

Pattern of Total Unemployment Rate of the States in India Over Last 5 Years

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ABSTRACT : The unemployment rate (UER) for total has been considered monthly basis for last 5 years. The patterns for each of 24 states has been tried for better and predictive model. The states have also been mapped for better comparison. Statistical measures have also been calculated. Except the acute pandemic period, the patterns in almost all the states are similar and it is linear parallel to the time axis.

KEYWORDS : UER, pattern, mean, mapping, parallel

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I. INTRODUCTION

Unemployment occurs when a person who is actively searching for employment is unable to find work. Unemployment is often used as a measure of the health of the economy. The most frequent measure of unemployment is the unemployment rate, which is the number of unemployed people divided by the number of people in the labor force.

Types of Unemployment in India- (a) Disguised Unemployment, (b) Seasonal Unemployment, (c) Structural Unemployment, (d) Cyclical Unemployment, (e) Technological Unemployment, (f) Frictional Unemployment, (g) Vulnerable Employment.

Causes of Unemployment may be large population, low or no educational levels and vocational skills, inadequate state support, legal complexities and low infrastructural, financial and market linkages, huge workforce associated with informal sector, regressive social norms that deter women from taking/continuing employment.

Government has taken different steps to decrease unemployment rates like IRDP, TRYSEM, JRY, PMKVY, MGNREGA, NCSS, NREP, DDAY, Start Up India, Stand Up India, Atma Nirvor Bharat, etc.

Unemployment statistics in India has traditionally had been collected, compiled and disseminated once every five years by the Ministry of Labour and Employment (MLE). It is done through sample studies conducted by the National Sample Survey Office Papola(2014), Shaw(2013). Other than these, in 2016, Centre for Monitoring Indian Economy – a non-government entity based in Mumbai, started sampling and publishing monthly unemployment in India statistics. Unemployment and under-employment have been a long-standing problem in the Indian economy. According to a 2013 report by Pravin Sinha(2013), the Indian labor force has been officially classified by the Indian government into three categories:

- Rural sector, which includes the farm labour
- Urban formal sector, which includes factory and service industry labour with periodic salaries and coverage per Indian labor laws
- Urban informal sector, which includes self-employment and casual wage workers.

The rural and informal sectors of the Indian labour market accounted for 93% of the employment in 2011, and these jobs were not covered by the then existing Indian labour laws. According to World Bank Report(2010), "low-paying, relatively unproductive, informal sector jobs continue to dominate the Indian labor market". This communication has tried to explore the patterns of unemployment rate (UER) for the states of India over a period January 2016 to January 2021 on monthly data.

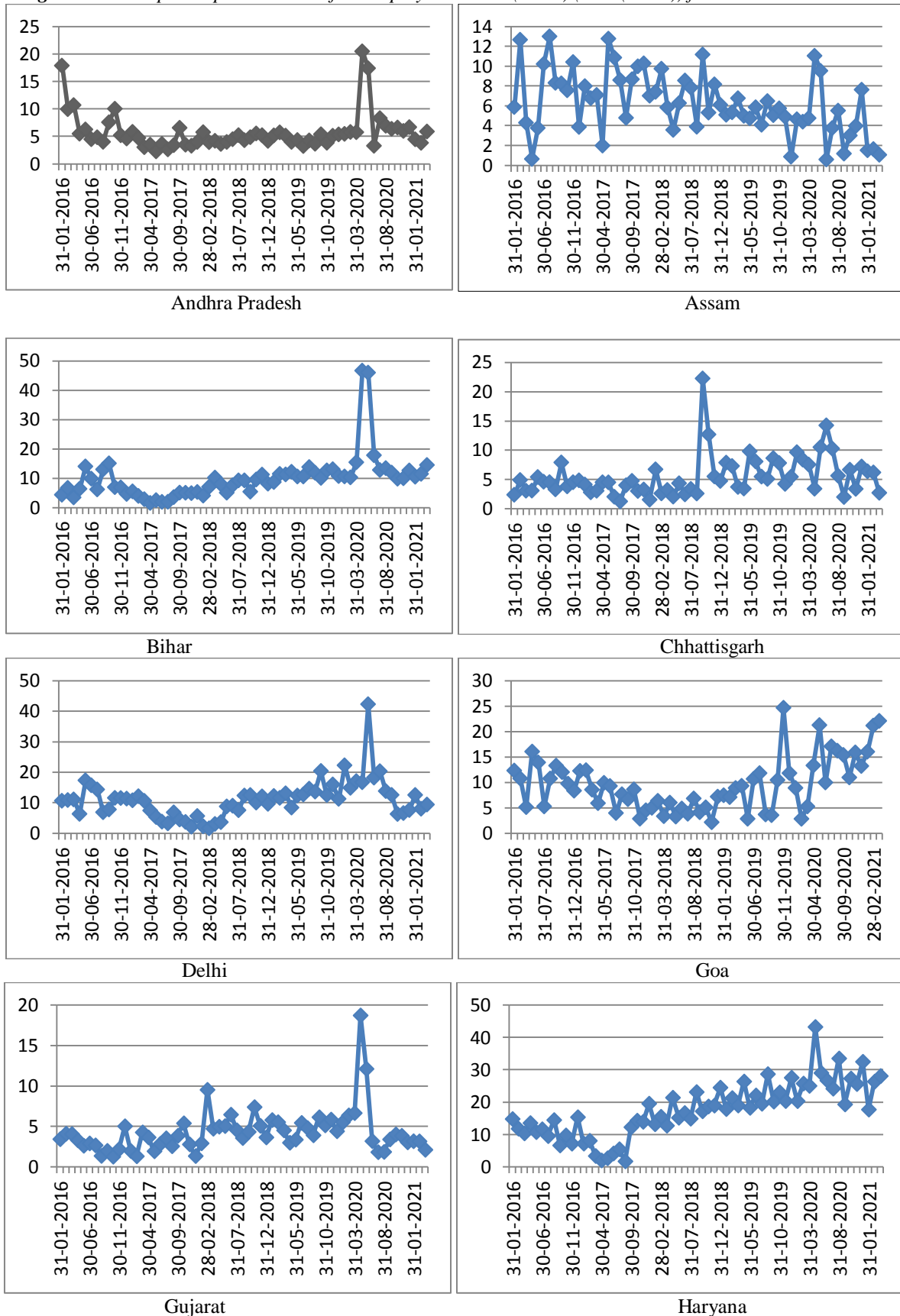
DATA

CMIE data has been downloaded for all the states of India for the period January 2016 to March 2021. Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand and West Bengal. The data considered monthly basis for 63 months and 24 states.

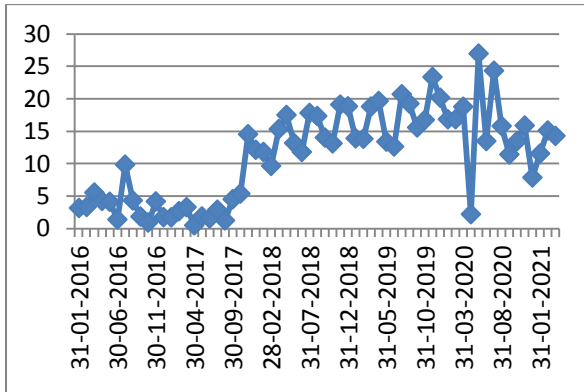
II. RESULTS

The monthly data are plotted for all 24 states (Figure-1).

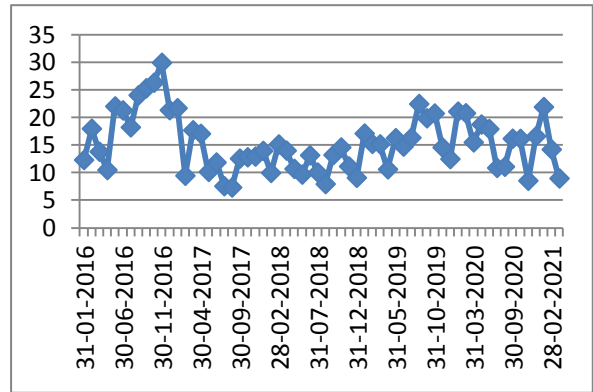
Figure – 1 : Graphical presentation of Unemployment Rate (Total) (UER(Total)) for all the states in India



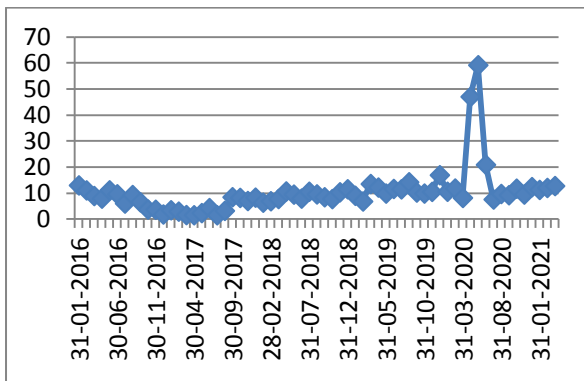
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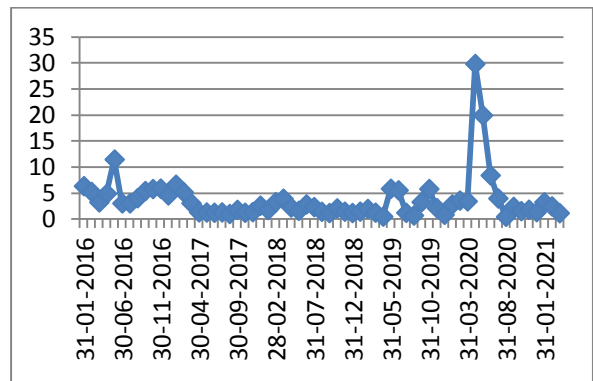
Himachal Pradesh



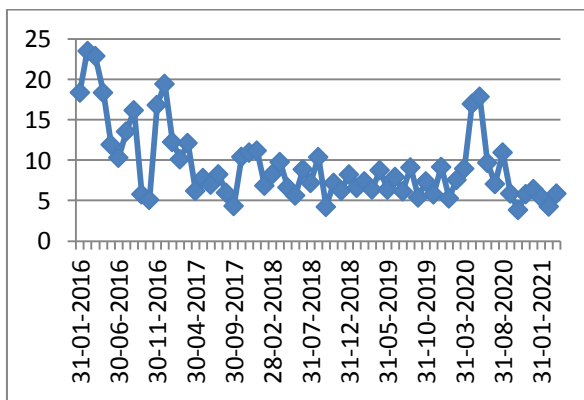
Jammu & Kashmir



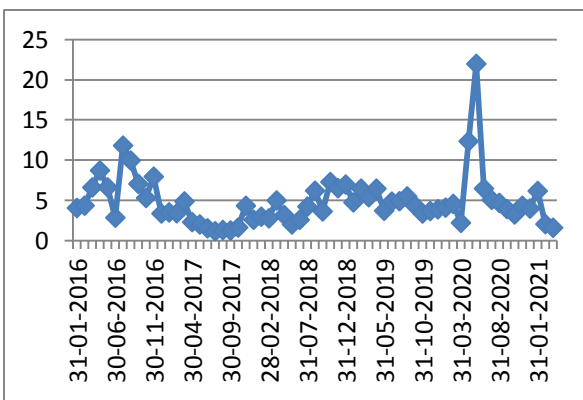
Jharkhand



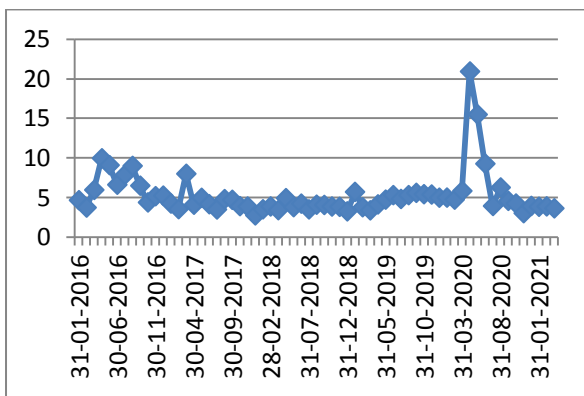
Karnataka



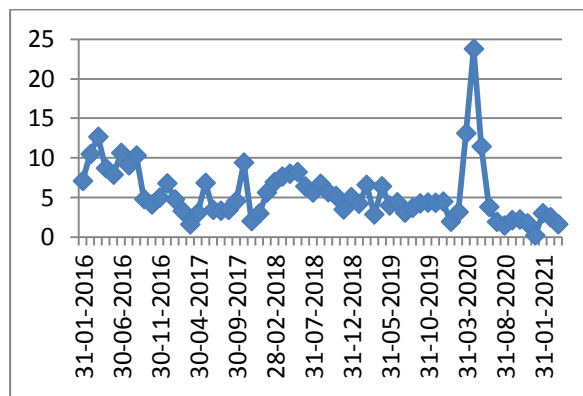
Kerala



Madhya Pradesh

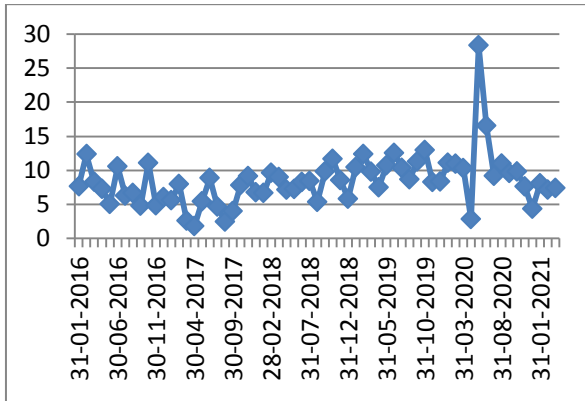


Maharashtra

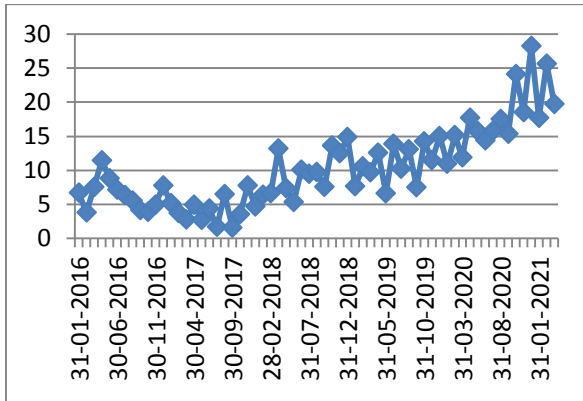


Odisha

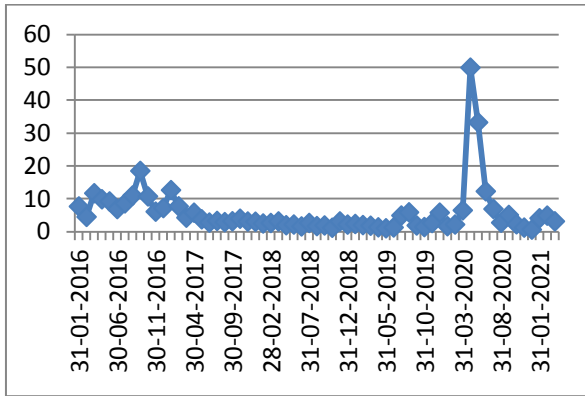
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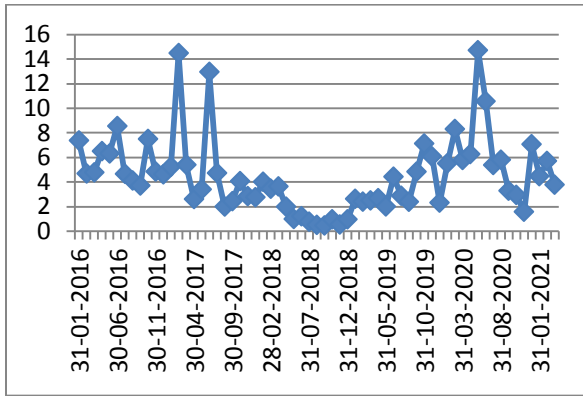
Punjab



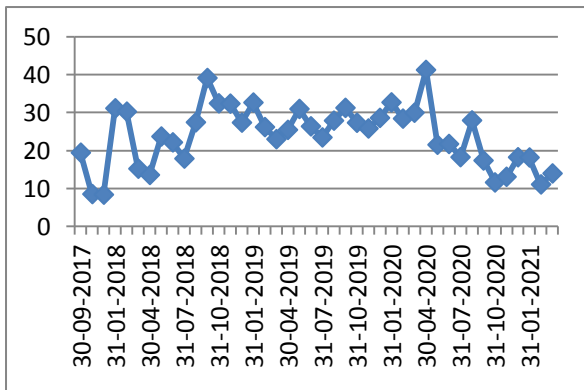
Rajasthan



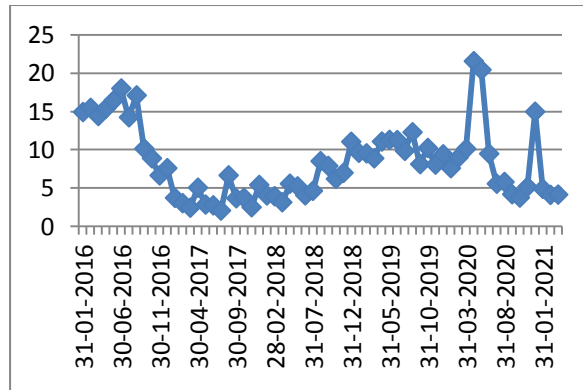
Tamil Nadu



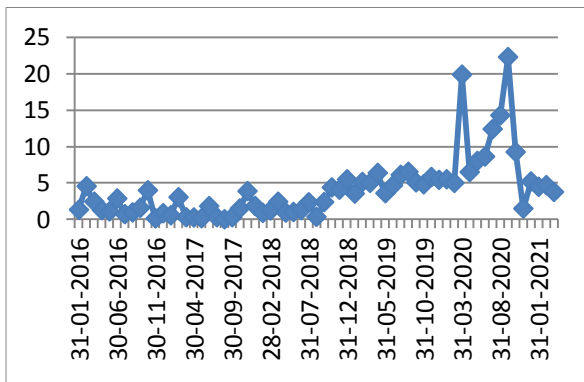
Telangana



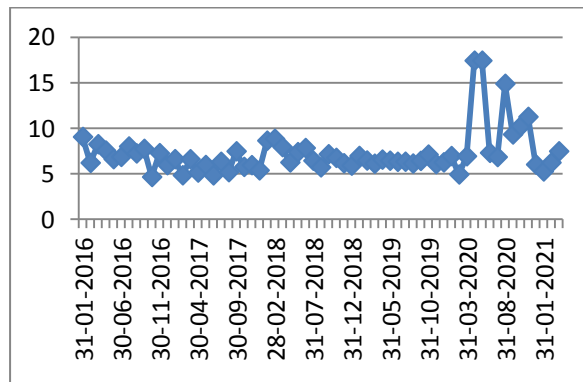
Tripura



Uttar Pradesh



Uttarakhand



West Bengal

The patterns of UER(Total) for 24 states are not all different. The patterns are mainly of 4 types. One is normal type with a mode around March or April or May 2020. The patterns for Tripura, Kerala, Himachal Pradesh, Haryana and Chhattisgarh are likewise. Second is parallel to time axis till January or February 2020 and then a bump and here-there still January 2021. The pattern for West Bengal, Uttarakhand, Uttar Pradesh, Punjab, Odisha, Maharastra, Madhya Pradesh, Karnataka, Jharkhand, Gujarat, Delhi, Bihar and Andhra Pradesh are of second type. Third is random for the whole period. For Telangana, Jammu & Kashmir and Assam, this pattern has occurred. Fourth is an increasing type like exponential. The pattern occurred for Rajasthan and Goa. The patterns were also studied with basic measures. Mean, sd, minimum, maximum and median were calculated for each of the states (Table-1).

Table – 1 : showing measures of UER(Total)

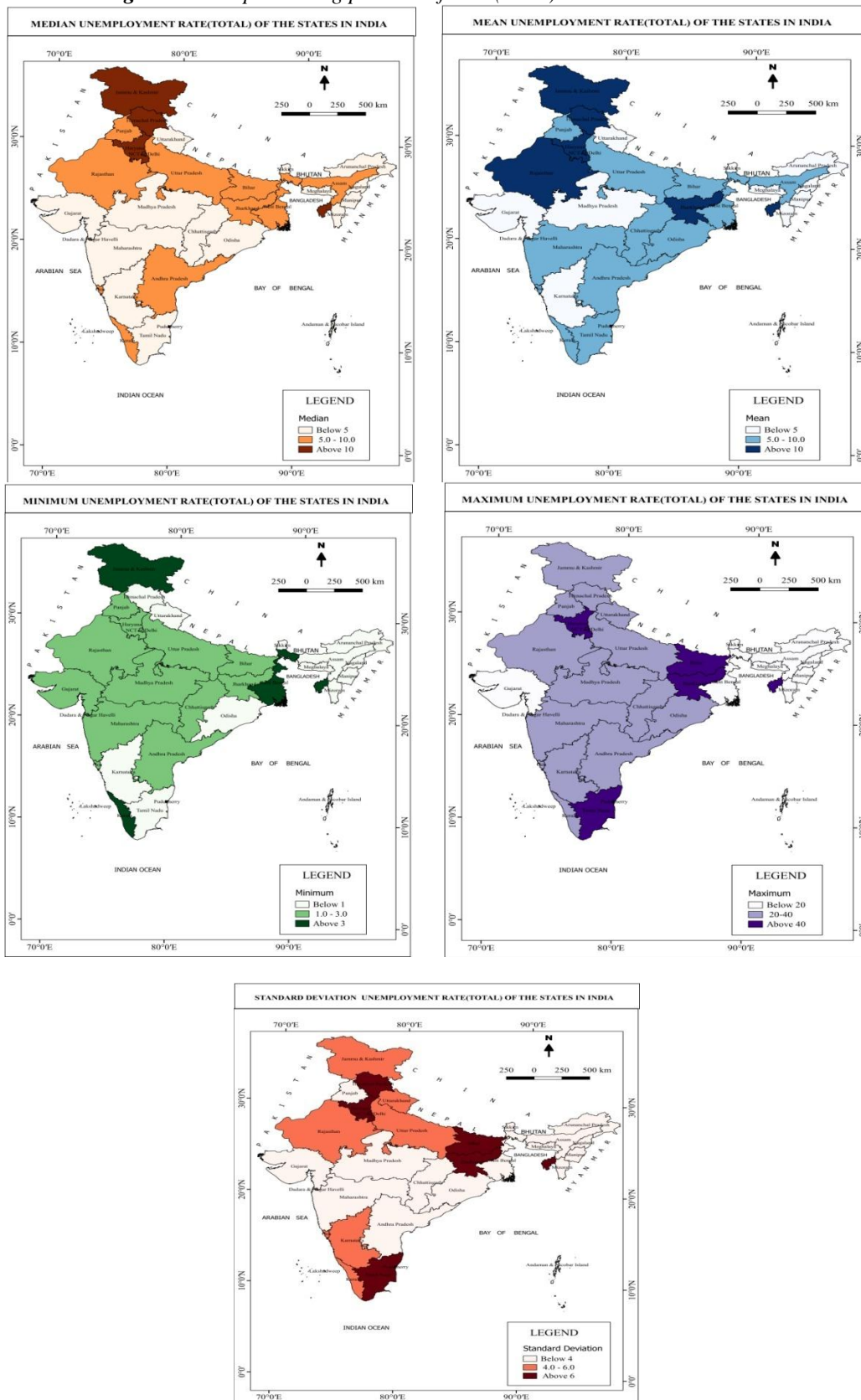
State	Median	Mean	Min	Max	sd
Andhra Pradesh	5.14	5.76	2.30	20.51	3.35
Assam	5.87	6.26	0.60	13.02	3.14
Bihar	9.82	9.96	1.57	46.64	7.67
Chhattisgarh	4.53	5.47	1.24	22.24	3.47
Delhi	11.05	10.94	1.57	42.27	6.19
Goa	8.88	9.50	2.14	24.66	5.24
Gujarat	3.86	4.29	1.28	18.71	2.66
Haryana	17.89	17.66	1.76	43.22	8.48
Himachal Pradesh	13.11	11.25	0.49	26.95	7.05
Jammu & Kashmir	14.66	15.34	7.33	29.92	5.07
Jharkhand	9.52	10.26	1.58	59.23	8.74
Karnataka	2.50	3.73	0.50	29.84	4.48
Kerala	7.82	9.34	3.88	23.53	4.60
Madhya Pradesh	4.34	4.87	1.18	21.98	3.21
Maharashtra	4.54	5.26	2.70	20.90	2.87
Odisha	4.44	5.48	0.16	23.76	3.74
Punjab	8.29	8.48	1.83	28.33	3.81
Rajasthan	9.49	10.25	1.59	28.23	5.85
Tamil Nadu	3.06	5.69	0.53	49.83	7.58
Telangana	4.05	4.48	0.44	14.70	3.06
Tripura	25.62	23.87	8.35	41.23	7.96
Uttar Pradesh	7.59	8.32	2.06	21.54	4.75
Uttarakhand	3.53	4.05	0.00	22.26	4.27
West Bengal	6.59	7.23	4.64	17.41	2.46

It is observed that medians are smaller than average median for the states Karnataka, Tamil Nadu, Uttarakhand, Gujarat, Telangana, Madhya Pradesh, Odisha, Chhattisgarh, Maharashtra, Andhra Pradesh, Assam, West Bengal, Uttar Pradesh and Kerala with maximum for Tripura and minimum for Karnataka. It is also observed that means are smaller than average mean for the states Karnataka, Tamil Nadu, Uttarakhand, Gujarat, Telangana, Madhya Pradesh, Odisha, Chhattisgarh, Maharashtra, Andhra Pradesh, Assam, West Bengal, Uttar Pradesh and Punjab with maximum for Tripura and minimum for Karnataka. It is observed that minimums are smaller than average minimum for the states Uttarakhand, Odisha, Telangana, Himachal Pradesh, Karnataka, Tamil Nadu, Assam, Madhya Pradesh, Chhattisgarh, Gujarat, Bihar, Delhi, Jharkhand, Rajasthan, Haryana, Punjab and Uttar Pradesh with maximum for Uttarakhand and minimum for Tripura. It is observed that maximums are smaller than average maximum for the states Assam, Telangana, West Bengal, Gujarat, Andhra Pradesh, Maharashtra, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Uttarakhand, Kerala, Odisha, Goa, Himachal Pradesh, Rajasthan and Punjab with maximum for Jharkhand and minimum for Assam. It is observed that sd's are smaller than average sd for the states West Bengal, Gujarat, Maharashtra, Telangana, Assam, Madhya Pradesh, Andhra Pradesh, Chhattisgarh, Odisha, Punjab, Uttarakhand, Karnataka, Kerala and Uttar

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Pradesh with maximum for Jharkhand. The patterns for UER(total) of the medians, means, minimums, maximums and sd;s are mapped (Figure-2).

Figure – 2: Maps showing patterns of UER(Total) over the states in India



III. CONCLUSION

UER(total) has been studied to have a pattern of definite nature so that further prediction may be had more accurately. It is interesting to note that the patterns are not definite and non-normal some what random or not to be smoothed over time. They are somewhat straight parallel to the time line. The means are near 5.00 in the states Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Telangana & Uttarakhand; around 10 in Bihar, Delhi, Goa, Jharkhand, Kerala, Rajasthan, Punjab, Uttar Pradesh & West Bengal. For other states it is more than 10. During COVID-19 (after March 2020 and till March 2021) the UER(total) has ups and down significantly on the scale of around 10% as per data. More details are being tried separately for rural – urban and male-female.

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