



INDIAN INDUSTRIAL & LOGISTICS

Gearing Up a Global Manufacturing Hub oct 2020

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Foreword **Binswanger**

All economies of the world are reeling under the adverse impact of COVID-19 pandemic. 2020 appears to be a watershed year with global economy predicted to contract 4.9% as per the International Monetary Fund (IMF). Shrinking economy and rising unemployment are perhaps at their worst since the great depression 90 years ago. However, the growth rate for 2021 is anticipated at 5.4% according to IMF. Though the global economy is said to expand then, the rate of growth is going to be lower than the pre COVID-19 projection of 6.5%.

Historically, it is observed that during recession investments fall rapidly but consumption remains less affected. However, this time, consumption, investments, as well as services output has dropped significantly. This is accentuated by a combination of factors including social distancing norms, lockdowns to control transmission, steep income losses, and weaker consumer confidence. Firms have also cut back on investments as demand has declined precipitously. The synchronized nature of the downturn has amplified domestic disruptions across the globe. Trade contracted by close to -3.5% on year in the first quarter of 2020.

However, the silver lining amidst this gloomy situation is that this is a health crisis and not a financial one. As the fear of pandemic is allayed and vaccines are produced, a better and nicer world will emerge where we are likely to witness higher collaboration between the east and west and developed and the emerging nations. The industrial and consumptiondriven western countries will have larger collaboration with emerging markets, leading to stronger development of new logistics passageways and industrial clusters on the world map.

The trade war caused due to rising trade deficit and realization of global industries to create alternate manufacturing facilities to step up their business continuity planning has become more pronounced post the COVID-19 crisis. Many countries today are augmenting their trade environment and ramping up the infrastructure in a planned manner to attract global industries. A survey of the supply chain companies indicates that India is a preferred destination, followed by Vietnam and other Asian countries.

The historical Silk Route that facilitated India's trade with other counties, centuries ago, helped establish India as a major trade hub. This gains relevance even in the present scenario. Over 10,000 km of dedicated freight corridor is also being planned to enable efficient and economic transportation of freight across the country. Better still, there has been a significant reduction in the number of approvals for setting up warehouses - from 33 in 2015 to 15 in 2019.

Meanwhile, the set-up time is reduced to 3.5 months now as compared to 6 months in 2015. Thus, the efficiency in setting up a warehouse is better than may developed nations. These indicate India's competitiveness and preparedness to be a preferred destination.

Moreover, as the world looks up to India as a land of opportunities, offering sizeable returns, the country is prepared for the big leap. Improved EoDB ranking (63rd in 2019 from 142nd in 2014), low corporate tax rates, burgeoning infrastructure, changing policies, and reforms are aimed to attract global industries to India.

The competitive corporate tax rate of 15% for new manufacturing companies is capable of attracting global manufacturers. To support future economic growth, physical infrastructure is also being upgraded with an investment of USD 1.3 Tn. Thus, today, India is capable of attracting most companies in setting up an alternate base due to its strategic location and connectivity to major markets across the world.

Additionally, the rich demographic dividend comprising a large employable workforce at highly competitive cost can be leveraged while operating out of India. Nearly 54% population is aged between 20 and 59 years with a balanced diversity ratio. The constant inflow of FDI across sectors and industries over the past years stand testimony to the confidence of global investors. Over USD 457 Bn FDI has been added since April 2000, of which manufacturing focussed sectors account for nearly 26%.

A unique crisis surely requires exceptional decisions for creating an inimitable opportunity to be created.

Jeff Binswanger MD Binswanger International



ANAROCK

In a world drastically changed by COVID-19, all economies must move on, rebuild and reinvent their future. It is indeed challenging as uncertainties still prevail but, in every crisis, there lies an opportunity.

To its advantage, India has been one of the fastest-growing economies over the past few years. As per World Bank's latest statistics, India recorded annual growth of 8.4% between 2009-2019 - significantly higher than the global growth of 3.8% over the same period. Our country's growth was primarily fueled by the large consumer base, burgeoning IT-ITeS, manufacturing sector and the rise of startups. It was only in fiscal 2019 and 2020 that India's GDP growth rate contracted to 6.1% and 4.2% respectively, largely attributed to global slowdown beginning early 2018.

But, COVID-19 outbreak and the subsequent lockdown that came into force from 25th March 2020 somewhat worsened the situation as businesses and consumption (at least for non-essentials) came to a screeching halt. While no segment was immune to the crisis, agriculture and pharmaceuticals remained functional and e-commerce facilitated logistics to ensure availability of essentials like food, vegetables and fruits, etc. across the length and breadth of the country. The logistics and warehousing sector thus played an instrumental role in combatting the crisis by ensuring adequate supply of essentials.

In retrospect, the Industrial & Logistics sector altogether contributed 23% to the overall GVA during fiscal 2019 and is thus an important contributor to the Indian economy. With the lockdown limited to the containment zones only, the Industrial & Logistics sector has started witnessing traction.

India's industrial prowess is appropriately depicted by over 3,400 industrial clusters spread over 4.6 lakh hectares, of which only 25% is vacant. While the manufacturing sector is large in India, its contribution to the GVA is only around 17%. Realizing the current need, the government has initiated several plans under its flagship 'Make in India' campaign and is looking to expand the manufacturing sector's economic contribution to 25% by 2025. To attain this, nearly 75,000 acres of new industrial areas are planned across the top cities of India. Meanwhile, India's logistics ranking also improved significantly during the past few years - from 54th in 2014 to 44th in 2018. Physical infrastructure development of roads, and enhanced connectivity via rail, road, and sea has improved the country's logistics performance index over the years. With an average logistics cost of 14% (of GDP), India fares well compared to China which has 15% and EU which has 13%. The policy reforms undertaken by the government aims to reduce it to 9-10% making India highly competitive across the world.

3PL, logistics and e-commerce are among the largest occupiers of warehousing space in India, accounting for nearly 46%. As of 2019, top 8 cities in India account for nearly 77 Mn sf of warehousing stock in India with a rental range of USD 0.18 – USD 0.3/sf/ month.

Consolidation of small warehouses into large & concentration into one place was an emerging trend post GST and pre COVID-19. However, with the enforced lockdown due to COVID-19 outbreak, the consolidation of warehouses is expected to slow down, and we may again witness the rise of deconsolidated small warehouses in India. This report titled, 'Indian Industrial & Logistics: Gearing up a Global Manufacturing Hub', takes a close look at the burgeoning Industrial & Warehousing sector and showcases the country's strengths and potential to emerge as a global manufacturing hub.

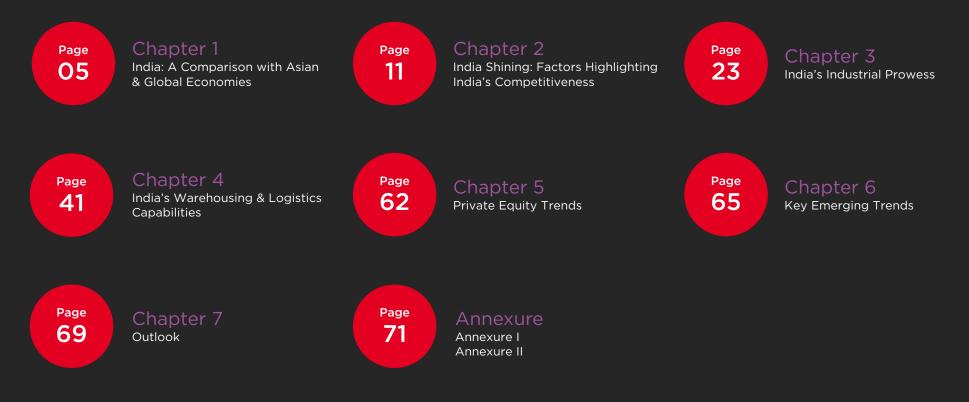
The overview of major warehousing and logistics destinations and how government policies augment the development of new industrial corridors leading to the rise to new warehousing clusters in the country is also noteworthy. While at this juncture, the world is reeling under the crisis brought in by the COVID-19 outbreak, the future is likely to be transformed significantly as the sector is positioned to change the course and is set on a new growth trajectory. The possible move out of companies from China may also be a blessing in disguise for India and we may see a surge in the entry of manufacturing businesses.

I hope you find the report engaging and informative. Always happy to hear from you.

Anuj Puri Founder & Chairman ANAROCK Group



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CHAPTER 1

India: A Comparison with Asian & Global Economies

2na Fastest growing nation after China

13.7% Contribution of India's manufacturing sector to GDP

> ~2% India's contribution to the global exports

> > 4th

India's ranking as compared to its Asian peers for its contribution to global exports (2019)

2^{nc}

Most populous country with a large consumer base

Asian Economies Growing Faster than the World

GDD (LISD Th)

India emerges as the 2nd fastest growing nation, next only to China

India

Recorded the steepest economic contraction - 23.9% between April-June 2020 impacted by national lockdown



2019 GDP*

6.1% China (Jan 2019 - Dec 2019)

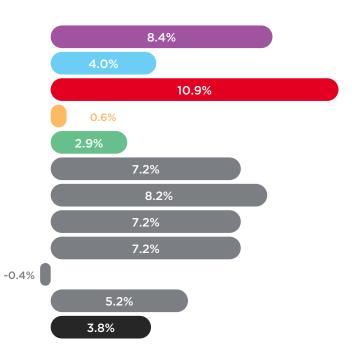
2.3% USA (Jan 2019 - Dec 2019)

India

- Grew faster than the Asian peers
- Grew significantly faster than **global average**

Country	2009	2019
India	1.3	2.9
USA	14.4	21.4
China	5.1	14.3
EU	14.7	15.6
UAE	0.3	0.4
Hong Kong, SAR	0.2	0.4
Indonesia	0.5	1.1
Philippines	0.2	0.4
Singapore	0.2	0.4
Japan	5.2	5.0
Thailand	0.3	0.5
World	60.4	87.7

GDP Growth (CAGR)



Note: Current USD; *Advance estimates

Source: World Bank, MOSPI, NBS - China, US Bureau of Economic Analysis

Asian Countries: The World's Manufacturing Hubs

India's manufacturing sector accounts for 13.7%[^] of GDP



India's ranking as the fastest growing manufacturing country amongst comparable Asian peers

~6%#

∆th

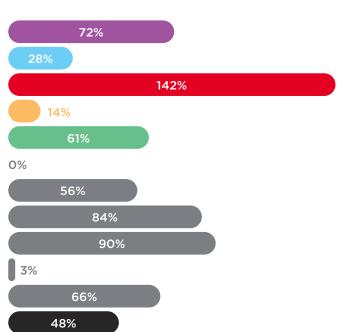
Estimated CAGR growth of India's manufacturing sector from FY12 to FY20

USD 395 Bn[^]

Value of India's manufacturing sector in 2019

Country	2009	2019
India	230	395
USA*	1,695	2,173
China	1,612	3,896
EU	2,044	2,322
UAE	23	37
Hong Kong, SAR**	4	4
Indonesia	142	221
Philippines	38	70
Singapore	39	74
Japan**	1,002	1,028
Thailand	83	138
World	9,346	13,809

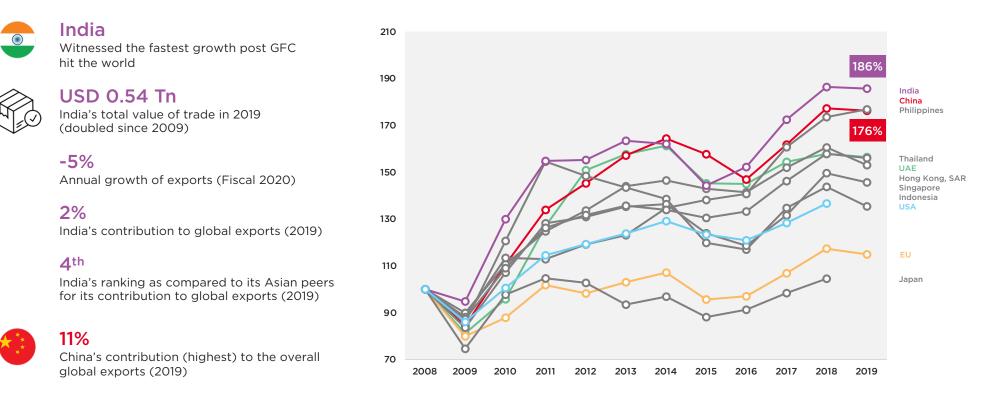
Decadal Growth



Note: #Current rate of INR; ^Current USD; *USA - 2017 values considered for 2019; **Hong Kong, SAR & Japan - 2018 values considered for 2019

Asian Countries: Remain Export Oriented

India is the fastest growing country compared to its peers in exports



Note: Annual export growth (current USD) indexed to 2008 = 100%; Data for Japan & USA are available till 2018

India: A Comparison with Asian Peers

2nd most populous country, large consumer base & improved Ease of Doing Business (EoDB) ranking differentiates India

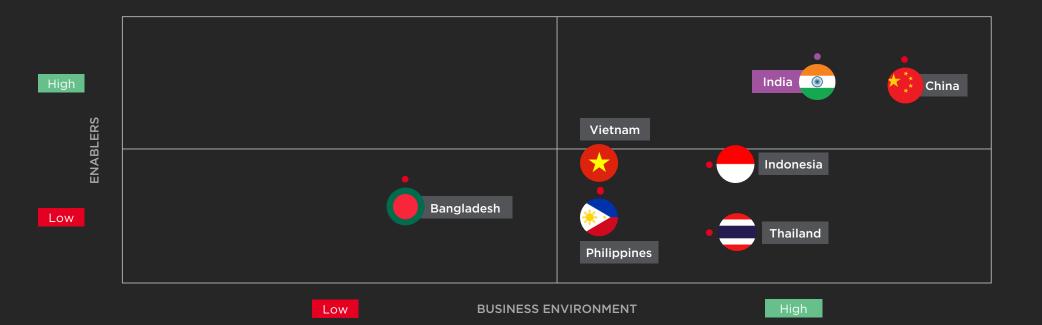
Parameters	India	China	Vietnam	Philippines	Indonesia	Thailand	Bangladesh
GDP (Current USD Bn)	2,875.14	14,342.90	261.92	376.80	1,119.19	543.65	302.57
GDP Growth Projections (%) (2020 2021)	-4.5 6.0	1.0 8.2	2.7 7.0	-3.6 6.8	-0.3 6.1	-7.7 5.0	1.2 7.5
EoDB Ranking (2014 2019)	142 nd 63 rd	90 th 46 th	78 th 70 th	95 th 95 th	114 th 73 rd	26 th 21 st	173 rd 168 th
Population (Mn)	1,366.42	1,397.72	96.46	108.12	270.63	69.63	163.05
Labour Force (Mn)	494.26	781.07	57.36	44.82	134.78	38.99	70.01
Population Aged 15-64 (Mn)	915.55	988.51	66.78	69.42	183.31	49.27	110.23
Minimum Wage for 8 hours (USD)	4.74	4.98	4.44	4.78	3.11	10.09	4.72
Consumption Expenditure (as % of GDP) (2010 2019)	66% 72%	48% 55%	73% 75%	81% 86%	65% 67%	68% 66%	79% 75%
Currency Exchange Rate (1 USD)	73.55 (INR)	6.77 (Yuan)	23,236.09 (Dong)	48.48 (Peso)	14,743.69 (Rupiah)	31.07 (Baht)	84.96 (Taka)
	GDP (Current USD Bn) GDP Growth Projections (%) (2020 2021) EoDB Ranking (2014 2019) Population (Mn) Labour Force (Mn) Population Aged 15-64 (Mn) Minimum Wage for 8 hours (USD) Consumption Expenditure (as % of GDP) (2010 2019)	GDP (Current USD Bn)2,875.14GDP Growth Projections (%) (2020 2021)-4.5 6.0EoDB Ranking (2014 2019)142 nd 63 rd Population (Mn)1,366.42Labour Force (Mn)494.26Population Aged 15-64 (Mn)915.55Minimum Wage for 8 hours (USD)4.74Consumption Expenditure (as % of GDP) (2010 2019)66% 72%Currency Exchange Pate (111SD)73.55	GDP (Current USD Bn) 2,875.14 14,342.90 GDP Growth Projections (%) -4.5 6.0 1.0 8.2 CODB Ranking (2014 2019) 142 nd 63 rd 90 th 46 th Population (Mn) 1,366.42 1,397.72 Labour Force (Mn) 494.26 781.07 Population Aged 15-64 (Mn) 915.55 988.51 Minimum Wage for 8 hours (USD) 4.74 4.98 Consumption Expenditure (as % of GDP) (2010 2019) 73.55 6.77	Current USD Bn) 2,875.14 14,342.90 261.92 GDP (Current USD Bn) -4.5 6.0 1.0 8.2 2.7 7.0 GDD Growth Projections (%) (2020 2021) 142 nd 63 rd 90 th 46 th 78 th 70 th EoDB Ranking (2014 2019) 142 nd 63 rd 90 th 46 th 78 th 70 th Population (Mn) 1,366.42 1,397.72 96.46 Labour Force (Mn) 494.26 781.07 57.36 Population Aged 15-64 (Mn) 915.55 988.51 66.78 Minimum Wage for 8 hours (USD) 4.74 4.98 4.44 Consumption Expenditure (as % of GDP) (2010 2019) 73.55 6.77 23,236.09	GDP (Current USD Bn) 2,875.14 14,342.90 261.92 376.80 GDP Growth Projections (%) -4.5 6.0 1.0 8.2 2.7 7.0 -3.6 6.8 EoDB Ranking (2014 2019) 142 nd 63 rd 90 th 46 th 78 th 70 th 95 th 95 th 95 th Population (Mn) 1,366.42 1,397.72 96.46 108.12 Labour Force (Mn) 494.26 781.07 57.36 44.82 Population Aged 15-64 (Mn) 915.55 988.51 66.78 69.42 Minimum Wage for 8 hours (USD) 4.74 4.98 4.44 4.78 Consumption Expenditure (as % of GDP) (2010 2019) 73.55 6.77 23,236.09 48.48	GDP (Current USD Bn) 2,875.14 14,342.90 261.92 376.80 1,119.19 GDP Growth Projections (%) -4.5 6.0 1.0 8.2 2.7 7.0 -3.6 6.8 -0.3 6.1 EoDB Ranking (2014 2019) 142 nd 63 rd 90 th 46 th 78 th 70 th 95 th 95 th 114 th 73 rd Population (Mn) 1,366.42 1,397.72 96.46 108.12 270.63 Labour Force (Mn) 494.26 781.07 57.36 44.82 134.78 Population Aged 15-64 (Mn) 915.55 988.51 66.78 69.42 183.31 Minimum Wage for 8 hours (USD) 4.74 4.98 4.44 4.78 3.11 Consumption Expenditure (as % of GDP) (2010 2019) 73.55 6.77 23.236.09 48.48 14.743.69	GDP (Current USD Bn) 2,875.14 14,342.90 261.92 376.80 1,119.19 543.65 GDP Growth Projections (%) -4.5 6.0 1.0 8.2 2.7 7.0 -3.6 6.8 -0.3 6.1 -7.7 5.0 EoDB Ranking (2014 2019) 142 nd 63 rd 90 th 46 th 78 th 70 th 95 th 95 th 114 th 73 rd 26 th 21 st Population (Mn) 1,366.42 1,397.72 96.46 108.12 270.63 69.63 Labour Force (Mn) 494.26 781.07 57.36 44.82 134.78 38.99 Population Aged 15-64 (Mn) 915.55 988.51 66.78 69.42 183.31 49.27 Minimum Wage for 8 hours (USD) 4.74 4.98 4.44 4.78 3.11 10.09 Consumption Expenditure (as % of GDP) (2010 2019) 66% 72% 48% 55% 73% 75% 81% 86% 65% 67% 68% 66% Currency Exphange Pate (LUSD) 73.55 6.77 23,236.09 48.48 14,743.69 31.07

Note: GDP, consumption & population data for 2019 Minimum wages converted into USD as per the rates on 21st September 2020 Exchange rate on XE.com as of 21st September 2020 GDP growth projections by IMF for June 2020 except for Vietnam & Bangladesh (April 2020) Consumption expenditure for China considered for 2010 | 2018

Source: World Bank, IMF, Chief Labour Commission India, Ministry of Labour Thailand, Department of Labour & Employment Philippines, Minimum Wage Board Bangladesh, Industry Sources

India: A Comparison with Asian Peers (mapped)

India is the only country which scores high on favourable business environment and enablers



Note: Enablers are population, labour force, population aged 15-64, minimum wages for 8 hours and consumption expenditure (as % of GDP) Business environment consists of current GDP, GDP growth rate projection for 2021 & EoDB ranking

India Shining: Factors Highlighting India's Competitiveness

2x Indian economy has doubled over the decade (2009-2019)

> **3**rd Largest consumer market by 2030

29 years Average age of India's population (Youngest nation)

USD 1.3 Tn

Infrastructure investment over the next 5 years (Almost equal to Australia's GDP)

> **63**rd vs. 142nd India's EoDB ranking (2019 vs. 2014)

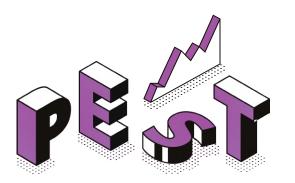
India: PEST Analysis

A growing economy along with a political stability makes India shine on the global map



POLITICAL

- Largest democracy with a stable political environment.
- Stable political environment is critical to attract FDI and India has successfully done so for the past few years.
- Political will and machinery successfully working towards making India's presence felt on the world map.
- Improving governance & existing policy framework to improve the business ranking of the country. EoDB ranking improved from 142nd (2014) to 63rd (2019).





ECONOMIC

ANALYSIS

- One of the world's largest economies with a real GDP of USD 2.9 Tn* as of fiscal 2020. India's GDP has grown by 4.2% in fiscal 2020. However, COVID-19 outbreak is likely to impact the future growth significantly.
- Corporate taxes in India, among the lowest in the world, are 25% for existing companies & 15% for new manufacturing companies.
- Per capita income has witnessed a CAGR of 5% from 2011 till 2019 & touched USD 2,104#.
- Rich in mineral deposits and steel production major.
- Top trading partners are China, USA, UAE, Switzerland, Saudi Arabia & Qatar.



- Large domestic consumption market with a population of $1.3^{\scriptscriptstyle +}$ Bn.
- Availability of cheap labour has attracted many multinationals to set up their business operations in India.
- India is a multi-ethnic, multi-lingual, and multi-religious country.
- Household expenditure during 2019 touched USD 1.73 Tn# clocking a 7% CAGR over 2011.
- Youngest nation in the world with average age of 29 years as of 2020.
- Nearly 54% of the current population is the working-class age group (20-59 years).



TECHNOLOGICAL

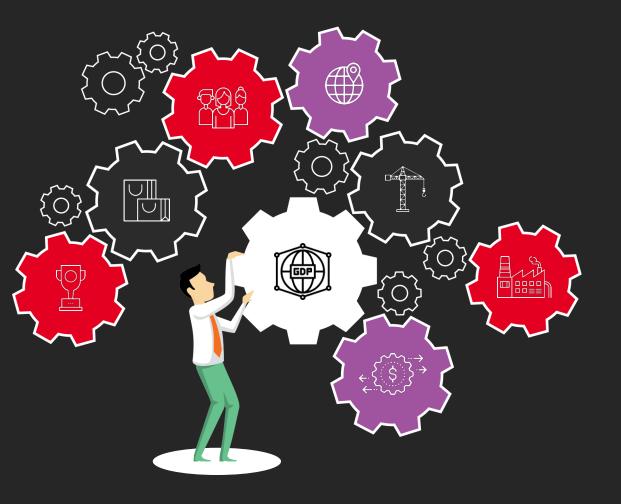
- Technological giants such as Facebook, Microsoft, Apple, Google etc. are investing heavily in the country.
- India is a key destination for IT outsourcing.
- With an advanced IT infrastructure & highly skilled IT workforce, India offers enormous opportunities for entrepreneurs to embark upon technological projects such as software development and upgrades, e-commerce, mobile apps, business solutions, and many more.

Note: *Estimated; #Current USD

Factors Highlighting India's Competitiveness

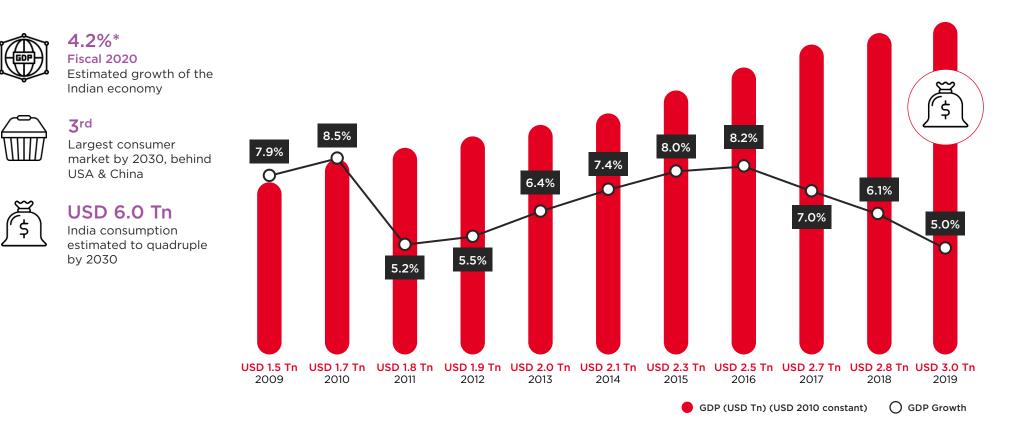
India's Competitive Advantages

- Fast-growing Economy
- Rapid Urbanization
- Rising Consumerism
- Geographic Advantage
- Foreign Direct Investments (FDIs)
- Improving EoDB Ranking
- Rich Demographic Dividend
- Existing & Planned Infrastructure Projects Development



A Fast-growing Economy

Indian economy has doubled over the decade



Note: *MOSPI (provisional estimates)

Source: World Bank, ANAROCK Research

India: Preferred Destination for Manufacturing

Many companies are looking outside China to ensure continuity of their manufacturing units



Finance Minister Nirmala Sitharaman welcomed US companies' investment and partnership with India, especially in the manufacturing and infrastructure sectors

India is among the leading investment destinations for US companies and has already attracted over USD 20 Bn in 2020. These are expected to create new jobs, facilitate financial inclusion, and broad-based economic development for the Indian economy.

Japan subsidy boost for companies exiting China to pick India

Japan's Ministry of Economy, Trade and Industry recently announced that it would add India to the list of ASEAN countries to qualify for subsidies for Japanese manufacturers moving out of China.



Rapid Urbanization & Rising Consumerism

Per capita & household expenditure grew at a CAGR of 5% & 7% respectively

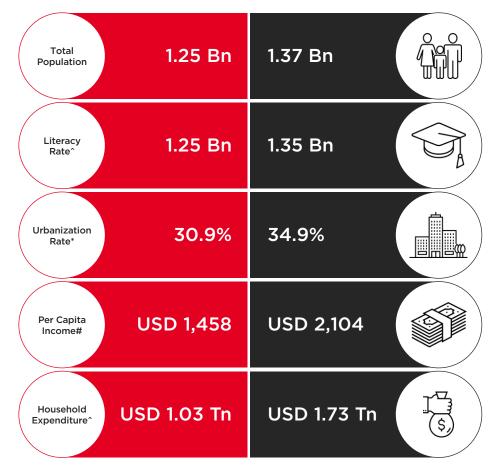


By 2050

India's urban areas are expected to cater to more than 50% of the overall population

By 2027

India is set to surpass China and become the world's most populous country



e 2011 **e** 2019

Note: #Current USD; *Urbanization in India is as of 2010 & 2020; ^ Literacy rate in India is as of 2011 & 2018

Geographic Advantage

INDIA

India is well-connected to the major countries through various modes

7,500+ km

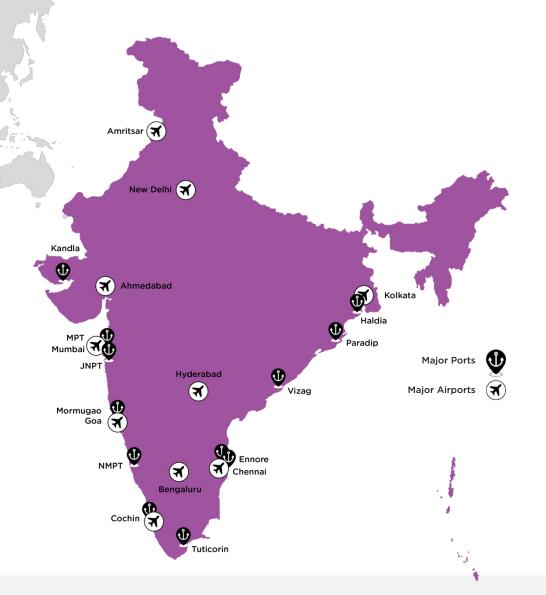
India's long coastline (Immense opportunities for future development of ports for trade)

EXCELLENT PORT | AIRPORT | ROAD CONNECTIVITY

 Image: Major Ports
 Image: Major International Airports

India is well connected to all continents (nearly 55 countries) with direct flights and nearly 80 international carriers operate from the country.

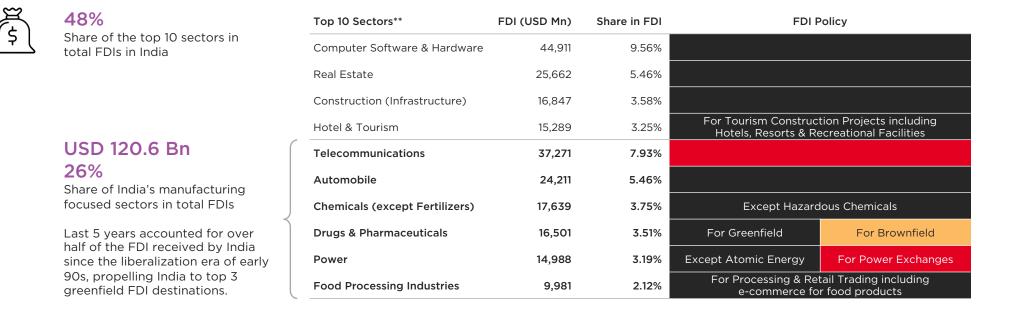
India has direct land route to south east Asia which is important for India's 'Act East' policy.



Note: Map not to scale; for representation purpose only

Foreign Direct Investments (FDIs)

A total of USD 470 Bn* FDI inflow in India (Apr – Mar 2020)



Note: *Excluding amount remitted through RBI's NRI scheme Investments above the automatic routes are induced through the government route **Data till March 2020 available

Disclaimer: For the purpose of this study, ANAROCK considers all sectors apart from Real Estate, Construction, Computer Software & Hardware & Hospitality to be manufacturing sectors.

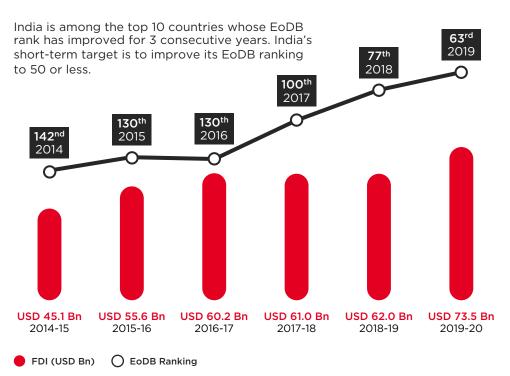


Source: DIPP, ANAROCK Research

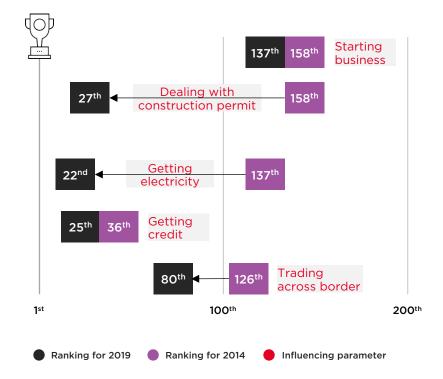
Improving Ease of Doing Business (EoDB) Ranking

India's EoDB ranking improved from 142nd in 2014 to 63rd in 2019

EoDB vs FDI



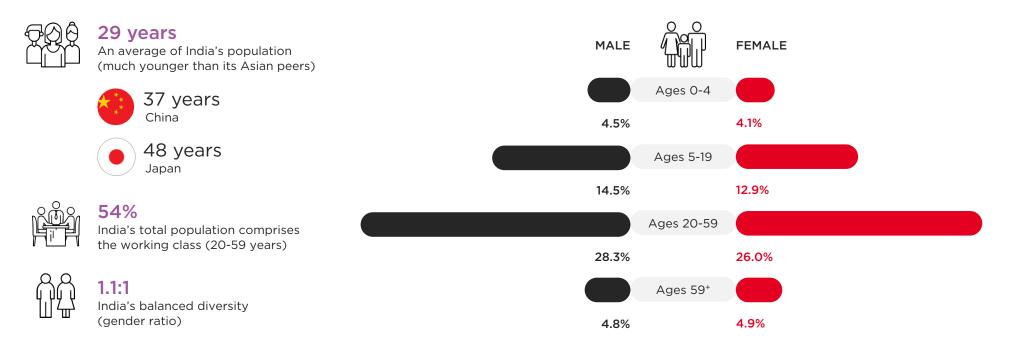
Parameters influencing EoDB ranking



Note: EoDB ranking is as of CY; Total FDI includes re-invested earnings and other earnings

Rich Demographic Dividend

Nearly 75% of the Indian population is under the age of 44



India's Existing Infrastructure

Strong support infrastructure to facilitate the growth of manufacturing & services industries



AIRPORTS

100+

Operational Airports & many under construction

Delhi, Mumbai, Bengaluru & Hyderabad**

Featured in Top 100 Airports of the World

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METRO & RAIL

~657 km New Metro Corridors planned across India

~67,368 km* Indian Railways Network (4th largest in the world)



ROADS & HIGHWAYS

~10,800 km Roadways constructed in 2018-19 (increased by 10% y-o-y)



PORTS

13 Major Ports

200 Minor & Intermediate Ports

704.82 Mn tonnes

Traffic handled by major ports in FY 2020 (increased by <1% annually)

India's Planned Infrastructure

Infrastructure investment of USD 1.3 Tn over the next 5 years (almost equal to Australia's GDP)



ROADS & HIGHWAYS

~1,504 km Delhi-Mumbai Industrial Corridor (DMIC) estimated to cost USD 94.9 Bn



~508 km Bullet Train network estimated to cost USD 14.7 Bn

~34,800 km Bharatmala Pariyojana Phase I estimated to cost USD 71.3 Bn ج د

SAGARMALA PROJECT

7,517 km long Coastline

14,500 km Waterways & Maritime Sector

USD 80.3 Bn Estimated Total Cost



SMART CITIES MISSION

100 Smart Cities Pan India

USD 27.3 Bn Allocated Cost

Two Greenfield Airports at Navi Mumbai & Jewar are planned.

Note: USD 1 = INR 75

Source: Compiled by ANAROCK Research

India's Industrial Prowess

13.7%

Contribution of the manufacturing sector to India's GDP (planned to increase it to 25% by 2025)

~3,400

Industrial clusters spread over 4.6 lakh hectares with only 25% vacancy depicts India's industrial prowess

10

Industrial regions spread across the length & breadth of the country drive manufacturing growth

~75,000 acres

Major industrial areas planned across India's top cities

Policy push & incentives

Reduced corporate tax rates, National Manufacturing Policy, Make in India & Self-reliant campaign to boost manufacturing



Manufacturing Sector: Fishbone Analysis

Technological changes & political challenges previously choked the manufacturing growth

4

5

THE PROBLEM Decreasing share of manufacturing in India's GDP: 17.1% in 2009 to 13.7% in 2019

UNDERLYING CAUSES

Machines: Manufacturing sector is a capital intensive business which restricts the replacement of old machines with newer technological advanced machines frequently.

- 2 Methods: Limited use of automation & technology owing to availability of cheap labour. Shortage of skilled workforce hindered the use of new technologies in the sector.
- 3

People: Unskilled workforce, lower wages, lack of safety hygiene at work.

Substitutes: Since last 2 decades, service sector witnessed exponential growth which led to migration of labour from manufacturing sector; the share of services in GDP increased from 42% in 1999 to 49.9% in 2019. The compensation and social status are relatively attractive in service sector.

Environment: Higher corporate tax rates & limited subsidy led to shutdown of many small businesses. Other factors include multiple layers of taxes (such as VAT, sales tax, etc.); lack of basic infrastructure (such as roads, power, etc.) and increased competition due to cheap imported products.

Changes witnessed by the sector in last decade to address the underlying causes



Machines & Methods: An increase in wages forced the companies to opt for automation.

People: Life insurance scheme by Gol for labourers by paying nominal premium. Foreign players standardized the safety and hygienic conditions at work.

Environment: Implementation of 'Make in India' & Self-reliant Campaign to boost local manufacturing.

Implementation of GST to simplify the tax structure across the country.

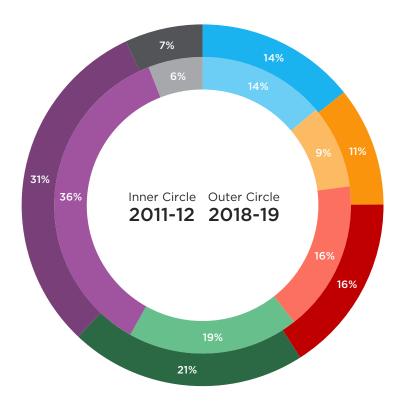
Corporate tax has been reduced to 25% from 30% for existing companies and 15% from 25% for new manufacturing companies.

Nearly USD 1.3 Tn infrastructure investment over the next 5 years.

Manufacturing: A Vital Cog of Economic Growth

Accounting for 13.7% of India's GDP (2019), planned to increase its contribution to 25% by 2025

Manufacturing as % Share in Output



In FY'19, output from manufacturing stood at USD 1.3 Tn (INR 97.4 Tn); 49% higher than FY'12 in absolute terms.

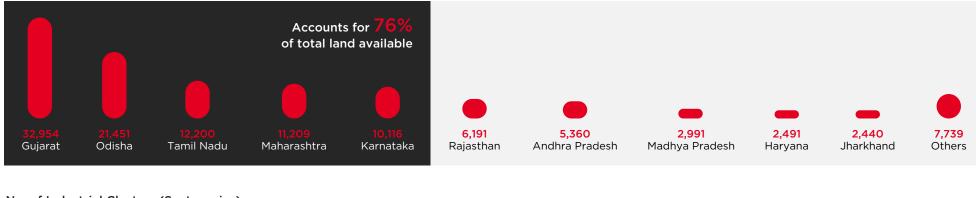
'Make in India' initiative and Self-reliant campaign is expected to provide impetus to manufacturing sector in India. The sector is likely to benefit from the exodus of companies from China to India.



Manufacturing Clusters Spread across India

~3,400 industrial clusters spread over 4.6 lakh Ha* with only 25% vacancy depicts India's industrial prowess

Industrial Land Available across States (Ha)



No. of Industrial Clusters (Sector-wise)



Note: *Ha = Hectare

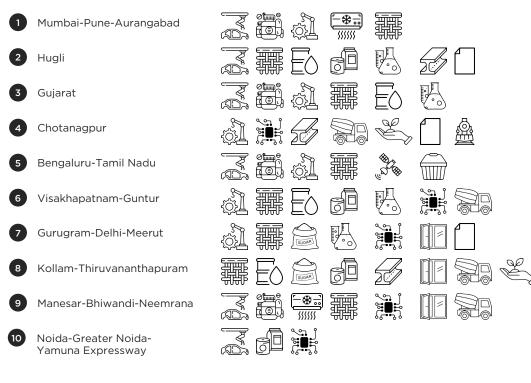
Source: Department of Industrial Policy & Promotion, Compiled by ANAROCK Research

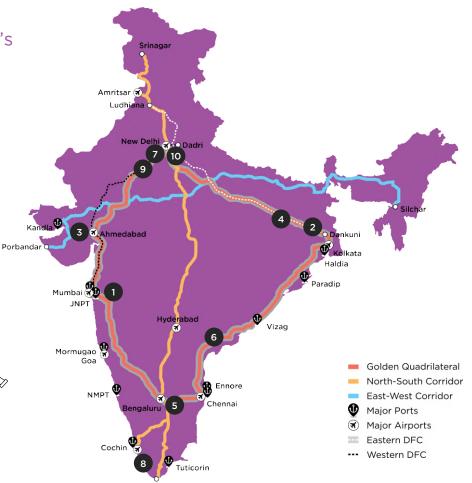
Major Industrial Regions in India

10 industrial regions contribute maximum to the country's manufacturing output

Industrial Regions

Key Industries*





Note: Map not to scale; for representation purpose only; *Details in Annexure I

Largest Industrial Parks in India

4

10

12

12 industrial parks spread across ~30,000 Ha*

Adani Mundra SEZ Mundra, Gujarat 12,146 Ha

1

7

11

- Reliance Modern Economic Township
 Jhajar, Haryana
 3,239 Ha
- 5 Khed City Pune, Maharashtra 1,700 Ha

TATA SEZ Gopalpur, Odisha 1,174 Ha

 Arete Industrial Park Bharuch, Gujarat

680 Ha

Ascendas One Hub Chennai, Tamil Nadu 506 Ha GMR SIR Kakinada, Andhra Pradesh **3,441 Ha**

Sri City Chittor, Andhra Pradesh **3,036 Ha**

Mahindra World City Jaipur, Rajasthan 1,215 Ha

AMRL SEZ Tuticorin, Tamil Nadu 1,019 Ha

Mahindra World City Chennai, Tamil Nadu

GMR Krishnagiri SIR Hosur, Tamil Nadu **243 Ha**



Note: Map not to scale, for representation purpose only; *Hectare

Ahmedabad: The Manchester of India

Textiles & chemical industries drive the city's growth

GIDC

development

GUJARAT - A Snapshot

11.2% GSDP Growth (Y-o-Y)

2nd Rank in exports (FY'19)

Nodal agency for industrial

45.0%

Contribution of industry sector* in GSVA

35.8%

Contribution of manufacturing in GSVA

11.3%

GSVA Growth of manufacturing sector (Y-o-Y)

Key Industries



Automobile & Ancillaries: Tata Motors, Suzuki Motors, Ford, Honda Motorcycle & Scooter



Pharma & Life Sciences: Cadila Pharmaceuticals, Claris Lifesciences, Concord Pharmaceuticals



Textiles: Arvind Mills, Modern Denim & Woolens, Rupangi Impex

Note: Data for FY'18 on constant 2011-12 prices (advance estimates); USD 1 = INR 75
*Industry sector includes manufacturing, construction, electricity, gas, water supply & other utility services

20	In all and the all statistics () is a statistic of	Consideration of Chale of Manager and Studies at the
29	indian industrial & Logistics:	Gearing Up a Global Manufacturing Hub

Major Industrial Areas

	Land Rates (USD Mn/acre)		Rer	nt (USD/sf/year)
	Q4 2019	Annual Change	Q4 2019	Annual Change
Sanand	0.37	0.1%	2.88	0.0%
Changodar	0.37	0.0%	3.20	0.0%
Aslali	0.23	0.0%	NA	NA
Kheda	0.20	0.5%	NA	NA

Bengaluru: Co-existence of Industries & Services

Home to a wide range of IT-ITeS and heavy & light engineering industries

KARNATAKA - A Snapshot

6.8% GSDP Growth (Y-o-Y) **3rd** Rank in exports (FY'19)

Nodal agency for

industrial development

KSIIDC

26.9% Contribution of industry sector* in GSVA

18.6%

Contribution of manufacturing in GSVA

5.6%

GSVA Growth of manufacturing sector (Y-o-Y)

Key Industries



<mark>Aeropsace:</mark> HAL, NAL, Airworks, Mahindra Aerospace



Pharma: Glaxo Smith Kline, Sun Pharmaceuticals, Biocon, Cipla, Mylan Laboratories



Heavy Engineering: BEML, ABB, Bosch, Rail Wheel Factory

Note: Data for FY'20 on constant 2011-12 prices (advance estimates); USD 1 = INR 75 *Industry sector includes manufacturing, construction, electricity, gas, water supply & other utility services

30 Indian Industrial & Logistics: Gearing Up a Global Manufacturing Hub

Major Industrial Areas

	Land Rates (USD Mn/acre)		Rer	nt (USD/sf/year)
_	Q4 2019	Annual Change	Q4 2019	Annual Change
KIADB Hitech Zone	0.39	0.5%	NA	NA
Narsapura	0.25	1.0%	NA	NA
Bommasandra	1.75	0.0%	4.00	0.0%
Bidadi	0.50	0.0%	3.68	0.0%
Dabaspet	0.32	0.0%	NA	NA
Harohalli	0.20	0.0%	NA	NA
Peenya	2.44	5.0%	5.44	0.0%

Chennai: City with a Diversified Economic Base

Automobiles, auto ancillaries, electronic hardware & IT SEZs drive the city's growth

TAMIL NADU - A Snapshot

8.2% GSDP Growth (Y-o-Y) **4**th Rank in exports (FY'19)

Nodal agency for industrial development

TNIDC

36.4% Contribution of industry sector* in GSVA

6.6%

GSVA Growth of manufacturing sector (Y-o-Y)

	Land Rates (US	D Mn/acre)	Rent (US	SD/sf/year)
	Q4 2019	Annual Change	Q4 2019	Annual Change
Ambattur	2.28	O.1%	4.32	3.0%
Poonamallee	1.43	0.0%	4.16	8.0%
Sriperumbudur-Oragadam	0.33	4.0%	4.00	4.0%
Irrungattukottai	0.36	8.0%	4.00	4.0%
Madhavaram	0.97	25.0%	3.52	0.0%
Gummidipoondi	0.19	0.0%	2.24	0.0%
Periyapalayam Road	0.21	6.0%	2.56	6.0%
Manali	0.48	0.0%	2.72	6.0%
Mannur	0.17	0.0%	3.04	17.0%
Maraimalai Nagar	0.62	0.0%	3.84	0.0%

Key Industries



Automobile & Ancillaries: Mahindra, BMW India, Federal Mogul, Force Motors, Renault Nissan, Posco, Daimler, Apollo Tyre, Royal Enfield, MRF Tyre



Petroleum: Manali Petrochemicals, Balmer Lawrie, Chennai Petroleum Corp., Indian Oil Corp.

Maior Industrial Areas



General Engineering & Electronics: Coramandel Electronics, Ingram Micro, Bosch Electrical

Note: Data for FY'19 on constant 2011-12 prices (advance estimates); USD 1 = INR 75 *Industry sector includes manufacturing, construction, electricity, gas, water supply & other utility services

Source: Tamil Nadu Budget Highlights 2020-21, Financial Express, ANAROCK Research

Rent (USD/sf/year)

Hyderabad: Genome Valley of India

Telangana has ~8,435 MSME units registered with an investment of ~USD 1.5 Bn

TELANGANA - A Snapshot

8.2% GSDP Growth (Y-o-Y) 5th Rank in exports (FY'19)

Nodal agency for

industrial development

TSIIDC

18.7% Contribution of industry sector* in GSVA

13.0%

GSVA Growth of manufacturing sector (Y-o-Y)

1.6%

GSVA Growth of manufacturing sector (Y-o-Y)

Key Industries



Aeropsace & Defence: Tata Boeing Aerospace, Tata Advanced Systems, Nucon Aerospace



Pharma: Gland Pharma, DuPont, Biocon, Dr. Reddy's Laboratories, Aurobindo Pharma

Maior Industrial Areas



Traditional Clusters: Clay & lac bangles, zari work, brass idol, silver foil, printing/dyeing, leather

Note: Data for FY'20 on constant 2011-12 prices (advance estimates); USD 1 = INR 75
*Industry sector includes manufacturing, construction, electricity, gas, water supply & other utility services

•		•	
Q4 2019 Ann	ual Change	Q4 2019 Ann	ual Change
0.72	24.0%	2.08	17.0%
0.16	32.0%	NA	NA
0.23	35.6%	NA	NA
0.15	40.0%	2.08	26.0%
1.28	0.0%	2.40	0.0%
2.15	23.0%	NA	NA
0.95	35.0%	2.40	25.0%
	0.72 0.16 0.23 0.15 1.28 2.15	0.1632.0%0.2335.6%0.1540.0%1.280.0%2.1523.0%	0.72 24.0% 2.08 0.16 32.0% NA 0.23 35.6% NA 0.15 40.0% 2.08 1.28 0.0% 2.40 2.15 23.0% NA

Land Rates (USD Mn/acre)

Manesar-Bhiwadi-Neemrana: Industrial Region

The automobiles & ancillaries' hub of India dotted by a large presence of Japanese companies; proximity to NCR, Haryana & Rajasthan acts as a key growth driver

HARYANA | RAJASTHAN - A Snapshot

7.7% | 5.1% GSDP Growth (Y-o-Y) 6th 12th Rank in exports (FY'19)

Nodal agency for industrial development

HSIIDC | RIICO

32.8% | 30.7% Contribution of industry sector* in GSVA

19.4% 9.8% Contribution of manufacturing in GSVA

7.1% 2.1% GSVA Growth of manufacturing sector (Y-o-Y)

	Land Rates (USD Mn/acre)		Rei	nt (USD/sf/year)
_	Q4 2019	Annual Change	Q4 2019	Annual Change
Manesar	1.29	26.6%	NA	NA
Bawal	0.65	40.8%	NA	NA
Bhiwadi	0.58	32.1%	2.56	0.0%
Khushkhera	0.41	0.2%	2.40	6.0%
Neemrana	0.62	0.0%	2.56	0.0%

Two out of eight investment regions under DMIC are spread across the boundaries of Haryana and Rajasthan. Manesar-Bawal Investment Region, spread across 402 km² is one of the largest automobile manufacturing hubs of India. Khushkhera-Bhiwadi-Neemrana Investment Region, spread across 165.6 km² has operational Japanese Industrial Township. Western Peripheral Expressway significantly improved the location profile & connectivity, thus reduced the time to bypass Delhi.

Key Industries



Automobile & Ancillaries: Maruti Suzuki, Honda Siel, Shriram Pistons & Rings, Nissin Brake, Hero Motocorp, Mushashi Auto Parts, Harley Davidson



Glass & Sanitary Fittings: Jaquar & Company, Saint-Gobain, Kajaria, Parryware, Ajanta Soya, Hindware

Maior Industrial Areas



Consumer Durables: Daikin India, Videocon Industries, Lloyd, Havells India, Panasonic, Micromax

Note: Data for FY'20 on constant 2011-12 prices (advance estimates); USD 1 = INR 75 *Industry sector includes manufacturing, construction, electricity, gas, water supply & other utility services

Meerut: Known for its Handloom Works

Its proximity to NCR & Haryana played a vital role in the growth of the city

UTTAR PRADESH - A Snapshot

4.4% GSDP Growth (Y-o-Y) **7th** Rank in exports (FY'19)

Maior Industrial Areas

Nodal agency for industrial

Mohkampur Industrial Area Partapur Industrial Area

UPSIDC

development

Udhyogpuram

Modinagar

28.7% Contribution of industry sector* in GSVA

16.4% Contribution of manufacturing in GSVA

~1.5% GSVA Growth of manufacturing sector (Y-o-Y)

Key Industries



Automobile & Ancillaries: Modi Tyre Factory, Samco Auto



Textiles: Alps Industries, Paswara Impex, Sardhana Spinning Mills



<mark>Sugar:</mark> Mawana Sugar Works, Daurala Sugar Works, Bajaj Hindustan



MSMEs Clusters: Sports goods, scissors, glass & wooden beads, embroidery, artificial jewelry and electric transformers

Note: Data for FY'20 on constant 2011-12 prices (advance estimates); USD 1 = INR 75 *Industry sector includes manufacturing, construction, electricity, gas, water supply & other utility services



MMR: Fine Balance b/w Services & Manufacturing

Mumbai city & Mumbai Suburban account for 20% of Maharashtra's GSVA

MAHARASHTRA - A Snapshot

6.0% GSDP Growth (Y-o-Y) **1**st Rank in exports (FY'19)

Nodal agency for industrial development

MIDC

34.7% Contribution of industry sector* in GSVA

23.0%

Contribution of manufacturing in GSVA

6.0%

GSVA Growth of manufacturing sector (Y-o-Y)

Key Industries

Automobile & Ancillaries Castrol India, Mobis India



Chemical & Petrochemical: Asian Paints, Pidilite Industries, Reliance Industries, Bharat Petroleum, HPCL, Balmer Lawrie



Engineering: Alfa Laval, Parker Hannifin, Exide Industries, Tata Steel

Note: Data for FY'19 on constant 2011-12 prices (1 st revised estimates); USD 1 = INR 75
*Industry sector includes manufacturing, construction, electricity, gas, water supply & other utility services

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Major Industrial Areas

	Land Rates (USD Mn/acre)		Rent (USD/sf/year)	
	Q4 2019	Annual Change	Q4 2019	Annual Change
Bhiwandi	0.42	21.1%	3.04	0.0%
Thane-Belapur Road	1.29	18.0%	8.00	11.0%
Taloja Industrial Estate	1.15	22.8%	4.00	13.0%
Panvel	0.82	22.5%	NA	NA
JNPT & Uran Road	0.31	9.0%	NA	NA
Rasayani Patalganga	0.29	1.9%	3.20	6.0%
Pen Khopoli Road	0.18	0.1%	2.40	0.0%

Level Deter (LICD Mar/seco)

Pune: No Longer Only a Pensioner's Paradise

IT-ITeS & automobiles drive the city's growth; Pune accounts for 12% of Maharashtra's GSVA

MAHARASHTRA - A Snapshot

6.0% GSDP Growth (Y-o-Y) **1**st Rank in exports (FY'19)

Nodal agency for industrial development

MIDC

34.7% Contribution of industry sector* in GSVA

23.0%

Contribution of manufacturing in GSVA

6.0%

GSVA Growth of manufacturing sector (Y-o-Y)

Key Industries



Automobile & Ancillaries: Jeep India, Mercedes Benz, Tata Motors, Bajaj Auto, Mahindra & Mahindra, Volkswagen



Pharma: Genova, Hindustan Antibiotics, Cipla, Lupin



Consumer Durables: Haier, Bosch, Phillips, LG, Bluestar, Whirlpool

Note: Data for FY'19 on constant 2011-12 prices (1 st revised estimates); USD 1 = INR 75	
*Industry sector includes manufacturing, construction, electricity, gas, water supply & other utility servic	es

36 Indian Industrial & Logistics: Gearing Up a Global Manufacturing Hub

Major Industrial Areas

	Land Rates (USD Mn/acre)		Rent (USD/sf/year)	
	Q4 2019	Annual Change	Q4 2019	Annual Change
Talegaon	0.32	0.1%	4.00	0.0%
Chakan	0.43	0.2%	4.00	0.0%
Pimpri-Chinchwad	1.10	0.0%	4.80	0.0%
Pirangut	0.43	0.0%	3.84	0.0%
Hinjewadi	0.93	0.0%	4.80	0.0%
Lonikand	0.39	0.0%	4.00	0.0%
Sanaswadi	0.31	0.0%	3.68	0.0%
Ranjangaon	0.23	0.0%	3.36	0.0%
Khed	0.24	0.0%	NA	NA
Shirwal	0.21	0.0%	3.20	0.0%

Land Rates (USD Mn/acre)

Vadodara: Has a Vibrant Manufacturing Base

City driven by public sector enterprises and heavy engineering industries

GUJARAT - A Snapshot

11.2% GSDP Growth (Y-o-Y) **2**nd

Rank in exports (FY'19)

45.0%

Contribution of industry sector* in GSVA

35.8%

Contribution of manufacturing in GSVA

11.3%

GSVA Growth of manufacturing sector (Y-o-Y)

Maior Industrial Areas

GIDC Nodal agency for industrial

development

	Q4 2019	Annual Change
Dahej Industrial Estate	0.10	15%
Savli Industrial Estate	0.09	15%
Halol Industrial Estate	0.10	15%
Makarpura Industrial Estate	0.34	15%
Bharuch Industrial Estate	0.09	15%
Ankleshwar Industrial Estate	0.15	15%

Vadodara-Ankleshwar industrial areas are expected to be developed under phase 1 of DMIC project. Once the project start taking shape, these industrial areas may witness traction.

Key Industries



Asian Paints. Pidilite Industries. Reliance Industries, Bharat Petroleum, HPCI



GE Power, Schneider Electric, Siemens Gamesa, DuPont



Jindal Rail Infra. Oriental Manufacturing, Trans-Rail Lighting

Note: Data for FY'18 on constant 2011-12 prices (quick estimates): USD 1 = INR 75; Land rates are allotment price as per GIDC *Industry sector includes manufacturing, construction, electricity, gas, water supply & other utility services

Source: Directorate of Economics & Statistics Guiarat, GIDC

Proposed Major Industrial Areas across India

~75,000 acres of major industrial areas planned across India's top cities

Industrial Area	Area (acres)	Sector / Remark	City	
JNPT SEZ	684	Multi-product	MMR	
Wockhardt Infra Dev. Ltd. SEZ, Shendra	107	Pharmaceutical	AURANGABAD	
KIADB Harohalli	2,381	Multi-product		
Tumkuru Machine Tool Park	530	Machine Tool		
Japanese Industrial Park	530	Automobile & Ancillaries	BENGALURU	
Taiwanese Park, Devanahalli	270	To be established by Century Development Corp.; will accommodate 100 companies from Taiwan		
Sira Industrial Area	815	To be developed as model industrial layout via private sector participation		
SIPCOT Aerospace Park, Vallam	250	Aerospace & Defence Manufacturing	CHENNAI	
Kakatiya Mega Textile Park, Warangal	1,190	Textile & Apparel (concept of 'Fibre to Fabric' facility)		
Pharma City	19,333	Pharmaceutical		
EMC E-city & EMC Maheshwaram	905	Electronics Manufacturing	HYDERABAD	
Zaheerabad NIMZ	12,635	Automobile & Ancillaries		
Japanese Industrial Township, Sanand III (Khoraj)	1,750	Core manufacturing, allied industries & facilities for Auto & Ancillaries, Engineering & Pharma		
Dholera SIR	22,734	Defence Manufacturing		
Vraj Integrated Textile Park	125	Textile SEZ with proposed further expansion	AHMEDABAD	
Origins by Mahindra World City	350	Multi-product		
Saykha Industrial Estate (Part of PCPIR)	5,078	Chemicals, Engineering & Textiles		
Payal Industrial Park, Arete	5,000	Part of Dahej PCPIR - the largest private business park in India	VADODARA	

Recent Policy Initiatives

Specific incentives offered to enhance India's industrial prowess

PRE-COVID 19





National Manufacturing Policy

Provide necessary impetus to the manufacturing sector in order to increase the share of manufacturing in GDP to 25% and create employment opportunities (100 Mn jobs)



'Make in India' Initiative (Launched in 2014)

Boost local manufacturing and promote India as a manufacturing destination for foreign companies, by providing various benefits for set-up, facilitation, taxation, etc.



Corporate Tax Rates Slashed from 25% to 15% in 2019 for new manufacturing companies till fiscal 2023 (lower than the global average)



Foreign Direct Investments (FDIs)

Investments from neighbouring countries would require government's approval, which may create a hurdle for the smooth flow of FDI

While above mentioned policies directly influence the development of manufacturing sector, GST and National Logistics Policy are expected to enable the growth indirectly.

Recent policy changes to strengthen India's position in the global market & to attract foreign industries



POST COVID 19



Capitalize

Gol is planning to incentivize the companies which shift their base from China to India

Thrust in Power Sector

- Additional coal mining blocks for private players to increase thermal energy output
- Gol to spend INR 50,000 Cr on evacuation infrastructure
- India aims to increase its Solar power capacity from 35 GW to 175 GW
- · Round-the-clock increased uniform tariff to attract more investments



Land Reforms

Gol to identify & develop 4.60 lakh Ha of land including 1.10 Ha in existing Industrial areas to set up manufacturing; some Indian states picking up from Federal initiatives: Karnataka allows companies to buy land directly from farmers & Uttar Pradesh state government is working on online land allotment



Sectoral Changes

- Increased FDI in defense sector from 49% to 74%
- Faster environment clearances for setting pharma industries; Reduce the number of drugs in the 'restricted for exports' category
- 7 to 8 Indian states have formalized an 'Electric Vehicle' policy to attract setting up of its manufacturing units

Strong existing transport, huge planned infrastructure and recent policy changes are expected to lure the foreign businesses to set up their manufacturing facilities in India. The manufacturing sector is expected to witness traction in future.



CHAPTER 4

India's Logistics & Warehousing Capabilities

~50% (3PL) Largest occupier of warehousing spaces in India

66% Share of road transportation in India's logistics

77 Mn sf Total warehousing stock across top 8 cities in India

14% of GDP India's logistics cost (better than China 15% of GDP)

> 15 approvals (2019) Reduction from 33 to set up a warehouse in 2015

3.5 months (2019) Reduction from 6 months to construct a warehouse in 2015

India Transport Sector Overview

Contributed nearly 5%* to the overall GVA during fiscal 2019

Components of Transport Sector (2018-19)

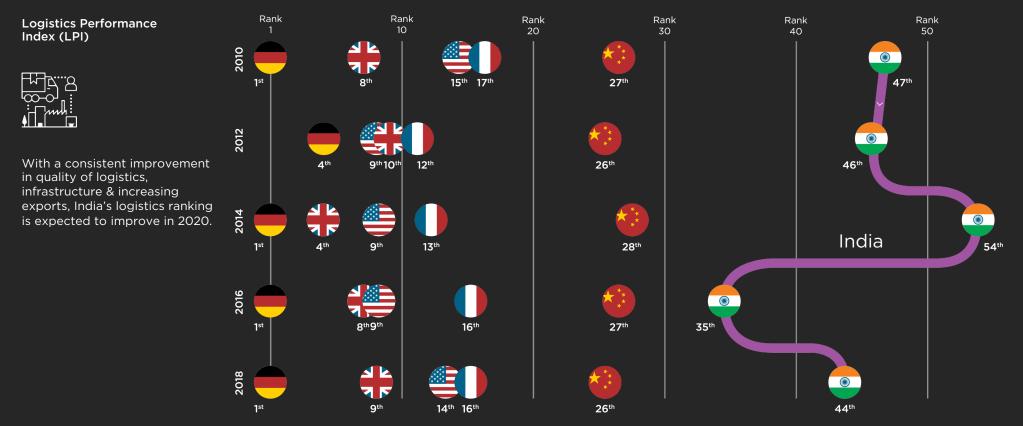


Dedicated freight corridor to help regain the lost share of freight traffic

Note: *At constant 2011-12 prices; USD 1 = INR 75

Logistics: A Global Comparison

Enhanced logistics infrastructure of road, rail, air & sea helping in improvement



Source: World Bank, ANAROCK Research

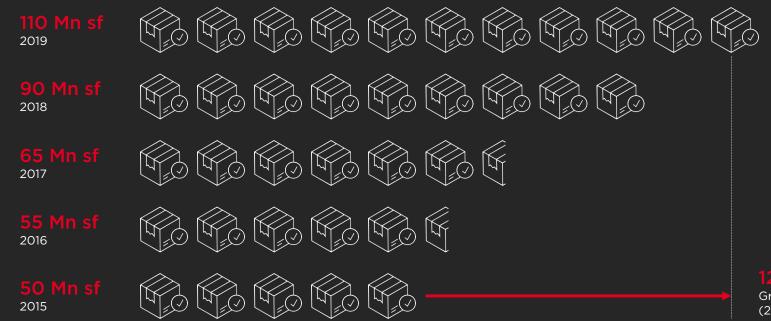
India's high logistics cost (% of GDP) is still better than the Asian peers



Grade A Warehousing Supply Takes Centre Stage

As of 2019, total of 110 Mn sf of Grade A warehousing stock Pan India

Grade A Warehousing Stock Pan India



120%

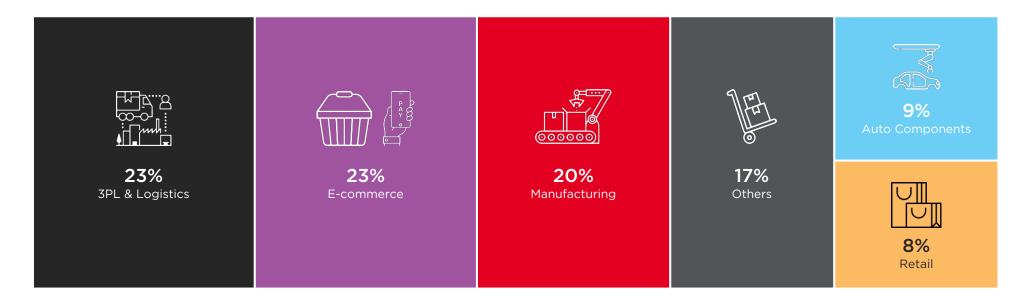
Growth in Grade A warehousing stock (2015 to 2019)

Note: Grade of warehouse defined in Annexure II

Indian Warehousing Sector: Key Occupiers

3PL & logistics and e-commerce are the largest occupiers of warehousing space in India

Share of Occupiers (as of 2019)



E-commerce which started flourishing in India by 2012 has gained prominence within a short span.

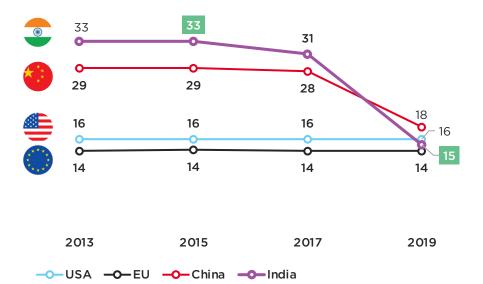
Note: Supply of 3PL players which they have leased to e-commerce players is accounted in 3PL

Source: ANAROCK Research

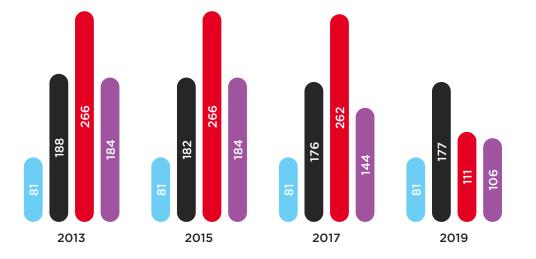
Warehousing: Comparing India with Global Majors

India improved significantly on approval requirements & execution capabilities

No. of Approvals (To Build a Warehouse)



No. of Days Required (To Build a Warehouse)





The number of approvals required to set up a warehouse in India has reduced from 33 in 2015 to 15 in 2019 and is among the best amid many global players. Significant reduction in the approval process has facilitated a swift rise in warehouse developments across the country. With a global average of 154 days as of 2019, India is much ahead in terms of the time required to set up a warehouse. Automation and use of technology in development has resulted in bringing down the setup time from nearly 6 months till 2015 to 3.5 months by 2019.

Existing Major Warehousing Hubs

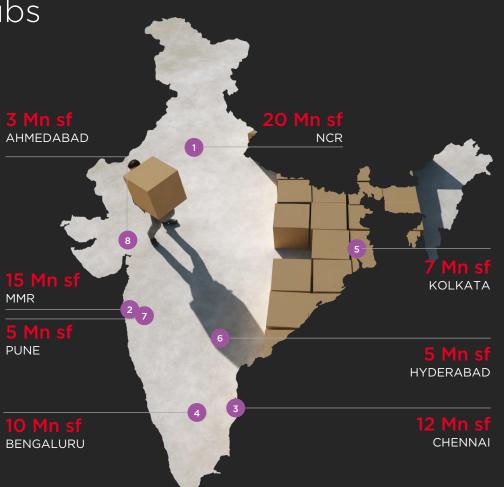
Warehousing stock across top 8 cities in India



77 Mn sf

Total warehousing stock across top 8 cities (as of 2019)

MMR	0.20-0.30	10%	0.23-0.32	5%
NCR	0.18-0.27	15%	0.20-0.30	5%
Bengaluru	0.20-0.27	10%	0.23-0.27	5%
Kolkata	0.16-0.24	15%	0.23-0.25	0%
Hyderabad	0.20-0.27	15%	0.18-0.24	0%
Chennai	0.20-0.27	0%	0.21-0.31	0%
Ahmedabad	0.17-0.21	10%	0.20-0.24	5%
Pune	0.20-0.27	0%	0.23-0.31	0%

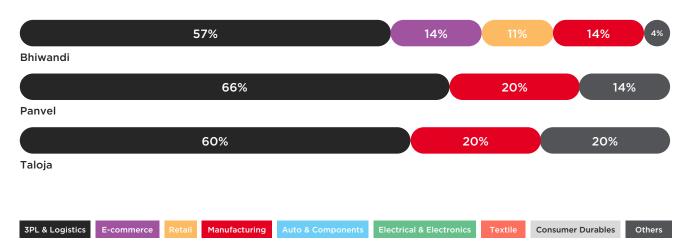


Note: Supply Grade A & B only (as of 2019); Grade of warehouse defined in Annexure II

MMR Warehousing Hub

Cluster	Bhiwandi	Panvel	Taloja
Land Rates (USD Mn/acre)	0.24-0.33	0.20-0.31	0.27-0.33
Change in Land Rates (y-o-y)	10%	10%	10%
Lease Rentals (USD/sf/month)	0.23-0.28	0.25-0.32	0.24-0.29
Growth in Lease Rentals (y-o-y)	5%	5%	Nil
Warehouse Infrastructure	Grade B	Grade B	Grade B
Key Industries	FMCG & FMCD	EXIM Focused Industries	Industrial & Cold Storage
Avg. Size of Warehouse (lakh sf)	0.75	0.60	0.40

Industry Concentration



Note: USD 1 = INR 75; Based on analysis of large sample of transactions in respective markets

MUMBAI METROPOLITAN REGION (MMR)



Navi Mumbai International Cargo Terminal and new port terminal being developed at JNPT to enhance warehousing demand.



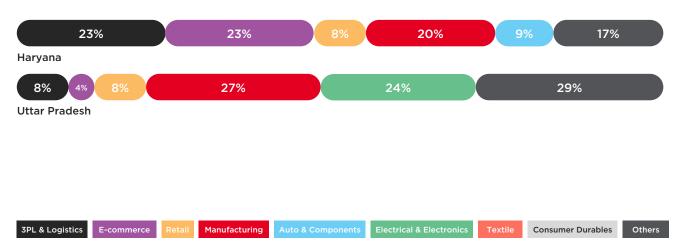
Reclassification of land along Mumbai-Nashik highway allowing new players to the market in **New Bhiwandi**.

Source: ANAROCK Research

NCR Warehousing Hub

Cluster	Haryana*	Uttar Pradesh*
Land Rates (USD Mn/acre)	0.18-0.25	0.20-0.27
Change in Land Rates (y-o-y)	15%	10%
Lease Rentals (USD/sf/month)	0.20-0.27	0.27-0.33
Growth in Lease Rentals (y-o-y)	5%	5%
Warehouse Infrastructure	Grade B+	Grade B+
Key Industries	Automobile & Ancillaries, FMCG & FMCD	Electronics
Avg. Size of Warehouse (lakh sf)	0.75	0.40

Industry Concentration



Note: USD 1 = INR 75; Based on analysis of large sample of transactions in respective markets *Haryana (Sonepat, Manesar & Pataudi) & Uttar Pradesh (Ghaziabad, Greater Noida & Dasna)

NATIONAL CAPITAL REGION (NCR)



Development of **Jewar Airport** to open international market opportunities.



Completion of Eastern Dedicated Freight Corridor will enhance connectivity to other parts of the country and few major ports to add EXIM based demand.

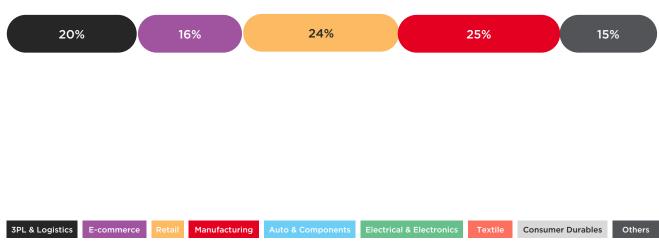
Development of **DMIC along the NH-8** making it attractive for players to invest into the region.

Source: ANAROCK Research

Bengaluru Warehousing Hub

Cluster	Neelamgala-Dabaspete Belt
Land Rates (USD Mn/acre)	0.20-0.27
Change in Land Rates (y-o-y)	10%
Lease Rentals (USD/sf/month)	0.23-0.27
Growth in Lease Rentals (y-o-y)	5%
Warehouse Infrastructure	Grade B+
Key Industries	Automobile & Ancillaries, FMCG & FMCD, Heavy Engineering
Avg. Size of Warehouse (lakh sf)	0.50

Industry Concentration



Note: USD 1 = INR 75; Based on analysis of large sample of transactions in respective markets



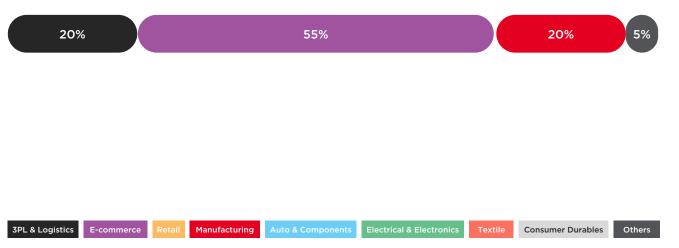
Development of Mumbai-Bengaluru industrial corridor and Chennai-Bengaluru industrial corridor will improve connectivity and help to create efficient logistics and infrastructure for warehouses in the region.

KOLKATA

Kolkata Warehousing Hub

Cluster	Dhulagori, Dankuni & Ulluberia Belt
Land Rates (USD Mn/acre)	0.16-0.24
Change in Land Rates (y-o-y)	15%
Lease Rentals (USD/sf/month)	0.23-0.25
Growth in Lease Rentals (y-o-y)	NIL
Warehouse Infrastructure	Grade B & C+
Key Industries	FMCG & FMCD
Avg. Size of Warehouse (lakh sf)	0.40

Industry Concentration



Note: USD 1 = INR 75; Based on analysis of large sample of transactions in respective markets



Development of EDFC and Amritsar-Kolkata industrial corridor to support warehousing growth.

HYDERABAD

Companies have committed **huge manufacturing facilities** in Hyderabad which will lead to increase in demand

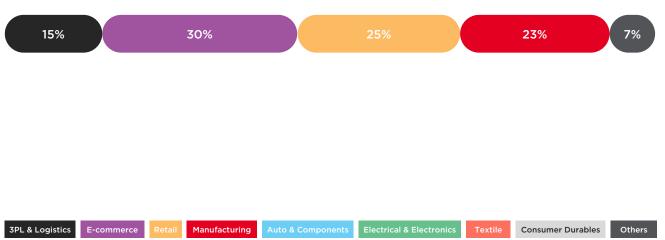
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for warehousing.

Hyderabad Warehousing Hub

Cluster	Jeedimetta - Medchal Belt
Land Rates (USD Mn/acre)	0.20-0.27
Change in Land Rates (y-o-y)	15%
Lease Rentals (USD/sf/month)	0.18-0.24
Growth in Lease Rentals (y-o-y)	NIL
Warehouse Infrastructure	Grade B
Key Industries	FMCG & FMCD, Pharmaceuticals, Chemicals
Avg. Size of Warehouse (lakh sf)	0.50

Industry Concentration



Note: USD 1 = INR 75; Based on analysis of large sample of transactions in respective markets

Source: ANAROCK Research

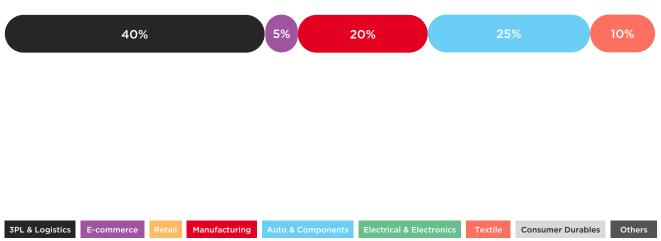
Upcoming **Dholera cluster** near Ahmedabad and proposed **DMIC** to increase warehousing demand.

ידיידי

Ahmedabad Warehousing Hub

Cluster	Ahmedabad
Land Rates (USD Mn/acre)	0.17-0.21
Change in Land Rates (y-o-y)	10%
Lease Rentals (USD/sf/month)	0.20-0.24
Growth in Lease Rentals (y-o-y)	5%
Warehouse Infrastructure	Grade B+ & B
Key Industries	Automobile & Ancillaries, FMCG & FMCD
Avg. Size of Warehouse (lakh sf)	0.30

Industry Concentration



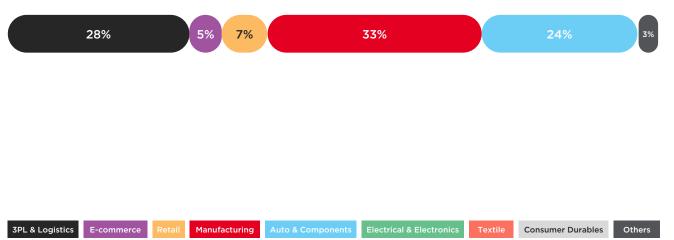
Note: USD 1 = INR 75; Based on analysis of large sample of transactions in respective markets

Planned **Bengaluru-Chennai Industrial Corridor** and its proximity to two major seaports will further boost the warehousing sector in Chennai.

Chennai Warehousing Hub

Cluster	Chennai
Land Rates (USD Mn/acre)	0.20-0.27
Change in Land Rates (y-o-y)	NIL
Lease Rentals (USD/sf/month)	0.21-0.31
Growth in Lease Rentals (y-o-y)	NIL
Warehouse Infrastructure	Grade A & B+
Key Industries	Automobile & Ancillaries, FMCG & FMCD, Pharmaceuticals
Avg. Size of Warehouse (lakh sf)	0.40

Industry Concentration

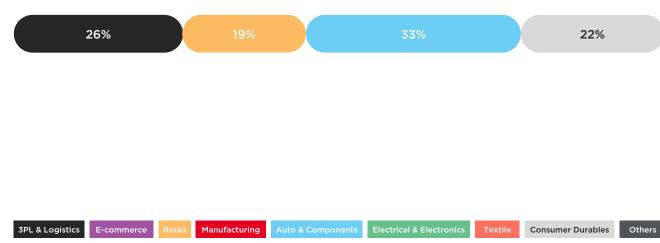


Note: USD 1 = INR 75; Based on analysis of large sample of transactions in respective markets

Pune Warehousing Hub

Cluster	Pune
Land Rates (USD Mn/acre)	0.20-0.27
Change in Land Rates (y-o-y)	NIL
Lease Rentals (USD/sf/month)	0.23-0.31
Growth in Lease Rentals (y-o-y)	NIL
Warehouse Infrastructure	Grade A & B+
Key Industries	Automobile & Ancillaries, FMCG & FMCD, Pharmaceuticals
Avg. Size of Warehouse (lakh sf)	0.30

Industry Concentration



Note: USD 1 = INR 75; Based on analysis of large sample of transactions in respective markets



The **Mumbai-Bengaluru industrial corridor** will enhance connectivity between Mumbai and Pune.



Expanded connectivity with the port city (MMR) will help automobile and heavy engineering companies to expand base in the Pune district.

Emerging Warehousing Hubs in India

Warehousing clusters are expanding rapidly beyond the Metro & Tier-I cities



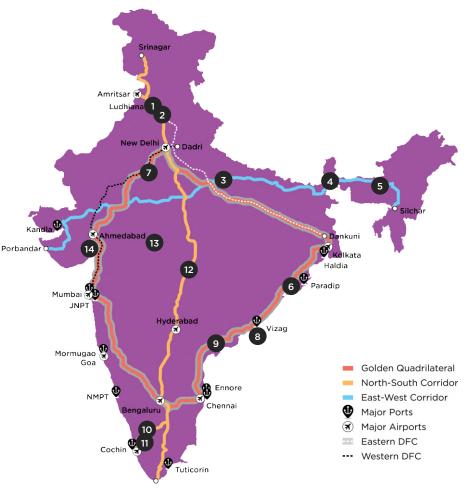
Warehousing clusters are expanding aggressively in Tier-II and Tier-III cities.

Majority of these emerging clusters are in line with the industrial and freight corridors being developed in India.

Demand for small and multi-location warehouses is expected to rise significantly.

Upcoming Warehousing Clusters





Policy Support: GST

GST implementation & framing of National Logistics Policy to shape the future



Good & Services Tax (GST)

A unified tax system in the country that removed inter-state barriers enabling smooth flow of goods from one state to the other.

Major Impact of GST



Increased efficiency

A simplified tax structure enables inter-state transportation of goods at reduced cost.



Consolidation

Supply chain management gets overhauled as warehouses consolidate.



Entry of new players

As the sector awaits infrastructure status, new entrants are expected to arrive.

Post implementation of GST a wave of consolidation struck the sector where operators were looking for larger spaces to exercise better operational control.

Policy Support: Pradhan Mantri Kisan Sampada Yojana

The PMKSY ordinance focuses to develop the food processing sector, provide better returns to farmers and increase employment opportunities



Mega Food Parks

A mechanism to create an ecosystem for agriculture produce and linking it to the market.



Cold Chain

To provide an integrated cold chain and preservation infrastructure facilities from the farm gate to the consumer.



Unit Scheme

To create processing & preservation capacities & modernization / expansion of existing food processing units.



Agro-processing Cluster

To encourage entrepreneurs to set up food processing units based on the cluster approach.



Creation of Backward & Forward Linkages

To provide effective and seamless backward and forward integration for the processed food industry.



Food Safety & Quality Assurance Infrastructure

To develop an ecosystem to assess and maintain the quality of food products manufactured and sold in the market.



Human Resources & Institutions

To develop workforce skills and promote institutional activities.

This aims to strengthen the supply chain and reduction in logistics cost through the creation of modern infrastructure.

Policy Support: Draft NLP

Draft National Logistics Policy (NLP)

To establish a single window e-logistics market

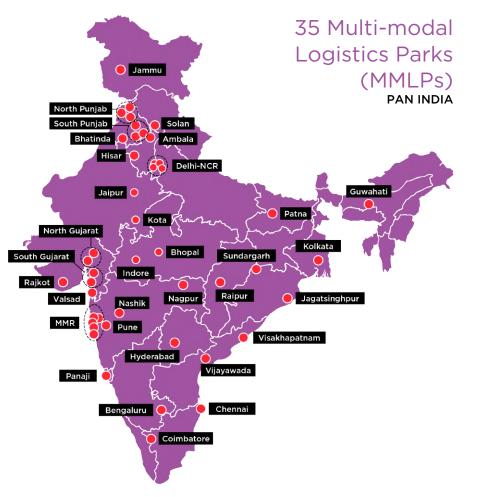
To bring logistics cost (% of GDP) down to 9-10%

Multi-modal Logistics Park Policy:

MMLPs are expected to help transition from the current situation of point-to-point freight movement to a hub-and-spoke model freight movement.

Note: North Punjab: Jalandar, Amritsar & Gurdaspur South Punjab: Ludhiana, Sangur & Patiala Delhi-NCR: Delhi, Faridabad, Gurugram & Ghaziabad North Gujarat: Ahmedabad & Vadodara South Gujarat: Surat & Bharuch MMR: Mumbai, Mumbai Suburbs, JNPT, Mumbai Port, Thane & Raigad

Map not to scale, for representation purpose only



Benefits of MMLPs

Provide modern mechanised logistics hubs with the necessary infrastructure and regulatory environment

Facilitate seamless freight movement across the industrial nodes via road, railways, air, inland waterways & sea

Improve freight aggregation, storage & distribution; reduce logistics costs and freight transportation lead time

To create various value-added services (such as customs clearance, testing facilities, warehouse management, round the clock services, one window services and enhanced security systems)

MICRO-LEVEL



MACRO-LEVEL

Private Equity (PE) Trends

USD 2 Bn

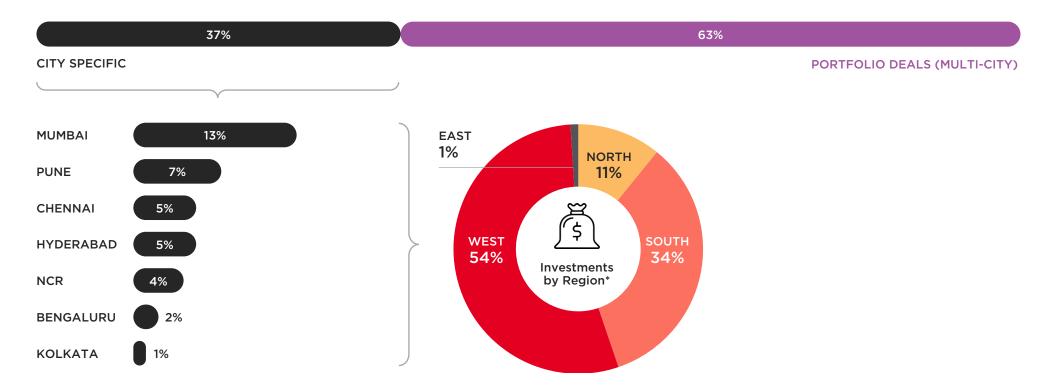
Worth PE investments in the Indian Industrial & Logistics sector (2017-Q1 2020)

USD 7 Bn

Worth platforms created in Warehousing sector since 2015

Policy Push Amidst Changing Environment Attracted Investors

USD 2 Bn of PE investments came in the Industrial & Logistics sector (2017-Q1 2020)



* Note: Transactions for PAN India locations are not included

Source: Compiled by ANAROCK Research

Platform Level Deals

Nearly USD 7 Bn worth platforms created for warehousing since 2015

Investor	Developer Partner	Value (USD Mn)
National Investment Infrastructure Fund (NIIF)	DP World	3,000
Allianz	ESR	1,000
СРРІВ	Indospace	800
GLP	Indospace	700
Ascendas	Firstspace	600
CDPQ	LOGOS India	400
Warburg Pincus	Embassy	250
Xander - Partners Group	-	250
Blackstone	Hiranandani	100

Source: Compiled by ANAROCK Research

Investors are upbeat on the growth of warehousing in India and are working closely with developer partners to identify and invest in the sector.



65 Indian Industrial & Logistics: Gearing Up a Global Manufacturing Hub

Key Emerging Trends

De-centralization of warehouses Rise of urban multi-level warehousing High demand for Grade A properties Rising demand from tier II & tier III cities Business consolidation on a rise

Key Emerging Trends

De-centralization, urban multi-level warehousing & the rise of automation



De-centralization of warehouses

- Mitigating future disruptions - Ensuring business continuity

- Maintenance ease



Rise of urban logistics

- High demand for e-commerce from urban areas - Enable faster delivery



Urban multi-level warehouses

High land cost within city limitsLarge inventory to cater to the consumer demand



Automation a necessity

Mitigating overdependence on cheap labour
Improving efficiencies



In USA, Amazon uses newage drones to scan stock in the warehouses which also appears to be cost efficient. The e-commerce giant has developed 'Prime Air Delivery' which will be used for customer deliveries using drones. However, this is yet to be operationalised in international markets. From stacking up the stock to packing orders in warehouses, the company uses robots to manage a large portion of the work. As per industry sources, the company is trying to mechanise the process of packing orders which is expected to be five times faster than humans.

Restricted supply, high demand of Grade A spaces & the rise of 3PL players



3PL players to flourish

- Companies to undertake cost rationalization - Outsourcing to 3PL players



Rentals under pressure

- Occupiers asking for rental waivers
- Landlords under pressure



High demand for Grade A properties

Health & safety considerations of the occupiersPreference for Grade A properties



High warehousing demand in future

- Rising inventory levels to cater for a longer period in such unprecedented times
- Higher production to mitigate risks due to lockdown



Restricted Supply

- Lockdown restrictions led to limited construction
- Limited availability of raw material and labour



Rising demand from tier II & III cities

- E-commerce to spread across the country - Cost advantage of tier II and tier III cities



Re-assessment of WIL investment strategies

- Changing supply chain trends
- Exposed over-reliance on China for manufacturing



- Residential grappling with subdued demand
- Commercial & retail on a slow track

Industrial & Logistics to flourish in the medium term



Move out from China may act as a blessing

Companies looking to leave China
Industrial developments may flourish in India



Business consolidation on rise

- Lockdown led to several business to shutdown

- Distress sale leading to consolidation

COVID-19 pandemic is an opportunity for India to strengthen its manufacturing base. China based manufacturing companies exploring options to move out and India is a possible beneficiary. 'Self-reliant' & 'Make in India' to help India in re-establishing its manufacturing prowess.

CHAPTER 7

Outlook

Structural changes in the last couple of years such as GST, reduction in corporate tax, 'Make in India', and the Self-reliant campaign – all aimed to increase manufacturing sector's share to 25% of GDP by 2025.



Outlook

Industrial & Logistics to be the fulcrum of India's future economic growth

The whole world is grappling with an economic slowdown and India is no exception. The Reserve bank of India, IMF and Barclays foresee contraction in the economy this fiscal. As per IMF estimates, world's economy is expected to contract by 4.9% in 2020 and India's economy is likely to contract by 4.5% in FY'21. The India's economy witnessed a contraction of 23.9% in the first quarter of FY'21 amid complete nationwide lockdown.



However, India's economy is expected to rebound to 6% by FY'22, as per IMF estimates. Moody's has also estimated the growth to be 6.6% in FY'22. This may be attributed to the conducive and improving business environment along with strong infrastructure support offered by the government in recent times. To facilitate growth and attract global players, nearly USD 1.3 Tn infrastructure investment is planned over the next 5 years.

Looking at how things are shaping up globally, India is likely to witness a growing interest from foreign investors over the next couple of years as many manufacturing firms are considering relocating their sites from China to mitigate risk and ensure business continuity. China is currently considered to be the world's factory owing to the presence of a large number of manufacturing units.

However, the COVID-19 pandemic outbreak exposed the over-reliance of companies in China for production. As companies explore options, India can surely be an alternative to China. The share of manufacturing in India's GDP decreased from 17.1% in 2009 to 13.7% in 2019. However, the government has introduced many structural changes in the last couple of years such as GST, reduction in corporate tax, 'Make in India', and the Selfreliant campaign – all aimed to increase manufacturing sector's share to 25% of GDP by 2025.

Undoubtedly, with rise in manufacturing activities across the country, the warehousing and logistics demand is likely to increase. Further, use of technology and automation coupled with massive reduction in the number of approvals required to set up a warehouse has brought down the setup time from nearly 6 months in 2015 to 3.5 months in 2019. This may further facilitate a swift rise in warehouse developments across the length and breadth of the country.

While the nationwide lockdown to contain the spread of COVID-19 severely impacted businesses across the country, the warehousing and logistics sector proved to be the lifeline of the country. Supply and delivery of essentials remained largely undeterred. Considering that e-commerce is bound to flourish in the post-COVID regime even further, there will be a rise in the online businesses which may lead to a surge in new warehousing demand along with a rising trend of multi-level warehouses within the city limits.

COVID-19 also exposed the challenges of consolidation in the warehousing business. The market is expected to de-centralize to mitigate future disruption, ensure business continuity, and ease operations. To contain the cost and maintain social distancing norms, the rise of automation is expected.

The Industrial & Warehousing sector undoubtedly faced supply and demand constraints during the past few months due to the forced lockdown. However, as things spring back to normalcy, manufacturing operations restart and the businesses come on track, there will be a rising demand for Industrial & Warehousing, resulting in growth of this sector in the future.

Annexure

Annexure I: Key Industries in India's 10 Major Industrial Regions

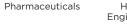








Automobiles & Ancillaries



Heavy Engineering



Electrical &

Electronics

Aerospace



Locomotive

Fertilizers

Cement



0

Textiles

Paper

SUGAR

Sugar

*-

\$\$\$\$\$\$

FMCD

P

Glass



ð

Food Processing

Iron, Steel & Aluminium



FMCG

Annexure II

Petroleum

Base Parameters	Grade A	Grade B
Type of Building	Pre-engineered building	Pre-engineered building, site fabricated truss structure
Clear Height	10m to 12m	8m to 10m
Flooring	FM2 equivalent	RCC to allow storage systems & MHE movement
Fire Fighting System	Hydrant & sprinklers, NBC/NFPA & above	Basic hydrant systems
Lighting	LED lights with 200 LUX level & above	Lights with 150 LUX level
Floor to Land Area	Maximum 55%	Maximum 60%
Internal Column Grid	50 ft and above	Less than 30 ft



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Binswanger, a global leader in full-service commercial real estate, has been helping its clients realize their full real estate potential since 1931. Founded by real estate innovator and pioneer, Frank Binswanger Sr., the company operates with the understanding that real estate has the ability to strengthen businesses and transform communities. The company offers a variety of services benefitting both owners and occupiers including global real estate brokerage, location consulting, investment sales, tenant representation, corporate advisory, strategic consulting and a variety of management services. Having worked with more than half of the Fortune 500, the employee-owned company has long been known as the industry leader in the acquisition and disposition of industrial and commercial facilities around the globe.

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ANAROCK is India's leading independent real estate services company with a presence across India and the Middle East. The Chairman, Mr. Anuj Puri, is a highly respected industry veteran and India's most prominent real estate thought leader. The Company has diversified interests across the real estate lifecycle and deploys its proprietary technology platform to accelerate marketing and sales, ANAROCK's services include Residential Broking & Technology, Retail (in partnership with Vindico), Commercial, Investment Banking, Hospitality (via HVS ANAROCK), Land Services, Industrial and Logistics (in partnership with Binswanger), Investment Management, Research, Strategic Advisory & Valuations and Project Management Services (in partnership with Mace). The Company has a unique business model, which is an amalgamation of traditional product sales supported by a modern technology platform with automated analytical and reporting tools. This offers timely solutions to its clients, while delivering financially favourable and efficient results. ANAROCK has a team of over 1,800 certified and experienced real estate professionals who operate across all major Indian (Mumbai, Navi Mumbai, Pune, Ahmedabad, NCR - Delhi, Gurugram, Noida, Chennai, Bangalore, Hyderabad, Kolkata, Lucknow) and Middle East markets. and within a period of two years, has successfully completed over 400 exclusive project mandates, ANAROCK also manages over 80,000 established channel partners to ensure global business coverage. Our assurance of consistent ethical dealing with clients and partners reflects our motto - Values Over Value

For more information, please visit www.anarock.com

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