Analysis of Reported Cases of Crime in India

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Abstract

The aim of the paper is to introduce an overall depiction of crimes in India. This paper examines the overall effect of financial factors (NSDP as an intermediary of monetarydevelopment, neediness, joblessness, sexual orientation proportion and instruction) on crime percentages in India. Information of few significant states are taken for the years from 1990 to 2020 over the period of decade. This contains the investigation of composition of crimes, comparing the data of various states for different years with respect to total crime rates and contribution of chosen crime heads such as murder, rape, burglary and many more. Murder describes the killing of a person deliberately. In the same way, rape is unlawful sexual activity. Crimes against property incorporates dacoity, thievery, burglary and dacoity. These gain significance for their prevalence in the absolute pace of crime at any instant of time.Comparative graphs have been made for the state wise contribution of different states/UT, line graph of the crime rate in the interval of two years and relative visualization of states with highest and lowest crime have been done. Comparison of few major crimes have also been made between before and during Covid-19.

Keywords: Crime rate, Crime, crime heads

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1. Introduction

India has constantly been the attraction place for the visitors because of its diverse culture and history. Therefore, the state earned much wished respect and recognition across the globe. But, the expanded rate of crime has affected its reputation badly. As we recognize peace is considered one of the vital necessities of humans in any country. The universal development in any subject like monetary, social or political somehow depends upon the non-violent surroundings which is basically absence of violence. Violence affects wellness of humans in oblique methods, as armed conflicts hinder the monetary growth or the working of public sectors. The latest upward fashion in crime rates of developing nations haveinduced tremendous public situation like non-public and proprietary insecurity. Crime is defined as the breaking of rule(s) or law(s) for which a governing authority (via prison structures) can ultimately prescribe a conviction and crime is an odd behaviour that violates winning norms or cultural requirements prescribing how human beings behave in a society. Example: murder, dacoity, rape, robbery, kidnapping, theft and many more.

Gupta and Lalit (2019) worked on Crimes in India and compared the percentage contribution of different heads from 1991 to 2011 and analysed the state wise contribution of different crime heads.But it was done before covid. In this paper, we have done the analysis of crime heads in the year 2019 i.e., before covid-19 and during the year of covid -19 i.e.,2020 along with the comparative study of varied crime heads in distinct states/UT till the latest year.

Relative visualization of different crimes has been made for varied states/UT. Comparative graphs have been constructed for the state wise distribution of the crime rates in India for four years namely, 1990,2000,2010 and 2020. Comparison of few major crimes have also been made between before and during Covid-19.

2. Source of Data

In our country India, the Criminal Procedure Code separate the wrongdoings into majorly two parts: cognizable and non-cognizable. The police have the obligation to make a brief move on receipt of a protest or of believable data on account of cognizable violations. Cognizable wrongdoings are again sub-divided as those coming under either the Indian Penal Code (IPC), or under the Special and Local Laws (SLL). Non-cognizable violations, then again, are left to be sought after by the impacted gatherings themselves in Courts. The police power starts examination concerning such wrongdoings besides with authoritative consent. In India measurements on wrongdoing are distributed yearly by the National Crime Records Bureau. State, City and area savvy information is accessible on number of various wrongdoings carried out, legal organizations and requirement component in a normalized design. 'Wrongdoing in India' was first brought out 1954. From that point forward it is in effect routinely distributed. The explanation is that the inspirations and implementation system for SLL violations are not the same as that of Indian Penal Code crimes.The study is confined on significant states as a result of non-accessibility of information.

3. Methodology

Traditional information and statistical research are regularly based on survey records and strategies which includes sampling, interviewing, or measuring, observed by means of statistical estimation. In evaluation, the legitimate crime figures are primarily based on each record made for law enforcement, research, prosecution, court docket instances, and prison administration. This affects how the information turn out.

To begin with, the annual crime rates have been taken within the gap of 10 years of data i.e.,from 1990 to 2020. On the basis of this, the graphshave been made to see the trend. Moreover, to find the changes in the composition of crime, different crime rates of various categories have been taken at four different years in the form of the table.

3.1 Types of crime

The Criminal Procedure Code of Indiagenerally bifurcates the crimes into:

- Cognizable Crime
- Non-Cognizable Crime

(I) **Cognizable Crime**: A cognizable offense is characterized as the those in which an official accountable for a police headquarters might explore without the request for a justice and impact capture without a warrant. Cognizable wrongdoings are comprehensively stored under IPC or under SLL

(II) **Non-CognizableCrime**:These are characterized as those which cannot be examined by the police without the request for a skilful officer. Cops don't start examination in non-cognizable wrongdoings besides with authoritative consent.

(III) Categorization of crimes under IPC:

i) **Crimes against property**: Dacoity, Preparation and assembly to commit Dacoity, Robbery, Burglary and Theft;

ii) **Economic crimes**: Criminal breach of trust, Cheating & Counterfeiting;

iii) **Crimes against women**: Rape, Dowry death, Cruelty by husband or his relatives, Assault on women with intent to outrage her modesty, Insult to the modesty of women and extortion;

iv) **Crimes against children**: Child rape, Kidnapping & abduction of children, Selling and buying of girls for prostitution, Exposure and Abandonment, Infanticide and foeticide;

v) **Crimes against body**: Murder, Kidnapping & Abduction, Hurt, death by negligence, attempt to murder;

vi) Other IPC crimes.

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3.2 Composition of Crimes

Table1:Contributions of different Crime Heads in Total Crime (%)

Crimes/year	1990	2000	2010	2020
Murder	2.2	2.1	1.5	2.2
Attempt to commit murder	1.7	1.8	1.3	4.3
CH not amounting murder	0.3	0.2	0.3	0.7
Rape	0.6	0.9	1.0	4.3
Kidnapping and abduction	1.2	1.3	1.7	3.3
Of women	0.9	0.8	1.3	3.8
Of others	0.3	0.4	0.4	1.8
Dacoity	0.7	0.3	0.2	0.2
Preparation & assembly for Dacoity	0.1	0.1	0.1	0.2
Robbery	1.6	1.3	1.1	1.8
Burglary	8.2	5.7	4.1	6.4
Theft	22.0	14.5	14.8	36.5
Riots	6.4	4.3	3.0	3.8
Criminal breach of trust	1.0	0.8	0.8	1.3
Cheating	1.5	2.6	3.6	5.0
Counterfeiting	0.2	0.1	0.1	0.1
others	52.4	63.0	77.9	78.5

Source: crime in India 1990, 2000, 2010, 2020

Table1 elucidates various crime heads as a percentage to total crime from 1990 to 2020. In 1990, theft has the highest percentage (22%) whereas dacoity (0.1%)accounts the least among all. Again, in 2000 theft has more (14.5%) contribution in the crime head but least percentage (0.1%) is shared by both preparation and assembly of dacoity and counterfeiting. Similarly, in 2010 and 2020 theft has the lofty percentage which is 14.8% and 36.5% respectively and preparation and assembly of dacoity and counterfeiting shares the least.

Changes in the constitution of crime are evident. In 1990, the total cases of IPC crime were 16,04,449 which further upsurged to 17,71,084 in the year 2000. Therefore, the growth of the ten years becomes 10.38%. With respect to %, dominance of few crimes are quite apparent in every year which incorporate robbery, theft, riots and burglary. Nevertheless, their percentage has plunged (from 38.2% in 1990 to 25.8% in 2000) but some crimes such as rapes and cheating almost doubled in this decade. Somehow, murder and counterfeiting declined. Therefore, there is deflation in the % of riots i.e. 6.4% to 4.3% whereas there is increase in the % of other crimes too.

The distinct scenario comes into frame when we compare the other ten years i.e.,2000 and 2010. In this decade, total incidences of crime increased from 17,71,084 in 2000 to 22,24,831 in 2010. The total growth of the decade becomes 25.6%. it shows a sky rocketed growth of this decade as compared to previous one which was only 10.38% (1990-2000). With respect to %, same picture has come to place. Crimessuch as robbery, preparation and assembly for dacoity, theft, riots and burglary have decreased from 25.9% to 23.3%. There is plunge in the murder from

2.1% to 1.5% and riots from 4.3% in 2000 to 3.0% in 2010. The gradual increase in the % of incidences of rape, kidnapping and abduction of women and girls have multiplied. The fundamental highlight to note here is that the % of seizing and kidnapping of ladies and girls have practically doubled andwrongdoing against ladies has likewise gone up in these years.

Comparing the other decade i.e.,2010 and 2020, it is observed that total %of crime which was 22,24,831 increased to 42,54,356 in the year 2020. In this decade,the total growth becomes 91.2% which is massively high. The %incidences of thefts sky rocketed from 14.8% in 2000 to 36.5% in 2020 which is a serious matter. Cases of kidnapping and abduction, riots, cheating have gradually increased form 8.3% in 2010 to 12.1% in 2020. This decade is seriously a matter of great concern because not even a single crime head has decreased in these ten years. Moreover, the cases of rape also jumped on large scale due to which women safety is on the verge.

Table2: Percentage contribution to the states/UT (total IPC crime)

States/UT	1990		2000		2010		2020	
	Total IPC	%	Total IPC	%	Total IPC	%	Total IPC	%
Andhra Pradesh	104299	6.6%	121279	6.9%	181438	8.6%	188997	4.74%
Arunachal Pradesh	2187	0.1%	2367	0.1%	2439	0.1%	2244	0.06%
Assam	37503	2.4%	35178	2.0%	61668	2.9%	111558	2.80%
Bihar	124414	7.8%	124082	7.1%	127453	6.1%	194698	4.88%
Delhi	31848	2.0%	56249	3.2%	51292	2.4%	249192	6.24%
Gujarat	107262	6.8%	115859	6.6%	116439	5.5%	381849	9.57%
Haryana	28713	1.8%	39490	2.3%	59120	2.8%	103276	2.59%
Himachal Pradesh	8316	0.5%	11135	0.6%	13049	0.6%	14803	0.37%
Jammu and Kashmir	15047	0.9%	17517	1.0%	23223	1.1%	51033	1.28%
Karnataka	100740	6.4%	109410	6.2%	142322	6.8%	106350	2.66%
Kerala	68698	4.3%	99033	5.6%	148313	7.1%	149099	3.74%
Madhya Pradesh	209556	13.2%	216441	12.3%	214269	10.2%	283881	7.11%
Maharashtra	185652	11.7%	173466	9.9%	208168	9.9%	394017	9.87%
Mizoram	1612	0.10%	2316	0.1%	2174	0.1%	1787	0.04%
Nagaland	1827	0.12%	1368	0.1%	1059	0.1%	1022	0.03%
Orissa	47947	3.0%	49419	2.8%	56459	2.7%	108533	2.72%
Punjab	16131	1.0%	24374	1.4%	36648	1.7%	49870	1.25%
Rajasthan	103228	6.5%	160983	9.2%	162957	7.8%	193279	4.84%
Sikkim	373	0.02%	432	0.0%	552	0.0%	504	0.01%
Tamil Nadu	128529	8.1%	151329	8.6%	185678	8.8%	891700	22.34%
Uttar Pradesh	193985	12.2%	175668	10.0%	174179	8.3%	355110	8.90%
West Bengal	66644	4.2%	65834	3.8%	129616	6.2%	158060	3.96%

Total states/UT	1584511		1753229		2098515		3990862	

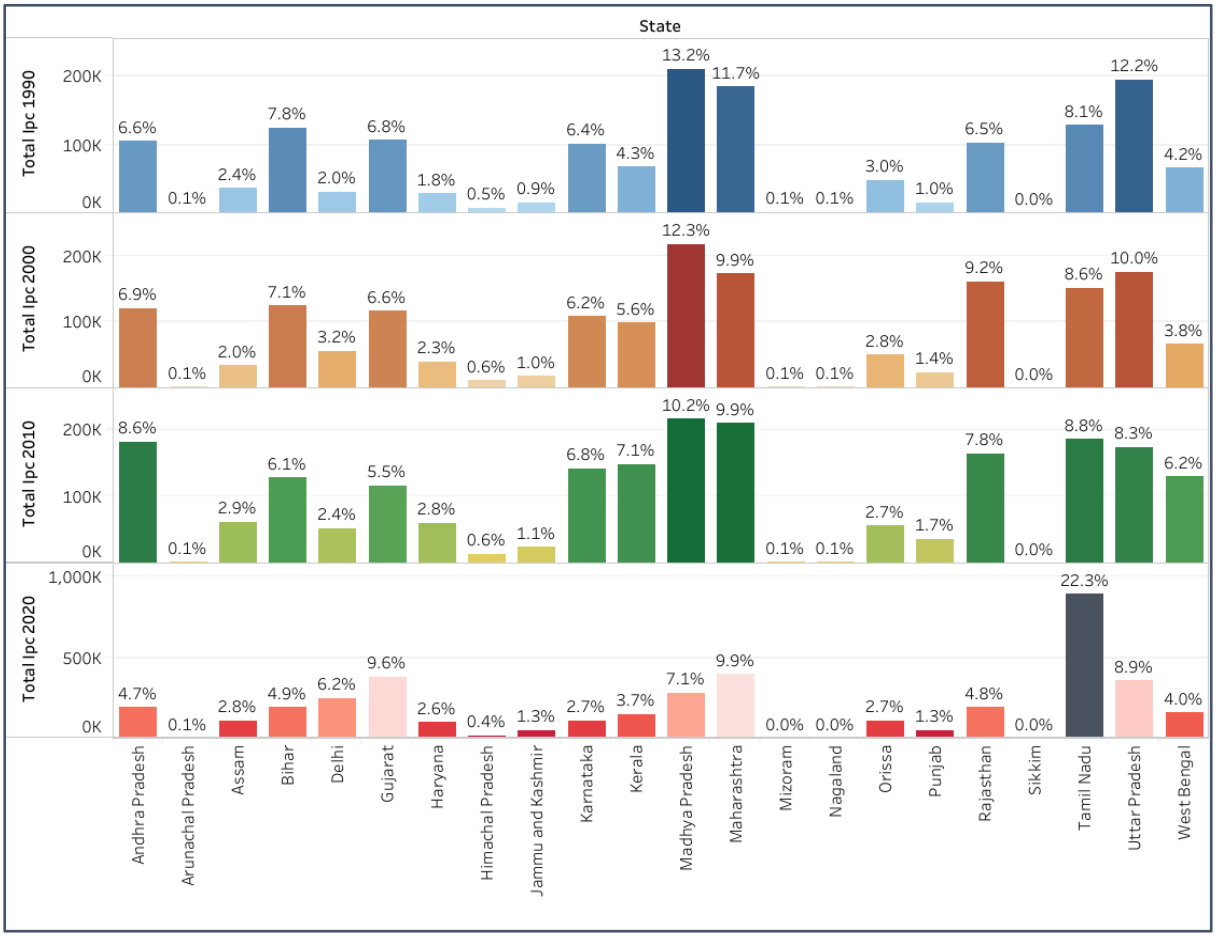


Figure 1: Tableau visualization of percentage contribution to states/UT

3.3 Trends of Crime rate

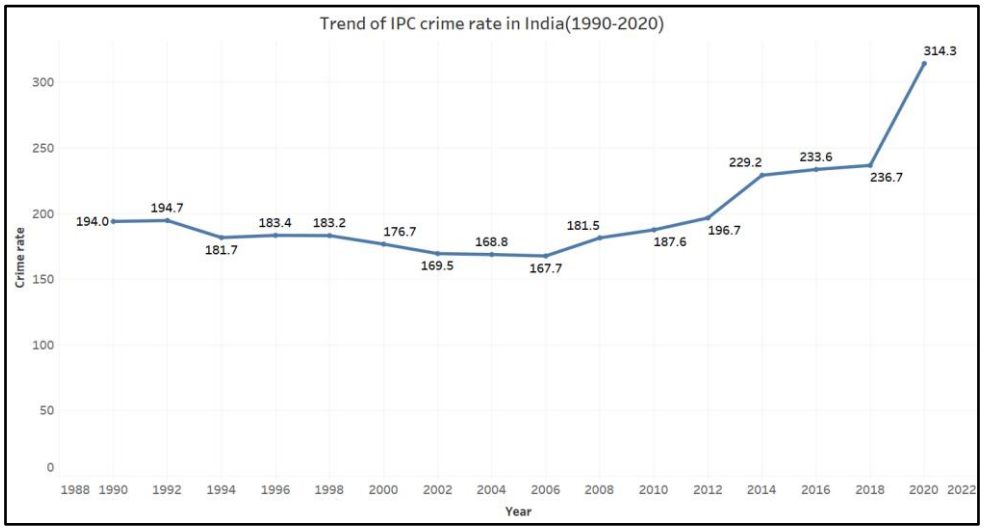


Figure 2: A tableau visualization of the trend of IPC crime rate

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This line graph (Figure 2) elucidates the trend pattern of crime rate for the two consecutive decades in the gap of two years i.e., from 1990 to 2020. Initially in 1990 the crime rate was 194.0 and the total cases were 16,04,449 and in the year1992, the graph didn't show much hike in the crime rate and it almost remained same. Then it plunged to 181.7 in the year 1994 with total cases 16,35,251 and then shoot up to 183.4 in 1996. Speaking of crime rate in 1998, it showed similar trend as that of 1996.

In the beginning of the next decade, the crime rates dipped for the year 2000 and 2002 with the crime incidences 17,71,084 and 17,80,330 respectively. The year 2004 and 2006 showed miniscule variation from 168.8 to167.7. Moreover, from 2006, the rate of crime started upsurging and reached the level of 314.3 crimes per 1lac population in the year 2020. The increased rate of crime is a matter of major concern and it is not really possible to find the exact reasons behind it but it is mandatory to point the unexpected changes.People may many a time choose ways which are illegal rather than the legal way which in result may lead to increase in crime rate. It is of utmost importance to study about the crime level pattern in different states which is regarding rape, robbery, murder and kidnapping and abduction.

Table 3: Percentage contribution in all India Rape (State/UT wise)

States/UT	1990		2000		2010		2020	
	Total Incidence	%	Total Incidence	%	Total Incidence	%	Total Incidence	%
Andhra Pradesh	601	**6.0%**	944	**5.7%**	1362	**6.1%**	1095	**3.9%**
Arunachal Pradesh	18	**0.2%**	36	**0.2%**	47	**0.2%**	60	**0.2%**
Assam	458	**4.5%**	762	**4.6%**	1721	**7.8%**	1657	**5.9%**
Bihar	1005	**10.0%**	1570	**9.5%**	795	**3.6%**	806	**2.9%**
Delhi	177	**1.8%**	435	**2.6%**	507	**2.3%**	997	**3.6%**
Gujarat	236	**2.3%**	330	**2.0%**	408	**1.8%**	486	**1.7%**
Haryana	168	**1.7%**	421	**2.6%**	720	**3.2%**	1373	**4.9%**
Himachal Pradesh	63	**0.6%**	129	**0.8%**	160	**0.7%**	331	**1.2%**
Jammu and Kashmir	121	**1.2%**	183	**1.1%**	245	**1.1%**	243	**0.9%**
Karnataka	164	**1.6%**	281	**1.7%**	586	**2.6%**	504	**1.8%**
Kerala	197	**2.0%**	552	**3.3%**	634	**2.9%**	637	**2.3%**
Madhya Pradesh	2302	**22.9%**	3737	**22.7%**	3135	**14.1 %**	2339	**8.3%**
Maharashtra	875	**8.7%**	1310	**7.9%**	1599	**7.2%**	2061	**7.3%**
Mizoram	56	**0.6%**	58	**0.4%**	92	**0.4%**	33	**0.1%**
Nagaland	13	**0.1%**	14	**0.1%**	16	**0.1%**	4	**0.0%**
Orissa	249	**2.5%**	747	**4.5%**	1025	**4.6%**	1211	**4.3%**
Punjab	55	**0.5%**	334	**2.0%**	546	**2.5%**	502	**1.8%**
Rajasthan	740	**7.4%**	1242	**7.5%**	1571	**7.1%**	5310	**18.9**

								%
Sikkim	6	**0.1%**	6	**0.0%**	18	**0.1%**	12	**0.0%**
Tamil Nadu	290	**2.9%**	538	**3.3%**	686	**3.1%**	389	**1.4%**
Uttar Pradesh	1541	**15.3%**	1865	**11.3%**	1563	**7.0%**	2769	**9.9%**
West Bengal	561	**5.6%**	814	**4.9%**	2311	**10.4 %**	1128	**4.0%**
All INDIA	10068		16496		22172		28046	

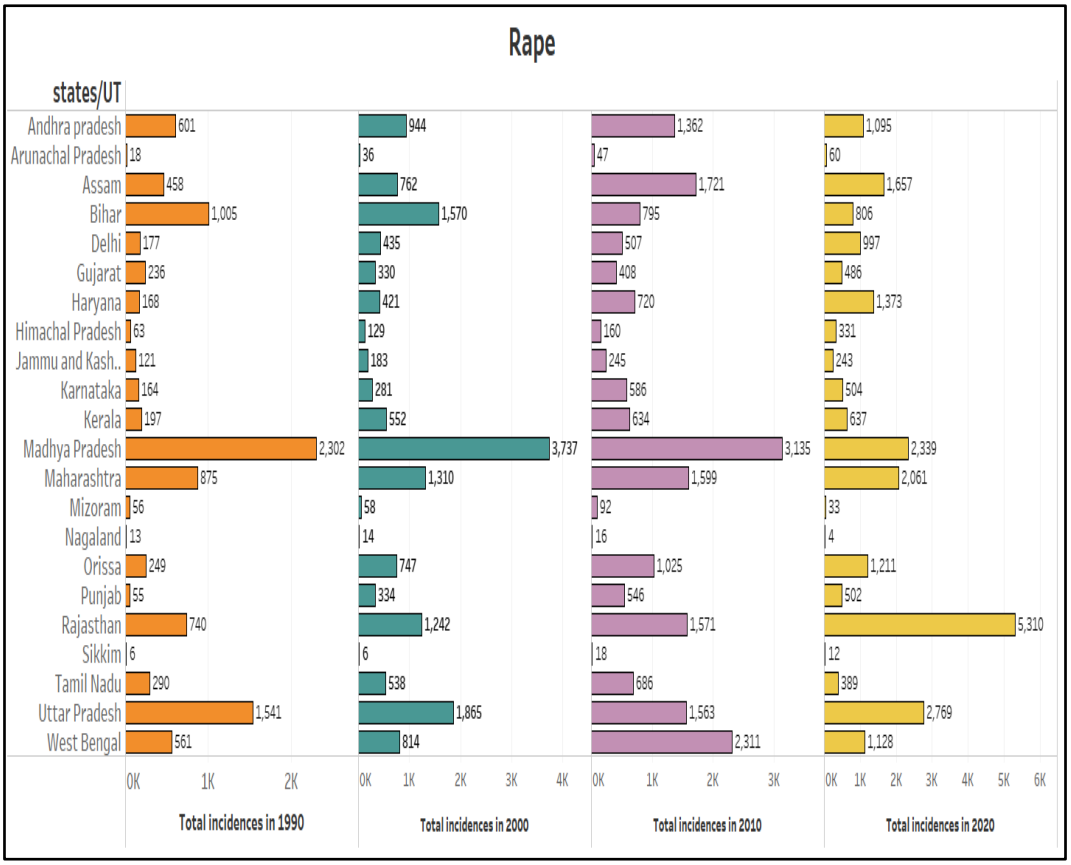


Figure 3: Graphical representation of state/UT wise contribution in All India rape

Table 3displays the incidences of state wise rape and its percentage contribution in the total cases in India. In the year 1990, total cases were 10,068 in which Madhya Pradesh contributed the most with 2,302 cases i.e.,22.9% of all the cases in India in that particular year which if further followed by Uttar Pradesh (1,541) with 15.3% of the cases. The states with the lowest cases were Sikkim (6) followed by Nagaland (13).

In the year 2000, total cases of rape increased to 16,496 i.e., the growth rate was 63.8% which is huge. In this year too Madhya Pradesh (3,737) observed the highest of all with 22.7% of the total cases in the nation but there was decline in the % share. The lowest cases of rape were reported again in Sikkim (6) followed by Nagaland (14). Few states namely AP, Bihar, Maharashtra, Mizoram, UP and West Bengal showed major decline in the % share of the total nation. Similar to the previous decade, most of the cases were shown by the central and western part of India.

In 2010, the crime incidences of rape were revealed in the country was 22,172 which was 34.4% higher than 2000. The states which contributed the lowest were Sikkim(18) and Nagaland (16) and Himachal Pradesh among north India observed the minimum of 0.7% share in the total cases. On the flipside, Madhya Pradesh and Uttar Pradesh showed dip in the cases from last decade i.e., from 2000 to 2010 but still have the most contribution in the count of cases. West Bengal (2,311) seemingly surprised the nation by the sudden elevation of the cases in the year 2010.

However, in the year 2020 cases of rape reported in the country touched the pinnacle with 28,046 incidences which is around 26.5% of the increase in comparison to the last decade. This year Rajasthan (5310) showed the maximum number of cases with 18.9% of the contribution in the total cases and the number increased unexpectedly. It is followed by Uttar Pradesh (2769) and then Madhya Pradesh (2339) and the state with the least cases in North India was Jammu and Kashmir (243) and Sikkim (12) and Nagaland (4) contributed the tiniest in the total share of the nation.

Table 4: Percentage contribution in all India Murder (State/UT wise)

States/UT	1990		2000		2010		2020	
	Total Incidences	%	Total Incidences	%	Total Incidences	%	Total Incidences	%
Andhra Pradesh	2614	**7.5%**	2704	**7.2%**	2538	**7.6%**	853	**2.9%**
Arunachal Pradesh	39	**0.1%**	68	**0.2%**	75	**0.2%**	45	**0.2%**
Assam	961	**2.7%**	1523	**4.1%**	1223	**3.7%**	1131	**3.9%**
Bihar	4166	**11.9%**	5356	**14.3%**	3362	**10.1 %**	3150	**10.8%**
Delhi	390	**1.1%**	586	**1.6%**	565	**1.7%**	472	**1.6%**
Gujarat	1392	**4.0%**	1317	**3.5%**	1048	**3.1%**	982	**3.4%**
Haryana	542	**1.5%**	784	**2.1%**	1005	**3.0%**	1143	**3.9%**
Himachal Pradesh	98	**0.3%**	123	**0.3%**	132	**0.4%**	91	**0.3%**
Jammu and Kashmir	546	**1.6%**	766	**2.0%**	217	**0.7%**	149	**0.5%**
Karnataka	1354	**3.9%**	1694	**4.5%**	1805	**5.4%**	1331	**4.6%**
Kerala	554	**1.6%**	465	**1.2%**	363	**1.1%**	306	**1.0%**
Madhya Pradesh	2904	**8.3%**	3415	**9.1%**	2423	**7.3%**	2101	**7.2%**
Maharashtra	2795	**8.0%**	2857	**7.6%**	2744	**8.2%**	2163	**7.4%**
Mizoram	27	**0.1%**	40	**0.1%**	48	**0.1%**	28	**0.1%**
Nagaland	71	**0.2%**	111	**0.3%**	45	**0.1%**	25	**0.1%**
Orissa	668	**1.9%**	1138	**3.0%**	1308	**3.9%**	1470	**5.0%**
Punjab	2813	**8.0%**	797	**2.1%**	907	**2.7%**	757	**2.6%**
Rajasthan	1203	**3.4%**	1513	**4.0%**	1412	**4.2%**	1719	**5.9%**
Sikkim	9	**0.0%**	19	**0.1%**	17	**0.1%**	11	**0.0%**

Tamil Nadu	1649	**4.7%**	1711	**4.6%**	1875	**5.6%**	1661	**5.7%**
Uttar Pradesh	8151	**23.3%**	7755	**20.7%**	4401	**13.2 %**	3779	**12.9%**
West Bengal	1610	**4.6%**	1892	**5.1%**	2398	**7.2%**	1948	**6.7%**
All INDIA	35045		37399		33335		29193	

In the year 1990, the total cases of murder crime were 35,045 and Uttar Pradesh topped the list with the major contribution of 23.3% of the total cases. The least contributed state was Sikkim (9) and its share was 0.02% which is negligible in comparison to other states. Around one-fourth of the total cases in India was reported by Uttar Pradesh (23.3%) and more than half of the murder in India was observed in these four states namely, Madhya Pradesh (8.3%), Uttar Pradesh (23.3%), Maharashtra (8.0%) and Bihar (11.9%). Central part of the country accounted the major share in the crime incidences of murder in the nation.

In 2000, the cases increased by 6.7% i.e., from 35045 to 37399. Again, the state with highest contribution in the total cases was Uttar Pradesh (7755) with 20.7% of the share followed by Bihar (5356) with 14.3% cases and the state with minimum cases is again a Northeast state, Sikkim (19). Many states showed major dip in the murder cases namely Punjab, Kerela and Uttar Pradesh from 1990 -2000. Moreover, cases in some states sky-rocketed named as Andhra Pradesh, Arunachal Pradesh, assam, Bihar, Haryana, Delhi, MP, Karnataka, west Bengal, Jammu and Kashmir and Orissa.

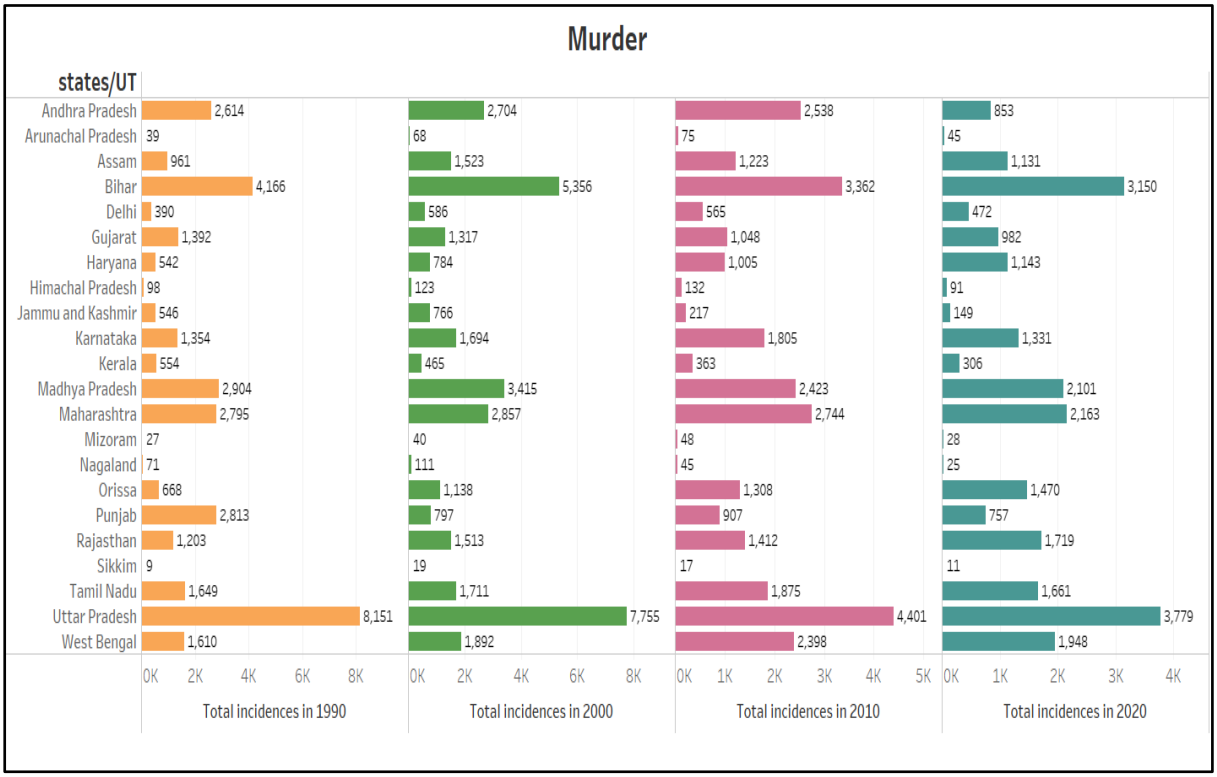


Figure 4: Graphical representation of state/UT wise contribution in All India Murder crime

In the year 2010, the total incidences of murder plunged to 33335 from 37399. Again, out of 22 states/UT, Uttar Pradesh (4401) contributed the most with 13.2% share but this time it displayed major decline in the cases since last decade whereas on the flipside, cases in west Bengal, Punjab, Orissa, Haryana elevated. Something different occurred in the year 2010 alike 1990 and 2000. Many new states emerged with the greater share to the total crime rate namely, Karnataka, Maharashtra,

Tamil Nadu and West Bengal. These states exhibited continuous upward trend in the total share of the India.

However, the year 2020 showed deacceleration in the cases of murder i.e,14% in the decline rate. This year too Uttar Pradesh (3779) observed the highest number of cases and holds 12.9% of the cases in the nation followed by Bihar with 10.8% shares. Like previous years, the least contributed state in 2020 was Sikkim (11). Uttar Pradesh showed reduction in the cases all these years but still contributed the most. Many states this year too showed decline in the cases namely, Kerala, Madhya Pradesh, Mizoram, Himachal Pradesh and Andhra Pradesh. Andhra Pradesh (853) showed massive dip in the cases since last year which were 2538.

Table4: Percentage contribution in all India Robbery crime(State/UT wise)

States/UT	1990		2000		2010		2020	
	Total Incidences	%	Total Incidences	%	Total Incidences	%	Total Incidences	%
Andhra Pradesh	1121	**4.4%**	635	**3.0%**	550	**2.4%**	237	1.0%
Arunachal Pradesh	70	**0.3%**	100	**0.5%**	69	**0.3%**	48	0.2%
Assam	1575	**6.2%**	741	**3.5%**	662	**2.8%**	1577	6.5%
Bihar	3025	**11.9%**	2896	**13.8%**	1538	**6.6%**	1902	7.9%
Delhi	226	**0.9%**	758	**3.6%**	599	**2.6%**	1963	8.1%
Gujarat	881	**3.5%**	1159	**5.5%**	1384	**5.9%**	498	2.1%
Haryana	120	**0.5%**	428	**2.0%**	734	**3.1%**	657	2.7%
Himachal Pradesh	28	**0.1%**	17	**0.1%**	11	**0.0%**	8	0.0%
Jammu and Kashmir	75	**0.3%**	136	**0.6%**	61	**0.3%**	70	0.3%
Karnataka	515	**2.0%**	957	**4.6%**	1949	**8.3%**	1354	5.6%
Kerala	231	**0.9%**	375	**1.8%**	636	**2.7%**	610	2.5%
Madhya Pradesh	2576	**10.1%**	1850	**8.8%**	1919	**8.2%**	994	4.1%
Maharashtra	3426	**13.5%**	2530	**12.1%**	3721	**15.9 %**	5054	21.0%
Mizoram	45	**0.2%**	17	**0.1%**	16	**0.1%**	8	0.0%
Nagaland	142	**0.6%**	125	**0.6%**	63	**0.3%**	23	0.1%
Orissa	659	**2.6%**	1188	**5.7%**	1491	**6.4%**	2162	9.0%
Punjab	567	**2.2%**	62	**0.3%**	241	**1.0%**	102	0.4%
Rajasthan	1070	**4.2%**	1021	**4.9%**	872	**3.7%**	1155	4.8%
Sikkim	10	**0.0%**	2	**0.0%**	7	**0.0%**	4	0.0%
Tamil Nadu	546	**2.1%**	660	**3.2%**	1817	**7.8%**	2023	8.4%
Uttar Pradesh	7368	**29.0%**	4171	**19.9%**	2577	**11.0 %**	1633	6.8%

West Bengal	851	**3.3%**	817	**3.9%**	798	**3.4%**	318	1.3%
All INDIA	25440		20926		23393		24107	

This table represents the cases of robbery in India of the years (1990,2000,2010 and 2020). The total number of robbery incidences in 1990 were 25,440 and the state which contributed the most was Uttar Pradesh (7368) with 29% of the total share. Sikkim (10), a north-eastern state contributed the least followed by Himachal (28) whereas in 2000,the cases dopped to 20,926 and displayed the decline rate of 21.5%. the eastern state Sikkim (2) again contributed the least but along with it many other states showed the dip in the cases namely Andhra Pradesh, Assam, Himachal Pradesh, Madhya Pradesh, Maharashtra, Punjab and UP. The largest contribution was made by Uttar Pradesh (4171) in 2000 but it was quite less in number than 1990.

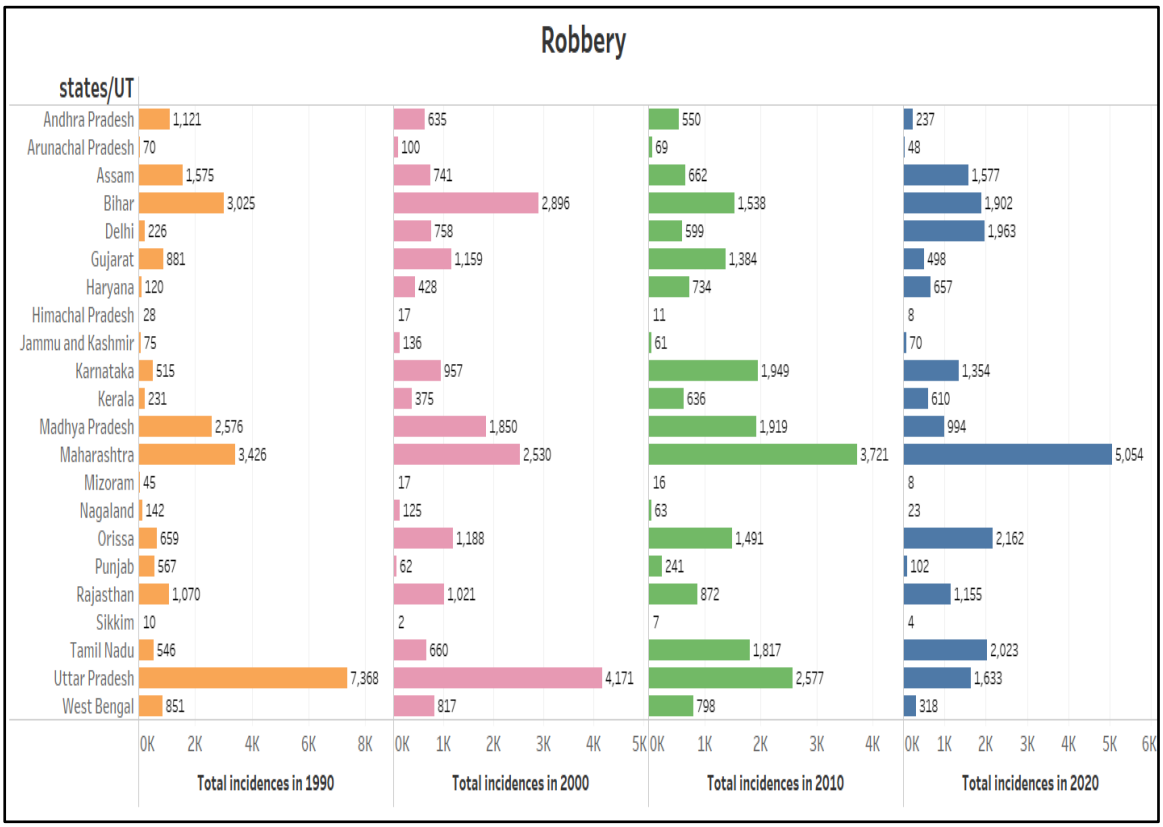


Figure 5: Graphical representation of state/UT wise contribution in All India Robbery crime

In the year 2010, Bihar and J& K showed dip in the cases as compared to previous year. Sikkim (7) and Himachal Pradesh (11) contributed the least in the crime rate whereas Maharashtra (3721) this year has around 16% of the share in the total cases. The cases of robbery showed sharp increase in few states mainly in Gujarat, Haryana, Karnataka and Orissa. However, the year 2020 again witnessed the highest number of cases in Maharashtra which is around 21% share of the total incidences. This is a horrifying percentage. On the other side, Mizoram, Sikkim and Himachal Pradesh maintained the number of cases which is negligible as compared to whole nation. The cases of robbery were mostly found in the central and the western region of India and eastern part showed the least cases.

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3.4 States/UT with the highest and lowest crime rate in 2021

The yearly report released in September 2021 by National Crime Records Bureau requires careful analysis before making inferences or rational comparisons. The cause is the sizable variances in case registration throughout States and Union Territories, mainly critical crimes such as assault and violence towards ladies. Tamil Nadu (1808.8), Kerala (1568.4) and Delhi (1309.6) topped the list with the highest crime rate (Hindu,2021).

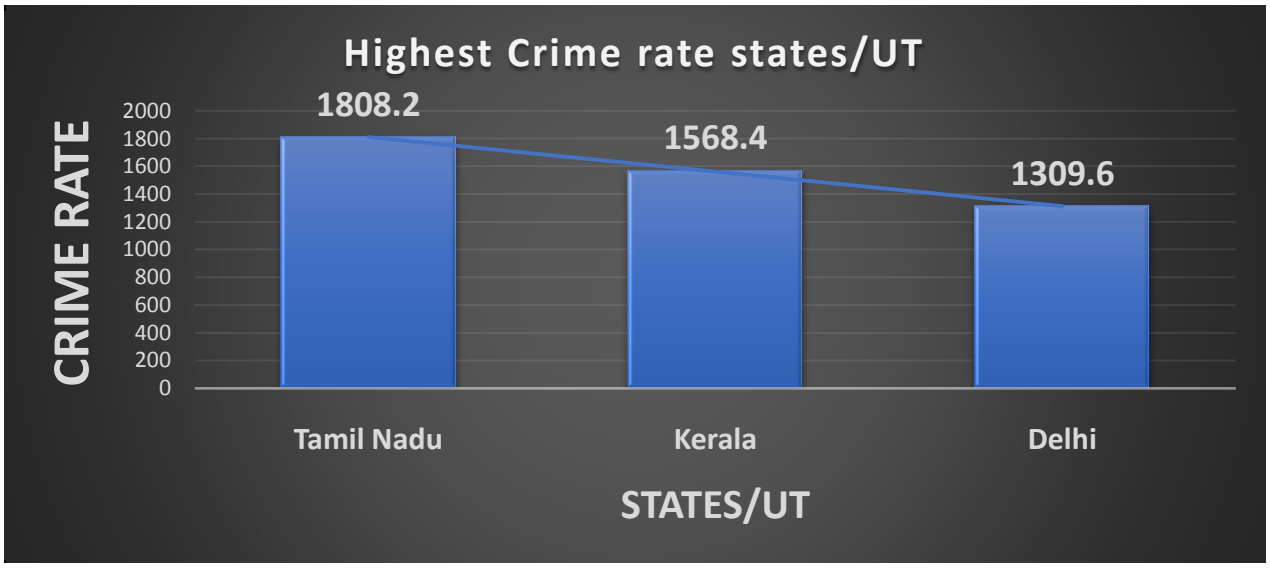


Figure 6: bar graph comparing crime rate and states/UT

4. Comparison of the before covid years i.e., 2017,2018, 2019 and during covid 2020

India stayed under strict regulations for the entire 2020 because of the novel Covid infection (COVID-19) pandemic. In any case, the general number of wrongdoing cases in the nation expanded by 28% for the year, as indicated by the NCRB's Crime in India 2020 published on September 15, 2021.Post the times of recession (Financial Crisis 2007-08), cases related to crimes skyrocketed around the globe. Our nation faced alike situation in this covid period. Here, we analysed some of the crimes' comparison between different years i.e, before covid period and during covid-19

Table 6: Comparison table of before covid and during covid years

	2017	2018	2019	2020
Robbery	30742	30822	31052	24107
Murder	28653	29017	28915	29193
Rape	32559	33356	32032	28046
Accidents	134803	15051	136852	120176
Disobedience to order by public servant	26080	22907	29469	612179
Cyber crime	21796	27248	44735	50035

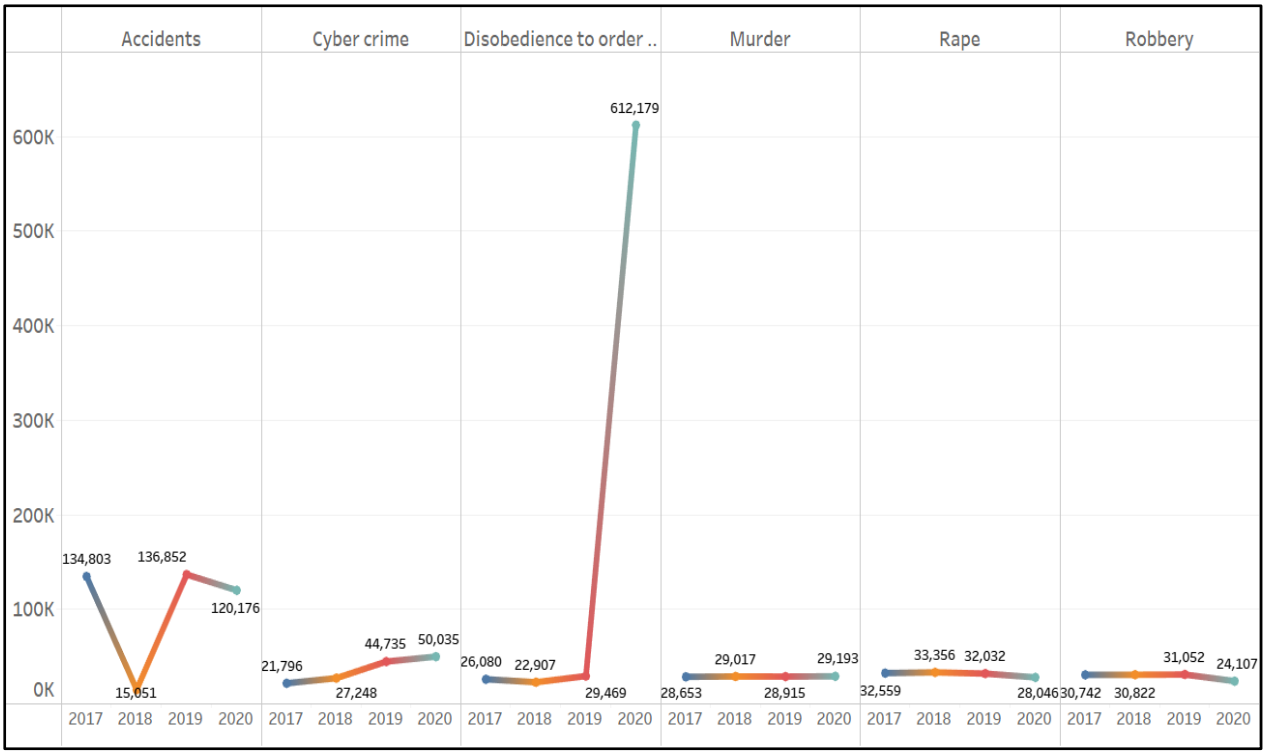


Figure 7: Graphical representation using Tableau

Comparing the results of different crimes:

- Accidents:
  - Due to stringent Covid-19 lockdown, accidents registered a decrease of 12% in 2020 over the previous year.
  - Year 2019, showed the highest number of the cases i.e.,1,36,852 and 2018 displayed the minimum.

- Cyber Crime:
  - The rate of cyber-crime continuously increased each year and showcased significant escalation in the year 2019 i.e. about 64% than 2018.
  - In the year 2020 too, cases increased by 11% as compared to 2019.

- Disobedience to order by public servant:
  - A increase in the incidences registered under Disobedience to order by public servant has been marked, principally emerging out of infringement of Covid-19 norms from 24,496 cases in 2019 to straight 6,12,179 cases in 2020 i.e. about 2399.1% increase which is seriously horrifying.
  - This number cannot be even achieved by adding all the cases of the before Covid-19 years.

- Murder:
  - Murder enlisted a minimal increment of 1% even as offenses falling under the classification of "violent crimes" diminished by 0.5%.
  - It is to be noted that the cases of murder showed uniformity these years.

- Rape:

- With a total of 28,046 cases registered against rape in 2020, a decline of 12.4% has been noted over 2019 (32,032 cases).
- On the other side, cases in the year 2017, 2018 and 2019 showed negligible changes.

- Robbery:
  - Robbery showed similar trend as that of Rape and similarly exhibited dip in the cases for the year 2020.
  - Before Covid years displayed more or less equal numbers and the cases plunged by 22% in 2020.

It is very important to analyse the shift in crime rates during Covid-19 to understand how to keep everything under control when social distancing rules are being adhered it is prevalent to know about the after-effects too. It has been already predicted that this pandemic will do severe damage to the global economy as the small-scale businesses, shops and factories around the globe were shut down prompting to complete shock. A lot of big companies have fired their employees in huge numbers to compensate the losses.

5. Conclusion

- The crime rates in India are rising year by year due to many factors like unemployment, illiteracy, corruption, poverty etc. Decadal comparison of different crime heads has been done from 1990 to 2020 to study the increase or decrease in the crime rate.
- We can draw the conclusion that annual crime rates are not displaying a particular symmetrical line. Line graph displayed high level of asymmetricity, thus a linear curve is not formed.
- Patterns of rape showed that the central and north central states are more vulnerable to the higher rates of rape in comparison to rest of the country. Murder too displayed the similar pattern.
- Increased rate of crime of Rape is surprisingly observed in all the states in 2010 as compared to 1990 except Uttar Pradesh and Bihar which is a matter of concern and a topic to discuss that what could be the reason behind this, does social factor responsible for this?
- Interestingly in the case of robbery, cases in Uttar Pradesh declined severely from 1990 to 2020 whereas in Maharashtra, it increased massively. It has been observed from the study that the contribution of the states in varied crime heads have tremendously plunged in the last few years.
- The examples at state level show that there has been significant change in a portion of the crime heads from 1990 to 2020. The general crime percentage has been varying during the periods yet unique image came up when crime percentage was taken at state level. The decadal pattern of sum of crimes in certain states have shown vertical pattern like Maharashtra, Kerala, Tamil Nadu and Haryana.
- The middle and the northern part of the country have seen higher cases in murder. At cluster level, cases of rape have shown skyward trend which indicates that the crime against females have upsurged with time.
- Overall, the cases against women have only increased in each decade where most of the incidences were counted in central, northern and western area of India. Eastern part of the nation is safer than other regions.
- After comparing the crime heads for the before covid-19 years (2017,2018,2019) and during the pandemic (2020), it can

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be analysed that crime rate have beensignificantly impacted by the beginning of the COVID-19 pandemic.

- A dip in crimes like accidents, rape and robbery was noticed whereas on the flipside, rapid increase was spotted in the cases of Disobedience to order by public servant and cybercrime. It can be concluded that the overall crime decreased due to the social distancing norms and strict lockdown.
- As anticipated by numerous financial specialists across the world the pandemic has impacted organizations worldwide and will undoubtedly antagonistically influence the economy which will ultimately prompt joblessness also, push individuals towards criminal operations and frivolous violations like burglary to survive.

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