ESTIMATING INCREMENTAL LABOUR DEMAND FOR 2020-21

Skill India
कौशल भारत-कुशल भारत

N·S·D·C
National Skill Development Corporation
Transforming the skill landscape

March 2020

Snapshot of the Study

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Objective

Estimate Incremental Labour Demand for the year 2020-21

Approach

Past data on Investments (CMIE), Bank Credits (RBI) and Employment (NSS) are modelled to predict demand for 2020-21

Result

Estimated Labour Demand for 2020-21 in India is 2.6 crore at district level

Objective

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Labour Demand Across Sectors (2020-21)

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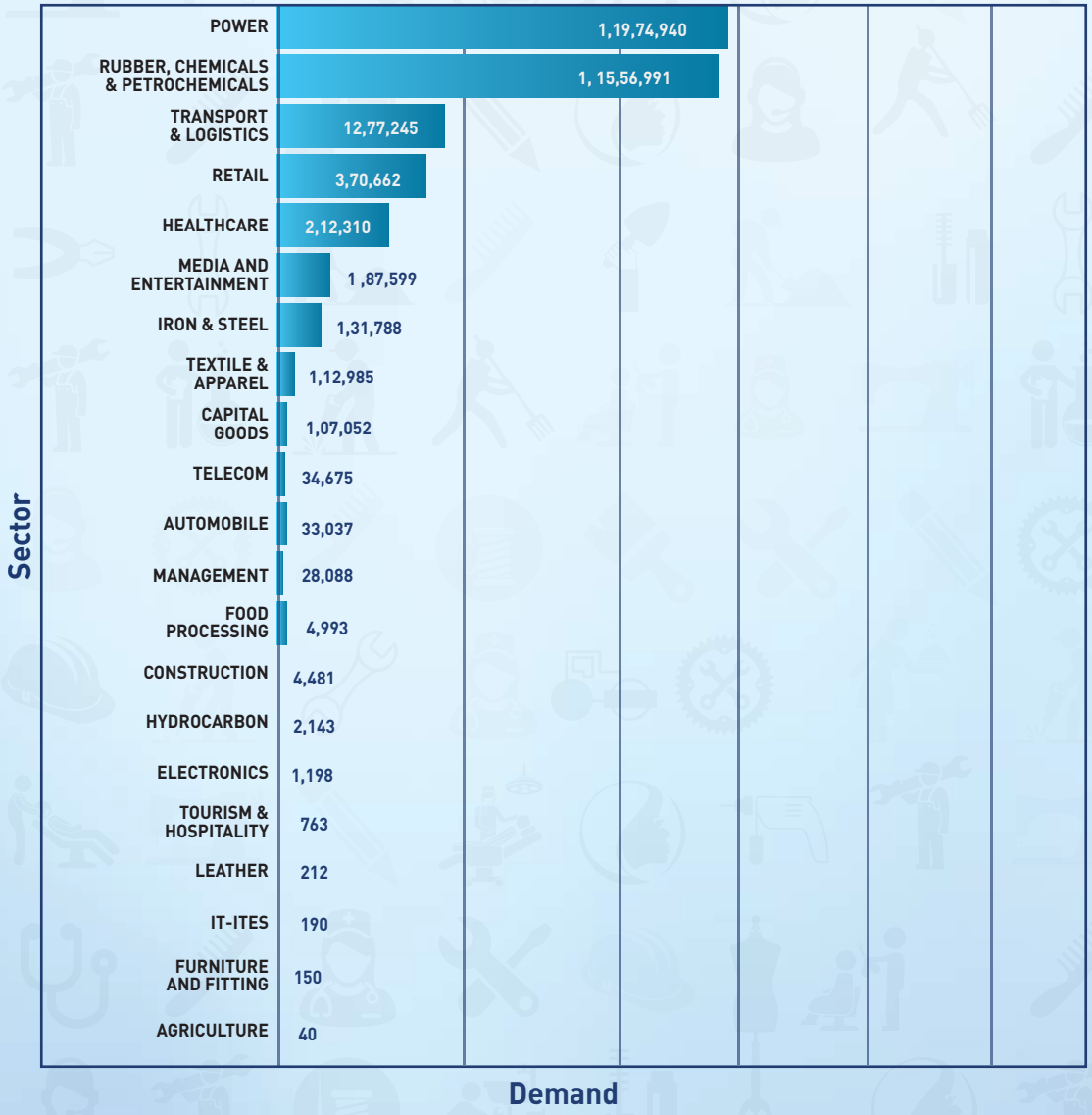

Labour Demand Across States (2020-21)

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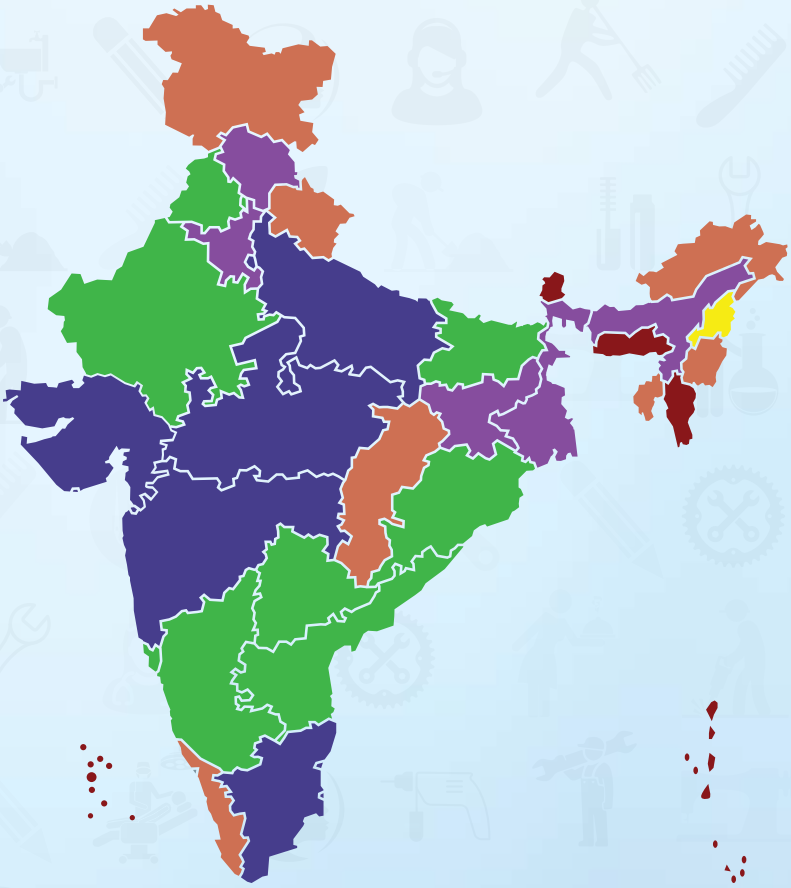

Labour Demand

1. Upto 50,000
2. 50,000-100,000
3. 100,000-5,000,000
4. 5,000,000-10,00,000
5. 10,00,000-15,00,000
6. More than 15,00,000

Top 5 Districts

- NCT OF DELHI
- MUMBAI
- CHENNAI
- HYDERABAD
- PUNE

Data Sources

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Investment (Source- CMIE)

- **Captured 'completed' and 'ongoing' investments (average of 4 years- 2016 to 2019) of at least Rs. 1 crore in construction of new units or substantial expansion of existing units**
- **District and Sector level**

Bank Credit (Source- Reserve Bank of India)

- **Aggregate bank credits by all scheduled commercial banks**
- **District level**

Employment (Source- NSS 68th Round, 2011-12)

- **Number of person employed (formal and informal)**
- **District and sector level**

Descriptive Statistics – All India

INVESTMENTS

- Total amount of investments is Rs. 66 lakh crore
- Top 5 sectors – Transport & Logistics, Power, Construction, Agriculture and Hydrocarbon
- Top 5 states/UTs – Maharashtra, Uttar Pradesh, Andhra Pradesh, Tamil Nadu and Gujarat
- Bottom 5 states/UTs – Andaman & Nicobar Islands, Puducherry, Chandigarh, Dadra & Nagar Haveli and Daman & Diu

Investments
for January 2016 to December 2019

(includes only those investments which could be identified at district- and sector- levels and for only sectors for which statistically significant estimation models were found)

BANK CREDITS

- Total amount of bank credit is about Rs. 94 lakh crore (average credit per district is Rs. 0.15 lakh crore)
- Top 5 states/UTs – Maharashtra, NCT of Delhi, Tamil Nadu, Gujarat and Telangana
- Bottom 5 states/UTs – Mizoram, Sikkim, Andaman & Nicobar Islands, Dadra & Nagar Haveli and Daman & Diu

Bank Credits
for second quarter of FY 2019-20

(includes bank credits for only those districts for which investments could be identified at district- and sector- levels)

Descriptive Statistics
Investments across States

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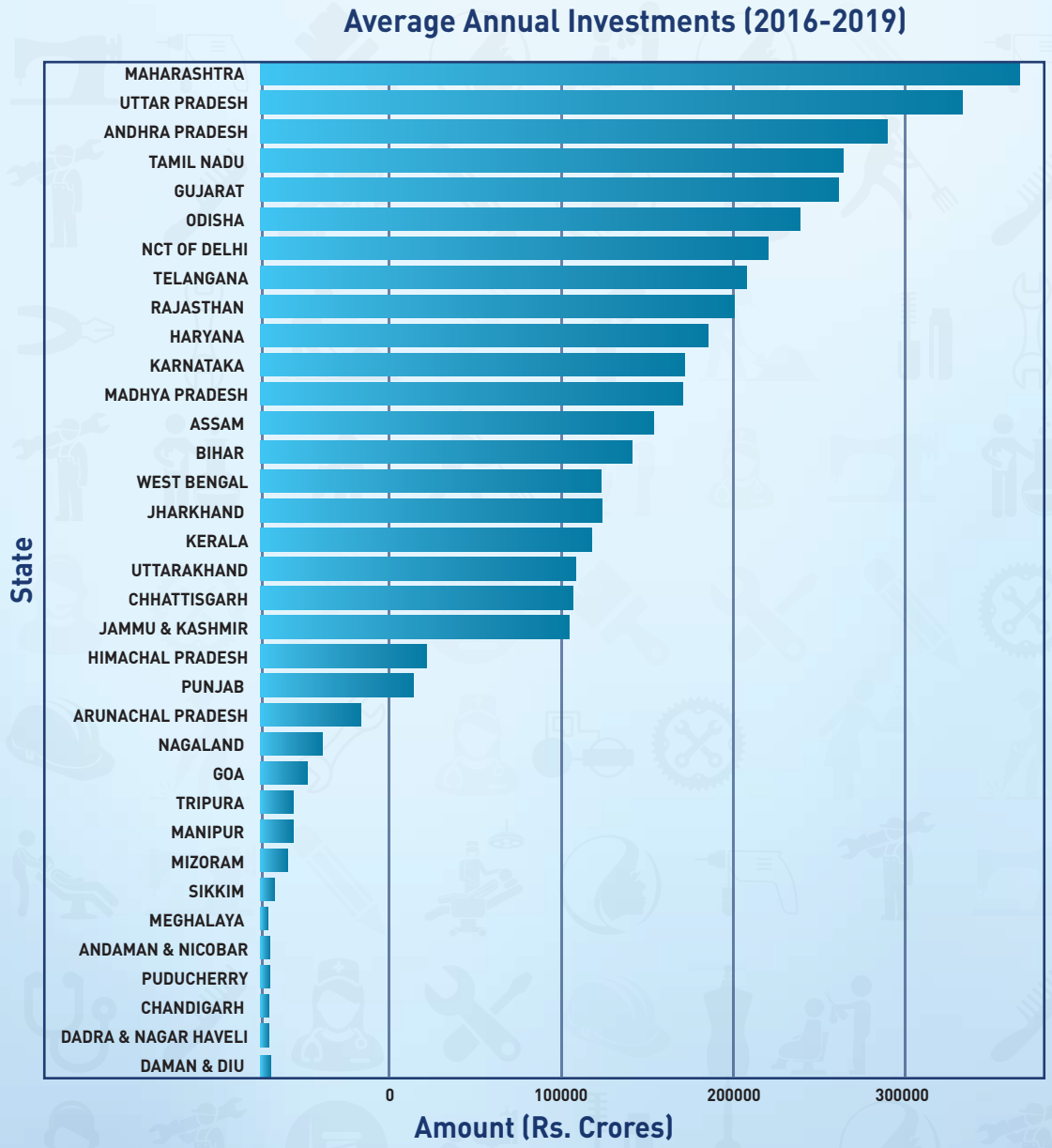

Descriptive Statistics
Investments across Districts

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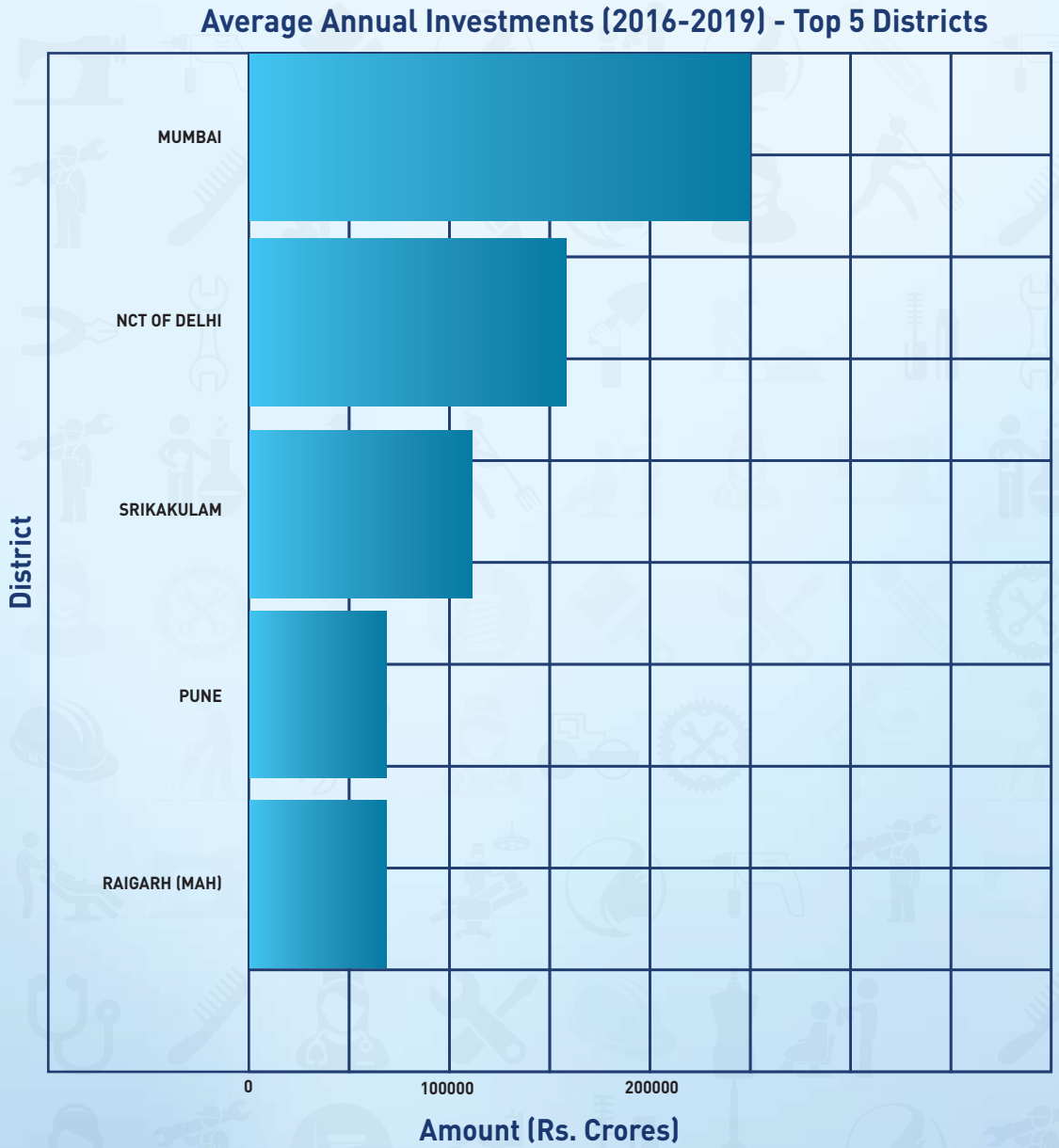

Note: Districts within NCT of Delhi are aggregated into one region

Descriptive Statistics
Investments across Top 10 Sectors

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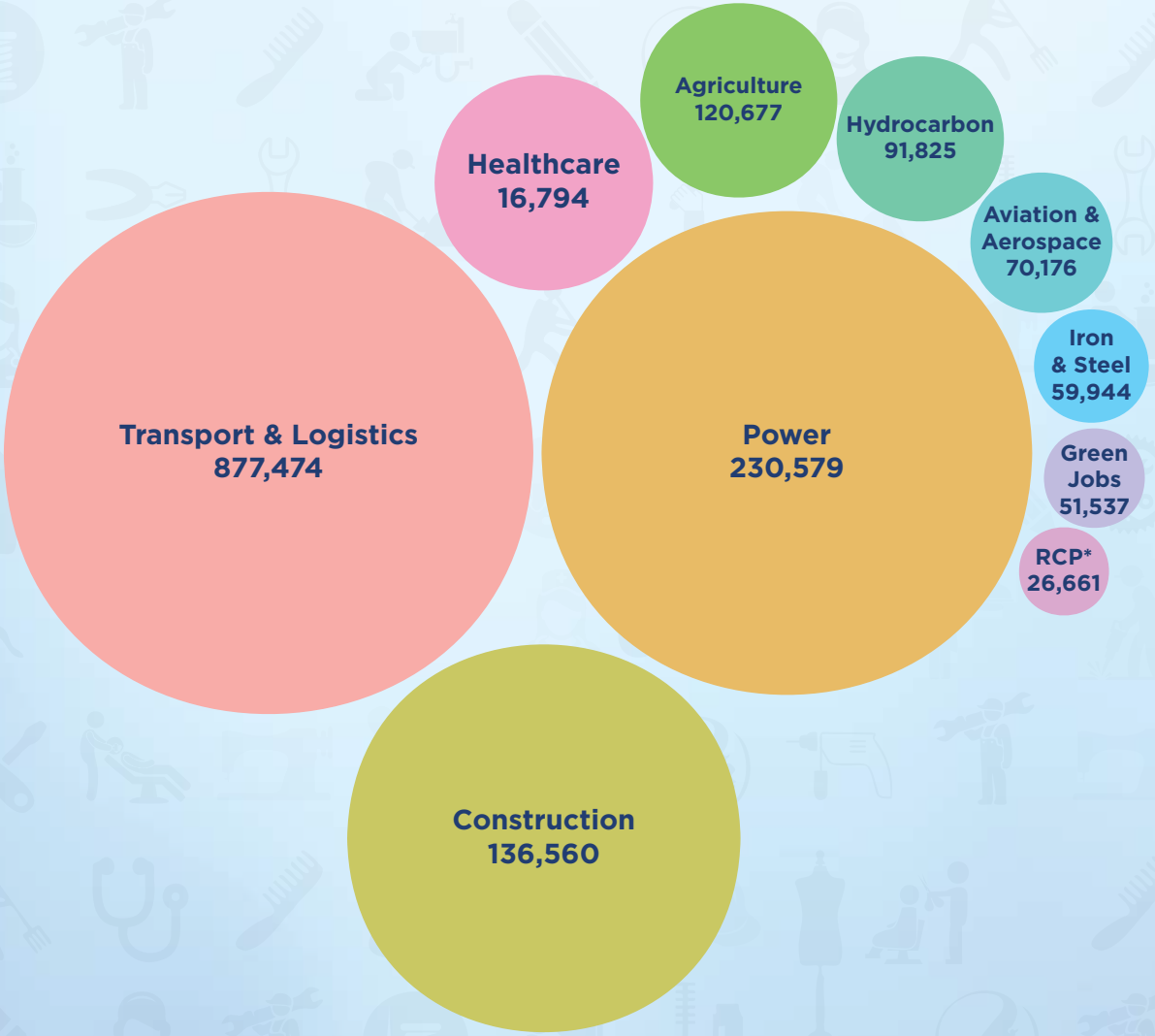
Top 10 Sectors By Average Annual Investments (2016-2019) (Rs. Crores)



*RCP Rubber, Chemicals & Petrochemicals

Descriptive Statistics
Bank Credits

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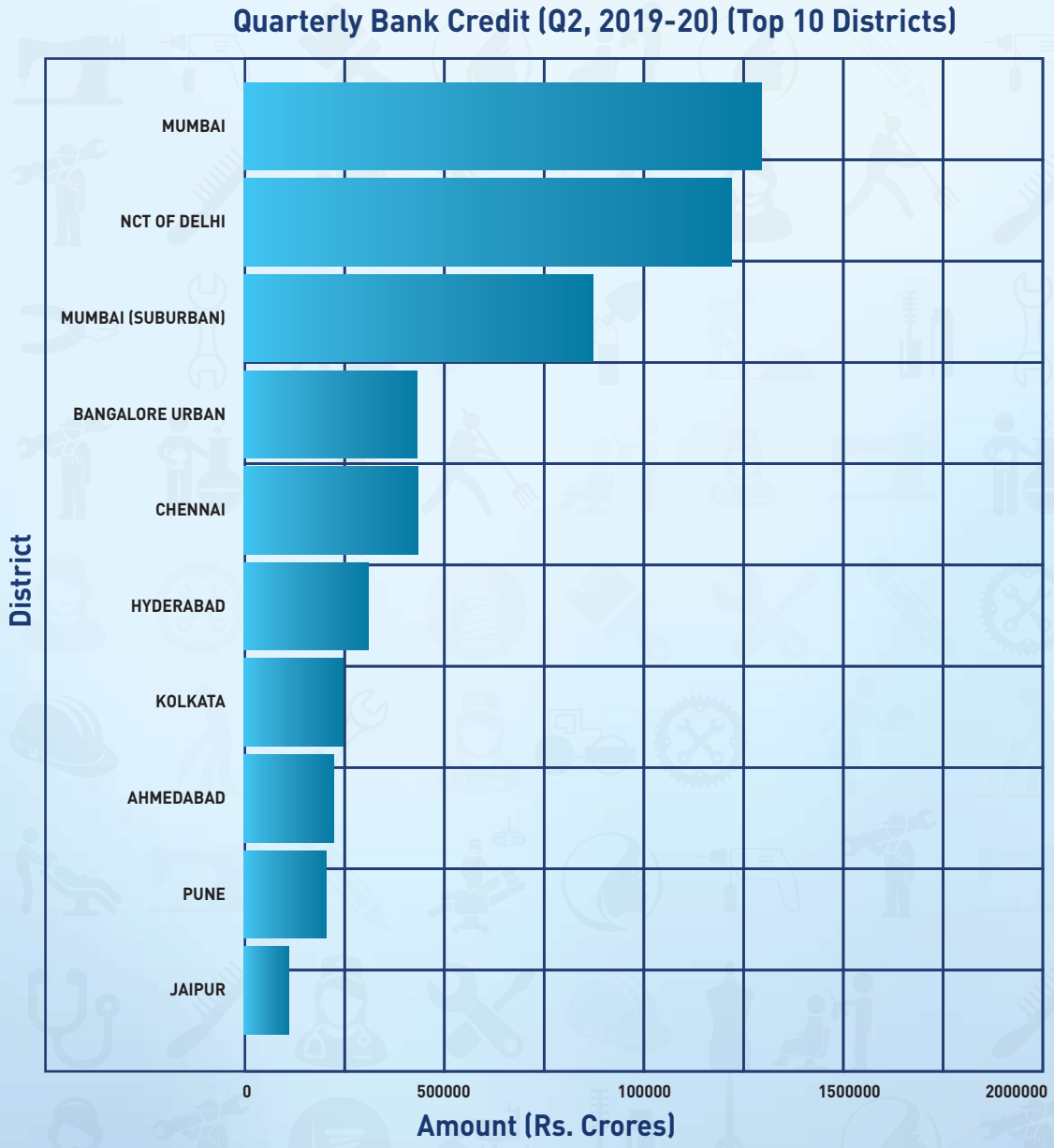


Note: Districts within NCT of Delhi are aggregated into one region

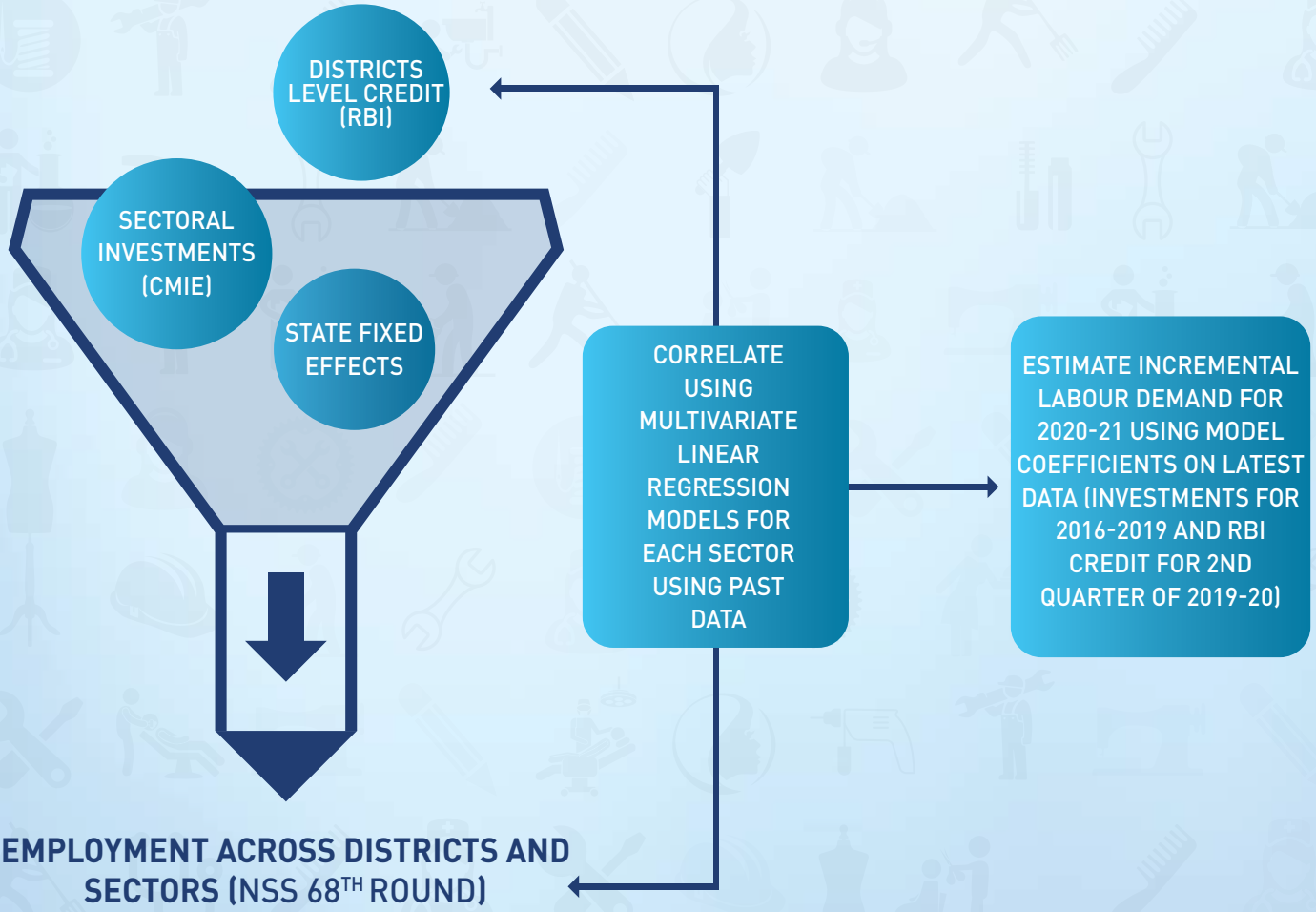
Theoretical Framework

New investments (sector-wise) are expected to be correlated with growth in business, leading to employment, in each sector

Bank credits (district-wise) are expected to be correlated to the growth in output (and thus employment) in those sectors in which the districts specialize in e.g. districts predominantly engaged in agriculture

Change in employment is related to change in investments and credit

Approach – Estimation



Detailed Methodology

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Activities Under The Assignment

- Map sectors across all data sources (CMIE, RBI and NSS) to Sector Skill Councils
- Calculate district level employment across mapped sectors from NSS 68th round (2011-12) using population weights to convert sample numbers to population estimates
- Process investment and credit data at district level for time periods before 2011
- Test multinomial linear regression models using employment as dependent variable, and investment and credit as independent variables (controlling for state level fixed effects)
- Test each sector separately as the conversion rate of investment and credit to employment may differ across sectors
- Select models using varying stringency levels (w.r.t. adjusted R-square, R-square, significance of F-statistic, significance of investment/credit coefficients)
- Estimate the models and apply the weights derived on latest data for investments and credit

Results - Total Incremental Demand

IT IS ESTIMATED THAT THE INCREMENTAL DEMAND FOR LABOUR IN INDIA FOR THE YEAR 2020-21 IS ABOUT

2.6 CRORE

AT DISTRICT LEVEL

Results - Top Sectors

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Rank	Sector	Incremental Demand (2020-2021)
01	POWER	11,974,940
02	RUBBER, CHEMICALS & PETROCHEMICALS	11,556,991
03	TRANSPORT & LOGISTICS	1,277,245
04	RETAIL	370,662
05	HEALTHCARE	212,310

Results - Top Sectors

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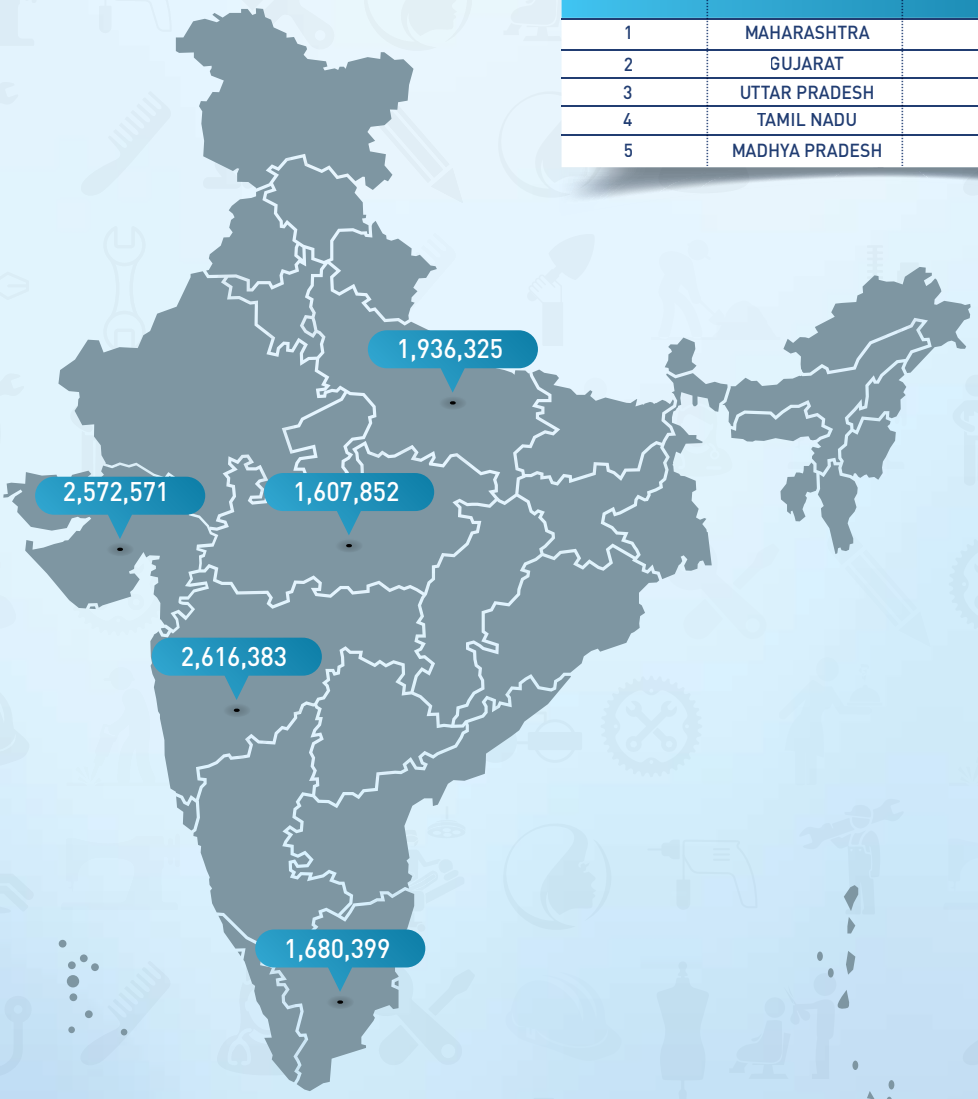
Rank	Sector	Incremental Demand (2020-2021)
06	MEDIA AND ENTERTAINMENT	187,599
07	IRON & STEEL	131,788
08	TEXTILE & APPAREL	112,985
09	CAPITAL GOODS	107,052
10	TELECOM	34,675

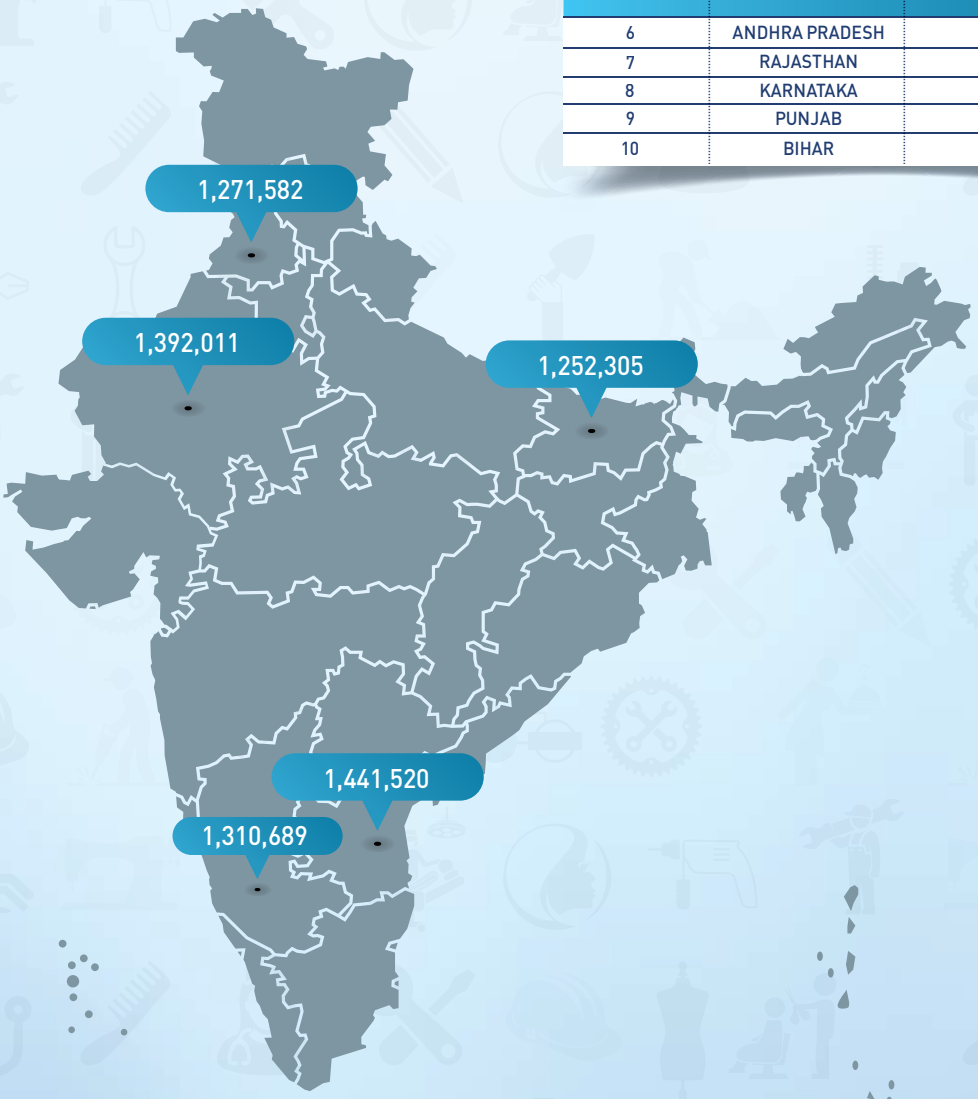
Results - Top States

Rank	State	Incremental Demand (2020-2021)
1	MAHARASHTRA	2,616,383
2	GUJARAT	2,572,571
3	UTTAR PRADESH	1,936,325
4	TAMIL NADU	1,680,399
5	MADHYA PRADESH	1,607,852



Results - Top States

Rank	State	Incremental Demand (2020-2021)
6	ANDHRA PRADESH	1,441,520
7	RAJASTHAN	1,392,011
8	KARNATAKA	1,310,689
9	PUNJAB	1,271,582
10	BIHAR	1,252,305



Results - Top Districts

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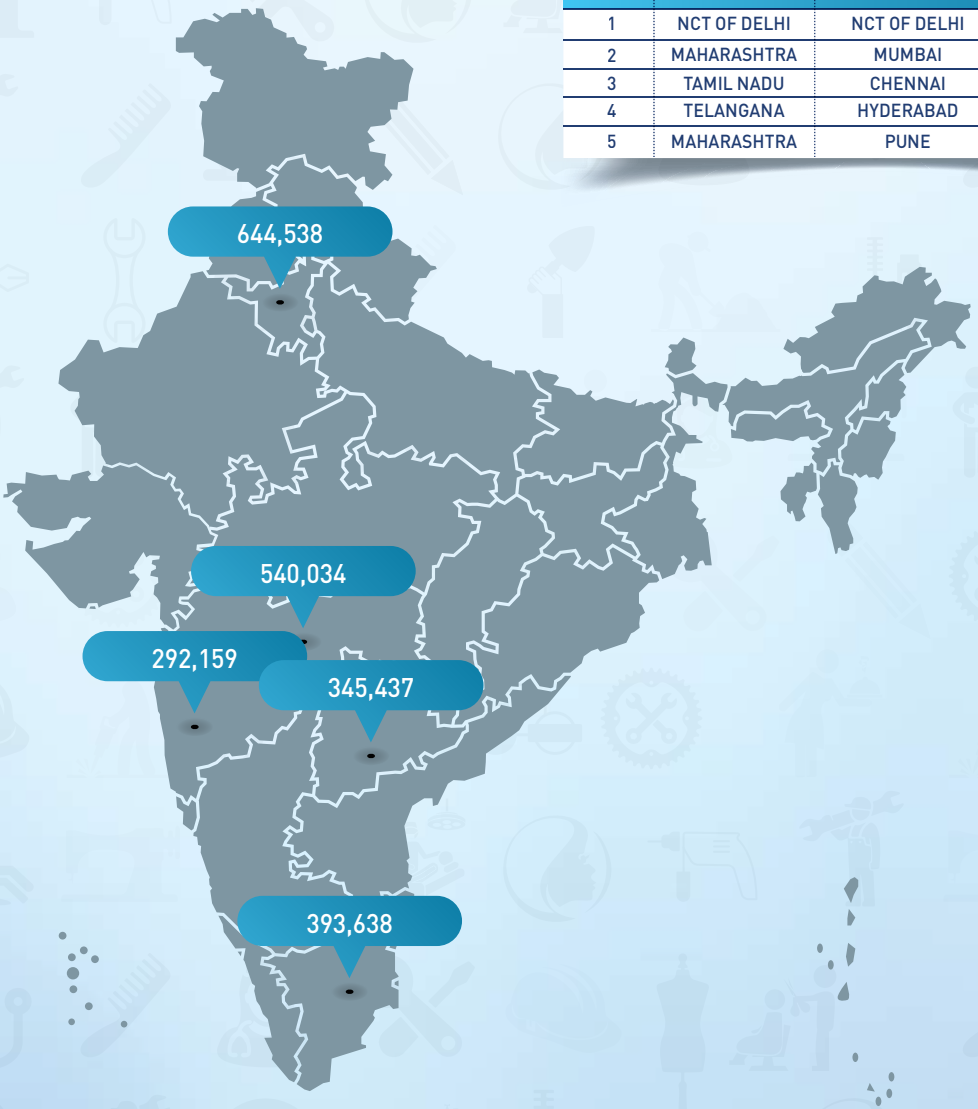
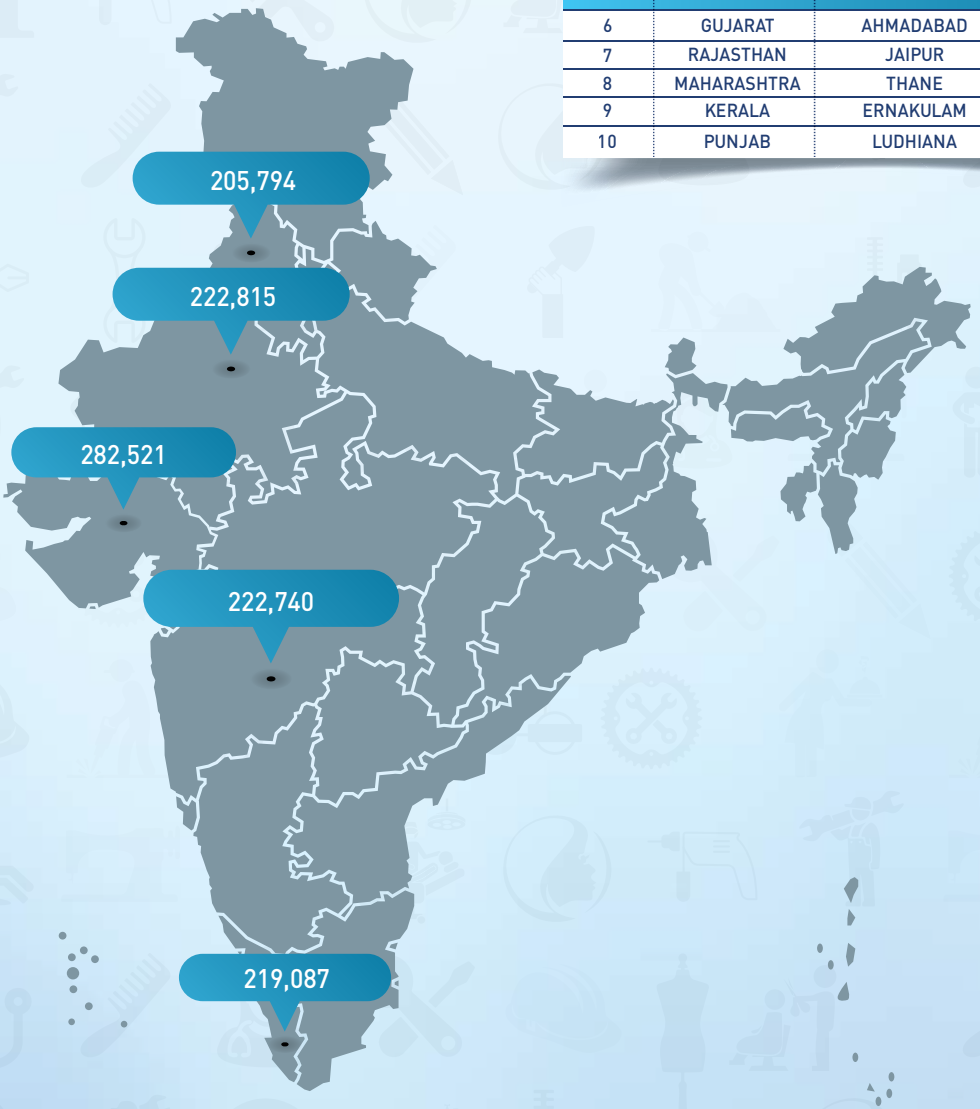
Rank	State	Districts	Incremental Demand (2020-2021)
1	NCT OF DELHI	NCT OF DELHI	644,538
2	MAHARASHTRA	MUMBAI	540,034
3	TAMIL NADU	CHENNAI	393,638
4	TELANGANA	HYDERABAD	345,437
5	MAHARASHTRA	PUNE	292,159



Note: The district level estimates are an underestimate

Results - Top Districts

Rank	State	Districts	Incremental Demand (2020-2021)
6	GUJARAT	AHMADABAD	282,521
7	RAJASTHAN	JAIPUR	222,815
8	MAHARASHTRA	THANE	222,740
9	KERALA	ERNAKULAM	219,087
10	PUNJAB	LUDHIANA	205,794



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Notes

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