 51 Indicators of LEADS 2019



(* - Expanded to include state government’s role in coordination with central agencies and private players)



Collection of data for assessing logistics ease: Capturing user perceptions

Industry practice suggests that the data to be used for developing such composite index should be relevant to the underlying measures, be measurable, and be consistent across units being assessed.

A number of composite indicators globally have been based on perception-based data. Handbook on Constructing Composite Indicators (Organisation for Economic Co-operation and Development, Joint Research Centre (JRC) European Commission, 2008) notes the scarcity of comparable quantitative data leading to use of survey-based data in many cases.

Users and logistics service providers in logistics value chain comprise the following:

- Shippers and domestic traders,
- Transport operators (such as road hauliers, rail operators, container train operators, airlines and shipping lines),
- Terminal operators (such as CFS/ICD/PFT/AFS operators, storage operators, port terminal operators, air cargo terminal operators), and
- Logistics service providers (including freight forwarders, express carriers, customs brokers, multimodal transport operators, and air cargo agents).

The LEADS Index therefore focuses on capturing perceptions of the users and

logistics service providers in domestic and international trade logistics on the identified indicators.

Stratified random sampling technique was used for adequate representation of all the categories of stakeholders across states and UTs. Sample size was arrived at with an assumption of 80 percent confidence interval and a margin of error of 0.10.

An appropriate sample frame was prepared with support from FIEO, DGFT, APEDA, Industry Chambers, national and regional Industry Associations, Federation of Freight Forwarders' Association of India, Air Cargo Agents Association of India, Exporter Associations, Export Promotion Councils, Transporter Associations and domestic freight forwarding community.

Survey instrument was designed on a standard 5-point Likert scale for collecting perceptions on identified indicators. Verbal scale construction was improved compared to the one used in LEADS 2018 leading to improvement in scale reliability as noticed in Cronbach Alpha values. The instrument was administered through web-enabled as well as on-ground visits across identified stakeholders.

The LEADS 2019 Survey questionnaire has two main parts:

- Assessing logistics efficiency across nine key indicators (through ten questions with questions on

“State Facilitation” and “State Coordination” clubbed under a single indicator) for mandatorily three states / UTs where respondents' have/had operations / experience pertaining to trade logistics in the past year; and

- Assessing logistics efficiency in more detail for one state / UT where a respondent had higher exposure and thereby better experience pertaining to trade logistics.

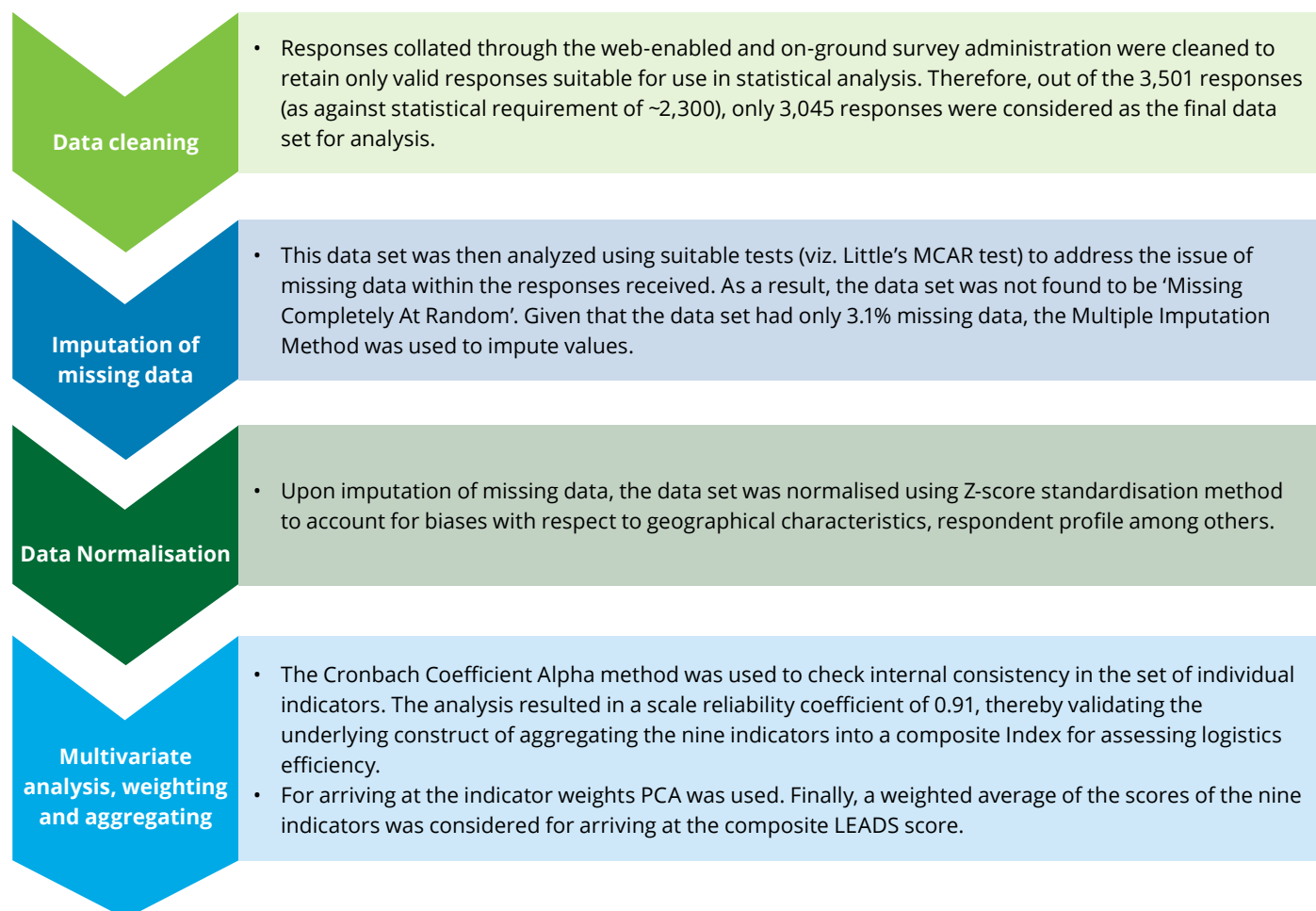
The draft survey was first pilot-tested with a variety of stakeholders and based on the feedback received, the finalised questionnaire was launched (Refer Annexure 3 for the survey questionnaire).

The study team visited 38 cities, including key industrial clusters and state capitals, for interacting with users, logistics service providers, associations, as well as state government officials to elicit a better response rate and also gain deeper insights into the issues prevalent in the states from the action planning perspective.

The survey was conducted over a period of eight weeks. A total of 3,045 responses were collected from around 1,150 respondents across states and UTs. Based on the number of responses individually for states and UTs, LEADS 2019 has covered 29 states and 5 UTs. Andaman & Nicobar Islands and Lakshadweep have not been assessed due to inadequate number of user / stakeholder responses.

Arriving at the LEADS Index: Statistical Data Aggregation

The study used standard statistical techniques to analyse and aggregate the responses received from the subjective assessment into the LEADS Index. Having collected responses through web-enabled and on-ground administration of the survey, various steps were undertaken including data cleaning, missing data imputation, normalisation, arriving at the weights of the indicators and finally, aggregating indicators into the composite LEADS Index. These steps have been described below:



The PCA results for states and UTs in the three relevant categories are presented below.

Exhibit 52 Principal Component Analysis results for 22 states

Component	Eigenvalue	Difference	Proportion	Cumulative
1	5.45	4.71	0.61	0.61
2	0.74	0.10	0.08	0.69
3	0.64	0.08	0.07	0.76
4	0.56	0.11	0.06	0.82
5	0.44	0.03	0.05	0.87
6	0.41	0.12	0.05	0.92
7	0.29	0.03	0.03	0.95
8	0.26	0.06	0.03	0.98
9	0.21		0.02	1.00

Exhibit 53 Principal Component Analysis results for UTs

Component	Eigenvalue	Difference	Proportion	Cumulative
1	5.04	4.18	0.56	0.56
2	0.87	0.12	0.10	0.66
3	0.74	0.18	0.08	0.74
4	0.56	0.06	0.06	0.80
5	0.50	0.00	0.06	0.86
6	0.50	0.20	0.06	0.91
7	0.30	0.04	0.03	0.95
8	0.26	0.03	0.03	0.97
9	0.23		0.03	1.00

Exhibit 54 Principal Component Analysis results for Hilly North-East cluster of states

Component	Eigenvalue	Difference	Proportion	Cumulative
1	4.77	3.68	0.53	0.53
2	1.09	0.15	0.12	0.65
3	0.95	0.30	0.11	0.76
4	0.64	0.24	0.07	0.83
5	0.41	0.02	0.05	0.87
6	0.39	0.11	0.04	0.92
7	0.27	0.02	0.03	0.95
8	0.25	0.03	0.03	0.98
9	0.22		0.02	1.00

The resultant indicator weights are as presented in Exhibit 55 below.

Exhibit 55: Indicator weights for computation of composite LEADS scores

Component	22 States	UTs	States in Hilly North-East Cluster
Availability of logistics infrastructure	0.12	0.12	0.10
Quality of logistics infrastructure	0.12	0.12	0.11
Quality of logistics services	0.12	0.12	0.13
Reasonableness of shipment prices	0.10	0.10	0.11
Timeliness of cargo delivery	0.11	0.11	0.13
Ease of tracking & tracing	0.10	0.11	0.09
Safety/Security of cargo movement	0.10	0.11	0.12
State Facilitation & Coordination	0.11	0.11	0.12
Efficiency of regulatory processes	0.11	0.11	0.11

Finally, Sensitivity Analysis was undertaken to check the robustness of the scores derived using the selected methods. For instance, alternative techniques for imputation of missing data such as single imputation method using mean or for normalisation were used with no resultant affect on the final scores of states confirming robustness of the scores.



Objective assessment: Adding data-based perspective

There have been very few studies or indices assessing trade or transport related performance through objective measures based on data. These data-based measures provide tangible outcomes to be compared across the administrative units being assessed for performance. Key concern, however, in use of objective measures has been its availability to enable a comprehensive assessment.

For instance, US Chambers of Commerce prepares Transportation Performance Index, which considers objective measures across the dimensions of supply, quality of service, and utilisation with parameters including access to ports / intermodal facilities, road roughness, delays, and reserve capacity. The study notes limitations on availability of data preventing use of some ideal indicators.

In order to enable such objective assessment of logistics ease in the context of India, presented below is a framework for consideration, improvement, and adoption over subsequent editions of LEADS. Objective assessment will critically depend on availability of data. Accordingly, guiding consideration for

identifying appropriate data points include:

- Coverage of the underlying construct for LEADS 2019,
- Coverage of logistics eco-system,
- Systems to capture such data,
- Periodicity of such measurement,
- Public availability of data,
- Consistency across states and UTs, and
- Consistency across sources.

Each state and UT has its own operating context and performance needs to be normalised to facilitate comparison across states / UTs. Parameters for such normalisation could include Gross State Value Added (GSVA), total traded volumes, total production / consumption volumes, habitable land area, total land area, and population.

The value chain analysis and stakeholder inputs indicate the following limitations on availability of data for objective assessment of logistics ease:

- Required indicators not measured quantitatively. For instance,
 - Logistics Service Providers (LSPs) service multiple states based on their connections, bandwidth, and demand for service. Number

of LSPs servicing a state, a potential measure of availability, is not practically feasible to be ascertained.

- Aspects, on account of nature of ownership, not reported periodically. For instance,
 - Given the fragmented nature of the industry, capacities created by unorganised players is not reported periodically at public sources.
 - Capacity created by industrial players for captive purposes is not reported periodically at public sources.
- Then there are those, while measurable, require massive studies to generate data. For instance,
 - While quality of roads can be measured through roughness indices, an exercise to measure roughness index across the road network in India will be massive.
- Aspects managed by private players and of commercial nature.
 - Quality of LSPs can potentially be measured through extent of compliance with SLAs, or number of grievances etc, however the same is not available publically.

Considering the above, having reference to data points used in global studies on logistics performance or trade related performance, and based on iterative rounds of discussions with academic and industry experts, data points were identified for their relevance and applicability in the Indian context. These sub-indicators for objective assessment of logistics ease across states / UTs are as follows:

Exhibit 56: Sub-indicators for objective assessment of logistics ease

	Indicators	Sub-indicators	
		Data points	Normalized for
Infrastructure	Availability of logistics infrastructure	<ul style="list-style-type: none"> Total length of road network Number of cities with a bypass (to ease traffic movement) Number of villages connected to state or national highway Rail Track kilometres Total capacity of Dry ports (including ICDs, CFSs, PFTs, MMLPs) Total capacity of air cargo terminals Cold storage capacity Total warehouse capacity (including state owned, central owned, private owned) Number of testing labs 	<ul style="list-style-type: none"> Population GSVA Habitable land area Total number of villages Total horticulture production
	Quality of logistics infrastructure	<ul style="list-style-type: none"> Total surfaced road network Length of multi-lane (two/four/six lane) national highways Roughness Index Percentage of ETC enabled toll plazas Value of ETC transactions Number of certified terminals and storages 	<ul style="list-style-type: none"> Population GSVA Habitable land area National Highways in the state Total number of toll plazas
Services	Quality of logistics services provided by service providers	<ul style="list-style-type: none"> Number of registered drivers for Goods Commercial Vehicles (GCVs) Number of trained individuals getting employed in training institutes /centres 	<ul style="list-style-type: none"> Total registered GCVs Number of enrolled individuals getting employed vis-à-vis total number of people getting enrolled in training institutes /centres
	Ease of arranging logistics at competitive prices	Applicable VAT on fuel throughout the year	
	Timeliness of cargo delivery	<ul style="list-style-type: none"> Percentage of BM road length under speed category 40 - 60 km No. of e-way bills extended Axle profile of commercial vehicles registered in the State/UTs 	<ul style="list-style-type: none"> No of e-way bills generated No of commercial vehicles
	Ease of track and trace	<ul style="list-style-type: none"> Total number of RFID readers installed in the state Number of mobile phone subscriptions Number of internet subscriptions 	<ul style="list-style-type: none"> GSVA Total tolled road (NH/SH)
	Safety and security of cargo	<ul style="list-style-type: none"> Number of FIRs during the year related to cargo damage due to arson/ riots/ strikes/union activities Total main line accidents of freight trains Number of Goods Commercial Vehicles (GCVs) accidents 	<ul style="list-style-type: none"> Total freight train movements Total no of registered Goods Commercial Vehicles (GCVs)

	Indicators	Sub-indicators
Operating & Regulatory Environment	State facilitation and coordination	<ul style="list-style-type: none"> Does the State/UT have a Logistics Policy/Scheme? Does the state have any other fund for logistics sector including transportation and logistics infrastructure developers, terminal service providers, transportation service providers, and logistics service providers? Does the state/UT plan for logistics infrastructure as part of the city development plan? Does the State/UT have a dedicated land bank for setting up of logistics facilities? Does the State/UT have any labour laws including definition/specification of minimum wages, standard working hours for the logistics sector? Amount of subsidy disbursed during the year by the state government for creation of transportation and logistics infrastructure Amount of subsidies utilised during the year for creation of transportation and logistics infrastructure Number of business applications received during the year from private players for setting up of logistics business as part of its Logistics Policy/Scheme (if any) Amount invested by the state government during the year in the following: <ol style="list-style-type: none"> Transport and logistics infrastructure Transport and logistics technology and R&D Transport and logistics sector skill development
	Efficiency of regulatory processes	<ul style="list-style-type: none"> Does the state have a nodal officer for liaising/coordinating with central agencies including regulatory authorities for setting up logistics related facilities? Does the state have a grievance redress mechanism for logistics sector? Are the State/UT transport databases integrated with VAHAN and SARATHI? Has the State/UT entered into MoUs with Central Government agencies for creation of logistics infrastructure?

Sources explored for availability of data included various publications / databases / annual reports / data handbooks available with public forums including central government, and state government agencies. Additionally, interactions were also conducted with state government officials at various levels during on-ground visits to further explore availability.

Considering that data sought was on varied aspects of logistics and that logistics as a subject is evolving and gaining attention, no central repository maintains all data points pertaining to logistics. Multiple government agencies have data points concerning respective portfolios.

Data generated by these agencies are for their own purposes – mostly for infrastructure planning / policy preparation and accordingly do not

follow consistent time horizons, administrative units, and definitions for underlying factors constraining their use for purposes of benchmarking of performance.

Key issues impacting availability of data for objective assessment of logistics ease were as follows:

- Data availability is limited to infrastructure dimension of logistics ease, and even that is not comprehensive. For instance,
 - While data ideally required for assessment of availability of logistics terminals is commodity wise storage and handling capacity at such terminals, data available is limited to number of such terminals only.
 - Service related aspects on quality of service providers, skilling initiatives and their

effectiveness, extent of track and trace on real time basis, and extent of road safety or accident are not measured and reported periodically.

- Administrative unit, considered for capturing data, varies across different government agencies. For instance:
 - While Indian Railways follows its 16 zones as the unit, other infrastructure ministries follow state or district as the unit.
 - While some data is available at district level, other is at urban centre level, yet other is at SEZ, industrial cluster level.
- Reporting of data is not consistent in time series. While some data points are available for most recent financial year, others are of different vintage.
- Coverage of data on publicly and privately owned infrastructure is not consistent across segments of

infrastructure. For instance,

- While capacity installed by CWC, SWCs, and FCI is available, capacity set up by private agencies, whether organised or unorganised, is not reported periodically.

Annexure- 2 presents the data collected during the study along the identified sub-indicators. Evidently, this data set is not adequate to enable benchmarking or meaningful comparison of logistics performance across states and UTs.

Appropriate institutional set up and emphasis on importance of assessment of logistics performance could drive agencies to invest in collection of these and more data points.

Once data points are available, next steps would include normalisation with respect to an appropriate parameter – say total trade volumes, GSVA, habitable area among others. For instance, while it will be more meaningful to normalise road length and rail track length with respect to habitable area, capacity of storage spaces are better normalised with respect to trade volumes.

These normalised sub-indicators may be rescaled to a scale of 1 to 5 to arrive at sub-indicator wise scores. Aggregation of these sub-indicators with appropriate weights, possibly equal, will help arrive at indicator level scores and so on to overall scores on objective assessment.

Scores on subjective and objective assessments may be examined independently for any correlation or inferences or may be clubbed in a suitable proportion, arrived at through industry consultations based on extent of data availability, to arrive at an aggregate LEADS score.



Annexure 2:

Summary of objective data available in the Indian context

Data points for states/UTs, available in various publications / public sources and understood to be periodically updated, are listed below:

- Total geographical area
- Total production of horticulture and plantation crops (fruits, vegetables, marine, and other perishables) during the year
- Total agricultural production during the year
- Total forest cover
- Total hilly area
- Gross state value added by economic activity at constant (2011-12) prices
- Length of surfaced/unsurfaced road network (National highways, state highways, urban roads, rural roads, project roads)
- Total length of railway lines (Route kilometers, running track kilometers, total track kilometers)
- Total number of registered Goods commercial vehicles (GCVs)
- Number of road accidents during the year of Goods commercial vehicles
- Total number of registered drivers for Goods Commercial Vehicles (GCVs)
- Total number of villages
- Population

Data points for states/UTs, available with specific agencies and published on a need basis rather than periodically, are as follows:

- Total number of toll points along national and state highways
- Total number of ETC enabled toll points
- Number of dry ports (ICD/CFS/AFS/PFT)
- Number and capacity of cold storages
- Total transactions across all the toll points
- Number and capacity of warehouses (CWC, SWCs, FCI owned and hired)
- Number of industrial clusters (excluding IT SEZs or similar service sector clusters)
- Number of mobile phone subscriptions
- Number of internet subscriptions
- Total number of training centres for skilling of logistics sector professionals
- Number of individuals getting enrolled in logistics training institutes/centres during the year
- Applicable VAT on diesel throughout the year
- Number of testing labs

Some of the above data points collected during the exercise are presented for reference.

The key sources explored for data points include:

- Various reports of Directorate General of Commercial Intelligence and Statistics
- Basic Road Statistics of India, Ministry of Road Transport & Highways
- National Highways Authority of India
- Road Transport Yearbook, Ministry of Road Transport & Highways
- Indian Railways Year Book, Ministry of Railways
- Census 2011
- Statistical Year Book India 2018, Ministry of Statistics and Programme Implementation
- The Department of Agriculture, Cooperation & Farmers Welfare
- Handbook of Statistics on Indian States, Reserve Bank of India
- State of Forest Report, 2017, Forest Survey Of India
- Inter-Ministerial Committee (IMC), Ministry of Commerce and Industry
- Lok Sabha Questions
- The Fertiliser Association of India
- Food Corporation of India
- Central Warehousing Corporation
- Directorate of Marketing and Inspection
- National Horticulture Board
- National Horticulture Mission
- Ministry of Food Processing Industries
- SEZ, Ministry of Commerce and Industry
- Development Commissioner, Ministry of Micro, Small & Medium Enterprises
- The Indian Telecom Services Performance Indicators, Telecom Regulatory Authority of India
- Logistics Sector Skill Council
- State government websites

Data Collected: Normalising Parameters

States	Population	GSVA (in INR Lakh)	Total geographical area (in '000 hectares)	Total forest cover (in '000 hectares)	Total hilly area (in '000 hectares)	Total production of Horticulture and plantation crops (in '000 MT)	Total production of food grains (in '000 MT)
	2011	2016-17	2014-15	2017	2017	2016-17	2015-16
Andaman and Nicobar	3,80,581	1,84,399.93	824.90	674.20	-	-	-
Andhra Pradesh	8,45,80,777	2,70,61,431.00	16,296.80	2,814.70	-	24,082.92	23,969.28
Arunachal Pradesh	13,83,727	8,55,935.00	8,374.30	6,696.40	8,374.30	208.70	472.60
Assam	3,12,05,576	1,06,03,333.73	7,843.80	2,810.50	1,929.50	5,913.97	7,556.82
Bihar	10,40,99,452	1,27,34,624.93	9,416.30	729.90	-	18,881.02	29,006.82
Chandigarh	10,55,450	3,07,725.00	11.40	2.16	-	-	-
Chhattisgarh	2,55,45,198	1,31,16,639.52	13,519.20	5,554.70	-	9,438.52	7,688.73
Dadra and Nagar Haveli	3,43,709	-	49.10	20.70	-	-	-
Daman and Diu	2,43,247	-	11.10	2.05	-	-	-
Delhi	1,67,87,941	66,11,150.98	148.30	19.24	-	-	118.10
Goa	14,58,545	31,00,406.57	370.20	222.90	-	-	182.11
Gujarat	6,04,39,692	5,59,55,194.86	19,602.00	1,475.70	-	23,401.84	36,826.20
Haryana	2,53,51,462	1,89,00,306.79	4,421.20	158.80	-	7,093.26	25,447.50
Himachal Pradesh	68,64,602	58,48,637.11	5,567.30	1,510.00	5,567.30	2,452.04	1,476.21
Jammu & Kashmir	1,25,41,302	42,97,845.42	22,223.60	2,324.10	22,223.60	3,683.69	1,262.64
Jharkhand	3,29,88,134	89,14,614.00	7,971.60	2,355.30	-	4,468.05	5,424.45
Karnataka	6,10,95,297	2,95,99,983.88	19,179.10	3,755.00	4,835.30	21,298.97	59,185.00
Kerala	3,34,06,061	1,58,97,007.79	3,886.00	2,032.10	2,955.20	9,926.36	713.07
Lakshadweep	64,473	-	3.00	2.71	-	-	-
Madhya Pradesh	7,26,26,809	2,69,63,766.00	30,825.20	7,741.40	-	26,643.74	42,736.72
Maharashtra	11,23,74,333	7,27,53,859.27	30,771.30	5,068.20	6,990.50	21,994.28	1,05,861.06
Manipur	28,55,794	5,78,397.00	2,232.70	1,734.60	2,232.70	872.39	792.57
Meghalaya	29,66,889	8,21,780.37	2,242.90	1,714.60	2,242.90	1,075.93	461.49
Mizoram	10,97,206	7,11,587.90	2,108.10	1,818.60	2,108.10	625.02	121.88
Nagaland	19,78,502	6,27,668.62	1,657.90	1,248.90	1,657.90	1,069.92	914.89
Odisha	4,19,74,218	1,76,13,195.33	15,570.70	5,134.50	-	11,800.21	10,313.20
Puducherry	12,47,953	9,20,615.37	48.00	5.37	-	-	372.13
Punjab	2,77,43,338	1,65,78,723.29	5,036.20	183.70	-	6,512.22	35,394.70
Rajasthan	6,85,48,437	3,12,61,523.96	34,223.90	1,657.20	-	4,387.99	26,872.07
Sikkim	6,10,577	10,38,079.88	709.60	334.40	709.60	299.80	109.26
Tamil Nadu	7,21,47,030	4,35,01,229.65	13,006.00	2,628.10	1,938.40	18,148.40	39,387.78
Telangana	3,51,93,978	1,74,78,073.32	11,231.00	2,041.90	-	3,654.87	14,888.80
Tripura	36,73,917	-	1,048.60	772.60	1,938.40	1,431.50	779.25
Uttar Pradesh	19,98,12,341	4,71,15,445.00	24,092.80	1,467.90	1,048.60	38,863.41	1,73,442.64
Uttarakhand	1,00,86,292	93,93,471.63	5,348.30	2,429.50	5,348.30	1,661.39	7,820.68
West Bengal	9,12,76,115	3,03,15,706.00	8,875.20	1,684.70	314.90	30,008.15	27,992.38
Source	Census 2011	Ministry of Statistics and Programme Implementation	Statistical Year Book India 2018, Ministry of Statistics & Programme Implementation	State of Forest Report, 2017 Forest Survey Of India	State of Forest Report, 2017 Forest Survey Of India	The Department of Agriculture, Cooperation and Farmers Welfare	Handbook of Statistics on Indian States, RBI

Data Collected: Infrastructure (1/2)

States	Length of State Highways (in Km)	Length of District Roads (in Km)	Length of Urban Roads (in Km)	Length of Rural Roads (in Km)	Length of Project Roads (in Km)	Length of national highway (in Km)	Length of national highway (less than two lane) (in Km)	Length of national highway (two- lane) (in Km)	Length of national highway (four- lane and above) (in Km)
As on 31.03.2016									
Andaman and Nicobar	266	139	143	437	177	331	319	11	1
Andhra Pradesh	6,485	35,471	24,124	97,666	5,156	5,465	608	2,993	1,864
Arunachal Pradesh	8,123	-	266	14,509	5,282	2,513	2,091	403	19
Assam	2,530	5,788	6,306	2,91,933	19,142	3,821	680	2,527	614
Bihar	4,253	10,634	8,826	1,75,373	2,559	4,839	1,081	2,970	788
Chandigarh	200	83	2,523	-	-	15	-	-	15
Chhattisgarh	4,462	25,308	12,247	35,048	15,666	3,078	558	2,166	354
Dadra and Nagar Haveli	28	190	83	802	-	31	31	-	-
Daman and Diu	22	89	145	218	-	22	22	-	-
Delhi	-	2,462	15,083	-	-	80	-	-	80
Goa	279	1,173	865	13,303	181	262	35	190	37
Gujarat	17,201	30,809	27,360	85,989	12,814	4,971	571	2,013	2,387
Haryana	1,801	21,817	14,680	6,974	589	2,622	18	1,730	874
Himachal Pradesh	1,466	2,438	1,127	44,755	3,331	2,642	1,101	1,524	17
Jammu & Kashmir	130	3,917	1,668	22,698	18,702	2,601	690	1,737	174
Jharkhand	1,296	9,310	6,003	36,076	11,447	2,654	357	2,022	275
Karnataka	19,578	49,909	51,357	2,00,389	17,779	6,503	1,516	3,207	1,780
Kerala	4,342	27,471	30,788	1,27,985	8,411	1,812	339	1,378	95
Lakshadweep	-	-	2	207	-	-	-	-	-
Madhya Pradesh	10,934	19,429	15,741	2,03,542	35,100	5,194	685	3,271	1,238
Maharashtra	38,999	1,09,531	23,870	4,13,146	20,436	7,435	1,030	3,070	3,335
Manipur	715	9,466	151	11,121	1,577	1,746	272	1,442	32
Meghalaya	772	5,062	171	13,534	985	1,203	666	480	57
Mizoram	170	1,580	395	3,487	1,095	1,381	1,161	220	-
Nagaland	722	6,458	99	26,631	1,054	1,150	1,062	88	-
Odisha	4,187	14,694	20,842	2,17,919	25,603	4,838	261	3,786	791
Puducherry	89	302	982	1,702	34	64	-	40	24
Punjab	1,133	6,930	17,534	70,362	9,651	2,769	174	1,859	736
Rajasthan	15,188	22,571	27,544	1,71,259	9,811	7,906	728	4,511	2,667
Sikkim	701	1,415	48	4,796	820	463	216	247	-
Tamil Nadu	11,752	45,538	24,496	1,65,292	9,011	4,946	125	2,766	2,055
Telangana	2,731	22,160	10,256	81,640	4,089	2,696	319	1,458	919
Tripura	329	1,189	602	35,041	1,400	805	621	184	-
Uttar Pradesh	7,147	53,373	62,565	2,45,396	45,448	8,483	844	5,224	2,415
Uttarakhand	4,521	4,791	5,573	24,755	18,664	2,714	1,983	692	39
West Bengal	3,612	10,444	95,267	1,91,354	13,096	2,956	539	1,394	1,023
Source	Basic Road Statistics of India, 2015-16, Ministry of Road Transport & Highways								

Data Collected: Infrastructure (2/2)

States	Total Track kilometres	Route kilometres	Running Track kilometres	Number of CFS	Number of ICDs	Number of cold storages	Capacity of cold storages	Number of warehouses	Total warehouse capacity (In '000 metric tonnes)
	As on 31.03.2017			As on 01.01.2018		As on 31.03.2018		FCI: as on 31.01.2018/ CWC & SWC: as on 31.03.2017	As on 31.03.2017
Andaman and Nicobar	-	-	-	-	-	3	810	1	10
Andhra Pradesh	7,282	3,817	5,704	6	2	452	18,36,366	141	2,997
Arunachal Pradesh	26	12	12	-	-	2	6,000	14	27
Assam	3,450	2,440	2,552	-	-	37	1,63,258	81	665
Bihar	6,772	3,714	4,907	-	-	306	14,15,595	93	1,450
Chandigarh	66	16	16	-	1	7	12,462	-	-
Chhattisgarh	2,800	1,216	2,032	-	1	98	4,84,331	193	2,612
Dadra and Nagar Haveli	-	-	-	-	-	-	-	-	-
Daman and Diu	-	-	-	-	-	-	-	-	-
Delhi	699	183	339	-	-	97	1,29,857	15	513
Goa	98	69	69	1	-	29	7,705	2	45
Gujarat	7,746	5,259	6,321	24	7	890	35,15,976	88	1,408
Haryana	3,156	1,710	2,441	3	6	352	7,91,780	317	6,954
Himachal Pradesh	358	296	301	-	1	65	1,25,967	18	57
Jammu & Kashmir	491	298	366	-	1	55	1,82,527	31	275
Jharkhand	6,105	2,455	3,975	-	1	58	2,36,680	29	327
Karnataka	5,417	3,424	4,361	7	-	209	6,02,457	200	2,572
Kerala	2,074	1,045	1,709	10	2	199	81,705	92	921
Lakshadweep	-	-	-	-	-	1	15	-	-
Madhya Pradesh	9,491	5,113	7,662	-	7	302	12,81,411	327	6,423
Maharashtra	11,188	5,784	8,303	41	9	603	9,79,607	273	4,426
Manipur	18	13	13	-	-	3	7,100	5	32
Meghalaya	13	9	9	-	-	4	8,200	24	29
Mizoram	6	2	2	-	-	3	3,971	-	25
Nagaland	22	11	11	-	-	4	7,350	6	46
Odisha	5,157	2,598	3,972	-	2	177	5,66,321	106	1,147
Puducherry	26	22	22	2	-	3	85	-	70
Punjab	3,603	2,269	2,744	5	2	672	22,01,386	458	13,127
Rajasthan	8,670	5,894	7,645	2	7	167	5,61,293	174	2,759
Sikkim	-	-	-	-	-	2	2,100	-	11
Tamil Nadu	6,606	4,028	5,358	48	9	173	3,47,583	106	2,072
Telangana	3,146	1,823	2,545	2	1	-	-	130	2,119
Tripura	256	203	203	-	-	14	45,477	3	88
Uttar Pradesh	15,588	9,167	12,563	9	8	2,368	1,45,00,773	307	8,154
Uttarakhand	465	340	400	-	2	47	1,62,821	25	302
West Bengal	10,612	4,139	7,345	11	1	511	59,40,511	128	2,308
Source	Indian Railways Year Book 2017-18, Indian Railways			Ministry of Commerce and Industry	Ministry of Commerce and Industry	Ministry of Agriculture and Farmers Welfare	Ministry of Agriculture and Farmers Welfare	The Fertilizer Association of India; Ministry of Consumer Affairs, Food & Public Distribution	The Fertilizer Association of India; Ministry of Consumer Affairs, Food & Public Distribution

Data Collected: Services

States	Total Number of toll points (along the NH)	Total Number of ETC enabled toll points (along the NH)	Value of transactions across all the toll points (Rs crores)	Number of registered Goods Commercial Vehicles (GCVs) (light motor vehicles)	Number of registered Goods Commercial Vehicles (GCVs) (multi axle)	Total number of valid professional drivers' licenses issued	Number of road accidents during the year of Goods Commercial Vehicles
			2017-18	31.03.2016	31.03.2016	31.03.2016	2017
Andaman and Nicobar	-	-	-	2,730	-	25,414	27
Andhra Pradesh	40	25	1,496.57	1,88,543	1,53,485	5,67,825	5,360
Arunachal Pradesh	-	-	-	11,823	9,573	18,215	29
Assam	6	-	-	1,14,591	1,40,338	3,55,367	1,522
Bihar	18	10	811.98	42,230	99,012	1,31,584	2,727
Chandigarh	1	1	-	8,798	1,870	25,774	34
Chhattisgarh	10	2	162.17	85,204	1,19,488	1,09,869	3,244
Dadra and Nagar Haveli	-	-	-	4,186	5,425	3,266	24
Daman and Diu	-	-	-	1,843	4,465	1,268	13
Delhi	3	2	-	-	2,81,159	-	902
Goa	-	-	-	17,052	43,781	98,408	427
Gujarat	39	36	2,334.63	6,33,599	3,75,265	40,56,993	4,092
Haryana	16	6	998.04	1,82,776	3,67,730	5,61,294	3,126
Himachal Pradesh	-	-	-	67,876	77,101	2,13,598	529
Jammu & Kashmir	5	1	79.11	74,598	48,124	1,56,111	975
Jharkhand	5	3	236.32	90,068	68,440	1,99,149	1,220
Karnataka	37	29	1,773.71	3,67,572	2,90,415	20,58,302	8,536
Kerala	7	1	167.76	3,66,326	1,90,469	21,76,908	4,183
Lakshadweep	-	-	-	1,202	-	823	-
Madhya Pradesh	38	21	702.39	1,97,240	1,77,352	-	11,065
Maharashtra	34	36	2,708.61	9,27,903	4,68,810	1,16,14,632	8,405
Manipur	-	-	-	4,515	14,134	43,679	114
Meghalaya	2	2	-	12,051	3,00,135	1,24,985	145
Mizoram	-	-	-	14,952	5,597	-	28
Nagaland	-	-	-	21,998	1,13,330	1,01,436	109
Odisha	11	8	603.76	1,65,858	1,58,247	3,39,054	2,915
Puducherry	-	-	-	11,439	2,285	2,38,773	157
Punjab	12	10	690.16	1,05,340	2,47,087	-	1,286
Rajasthan	66	33	3,276.36	99,763	5,17,604	-	5,493
Sikkim	-	-	-	1,473	3,686	54,485	10
Tamil Nadu	42	38	2,378.69	4,23,098	5,49,461	51,40,928	9,988
Telangana	12	12	854.60	-	3,62,650	-	4,006
Tripura	-	-	-	10,022	8,580	63,472	97
Uttar Pradesh	54	34	2,411.84	3,16,815	2,45,688	26,46,900	8,588
Uttarakhand	2	-	19.06	39,302	45,355	90,215	289
West Bengal	20	13	1,178.15	-	4,07,229	-	3,153
Source	Toll Information System, National Highways Authority of India	National Highways Authority of India	Lok Sabha Question	Road Transport Yearbook, 2015-16, Ministry of Road Transport and Highways	Road Transport Yearbook, 2015-16, Ministry of Road Transport and Highways	Road Transport Yearbook, 2015-16, Ministry of Road Transport and Highways	Road Accidents in India – 2017, Ministry of Road Transport and Highways

Annexure 3:

LEADS Questionnaire

Logistics Ease Across Different States (LEADS) Survey 2019

Department of Commerce, Ministry of Commerce & Industry, Government of India has commissioned Deloitte for the second edition of LEADS (Logistics Ease across Different States) Survey to assess the logistics efficiency across different States/Union Territories. This survey assesses how stakeholders across the logistics value chain experience the performance of associated functions across various States/UTs. The Ministry intends to bring focus to opportunities for improving logistics performance for trade across States/UTs.

We invite you to participate in this survey as you are an important stakeholder in the logistics sector and your inputs are critical for the policy makers. We will collate all response, analyse and present the overall findings to policy makers

in the Ministry at an aggregate level. Your individual response will be kept confidential.

Survey Guidance/Instructions

General

- In this survey, 'performance of the State/UT' refers to performance of the logistics community operating across the State/UT comprising both government and private sector participants. It is not a reflection of the performance of the state government/UT administration alone but of the overall logistics ecosystem in the state/UT.
- Please select answers/options that best represent your experience of the logistics performance across your chosen State(s)/UT(s) against generally accepted industry standards or practices.

- Unless specifically requested otherwise, please respond to this survey with respect to your recent (last 1 year) experience with logistics performance across State(s)/UT(s)

Follow-up discussion / views

- If you would like us to contact you for a follow-up discussion or would like to provide further information / views, please contact us at inmocileads@deloitte.com along with your contact details and we shall contact you as soon as possible.

Responding to questions

- This survey comprises two parts and will take approximately 20-30 minutes.
- Please take the survey in one sitting.

THANK YOU VERY MUCH FOR YOUR TIME AND PARTICIPATION IN THIS SURVEY!

BEGIN SURVEY

For each question, please select the option that best describes your current work. Questions marked with * are mandatory for beginning the survey.

1. Name of respondent:

2. Name of the Company:

3. Location:

4. Nature of market you primarily deal with*:

- ☐ EXIM (International)
- ☐ Domestic
- ☐ Both

5. Your position in your company / firm:

- ☐ Senior Management
- ☐ Middle Management (Manager and above)
- ☐ Supervisor
- ☐ Operations executive
- ☐ Other

6. Freight transport mode you typically deal with*:

- ☐ Road
- ☐ Rail
- ☐ Air Transport
- ☐ Shipping

7. Commodity type you primarily deal with*:

- ☐ Bulk/Break Bulk
- ☐ Container Cargo
- ☐ Perishable Cargo
- ☐ Express Cargo
- ☐ Special Cargo (Project Cargo, Hazardous, High Value Commodities, etc.)
- ☐ Others: Please specify

8. Please indicate the predominant nature of your involvement in the logistics chain*:

- ☐ Trader/Shipper
- ☐ Transport Service Provider (including Road Haulier, Rail Operator, Shipping Line, Airline)
- ☐ Terminal Infrastructure Service Provider (including ICD, CFS, PFT, AFS, air cargo terminal, port terminal, warehouse, cold storage operator)
- ☐ Logistics Service Provider (including Freight forwarder, customs broker, air cargo agent, 3rd Party Logistics Service Provider)

Please select top three (3) States/UTs where you perform logistics operations and/or are familiar with ground realities of logistics*:

State/ UT 1

State/ UT 2

State/ UT 3

CONTINUE

Part A

This part of the survey comprises three main sections and all the questions are mandatory. Please select options based on your perception of the entire logistics chain across the States/UTs.

Section 1: Logistics Infrastructure

1.	Rate the Availability of logistics infrastructure# in your chosen States/UTs.				
	(Availability here refers to adequate supply of infrastructure facilities in relation to demand.)				
	Very Poor	Poor	Average	Good	Very Good
State/ UT 1					
State/ UT 2					
State/ UT 3					

#Logistics infrastructure includes road network, rail network, ports, airports, CFSSs, ICDs, PFTs, AFSs, ICPs, logistics parks, transport hubs, warehouses, cold storage units, testing labs, weighbridges, handling equipment, rolling stock, etc.

2.	Rate the Quality of logistics infrastructure# in your chosen States/UTs.				
	(Quality here refers to operations and maintenance protocols, and efficiency of infrastructure facilities, equipment and rolling stock)				
	Very Poor	Poor	Average	Good	Very Good
State/ UT 1					
State/ UT 2					
State/ UT 3					

Do you have any comments/suggestions on the Availability and Quality of logistics infrastructure in these states? If so, please share your views below:

State/ UT 1: _____

State/ UT 2: _____

State/ UT 3: _____

Section 2: Logistics Service Provision

3.	Rate the Quality of logistics services [^] in your chosen States/UTs.				
	(Quality here refers to availability and efficiency of services)				
	Very Poor	Poor	Average	Good	Very Good
State/ UT 1					
State/ UT 2					
State/ UT 3					
[^] Logistics infrastructure include haulage / transportation by different modes (line haul and last mile), handling & storage of cargo and containers, freight forwarding, customs broking and value adding logistics activities (consolidation, repackaging, labelling, last-mile connectivity, etc.)					

4.	Rate the Reasonableness of shipment prices ^{##} paid by you in your chosen States/UTs.				
	Very Poor	Poor	Average	Good	Very Good
State/ UT 1					
State/ UT 2					
State/ UT 3					
^{##} Shipment prices include prices for transportation, handling, storage, value added services, as also for brokerage, commission etc.					

5.	Rate the Timeliness of cargo delivery to/from your chosen States/UTs.				
	(Timeliness refers to delivery within scheduled/expected time)				
	Very Poor	Poor	Average	Good	Very Good
State/ UT 1					
State/ UT 2					
State/ UT 3					

6.	Evaluate the Ease of tracking & tracing cargo moving to/from your chosen States/UTs.				
	(Ease refers to the ability to obtain frequent, consistent & accurate information regarding movement, storage and condition of cargo)				
	Very Poor	Poor	Average	Good	Very Good
State/ UT 1					
State/ UT 2					
State/ UT 3					

7. Evaluate the **Safety/Security of cargo movement** to/from your chosen States/UTs.

(**Safety/Security** refers to **consistency in delivery without damage/deterioration/pilferage/loss** of cargo due to logistics inefficiencies, accidents or thefts)

	Very Poor	Poor	Average	Good	Very Good
State/ UT 1					
State/ UT 2					
State/ UT 3					

Do you have any comments/suggestions on Logistics Service Provision with respect to Quality, Pricing, Timeliness, Track and Trace, and Safety/Security in these states? If so, please share your views below:

State/ UT 1: _____

State/ UT 2: _____

State/ UT 3: _____

Section 3: Operating and Regulatory Environment impacting logistics infrastructure and service provision

8. Evaluate the **Extent of facilitation provided by the state government/UT administration for encouraging logistics** in your chosen States/UTs.

(**Facilitation** here refers to existence and effectiveness of policies related to logistics/ labour, ease of availing land and ancillary facilities, maintenance of law and order, and provision of tax breaks/subsidies/access to credit)

	Very Poor	Poor	Average	Good	Very Good
State/ UT 1					
State/ UT 2					
State/ UT 3					

9. Evaluate the **Extent of coordination undertaken by the state government/UT administration for encouraging logistics** in your chosen States/UTs.

(**Coordination** here refers to efforts undertaken by the state government/UT administration to proactively make available the agencies and infrastructure under the control of the central government, interact with private sector, unions, etc.)

	Very Poor	Poor	Average	Good	Very Good
State/ UT 1					
State/ UT 2					
State/ UT 3					

10. Assess the **Efficiency of regulatory processes[§]** in your chosen States/UTs.

(**Efficiency** refers to **speed, simplicity, transparency in processing, ease of documentation**)

	Very Poor	Poor	Average	Good	Very Good
State/ UT 1					
State/ UT 2					
State/ UT 3					

[§]**Regulatory processes** include those relating to customs, health, sanitary & phytosanitary, quarantine, drug controller, FSSAI, RTOs, GST and all other such agencies

Do you have any comments, suggestions on the Operating and Regulatory Environment in terms of extent of Facilitation, Coordination and Efficiency in these states? If so, please share your views below:

State/ UT 1: _____

State/ UT 2: _____





State/ UT 3: _____








Part B

This part of the survey is to seek your opinion on specific components of the three dimension of logistics - infrastructure, services, and operating and regulatory environment. We have categorised the questions along these dimensions.

We request you to choose the transport mode(s), which you are most familiar with and respond to the respective questions:

	<div>Road Transportation</div> <input type="checkbox"/>		<div>Rail Transportation</div> <input type="checkbox"/>		<div>Sea Transportation</div> <input type="checkbox"/>		<div>Air transportation</div> <input type="checkbox"/>
--	---	---	---	---	--	---	--

Additionally we request your inputs on other dimensions categorised as below:

	<div>ICDs, CFS, PFT, MMLP, Transport Hubs</div> <input type="checkbox"/>		<div>Warehousing</div> <input type="checkbox"/>		<div>Government regulation</div> <input type="checkbox"/>
	<div>Logistics services</div> <input type="checkbox"/>		<div>Government facilitation</div> <input type="checkbox"/>		

VP = Very Poor, P = Poor, Av = Average, G = Good, VG = Very Good

1. Rate the following aspects/dimensions related to road network and transportation for your selected States/UTs

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Availability of road network															
b. Availability of fleet (Goods Commercial Vehicles)															
c. Quality of road network															
d. Quality of fleet (Goods Commercial Vehicles)															
e. Quality (availability and efficiency) of road transportation services															
f. Knowledge and competence of road hauliers															
g. Extent of technology adoption															
h. Provision of facility for online document sharing and payments															
i. Reasonableness of price paid for road transportation															
j. Extent of timeliness of road transportation															

2. Please rate the following aspects/dimensions with respect to Regional Transport Offices (RTOs) for your selected States/UTs.

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Ease of obtaining permits/licenses															
b. Knowledge and competence of RTO officials															
c. Extent of technology adoption															
d. Provision of facility for online document sharing and payments															
e. Extent of obtaining permits/licenses on time															

VP = Very Poor,

P = Poor,

Av = Average,

G = Good,

VG = Very Good

3. Rate the following aspects/dimensions of infrastructure at inter-state border check points for your selected States/UTs

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Availability of weigh-bridges, parking spaces, and utilities															
b. Quality of weigh-bridges and utilities															

4. Rate the following aspects/dimensions related to rail network and transportation for your selected States/UTs.

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Availability of rail network															
b. Availability of rolling stock															
c. Quality of rail network															
d. Quality of rolling stock															
e. Quality (availability and efficiency) of rail transportation services															
f. Knowledge and competence of rail operators															
g. Extent of technology adoption															
h. Provision of facility for online document sharing and payments															
i. Reasonableness of price paid for rail transportation															
j. Extent of timeliness of rail transportation															

VP = Very Poor,

P = Poor,

Av = Average,

G = Good,

VG = Very Good

5. Rate the following aspects/dimensions of port terminal infrastructure and services for your selected States/UTs

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Availability of ports															
b. Quality of ports															
c. Quality (availability and efficiency) of services provided at the ports															
d. Knowledge and competence of service providers at the ports															
e. Extent of technology adoption															
f. Provision of facility for online document sharing and payments															
g. Reasonableness of price paid for logistics services at the ports															
h. Extent of timeliness in cargo handling at ports															

6. Rate the following aspects/dimensions of air cargo terminal infrastructure and services for your selected States/UTs

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Availability of air cargo terminal infrastructure															
b. Quality of air cargo terminal infrastructure															
c. Quality (availability and efficiency) of services provided at the air cargo terminal															
d. Knowledge and competence of service providers at the air cargo terminal															
e. Extent of technology adoption															
f. Provision of facility for online document sharing and payments															
g. Reasonableness of price paid for logistics services at the air cargo terminal															
h. Extent of timeliness in cargo handling at air cargo terminal															

VP = Very Poor,

P = Poor,

Av = Average,

G = Good,

VG = Very Good

7. Rate the following aspects/dimensions of port terminal infrastructure* and services for your selected States/UTs

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Availability of Road, Rail and IWT terminal infrastructure															
b. Availability of cargo and container equipment															
c. Quality of Road, Rail and IWT terminal infrastructure															
d. Quality of cargo and container equipment															
e. Quality (availability and efficiency) of services provided at the Road, Rail and IWT terminals															
f. Knowledge and competence of service providers at the Road, Rail and IWT terminals															
g. Extent of technology adoption															
h. Provision of facility for online document sharing and payments															
i. Reasonableness of price paid for logistics services at the Road, Rail and IWT terminals															
j. Extent of timeliness in cargo handling at Road, Rail and IWT terminals															

*Here road and rail terminal include ICDs/CFSS/PFTs/MMLPs/Transport Nagars

Please indicate the warehousing category for which you are providing responses:

- Warehouses
- Cold Storages
- Both

VP = Very Poor,

P = Poor,

Av = Average,

G = Good,

VG = Very Good

8. Rate the following aspects/dimensions of Warehousing infrastructure and services for your selected States/UTs

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Availability of warehouses and cold storages															
b. Availability of cargo and container equipment at warehouses and cold storages															
c. Quality of warehouses and cold storages															
d. Quality of cargo and container equipment at warehouses and cold storages															
e. Quality (availability and efficiency) of services provided by warehouse and cold storage operators															
f. Knowledge and competence of warehouse and cold storage operators															
g. Extent of technology adoption															
h. Provision of facility for online document sharing and payments															
i. Reasonableness of price paid for warehousing and cold storage															
j. Extent of timeliness in cargo handling at warehouses and cold storages															

VP = Very Poor,

P = Poor,

Av = Average,

G = Good,

VG = Very Good

9. Please rate the following aspects/dimensions with respect to the services provided by Logistics Service Providers for your selected States/UTs.

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Quality (Availability and efficiency) of services provided by service providers															
b. Knowledge and competence of logistics service providers															
c. Extent of technology adoption															
d. Provision of facility for online document sharing and payments															
e. Reasonableness of price paid for availing logistics services															
f. Extent of timeliness in service provision															

10. Please rate the extent of informal payments solicited at any stage for cargo movement in your selected States/UTs.

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. In transit: Road															
b. In transit: Rail															
c. At terminals															

11. Please rate the following aspects/dimensions with respect to Customs for your selected States/UTs.

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Ease of obtaining approvals/ clearances															
b. Consistency in implementation of regulatory provisions															
c. Extent of technology adoption															
d. Provision of facility for online document sharing and payments															
e. Extent of obtaining approvals/ clearances on time															

VP = Very Poor,

P = Poor,

Av = Average,

G = Good,

VG = Very Good

12. Rate the following aspects/dimensions of other regulatory agencies (Participatory Government Agencies) for your selected States/UTs.

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Ease of obtaining approvals/ clearances															
b. Availability of testing laboratories															
c. Quality of testing laboratories															
d. Ease of obtaining certifications/ test reports															
e. Knowledge and competence of inspection officials															
f. Extent of technology adoption															
g. Provision of facility for online document sharing and payments															
i. Extent of obtaining certifications/ test reports															

13. With respect to track and trace, rate your selected States/UTs on the following:

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Availability of mobile connectivity															
b. Availability of internet connectivity															
c. Quality of mobile connectivity															
d. Quality of internet connectivity															
e. Real time information availability															
f. Adoption of RFID tags/GPS devices by the industry															
g. Provision of RFID readers along the routes and terminals															

14. With respect to state government facilitating trade logistics, rate your selected States/UTs on the following aspects:

	State/ UT 1					State/ UT 2					State/ UT 3				
	VP	P	Av	G	VG	VP	P	Av	G	VG	VP	P	Av	G	VG
a. Efficiency of Law and Order services															
b. Impact due to Trade/Transporter unions															
c. Effectiveness of state labour policies															

Annexure 4:

LEADS 2018

Exhibit 56: LEADS scores for 22 states

Rank order	States	Infrastructure	Services	Timeliness	Track & Trace	Competitiveness of Pricing
1	GUJARAT	3.70	3.62	3.55	3.38	2.73
2	PUNJAB	3.40	3.47	3.31	3.47	2.60
3	ANDHRA PRADESH	3.36	3.35	3.41	3.37	2.71
4	KARNATAKA	3.34	3.40	3.36	3.25	2.71
5	MAHARASHTRA	3.44	3.53	3.36	3.31	2.63
6	HARYANA	3.32	3.38	3.30	3.34	2.66
7	RAJASTHAN	3.26	3.23	3.23	3.30	2.74
8	TAMIL NADU	3.27	3.38	3.27	3.17	2.59
9	TELANGANA	3.15	3.15	3.15	3.29	2.62
10	CHHATTISGARH	3.04	3.11	3.07	3.32	2.64
11	ODISHA	2.95	3.00	3.33	3.26	2.55
12	KERALA	3.15	3.25	3.31	2.96	2.48
13	UTTAR PRADESH	3.08	3.15	3.11	3.23	2.55
14	MADHYA PRADESH	2.98	3.10	2.90	3.15	2.68
15	UTTARAKHAND	2.95	3.16	3.11	3.11	1.94
16	GOA	2.76	2.92	3.04	3.16	2.51
17	HIMACHAL PRADESH	2.62	3.00	2.95	3.24	2.52
18	JHARKHAND	2.75	2.94	3.00	2.25	2.98
19	WEST BENGAL	2.57	2.88	2.73	2.78	2.71
20	ASSAM	2.81	2.68	2.79	2.65	2.49
21	BIHAR	2.17	2.42	2.38	2.50	2.67
22	JAMMU & KASHMIR	2.18	2.35	2.18	2.29	2.80

Safety of Cargo	Operating Environment	Regulatory Process	LEADS 2018 Index	Lower Bound	Upper Bound
3.45	3.46	3.21	3.34	3.31	3.37
3.53	3.30	3.15	3.22	3.14	3.31
3.33	3.29	3.16	3.21	3.15	3.26
3.39	3.28	3.12	3.19	3.14	3.24
3.28	3.18	3.11	3.19	3.15	3.23
3.41	3.32	3.15	3.19	3.12	3.25
3.33	3.32	3.05	3.14	3.08	3.20
3.29	3.22	3.01	3.11	3.07	3.15
3.30	3.24	3.10	3.08	2.97	3.19
3.40	3.09	2.98	3.04	2.88	3.19
3.12	3.28	3.03	3.02	2.91	3.12
3.38	2.80	3.01	3.00	2.95	3.06
3.20	3.02	2.95	3.00	2.94	3.06
3.17	3.01	2.97	2.97	2.87	3.06
3.25	3.20	3.25	2.90	2.69	3.12
3.08	3.10	2.89	2.89	2.74	3.04
3.25	2.69	2.98	2.87	2.71	3.03
2.78	2.65	3.02	2.82	2.67	2.97
3.00	2.71	2.68	2.75	2.70	2.80
2.84	2.56	2.70	2.68	2.53	2.82
2.90	2.66	2.56	2.52	2.36	2.69
2.47	2.17	2.42	2.39	2.23	2.55

Exhibit 57: LEADS scores for Hilly North East

Rank Order	States	Infrastructure	Services	Timeliness	Tracking	Pricing
1	Tripura	2.40	2.57	2.25	2.40	2.15
2	Mizoram	2.00	2.74	2.28	2.14	2.86
3	Meghalaya	2.22	2.17	2.51	2.11	2.35
4	Nagaland	1.67	2.23	2.05	2.11	1.95
5	Manipur	1.63	1.81	1.68	1.88	2.02

Note: Scores have not been computed for Sikkim and Arunachal Pradesh due to inadequate number of user / stakeholder responses Source: Deloitte analyses of perception-based data

Exhibit 57: LEADS scores for Hilly North East

Rank Order	UTs	Infrastructure	Services	Timeliness	Tracking	Pricing
1	Daman & Diu	3.35	3.35	3.43	3.43	2.83
2	Delhi	3.28	3.43	3.26	3.37	2.61
3	Chandigarh	2.93	3.11	3.07	3.36	2.63
4	Puducherry	2.17	2.58	2.75	3.17	2.92
5	Dadra & Nagar Haveli	2.38	2.63	3.00	3.13	2.50

Safety	Operating Environment	Regulatory Process	LEADS 2018 Index	Lower Bound	Upper Bound
2.98	2.52	2.68	2.53	2.26	2.81
2.43	2.29	2.54	2.37	2.27	2.47
2.57	2.45	2.42	2.36	2.00	2.72
2.38	2.08	2.56	2.15	1.85	2.45
2.28	1.80	2.53	1.97	1.82	2.12

Safety	Operating Environment	Regulatory Process	LEADS 2018 Index	Lower Bound	Upper Bound
3.48	3.26	3.17	3.25	3.08	3.42
3.29	3.23	3.10	3.15	3.12	3.19
3.46	3.00	3.08	3.04	2.88	3.19
3.11	2.75	3.06	2.80	2.66	2.95
2.88	3.13	2.88	2.78	2.32	3.23

References

- Airports Authority of India, 2018, 'Annexure 4: Traffic News' (Available at <https://www.aai.aero/sites/default/files/traffic-news/Mar2k18annex4.pdf>) (Accessed on 19/02/2019)
- AAISATS, 2019 (Available at <http://www.aisats.in/index.php/fronted/services>) (Accessed on 19/02/2019)
- Census, 2011 (Available at http://planningcommission.nic.in/data/datatable/data_2312/DatabookDec2014%20307.pdf) (Accessed on 21/12/2018)
- Central Institute of Post-Harvest Engineering and Technology, 2015, 'Assessment of Quantitative Harvest and Post-Harvest Losses of Major Crops and Commodities in India' (Available at <http://mofpi.nic.in/sites/default/files/selection.pdf.pdf>) (Accessed on 17/02/2019)
- Department of Agriculture, Cooperation and Farmers Welfare, 2017, (Available at http://agricoop.nic.in/sites/default/files/Area%20Production-Horticulture%20Crops_0.pdf) (Accessed on 20/12/2018)
- Directorate General of Commercial Intelligence and Statistics, 2018 (Available at <https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/TABLE%201208256FA73D4E0427A93063E4DB7FAC549.PDF>) (Accessed on 12/02/2019)
- Dhasmana, I, 2018 (Available at https://www.business-standard.com/article/economy-policy/india-set-for-third-largest-economy-tag-with-10-trn-gdp-by-2030-garg-118071400774_1.html) (Accessed on 19/02/2019)
- Forest Survey of India, 2017, (Available at <http://fsi.nic.in/isfr2017/isfr-forest-cover-2017.pdf>) (Accessed on 20/12/2018)
- Indian Ports Association, 2017, "State-Wise Traffic Handled at Non-Major Ports", (Available at <http://www.ipa.nic.in/WriteReadData/Links/State-wise%20traffic%20handled%20at%20portsea7965ce-8715-4924-8b9a-f3fd6e9d7a1a.pdf>)
- Indian Ports Association, 2018, "Major Ports of India: A Profile: 2017-2018", New Delhi
- Indian Railways, "Indian Railways Year Book 2017-18", New Delhi: Government of India
- Ministry of Agriculture and Farmers Welfare, 2018, Lok Sabha Unstarred Question No. 974 (Available at <http://164.100.47.190/loksabhaquestions/annex/15/AU974.pdf>) (Accessed on 04/01/2019)
- Ministry of Commerce and Industry, 2018, (Available at http://commerce.gov.in/writereaddata/UploadedFile/MOC_636517146051928242_List_ICDs_CFSs_AFSS_01-01-2018.pdf) (Accessed on 4/01/2019)
- Ministry of Consumer Affairs, Food and Public Distribution, 2018, Lok Sabha Unstarred Question No. 2849, (Available at <http://164.100.47.190/loksabhaquestions/annex/14/AU2849.pdf>) (Accessed on 06/01/2019)
- Ministry of Finance, 2018, 'Economic Survey 2017-18', New Delhi: Government of India
- Ministry of Road Transport & Highways, 2016, 'Basic Road Statistics of India 2015-16', New Delhi: Government of India
- Ministry of Road Transport & Highways, 2017, 'Road Accidents in India - 2017', New Delhi: Government of India
- Ministry of Road Transport & Highways, 2017, 'GST is Good and Simple Tax' (Available at <https://48months.mygov.in/wp-content/uploads/2018/06/10000000001737939328.pdf>) (Accessed on 17/02/2019)
- Ministry of Road Transport & Highways, 2018, Lok Sabha Unstarred Question No. 3797 (Available at <http://164.100.47.190/loksabhaquestions/annex/15/AU3797.pdf>) (Accessed on 17/02/2019)
- Ministry of Shipping, Government of India, 2018 (Available at <http://sagarmala.gov.in/project/project-tracker>) (Accessed on 19/02/2019)
- Ministry of Shipping, Government of India, 2018 "Sagarmala Project in Andhra Pradesh" (Available at <http://pib.nic.in/PressReleaseframePage.aspx?PRID=1539653>) (Accessed on 17/02/2019)

Ministry of Statistics and Programme Implementation, 2017, (Available at <http://mospi.nic.in/GSVA-NSVA>) (Accessed on 23/12/2018)

Ministry of Statistics and Programme Implementation, 2018, (Available at <http://mospi.nic.in/statistical-year-book-india/2018/177>) (Accessed on 20/12/2018)

National Highways Authority of India, 2018 (Available at <http://pibphoto.nic.in/documents/rlink/2017/oct/p2017102504.pdf>) (Accessed on 19/02/2019)

National Highways Authority of India, 2018, "List of Toll Plazas", (Available at <http://tis.nhai.gov.in/tollplazasataglance?language=en>) (Accessed on 04/01/2019)

National Highways Authority of India, 2018, "List of Toll Plazas", (Available at <http://www.nhai.org/writereaddata/Portal/Images/pdf/ATP.pdf>) (Accessed on 04/01/2019)

OECD Data (2019) 'ITF Transport Statistics: Transport Infrastructure Investment and Maintenance' (Available at: <https://data.oecd.org/transport/infrastructure-investment.htm#indicator-chart>) (Accessed on 24/01/2019)

Organisation for Economic Co-operation and Development, JRC European Commission. (2008). "Handbook on Constructing Composite Indicators"

Press Information Bureau, 2018 (Available at <http://pib.nic.in/PressReleaseFramePage.aspx?PRID=1551076>) (Accessed on 19/02/2019)

Rail Analysis India, 2018 (Available at <http://railanalysis.in/rail-news/dfccil-completes-194-km-bhadan-khurja-section-eastern-dedicated-freight-corridor/>; <http://railanalysis.in/rail-news/dedicated-freight-corridor-dfc-one-largest-rail-infrastructure-projects-india-marching-towards-fulfilling-objective-creating-dedicated-freight-corridors-ushering-parad/>) (Accessed on 19/02/2019)

Reserve Bank of India, 2018, (Available at <https://www.rbi.org.in/Scripts/AnnualPublications.aspx?head=Handbook%20of%20Statistics%20on%20Indian%20Economy>) (Accessed on 21/12/2018)

The Fertilizer Association of India, 2017, (Available at <https://www.indiastat.com/table/agriculture-data/2/warehouses/206862/991571/data.aspx>) (Accessed on 23/12/2018)

The World Bank, 2019, 'Global Economic Prospects: Darkening Skies' (Available at <http://documents.worldbank.org/curated/en/307751546982400534/pdf/133493-PUB-9781464813863.pdf>) (Accessed on 24/01/2019)

The World Bank, 2019, World Bank national accounts data, and OECD National Accounts data files, (Available at: <https://data.worldbank.org/indicator/NY.GDP.FCST.CD>) (Accessed on 24/01/2019)

World Trade Organization, 2019, 'Global Value Chains' (Available at https://www.wto.org/english/res_e/statis_e/miwi_e/miwi_e.htm) (Accessed on 24/01/2019)





Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee (“DTTL”), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as “Deloitte Global”) does not provide services to clients. Please see www.deloitte.com/about for a more detailed description of DTTL and its member firms.

This material is prepared by Deloitte Touche Tohmatsu India LLP (DTTILLP). This material (including any information contained in it) is intended to provide general information on a particular subject(s) and is not an exhaustive treatment of such subject(s) or a substitute to obtaining professional services or advice. This material may contain information sourced from publicly available information or other third party sources. DTTILLP does not independently verify any such sources and is not responsible for any loss whatsoever caused due to reliance placed on information sourced from such sources. None of DTTILLP, Deloitte Touche Tohmatsu Limited, its member firms, or their related entities (collectively, the “Deloitte Network”) is, by means of this material, rendering any kind of investment, legal or other professional advice or services. You should seek specific advice of the relevant professional(s) for these kind of services. This material or information is not intended to be relied upon as the sole basis for any decision which may affect you or your business. Before making any decision or taking any action that might affect your personal finances or business, you should consult a qualified professional adviser.

No entity in the Deloitte Network shall be responsible for any loss whatsoever sustained by any person or entity by reason of access to, use of or reliance on, this material. By using this material or any information contained in it, the user accepts this entire notice and terms of use.