

Supplementary

Temporal Analysis of COVID - 19 Pandemic in India and R_0 prediction

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Figures

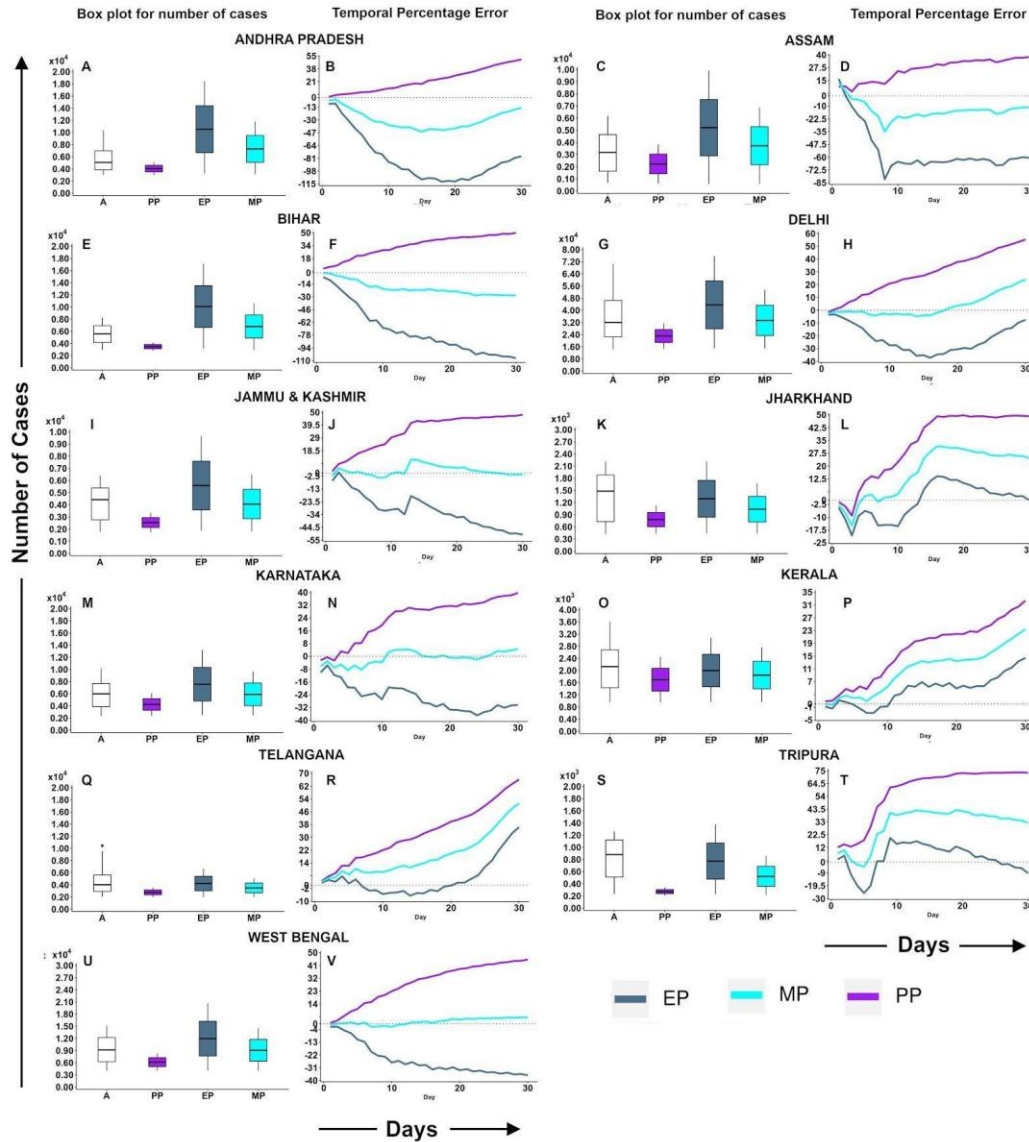


Fig. S1. Data structure of actual and predicted number of cases along with Temporal variation of Percentage Errors for Group A States: Box plots showing comparison of distribution of Actual number of cases (white) to Principal prediction (PP) (purple), Exponential prediction (EP) (blue) and Mean prediction (MP) (cyan) each for (A) Andhra Pradesh, (C) Assam, (E) Bihar, (G) Delhi, (I) Jammu & Kashmir, (K) Jharkhand, (M) Karnataka, (O) Kerala, (Q) Telangana, (S) Tripura and (U) West Bengal; Temporal variation of Percentage errors of PP (purple line), EP (blue line) and MP (cyan line) for 30 days in (B, D, F, H, J, L, N, P, R, T, V) for the same states respectively.

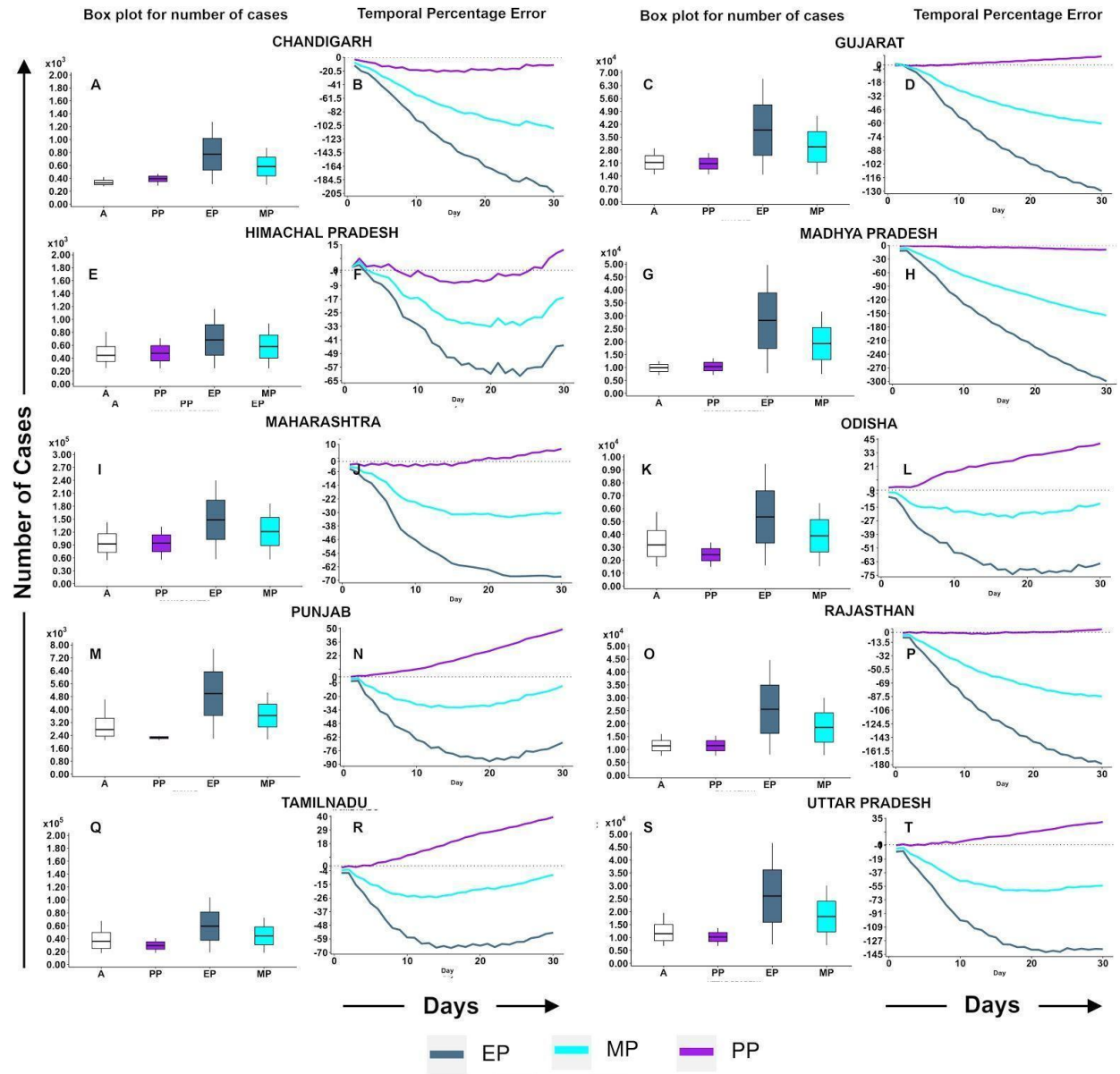


Fig. S2. Data structure of actual and predicted number of cases along with Temporal variation of Percentage Errors for Group B States: Box plots showing comparison of distribution of Actual number of cases (white) to Principal prediction (PP) (purple), Exponential prediction (EP) (blue) and Mean prediction (MP) (cyan) each for (A) Chandigarh, (C) Gujarat, (E) Himachal Pradesh, (G) Madhya Pradesh, (I) Maharashtra, (K) Odisha, (M) Punjab, (O) Rajasthan, (Q) Tamil Nadu and (S) Uttar Pradesh; Temporal variation of Percentage errors of PP (purple line), EP (blue line) and MP (cyan line) for 30 days in ; (B, D, F, H, J, L, N, P, R, T) for the same states respectively.

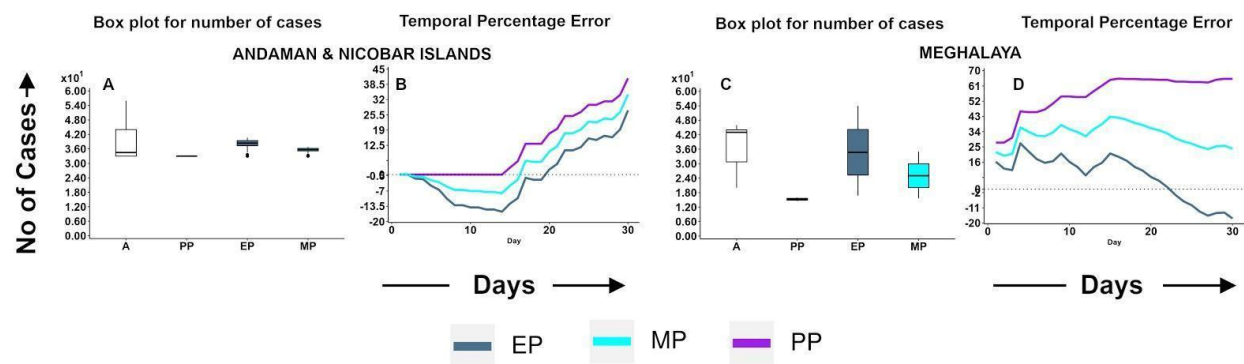


Fig. S3. Data structure of actual and predicted number of cases along with Temporal variation of Percentage Errors for Group C States: Box plots showing comparison of distribution of Actual number of cases (white) to Principal prediction (PP) (purple), Exponential prediction (EP) (blue) and Mean prediction (MP) (cyan) each for (A) Andaman & Nicobar Islands and (C) Meghalaya; Temporal variation of Percentage errors of PP (purple line), EP (blue line) and MP (cyan line) for 30 days in (B, D) for the same states respectively.

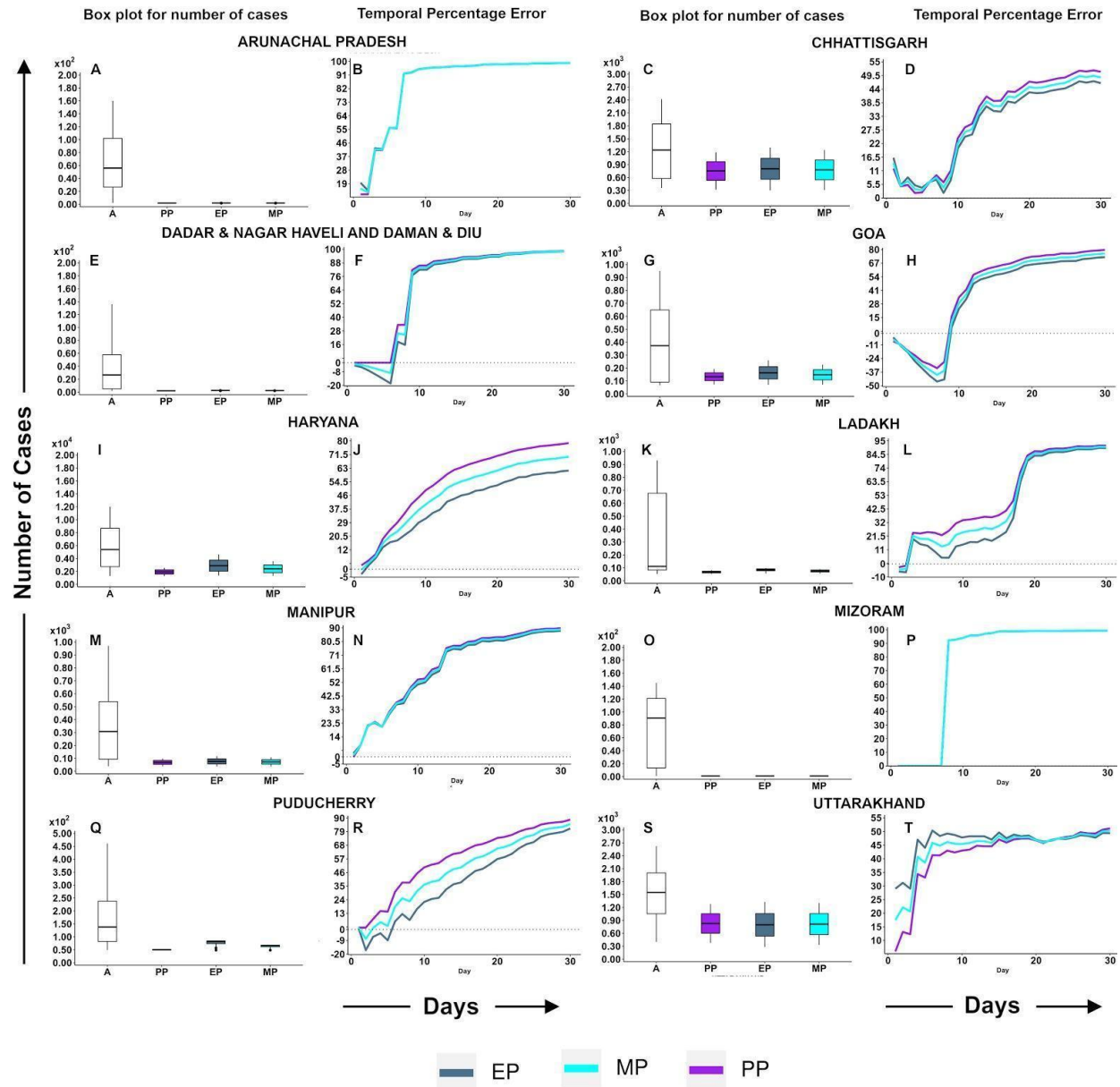


Fig. S4. Data structure of actual and predicted number of cases along with Temporal variation of Percentage Errors for Exception States: Box plots showing comparison of distribution of Actual number of cases (white) to Principal prediction (PP) (purple), Exponential prediction (EP) (blue) and Mean prediction (MP) (cyan) each for (A) Arunachal Pradesh, (C) Chhattisgarh, (E) Dadra & Nagar Haveli and Daman & Diu, (G) Goa, (I) Haryana, (K) Ladakh, (M) Manipur, (O) Mizoram, (Q) Puducherry, (S) and Uttarakhand; Temporal variation of Percentage errors of PP (purple line), EP (blue line) and MP (cyan line) for 30 days in ; (B, D, F, H, J, L, N, P, R, T) for the same states respectively.

Tables

Table S1: Selected dates for India and it's states for model training, Validation and Use Case (UC)

Sl. No.	Region	First Date	Last Training Date for		Sl. No.	Region	First Date	Last Training Date for	
			Validation	Use Case				Validation	Use Case
1	India	30/01/20	25/05/20	24/06/20	18	Kerala	14/03/20	25/05/20	24/06/20
2	Andaman and Nicobar Islands	26/03/20	25/05/20	24/06/20	19	Ladakh	18/03/20	25/05/20	24/06/20
3	Andhra Pradesh	14/03/20	25/05/20	24/06/20	20	Madhya Pradesh	20/03/20	25/05/20	24/06/20
4	Arunachal Pradesh	02/04/20	25/05/20	24/06/20	21	Maharashtra	09/03/20	25/05/20	24/06/20
5	Assam	31/03/20	25/05/20	24/06/20	22	Manipur	24/03/20	25/05/20	24/06/20
6	Bihar	22/03/20	25/05/20	24/06/20	23	Meghalaya	13/04/20	25/05/20	24/06/20
7	Chandigarh	19/03/20	25/05/20	24/06/20	24	Mizoram	25/03/20	25/05/20	24/06/20
8	Chhattisgarh	19/03/20	25/05/20	24/06/20	25	Odisha	16/03/20	25/05/20	24/06/20
9	Dadra & Nagar Haveli and Daman & Diu	05/05/20	25/05/20	24/06/20	26	Puducherry	16/03/20	25/05/20	24/06/20
10	Delhi	02/03/20	25/05/20	24/06/20	27	Punjab	14/03/20	25/05/20	24/06/20
11	Goa	25/03/20	25/05/20	24/06/20	28	Rajasthan	02/03/20	25/05/20	24/06/20
12	Gujarat	19/03/20	25/05/20	24/06/20	29	Tamil Nadu	07/03/20	25/05/20	24/06/20
13	Haryana	14/03/20	25/05/20	24/06/20	30	Telangana	02/03/20	25/05/20	24/06/20
14	Himachal Pradesh	20/03/20	25/05/20	24/06/20	31	Tripura	06/04/20	25/05/20	24/06/20
15	Jammu and Kashmir	07/03/20	25/05/20	24/06/20	32	Uttar Pradesh	05/03/20	25/05/20	24/06/20
16	Jharkhand	31/03/20	25/05/20	24/06/20	33	Uttarakhand	16/03/20	25/05/20	24/06/20
17	Karnataka	14/03/20	25/05/20	24/06/20	34	West Bengal	17/03/20	25/05/20	24/06/20

Table S2: Error Metrics for the validated forecasts from May 26 to June 24 for India and it's states

	Region	nRMSE			MAPE			Group		Region	nRMSE			MAPE			Group
		P	E	M	P	E	M				P	E	M	P	E	M	
1	Andhra Pradesh	0.391	0.987	0.324	22.710	81.491	29.390	A	18	Odisha	0.342	0.707	0.189	22.544	55.612	16.534	B
2	Assam	0.381	0.709	0.169	25.790	55.204	15.316	A	19	Punjab	0.330	0.748	0.233	20.321	63.779	21.729	B
3	Bihar	0.433	0.934	0.251	33.621	72.386	19.382	A	20	Rajasthan	0.019	1.444	0.717	1.136	111.793	55.841	B
4	Delhi	0.475	0.252	0.155	28.669	22.122	6.283	A	21	Tamil Nadu	0.314	0.637	0.179	17.989	51.946	17.060	B
5	Jammu and Kashmir	0.455	0.416	0.045	34.372	30.437	3.153	A	22	Uttar Pradesh	0.218	1.345	0.570	12.566	104.578	46.080	B
6	Jharkhand	0.516	0.086	0.289	34.521	8.553	18.480	A	23	Andaman and Nicobar Islands	0.224	0.137	0.173	11.965	10.062	10.533	C
7	Karnataka	0.351	0.328	0.032	24.083	25.653	3.243	A	24	Meghalaya	0.626	0.146	0.340	56.282	13.837	31.923	C
8	Kerala	0.254	0.089	0.170	16.926	5.098	10.665	A	25	Arunachal Pradesh	1.223	1.222	1.222	84.983	85.306	85.144	E
9	Telangana	0.558	0.233	0.384	32.563	7.530	18.392	A	26	Chhattisgarh	0.530	0.481	0.505	32.322	29.432	30.877	E
10	Tripura	0.772	0.101	0.412	58.150	9.739	31.138	A	27	Dadra and Nagar Haveli	1.384	1.374	1.379	70.797	70.353	70.575	E
11	West Bengal	0.409	0.343	0.036	28.932	25.826	2.227	A	28	Goa	0.921	0.833	0.877	54.008	49.963	51.985	E
12	Chandigarh	0.163	1.497	0.824	15.500	122.946	69.223	B	29	Haryana	0.845	0.646	0.746	54.974	40.177	47.498	E
13	Gujarat	0.054	0.987	0.467	3.410	73.640	35.223	B	30	Ladakh	1.214	1.180	1.197	54.086	45.368	49.727	E
14	Himachal Pradesh	0.064	0.528	0.266	4.256	39.979	20.717	B	31	Manipur	1.111	1.085	1.098	63.165	61.279	62.216	E
15	India	0.195	0.187	0.042	11.990	15.781	3.529	B	32	Mizoram	1.271	1.271	1.271	75.070	75.070	75.070	E
16	Madhya Pradesh	0.063	2.182	1.123	4.835	171.348	88.091	B	33	Puducherry	0.969	0.838	0.902	56.746	40.707	48.080	E
17	Maharashtra	0.041	0.630	0.302	2.627	49.806	24.647	B	34	Uttarakhand	0.514	0.520	0.516	41.854	46.191	44.023	E

The **Table S2** gives an overall idea of the errors during validation. nRMSE P is the nRMSE value of the Principal Prediction, nRMSE E is the nRMSE value of the Exponential Prediction and nRMSE M is the nRMSE value of the Mean Prediction. The minimum of the nRMSE P, nRMSE E and nRMSE M values of a region are highlighted in purple, blue and cyan respectively. Similar notations are used for MAPE values. The states shaded in pink are the states in the Exception group.

Table S3: Comparison of $R_0P(t)$ and $R_0E(t)$ values with actual values for first (26 May) and last (24 June) day of validation.

	Region	$R_0(1)$	$R_0P(1)$	$R_0E(1)$	$R_0M(1)$	$R_0(30)$	$R_0P(30)$	$R_0E(30)$	$R_0M(30)$
1	Andhra Pradesh	1.53974	1.53933	1.54607	1.5427	1.45094	1.41651	1.5411	1.47881
2	Assam	1.58733	1.57883	1.58707	1.58295	1.52032	1.49163	1.71053	1.60108
3	Bihar	1.62162	1.61739	1.62466	1.62102	1.48659	1.44911	1.61397	1.53154
4	Delhi	1.57128	1.57224	1.57375	1.57299	1.49743	1.46132	1.56144	1.51138
5	Jammu and Kashmir	1.47268	1.47177	1.47572	1.47374	1.40813	1.37764	1.47572	1.42668
6	Jharkhand	1.54462	1.54556	1.5488	1.54718	1.45898	1.41847	1.53421	1.47634
7	Karnataka	1.53578	1.53745	1.53935	1.5384	1.45869	1.43347	1.53465	1.48406
8	Kerala	1.29784	1.29746	1.29744	1.29745	1.28494	1.27129	1.30008	1.28569
9	Telangana	1.45371	1.45209	1.45276	1.45243	1.41205	1.36365	1.43639	1.40002
10	Tripura	1.54761	1.53449	1.54363	1.53906	1.45731	1.37224	1.54363	1.45793
11	West Bengal	1.59945	1.59905	1.60069	1.59987	1.49338	1.46244	1.5818	1.52212
12	Chandigarh	1.41767	1.41991	1.42685	1.42338	1.31532	1.32106	1.41991	1.37048
13	Gujarat	1.71487	1.71531	1.71412	1.71471	1.53755	1.53271	1.67256	1.60264
14	Himachal Pradesh	1.41489	1.41351	1.41344	1.41347	1.35308	1.34627	1.41682	1.38154
15	India	1.51799	1.51851	1.51845	1.51848	1.45537	1.44438	1.49595	1.47016
16	Madhya Pradesh	1.66865	1.66969	1.67659	1.67314	1.4982	1.50293	1.66183	1.58238
17	Maharashtra	1.70927	1.7105	1.71353	1.71201	1.56363	1.55996	1.67656	1.61826
18	Odisha	1.52148	1.51981	1.52581	1.52281	1.43904	1.41193	1.52581	1.46887
19	Punjab	1.49644	1.49628	1.49947	1.49787	1.40011	1.36802	1.45308	1.41055
20	Rajasthan	1.53219	1.53271	1.53608	1.53439	1.43115	1.42918	1.53162	1.4804
21	Tamil Nadu	1.61972	1.62057	1.62301	1.62179	1.51817	1.49466	1.6045	1.54958
22	Uttar Pradesh	1.61107	1.61157	1.61661	1.61409	1.49163	1.47362	1.6118	1.54271
23	Andaman and Nicobar Islands	1.28843	1.28843	1.28834	1.28839	1.2261	1.19634	1.2621	1.22922
24	Meghalaya	1.34843	1.31085	1.3262	1.31853	1.26819	1.1941	1.3221	1.2581
25	Arunachal Pradesh	1.06431	1.05241	1.04974	1.05107	1.30908	1.03431	1.04974	1.04203
26	Chhattisgarh	1.43693	1.42749	1.42694	1.42721	1.40708	1.36965	1.42694	1.39829
27	Dadra and Nagar Haveli	1.16094	1.16094	1.17	1.16547	1.49365	1.06936	1.17	1.11968
28	Goa	1.34153	1.3475	1.34694	1.34722	1.38158	1.29254	1.34601	1.31927
29	Haryana	1.49019	1.48858	1.48954	1.48906	1.46274	1.38633	1.47157	1.42895
30	Ladakh	1.29009	1.29191	1.29359	1.29275	1.35345	1.22674	1.28917	1.25795
31	Manipur	1.29278	1.29292	1.28993	1.29143	1.37855	1.25239	1.28993	1.27116
32	Mizoram	1	1	1	1	1.27664	1	1	1
33	Puducherry	1.27642	1.27535	1.2792	1.27727	1.31066	1.19996	1.2792	1.23958
34	Uttarakhand	1.42618	1.4218	1.39969	1.41074	1.39907	1.3626	1.39727	1.37994

$R_0(1)$ and $R_0(30)$ are the values of R_0 on the first (26 May) and last (24 June) days of validation respectively. $R_0P(t)$, $R_0E(t)$ and $R_0M(t)$ are similarly defined for the Principal Prediction (PP), Exponential Prediction (EP) and Mean Prediction (MP).

The cells under $R_0P(1)$ are filled in purple if it is closer to $R_0(1)$ than $R_0E(1)$ and $R_0M(1)$.

The cells under $R_0E(1)$ are filled in blue if it is closer to $R_0(1)$ than $R_0P(1)$ and $R_0M(1)$.

The cells under $R_0M(1)$ are filled in cyan if it is closer to $R_0(1)$ than $R_0P(1)$ and $R_0E(1)$.

Table S4 : Error Metrics for the validated forecasts from June 25 to July 06 for India and it's states^{*S4}

	Region	nRMSE			MAPE			Group		Region	nRMSE			MAPE			Group
		P	E	M	P	E	M				P	E	M	P	E	M	
1	Andhra Pradesh	0.135	0.260	0.064	10.014	20.070	5.028	A	18	Goa	0.135	0.139	0.017	9.478	11.071	1.464	B
2	Assam	0.166	0.148	0.043	9.981	12.152	3.333	A	19	Gujarat	0.018	0.011	0.014	1.367	0.823	1.049	B
3	Bihar	0.083	0.539	0.229	5.965	43.282	18.659	A	20	Haryana	0.018	0.329	0.172	1.423	26.219	13.821	B
4	Chhattisgarh	0.131	0.313	0.093	10.818	26.395	7.789	A	21	Himachal Pradesh	0.117	0.363	0.240	9.461	29.170	19.315	B
5	Delhi	0.089	0.271	0.180	6.803	21.222	14.012	A	22	India	0.044	0.098	0.028	3.313	7.567	2.224	B
6	Jammu and Kashmir	0.013	0.274	0.131	0.998	21.438	10.335	A	23	Ladakh	0.037	0.544	0.290	3.245	46.030	24.638	B
7	Jharkhand	0.030	0.304	0.139	1.954	25.586	11.942	A	24	Madhya Pradesh	0.020	0.664	0.323	1.328	54.689	26.749	B
8	Karnataka	0.350	0.079	0.206	23.081	4.263	12.259	A	25	Maharashtra	0.081	0.158	0.039	6.457	12.391	2.975	B
9	Kerala	0.022	0.086	0.038	1.332	6.770	3.108	A	26	Odisha	0.074	0.458	0.199	3.970	37.314	16.740	B
10	Manipur	0.034	0.354	0.192	2.666	26.917	14.327	A	27	Punjab	0.074	0.324	0.199	6.206	26.077	16.141	B
11	Mizoram	0.055	0.129	0.088	4.946	11.377	7.710	A	28	Rajasthan	0.012	0.517	0.261	1.045	42.034	21.393	B
12	Puducherry	0.388	0.115	0.250	31.443	9.457	20.450	A	29	Tamil Nadu	0.091	0.296	0.103	7.146	22.227	7.592	B
13	Telangana	0.117	0.113	0.034	6.729	9.192	2.614	A	30	Uttar Pradesh	0.032	0.282	0.156	2.050	22.071	12.043	B
14	Tripura	0.128	0.718	0.297	10.006	58.556	24.275	A	31	Uttarakhand	0.107	0.460	0.283	9.097	38.420	23.759	B
15	West Bengal	0.076	0.221	0.073	5.646	17.055	5.783	A	32	Andaman and Nicobar Islands	0.310	0.336	0.322	23.181	27.920	25.242	C
16	Arunachal Pradesh	0.138	0.165	0.061	7.808	14.224	4.812	B	33	Meghalaya	0.247	0.358	0.302	13.827	24.360	18.958	C
17	Chandigarh	0.023	0.172	0.080	1.435	14.913	7.171	B	34	Dadra and Nagar Haveli	0.248	0.073	0.134	14.410	6.252	7.231	E

^{*S4}The notations used in Table S2 are used in Table S4.

Table S5: Comparison of $R_0P(t)$ and $R_0E(t)$ values for first (25 June) and last (08 August) day of forecast. ^{*S5}

	Country	$R_0P(1)$	$R_0E(1)$	$R_0M(1)$	$R_0P(45)$	$R_0E(45)$	$R_0M(45)$
1	Andhra Pradesh	1.44906	1.45137	1.45021	1.35368	1.44942	1.40155
2	Assam	1.51723	1.51881	1.51802	1.38181	1.50587	1.44384
3	Bihar	1.48288	1.48704	1.48496	1.35631	1.4824	1.41936
4	Chhattisgarh	1.40368	1.40752	1.4056	1.29063	1.40752	1.34907
5	Delhi	1.49569	1.49626	1.49598	1.39641	1.43468	1.41555
6	Jammu and Kashmir	1.40569	1.40669	1.40619	1.31539	1.39889	1.35714
7	Jharkhand	1.45498	1.45908	1.45703	1.3244	1.43888	1.38164
8	Karnataka	1.45603	1.45814	1.45708	1.34485	1.4547	1.39977
9	Kerala	1.28454	1.28443	1.28448	1.24602	1.28217	1.26409
10	Manipur	1.37876	1.37881	1.37878	1.2938	1.37881	1.33631
11	Mizoram	1.27488	1.27557	1.27522	1.21275	1.2469	1.22983
12	Puducherry	1.30837	1.31017	1.30927	1.21999	1.31017	1.26508
13	Telangana	1.41253	1.41277	1.41265	1.3464	1.41654	1.38147
14	Tripura	1.45202	1.45817	1.4551	1.29762	1.45817	1.3779
15	West Bengal	1.48998	1.49064	1.49031	1.36812	1.44487	1.4065
16	Arunachal Pradesh	1.3084	1.31019	1.30929	1.23596	1.31247	1.27422
17	Chandigarh	1.31287	1.314	1.31344	1.22312	1.2963	1.25971
18	Goa	1.38032	1.38178	1.38105	1.29826	1.38178	1.34002
19	Gujarat	1.5332	1.53255	1.53288	1.39018	1.37397	1.38207
20	Haryana	1.46038	1.46246	1.46142	1.35819	1.45613	1.40716
21	Himachal Pradesh	1.35241	1.35323	1.35282	1.28304	1.35204	1.31754
22	India	1.45358	1.45354	1.45356	1.37343	1.43054	1.40198
23	Ladakh	1.35113	1.35366	1.3524	1.25847	1.3515	1.30498
24	Madhya Pradesh	1.49394	1.49794	1.49594	1.35803	1.48857	1.4233
25	Maharashtra	1.55976	1.56173	1.56075	1.42305	1.53036	1.4767
26	Odisha	1.43661	1.44021	1.43841	1.33745	1.44021	1.38883
27	Punjab	1.39855	1.39926	1.39891	1.31933	1.377	1.34816
28	Rajasthan	1.42855	1.43059	1.42957	1.33237	1.4259	1.37914
29	Tamil Nadu	1.51553	1.51704	1.51629	1.40195	1.50395	1.45295
30	Uttar Pradesh	1.48857	1.48318	1.48587	1.37221	1.29226	1.33224
31	Uttarakhand	1.39701	1.39979	1.3984	1.30823	1.39111	1.34967
32	Andaman and Nicobar Islands	1.22762	1.2237	1.22566	1.17383	1.2208	1.19731
33	Meghalaya	1.26567	1.26089	1.26328	1.17739	1.10227	1.13983
34	Dadra and Nagar Haveli	1.49259	1.4936	1.4931	1.34289	1.4936	1.41825

^{*S5} The notations used in Table S3 are used in Table S5.

Table S6: Verification of Principal Prediction (PP), Exponential Prediction (EP) against Actual values from 25 June to 06 July, 2020 ^{*S6}

Region	Date	Actual	PP	EP	MP	Region	Date	Actual	PP	EP	MP
Andhra Pradesh	25/06/20	0.1088	0.1085	0.1141	0.1113	Goa	25/06/20	0.0100	0.0100	0.0104	0.0102
	26/06/20	0.1149	0.1121	0.1198	0.1160		26/06/20	0.0104	0.0103	0.0109	0.0106
	27/06/20	0.1229	0.1181	0.1338	0.1259		27/06/20	0.0113	0.0109	0.0116	0.0113
	28/06/20	0.1310	0.1216	0.1459	0.1338		28/06/20	0.0120	0.0112	0.0126	0.0119
	29/06/20	0.1389	0.1276	0.1601	0.1438		29/06/20	0.0125	0.0118	0.0137	0.0127
	30/06/20	0.1460	0.1311	0.1733	0.1522		30/06/20	0.0132	0.0121	0.0148	0.0135
	01/07/20	0.1525	0.1371	0.1896	0.1634		01/07/20	0.0139	0.0127	0.0160	0.0143
	02/07/20	0.1610	0.1406	0.2056	0.1731		02/07/20	0.0148	0.0130	0.0172	0.0151
	03/07/20	0.1693	0.1466	0.2169	0.1817		03/07/20	0.0158	0.0136	0.0180	0.0158
	04/07/20	0.1770	0.1502	0.2353	0.1927		04/07/20	0.0168	0.0139	0.0194	0.0166
	05/07/20	0.1870	0.1561	0.2466	0.2013		05/07/20	0.0176	0.0144	0.0202	0.0173
	06/07/20	0.2002	0.1597	0.2650	0.2123		06/07/20	0.0181	0.0148	0.0215	0.0181
Assam	25/06/20	0.0655	0.0649	0.0679	0.0664	Gujarat	25/06/20	0.2958	0.2962	0.2929	0.2946
	26/06/20	0.0682	0.0669	0.0697	0.0683		26/06/20	0.3016	0.3004	0.2987	0.2995
	27/06/20	0.0706	0.0699	0.0744	0.0722		27/06/20	0.3077	0.3074	0.3088	0.3081
	28/06/20	0.0739	0.0719	0.0801	0.0760		28/06/20	0.3140	0.3115	0.3127	0.3121
	29/06/20	0.0769	0.0750	0.0869	0.0809		29/06/20	0.3202	0.3185	0.3210	0.3198
	30/06/20	0.0831	0.0769	0.0943	0.0856		30/06/20	0.3264	0.3226	0.3253	0.3240
	01/07/20	0.0885	0.0800	0.1029	0.0914		01/07/20	0.3332	0.3296	0.3333	0.3314
	02/07/20	0.0933	0.0819	0.1122	0.0970		02/07/20	0.3400	0.3338	0.3380	0.3359
	03/07/20	0.0970	0.0850	0.1177	0.1013		03/07/20	0.3469	0.3407	0.3424	0.3416

	04/07/20	0.1090	0.0869	0.1266	0.1067		04/07/20	0.3540	0.3449	0.3501	0.3475
	05/07/20	0.1164	0.0900	0.1316	0.1108		05/07/20	0.3612	0.3518	0.3545	0.3532
	06/07/20	0.1242	0.0919	0.1401	0.1160		06/07/20	0.3686	0.3560	0.3621	0.3591
Bihar	25/06/20	0.0849	0.0849	0.0917	0.0883	Haryana	25/06/20	0.1246	0.1253	0.1307	0.1280
	26/06/20	0.0868	0.0864	0.0940	0.0902		26/06/20	0.1288	0.1289	0.1362	0.1326
	27/06/20	0.0898	0.0888	0.1052	0.0970		27/06/20	0.1343	0.1349	0.1450	0.1400
	28/06/20	0.0922	0.0903	0.1165	0.1034		28/06/20	0.1383	0.1386	0.1559	0.1472
	29/06/20	0.0962	0.0927	0.1294	0.1110		29/06/20	0.1421	0.1446	0.1682	0.1564
	30/06/20	0.0999	0.0942	0.1409	0.1176		30/06/20	0.1455	0.1483	0.1819	0.1651
	01/07/20	0.1020	0.0966	0.1552	0.1259		01/07/20	0.1494	0.1543	0.1973	0.1758
	02/07/20	0.1068	0.0981	0.1691	0.1336		02/07/20	0.1551	0.1579	0.2143	0.1861
	03/07/20	0.1111	0.1005	0.1775	0.1390		03/07/20	0.1600	0.1639	0.2219	0.1929
	04/07/20	0.1146	0.1020	0.1920	0.1470		04/07/20	0.1655	0.1676	0.2351	0.2014
	05/07/20	0.1186	0.1045	0.2005	0.1525		05/07/20	0.1701	0.1736	0.2428	0.2082
	06/07/20	0.1214	0.1059	0.2150	0.1605		06/07/20	0.1750	0.1773	0.2560	0.2166
Chhattisgarh	25/06/20	0.0246	0.0245	0.0263	0.0254	Himachal Pradesh	25/06/20	0.0084	0.0085	0.0088	0.0087
	26/06/20	0.0255	0.0246	0.0268	0.0257		26/06/20	0.0086	0.0088	0.0092	0.0090
	27/06/20	0.0261	0.0250	0.0288	0.0269		27/06/20	0.0089	0.0093	0.0099	0.0096
	28/06/20	0.0269	0.0250	0.0312	0.0281		28/06/20	0.0092	0.0096	0.0105	0.0101
	29/06/20	0.0280	0.0254	0.0338	0.0296		29/06/20	0.0094	0.0101	0.0113	0.0107
	30/06/20	0.0286	0.0254	0.0366	0.0310		30/06/20	0.0095	0.0104	0.0121	0.0112
	01/07/20	0.0294	0.0258	0.0397	0.0327		01/07/20	0.0098	0.0109	0.0130	0.0119

	02/07/20	0.0301	0.0258	0.0430	0.0344		02/07/20	0.0101	0.0112	0.0138	0.0125
	03/07/20	0.0307	0.0262	0.0431	0.0346		03/07/20	0.0103	0.0117	0.0144	0.0131
	04/07/20	0.0316	0.0262	0.0439	0.0351		04/07/20	0.0105	0.0120	0.0154	0.0137
	05/07/20	0.0321	0.0266	0.0439	0.0353		05/07/20	0.0106	0.0125	0.0161	0.0143
	06/07/20	0.0331	0.0267	0.0447	0.0357		06/07/20	0.0108	0.0128	0.0171	0.0149
Delhi	25/06/20	0.7378	0.7459	0.7582	0.7520	India	25/06/20	4.9109	4.9100	4.8989	4.9044
	26/06/20	0.7724	0.7743	0.8022	0.7882		26/06/20	5.0934	5.0350	5.0910	5.0630
	27/06/20	0.8019	0.8210	0.8580	0.8395		27/06/20	5.2948	5.2373	5.4651	5.3512
	28/06/20	0.8308	0.8495	0.9174	0.8834		28/06/20	5.4909	5.3623	5.6323	5.4973
	29/06/20	0.8516	0.8962	0.9789	0.9375		29/06/20	5.6743	5.5645	6.0355	5.8000
	30/06/20	0.8736	0.9246	1.0423	0.9835		30/06/20	5.8569	5.6896	6.2511	5.9704
	01/07/20	0.8980	0.9713	1.1093	1.0403		01/07/20	6.0512	5.8918	6.7171	6.3044
	02/07/20	0.9218	0.9998	1.1800	1.0899		02/07/20	6.2707	6.0169	6.9894	6.5032
	03/07/20	0.9470	1.0465	1.2299	1.1382		03/07/20	6.4978	6.2191	7.2124	6.7157
	04/07/20	0.9720	1.0749	1.3115	1.1932		04/07/20	6.7380	6.3442	7.5936	6.9689
	05/07/20	0.9944	1.1216	1.3614	1.2415		05/07/20	6.9774	6.5464	7.8075	7.1770
	06/07/20	1.0082	1.1501	1.4430	1.2965		06/07/20	7.2024	6.6715	8.1799	7.4257
Jammu and Kashmir	25/06/20	0.0655	0.0660	0.0670	0.0665	Ladakh	25/06/20	0.0094	0.0095	0.0103	0.0099
	26/06/20	0.0676	0.0673	0.0694	0.0684		26/06/20	0.0095	0.0095	0.0106	0.0101
	27/06/20	0.0697	0.0694	0.0737	0.0715		27/06/20	0.0096	0.0098	0.0111	0.0104
	28/06/20	0.0709	0.0708	0.0782	0.0745		28/06/20	0.0096	0.0098	0.0119	0.0108
	29/06/20	0.0724	0.0728	0.0833	0.0781		29/06/20	0.0096	0.0100	0.0129	0.0114

	30/06/20	0.0750	0.0742	0.0889	0.0815		30/06/20	0.0097	0.0100	0.0137	0.0119
	01/07/20	0.0770	0.0762	0.0951	0.0857		01/07/20	0.0099	0.0102	0.0147	0.0125
	02/07/20	0.0785	0.0776	0.1020	0.0898		02/07/20	0.0099	0.0102	0.0157	0.0130
	03/07/20	0.0802	0.0797	0.1063	0.0930		03/07/20	0.0100	0.0104	0.0164	0.0134
	04/07/20	0.0825	0.0810	0.1129	0.0969		04/07/20	0.0101	0.0104	0.0175	0.0140
	05/07/20	0.0843	0.0831	0.1165	0.0998		05/07/20	0.0101	0.0107	0.0182	0.0144
	06/07/20	0.0868	0.0844	0.1226	0.1035		06/07/20	0.0101	0.0107	0.0193	0.0150
Jharkhand	25/06/20	0.0226	0.0227	0.0244	0.0235	Madhya Pradesh	25/06/20	0.1260	0.1265	0.1366	0.1316
	26/06/20	0.0229	0.0230	0.0248	0.0239		26/06/20	0.1280	0.1279	0.1386	0.1332
	27/06/20	0.0234	0.0235	0.0262	0.0248		27/06/20	0.1297	0.1301	0.1567	0.1434
	28/06/20	0.0236	0.0238	0.0271	0.0254		28/06/20	0.1319	0.1315	0.1722	0.1518
	29/06/20	0.0243	0.0243	0.0290	0.0266		29/06/20	0.1337	0.1337	0.1908	0.1623
	30/06/20	0.0249	0.0246	0.0304	0.0275		30/06/20	0.1359	0.1351	0.2044	0.1697
	01/07/20	0.0253	0.0251	0.0328	0.0290		01/07/20	0.1386	0.1374	0.2244	0.1809
	02/07/20	0.0259	0.0254	0.0348	0.0301		02/07/20	0.1411	0.1387	0.2418	0.1903
	03/07/20	0.0270	0.0259	0.0360	0.0310		03/07/20	0.1430	0.1410	0.2545	0.1977
	04/07/20	0.0274	0.0262	0.0382	0.0322		04/07/20	0.1460	0.1423	0.2754	0.2089
	05/07/20	0.0281	0.0267	0.0394	0.0331		05/07/20	0.1493	0.1446	0.2880	0.2163
	06/07/20	0.0285	0.0270	0.0415	0.0343		06/07/20	0.1528	0.1460	0.3089	0.2274
Karnataka	25/06/20	0.1056	0.1049	0.1086	0.1067	Maharashtra	25/06/20	1.4774	1.4697	1.5375	1.5036
	26/06/20	0.1101	0.1074	0.1127	0.1101		26/06/20	1.5277	1.4974	1.5743	1.5359
	27/06/20	0.1192	0.1115	0.1220	0.1167		27/06/20	1.5913	1.5431	1.6680	1.6055

	28/06/20	0.1319	0.1139	0.1323	0.1231		28/06/20	1.6463	1.5708	1.7201	1.6455
	29/06/20	0.1430	0.1179	0.1444	0.1311		29/06/20	1.6988	1.6164	1.8329	1.7246
	30/06/20	0.1524	0.1202	0.1569	0.1386		30/06/20	1.7476	1.6441	1.9211	1.7826
	01/07/20	0.1651	0.1241	0.1713	0.1477		01/07/20	1.8030	1.6897	2.0685	1.8791
	02/07/20	0.1802	0.1263	0.1864	0.1563		02/07/20	1.8663	1.7174	2.1922	1.9548
	03/07/20	0.1971	0.1301	0.1932	0.1616		03/07/20	1.9299	1.7630	2.2740	2.0185
	04/07/20	0.2155	0.1322	0.2028	0.1675		04/07/20	2.0006	1.7907	2.4093	2.1000
	05/07/20	0.2347	0.1360	0.2096	0.1728		05/07/20	2.0662	1.8363	2.4879	2.1621
	06/07/20	0.2532	0.1380	0.2192	0.1786		06/07/20	2.1199	1.8641	2.6200	2.2420
Kerala	25/06/20	0.0373	0.0377	0.0376	0.0376	Odisha	25/06/20	0.0596	0.0597	0.0639	0.0618
	26/06/20	0.0388	0.0388	0.0392	0.0390		26/06/20	0.0618	0.0613	0.0666	0.0640
	27/06/20	0.0407	0.0406	0.0412	0.0409		27/06/20	0.0635	0.0639	0.0742	0.0691
	28/06/20	0.0419	0.0418	0.0432	0.0425		28/06/20	0.0661	0.0655	0.0826	0.0741
	29/06/20	0.0431	0.0436	0.0454	0.0445		29/06/20	0.0686	0.0681	0.0905	0.0793
	30/06/20	0.0444	0.0447	0.0477	0.0462		30/06/20	0.0707	0.0697	0.0985	0.0841
	01/07/20	0.0459	0.0466	0.0503	0.0484		01/07/20	0.0732	0.0723	0.1072	0.0898
	02/07/20	0.0475	0.0477	0.0529	0.0503		02/07/20	0.0755	0.0739	0.1168	0.0954
	03/07/20	0.0497	0.0495	0.0547	0.0521		03/07/20	0.0811	0.0765	0.1235	0.1000
	04/07/20	0.0521	0.0507	0.0577	0.0542		04/07/20	0.0860	0.0781	0.1333	0.1057
	05/07/20	0.0543	0.0525	0.0595	0.0560		05/07/20	0.0907	0.0807	0.1399	0.1103
	06/07/20	0.0562	0.0536	0.0625	0.0580		06/07/20	0.0953	0.0822	0.1492	0.1157
Manipur	25/06/20	0.0106	0.0105	0.0107	0.0106	Punjab	25/06/20	0.0477	0.0484	0.0486	0.0485

	26/06/20	0.0108	0.0107	0.0111	0.0109		26/06/20	0.0496	0.0500	0.0514	0.0507
	27/06/20	0.0109	0.0113	0.0120	0.0116		27/06/20	0.0506	0.0526	0.0565	0.0546
	28/06/20	0.0119	0.0115	0.0129	0.0122		28/06/20	0.0522	0.0542	0.0601	0.0572
	29/06/20	0.0123	0.0120	0.0140	0.0130		29/06/20	0.0542	0.0568	0.0651	0.0609
	30/06/20	0.0123	0.0123	0.0151	0.0137		30/06/20	0.0557	0.0584	0.0686	0.0635
	01/07/20	0.0126	0.0128	0.0163	0.0146		01/07/20	0.0567	0.0609	0.0743	0.0676
	02/07/20	0.0128	0.0131	0.0175	0.0153		02/07/20	0.0578	0.0626	0.0783	0.0705
	03/07/20	0.0132	0.0136	0.0184	0.0160		03/07/20	0.0594	0.0651	0.0815	0.0733
	04/07/20	0.0133	0.0139	0.0197	0.0168		04/07/20	0.0611	0.0668	0.0870	0.0769
	05/07/20	0.0137	0.0144	0.0205	0.0175		05/07/20	0.0628	0.0693	0.0902	0.0797
	06/07/20	0.0139	0.0147	0.0219	0.0183		06/07/20	0.0649	0.0710	0.0956	0.0833
Mizoram	25/06/20	0.0015	0.0015	0.0015	0.0015	Rajasthan	25/06/20	0.1630	0.1642	0.1721	0.1682
	26/06/20	0.0015	0.0015	0.0015	0.0015		26/06/20	0.1666	0.1670	0.1764	0.1717
	27/06/20	0.0015	0.0016	0.0016	0.0016		27/06/20	0.1694	0.1716	0.1969	0.1843
	28/06/20	0.0015	0.0016	0.0016	0.0016		28/06/20	0.1727	0.1743	0.2138	0.1941
	29/06/20	0.0015	0.0016	0.0017	0.0017		29/06/20	0.1766	0.1790	0.2333	0.2061
	30/06/20	0.0016	0.0016	0.0018	0.0017		30/06/20	0.1801	0.1817	0.2497	0.2157
	01/07/20	0.0016	0.0017	0.0019	0.0018		01/07/20	0.1831	0.1863	0.2715	0.2289
	02/07/20	0.0016	0.0017	0.0019	0.0018		02/07/20	0.1866	0.1891	0.2915	0.2403
	03/07/20	0.0016	0.0018	0.0020	0.0019		03/07/20	0.1905	0.1937	0.3059	0.2498
	04/07/20	0.0016	0.0018	0.0020	0.0019		04/07/20	0.1953	0.1965	0.3296	0.2630

	05/07/20	0.0019	0.0018	0.0020	0.0019		05/07/20	0.2016	0.2011	0.3440	0.2725
	06/07/20	0.0020	0.0019	0.0020	0.0019		06/07/20	0.2069	0.2038	0.3676	0.2857
Puducherry	25/06/20	0.0050	0.0047	0.0045	0.0046	Tamil Nadu	25/06/20	0.7098	0.7052	0.7295	0.7173
	26/06/20	0.0053	0.0047	0.0053	0.0050		26/06/20	0.7462	0.7263	0.7615	0.7439
	27/06/20	0.0062	0.0048	0.0055	0.0052		27/06/20	0.7834	0.7607	0.8463	0.8035
	28/06/20	0.0065	0.0048	0.0058	0.0053		28/06/20	0.8228	0.7818	0.9172	0.8495
	29/06/20	0.0069	0.0049	0.0062	0.0055		29/06/20	0.8622	0.8161	1.0041	0.9101
	30/06/20	0.0071	0.0049	0.0066	0.0057		30/06/20	0.9017	0.8372	1.0833	0.9602
	01/07/20	0.0074	0.0050	0.0070	0.0060		01/07/20	0.9405	0.8716	1.1847	1.0281
	02/07/20	0.0080	0.0050	0.0074	0.0062		02/07/20	0.9839	0.8927	1.2827	1.0877
	03/07/20	0.0082	0.0050	0.0076	0.0063		03/07/20	1.0272	0.9270	1.3518	1.1394
	04/07/20	0.0090	0.0050	0.0080	0.0065		04/07/20	1.0700	0.9481	1.4641	1.2061
	05/07/20	0.0095	0.0051	0.0081	0.0066		05/07/20	1.1115	0.9825	1.5331	1.2578
	06/07/20	0.0101	0.0051	0.0084	0.0067		06/07/20	1.1498	1.0036	1.6454	1.3245
Telangana	25/06/20	0.1136	0.1144	0.1159	0.1152	Uttar Pradesh	25/06/20	0.2019	0.2024	0.1816	0.1920
	26/06/20	0.1235	0.1211	0.1274	0.1242		26/06/20	0.2094	0.2070	0.1874	0.1972
	27/06/20	0.1344	0.1322	0.1395	0.1358		27/06/20	0.2155	0.2146	0.2103	0.2124
	28/06/20	0.1442	0.1389	0.1530	0.1459		28/06/20	0.2215	0.2192	0.1861	0.2027
	29/06/20	0.1539	0.1499	0.1670	0.1585		29/06/20	0.2283	0.2269	0.2058	0.2163
	30/06/20	0.1634	0.1566	0.1826	0.1696		30/06/20	0.2349	0.2315	0.1826	0.2070
	01/07/20	0.1736	0.1677	0.1989	0.1833		01/07/20	0.2406	0.2391	0.2044	0.2218
	02/07/20	0.1857	0.1744	0.2170	0.1957		02/07/20	0.2483	0.2438	0.1806	0.2122

	03/07/20	0.2046	0.1855	0.2295	0.2075		03/07/20	0.2580	0.2514	0.1757	0.2135
	04/07/20	0.2231	0.1922	0.2497	0.2209		04/07/20	0.2655	0.2560	0.1708	0.2134
	05/07/20	0.2390	0.2033	0.2622	0.2327		05/07/20	0.2771	0.2636	0.1659	0.2148
	06/07/20	0.2573	0.2099	0.2824	0.2462		06/07/20	0.2864	0.2683	0.1610	0.2146
Tripura	25/06/20	0.0130	0.0127	0.0142	0.0135	Uttarakhand	25/06/20	0.0269	0.0272	0.0288	0.0280
	26/06/20	0.0133	0.0127	0.0141	0.0134		26/06/20	0.0273	0.0279	0.0300	0.0290
	27/06/20	0.0134	0.0128	0.0163	0.0146		27/06/20	0.0279	0.0290	0.0321	0.0306
	28/06/20	0.0135	0.0128	0.0181	0.0155		28/06/20	0.0282	0.0297	0.0341	0.0319
	29/06/20	0.0139	0.0129	0.0200	0.0164		29/06/20	0.0283	0.0308	0.0365	0.0337
	30/06/20	0.0139	0.0129	0.0219	0.0174		30/06/20	0.0288	0.0314	0.0389	0.0352
	01/07/20	0.0140	0.0129	0.0239	0.0184		01/07/20	0.0295	0.0325	0.0418	0.0372
	02/07/20	0.0144	0.0129	0.0262	0.0195		02/07/20	0.0298	0.0332	0.0446	0.0389
	03/07/20	0.0153	0.0130	0.0277	0.0204		03/07/20	0.0305	0.0343	0.0466	0.0404
	04/07/20	0.0156	0.0130	0.0302	0.0216		04/07/20	0.0309	0.0350	0.0497	0.0423
	05/07/20	0.0158	0.0131	0.0317	0.0224		05/07/20	0.0312	0.0361	0.0517	0.0439
	06/07/20	0.0169	0.0131	0.0342	0.0236		06/07/20	0.0316	0.0367	0.0548	0.0458
West Bengal	25/06/20	0.1565	0.1563	0.1585	0.1574	Andaman and Nicobar Islands	25/06/20	0.0006	0.0006	0.0005	0.0006
	26/06/20	0.1619	0.1594	0.1628	0.1611		26/06/20	0.0007	0.0006	0.0006	0.0006
	27/06/20	0.1671	0.1646	0.1764	0.1705		27/06/20	0.0007	0.0007	0.0006	0.0006
	28/06/20	0.1728	0.1677	0.1874	0.1775		28/06/20	0.0008	0.0007	0.0006	0.0007
	29/06/20	0.1791	0.1728	0.2035	0.1881		29/06/20	0.0009	0.0007	0.0006	0.0007
	30/06/20	0.1856	0.1759	0.2151	0.1955		30/06/20	0.0010	0.0007	0.0007	0.0007

	01/07/20	0.1917	0.1811	0.2331	0.2071		01/07/20	0.0010	0.0008	0.0007	0.0007
	02/07/20	0.1982	0.1842	0.2466	0.2154		02/07/20	0.0011	0.0008	0.0007	0.0007
	03/07/20	0.2049	0.1893	0.2569	0.2231		03/07/20	0.0012	0.0008	0.0007	0.0008
	04/07/20	0.2123	0.1925	0.2735	0.2330		04/07/20	0.0012	0.0008	0.0008	0.0008
	05/07/20	0.2213	0.1976	0.2838	0.2407		05/07/20	0.0013	0.0008	0.0008	0.0008
	06/07/20	0.2299	0.2007	0.3005	0.2506		06/07/20	0.0014	0.0008	0.0008	0.0008
Arunachal Pradesh	25/06/20	0.0017	0.0017	0.0018	0.0017	Meghalaya	25/06/20	0.0005	0.0005	0.0004	0.0005
	26/06/20	0.0017	0.0017	0.0018	0.0018		26/06/20	0.0005	0.0005	0.0004	0.0005
	27/06/20	0.0018	0.0018	0.0019	0.0018		27/06/20	0.0005	0.0005	0.0004	0.0005
	28/06/20	0.0018	0.0018	0.0021	0.0019		28/06/20	0.0005	0.0005	0.0004	0.0005
	29/06/20	0.0019	0.0019	0.0022	0.0020		29/06/20	0.0005	0.0005	0.0004	0.0005
	30/06/20	0.0019	0.0019	0.0024	0.0021		30/06/20	0.0005	0.0005	0.0004	0.0005
	01/07/20	0.0020	0.0020	0.0025	0.0022		01/07/20	0.0006	0.0005	0.0004	0.0005
	02/07/20	0.0023	0.0020	0.0027	0.0023		02/07/20	0.0006	0.0005	0.0004	0.0005
	03/07/20	0.0025	0.0021	0.0028	0.0024		03/07/20	0.0006	0.0005	0.0004	0.0005
	04/07/20	0.0026	0.0021	0.0030	0.0025		04/07/20	0.0007	0.0005	0.0004	0.0005
	05/07/20	0.0027	0.0022	0.0031	0.0026		05/07/20	0.0007	0.0005	0.0004	0.0005
	06/07/20	0.0027	0.0022	0.0033	0.0027		06/07/20	0.0009	0.0005	0.0004	0.0005
Chandigarh	25/06/20	0.0042	0.0043	0.0044	0.0043	Dadra and Nagar Haveli	25/06/20	0.0016	0.0015	0.0015	0.0015
	26/06/20	0.0043	0.0043	0.0044	0.0043		26/06/20	0.0017	0.0016	0.0016	0.0016
	27/06/20	0.0043	0.0043	0.0046	0.0044		27/06/20	0.0019	0.0017	0.0018	0.0018
	28/06/20	0.0043	0.0044	0.0047	0.0045		28/06/20	0.0019	0.0018	0.0020	0.0019

	29/06/20	0.0043	0.0044	0.0049	0.0046		29/06/20	0.0021	0.0019	0.0022	0.0021
	30/06/20	0.0044	0.0044	0.0050	0.0047		30/06/20	0.0022	0.0020	0.0024	0.0022
	01/07/20	0.0045	0.0045	0.0052	0.0048		01/07/20	0.0023	0.0022	0.0027	0.0024
	02/07/20	0.0045	0.0045	0.0054	0.0049		02/07/20	0.0026	0.0022	0.0029	0.0026
	03/07/20	0.0045	0.0045	0.0055	0.0050		03/07/20	0.0031	0.0024	0.0031	0.0027
	04/07/20	0.0046	0.0045	0.0057	0.0051		04/07/20	0.0034	0.0025	0.0034	0.0029
	05/07/20	0.0047	0.0046	0.0058	0.0052		05/07/20	0.0038	0.0026	0.0036	0.0031
	06/07/20	0.0049	0.0046	0.0059	0.0052		06/07/20	0.0040	0.0027	0.0039	0.0033

*S6 The values are in lakhs (10^5)

Table S7 : Principal Prediction(PP) and Exponential Prediction(EP) for last day of forecast (08 August, 2020) ^{*S7}

	Region	PP	EP	MP		Region	PP	EP	MP
1	Andhra Pradesh	0.3177	0.7514	0.5345	18	Goa	0.0295	0.0565	0.0430
2	Assam	0.1751	0.2765	0.2258	19	Gujarat	0.5409	0.5599	0.5504
3	Bihar	0.1710	0.5911	0.3811	20	Haryana	0.3379	0.5976	0.4677
4	Chhattisgarh	0.0338	0.0581	0.0459	21	Himachal Pradesh	0.0259	0.0433	0.0346
5	Delhi	2.3992	3.5964	2.9978	22	India	12.1103	15.7505	13.9304
6	Jammu and Kashmir	0.1413	0.2041	0.1727	23	Ladakh	0.0145	0.0492	0.0319
7	Jharkhand	0.0405	0.0966	0.0685	24	Madhya Pradesh	0.2061	0.8581	0.5321
8	Karnataka	0.2145	0.4884	0.3514	25	Maharashtra	3.0828	5.3384	4.2106
9	Kerala	0.1030	0.1409	0.1219	26	Odisha	0.1519	0.3777	0.2648
10	Manipur	0.0277	0.0576	0.0426	27	Punjab	0.1404	0.2370	0.1887
11	Mizoram	0.0030	0.0030	0.0030	28	Rajasthan	0.3264	0.9907	0.6585
12	Puducherry	0.0054	0.0093	0.0073	29	Tamil Nadu	1.9252	4.6163	3.2708
13	Telangana	0.5053	0.8181	0.6617	30	Uttar Pradesh	0.4719	0.0000	0.2357
14	Tripura	0.0144	0.0999	0.0571	31	Uttarakhand	0.0662	0.1386	0.1024
15	West Bengal	0.3381	0.7421	0.5401	32	Andaman and Nicobar Islands	0.0010	0.0016	0.0013
16	Arunachal Pradesh	0.0039	0.0081	0.0060	33	Meghalaya	0.0006	0.0004	0.0005
17	Chandigarh	0.0051	0.0066	0.0059	34	Dadra and Nagar Haveli	0.0062	0.0113	0.0088

^{*S7} The values are in lakhs (10^5)

Table S8 : Comparison amongst studies

30/05/20						
State	Actual	Khimya Et al	Rafiq Et al	This Study		
				PP	EP	MP
Maharashtra	65168	51836	73913	53087	82453	67770
Delhi	18549	14565	21493	15337	28463	21900
Madhya Pradesh	7891	7031	8343	7571	22945	15258
Tamil Nadu	21184	17737	32000	16727	38367	27547
Gujarat	16356	15007	28147	15048	26164	20606
Rajasthan	8617	7905	9375	7914	18680	13297
06/06/20						
State	Actual	Khimya Et al	Rafiq Et al	This Study		
				PP	EP	MP
Maharashtra	82968	62516	132950	63848	108697	86273
Delhi	27654	17283	31542	18218	39121	28670
Madhya Pradesh	9228	8164	11313	8891	32603	20747
Tamil Nadu	30152	21288	55000	19672	52934	36303
Gujarat	19617	17376	48200	17332	33804	25568
Rajasthan	10337	9379	13125	9331	26119	17725
13/06/20						
State	Actual	Khimya Et al	Rafiq Et al	This Study		
				PP	EP	MP
Maharashtra	104568	73196	225480	75348	134940	105144
Delhi	38958	20002	47761	21303	50514	35909
Madhya Pradesh	10641	9298	14875	10318	42262	26290
Tamil Nadu	42687	24838	92000	22847	68563	45705
Gujarat	23079	19745	82503	19785	41954	30870
Rajasthan	12401	10853	17888	10912	34004	22426
27/06/20						
State	Actual	Khimya Et al	Rafiq Et al	This Study		
				PP	EP	MP
Maharashtra	159133	94557	-	98348	187428	142888
Delhi	80188	25438	-	27432	72564	49998
Madhya Pradesh	12965	11564	-	12920	61578	37249
Tamil Nadu	82275	31939	-	30155	98759	64457
Gujarat	30773	24482	-	24385	57744	41065
Rajasthan	16944	13801	-	13902	49328	31615

Khimya Et al training data : 30 January to 15 May, 2020

Rafiq Et al training data : 30 January to 17 May, 2020

This study training data : 14 March to 16 May, 2020