



STATISTICAL ANALYSIS OF MIGRATION FROM RURAL TO URBAN IN INDIA

SUBMITTED TO

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INTRODUCTION

Like many developing countries, India has experienced a rapid demographic transition during the second half of the twentieth century. The total fertility rate (TFR) declined steadily from a high of six during the 1970s to almost replacement level, with a TFR of 2.2 by 2015 (IIPS and ICF 2017). There has also been a significant improvement in the life expectancy at birth from 50 years between 1970 and 1975 to 68 years between 2011 and 2015 (Census of India 2017). As a result, India has a young population, with almost 60 per cent in the 15–59 age group and a median age of about 24 years at the 2011 census. Furthermore, India is the seventh largest country in terms of geographical area and the second most populous country in the world, with a population of 1.2 billion at the 2011 census. At the same time, India shows considerable demographic diversity between regions and states, and diverse patterns of demographic and socioeconomic change.

Despite progress through the demographic transition, the level of urbanization remains relatively low at 31.1 per cent. This is the product of a restrictive definition of what constitutes an urban area (Bhagat 2005; Census of India 2011) allied with a low contribution of net rural-to-urban migration to urban growth (Bhagat and Mohanty 2009), which suggests a limited role of migration in redistributing the population from rural to urban areas within the country. Thus, in situ urbanization, or the reclassification of rural settlements as urban (Zhu 2000) is thought to have had a greater impact on urbanization than net rural-to-urban migration. India has a long history of internal population movement. In post-independence India, the partition of the country in 1947 led to the forced displacement of about 14 million people between India and Pakistan, about seven million from each side of the border (Visaria 1969). Subsequently, the rapid growth of industries and trade in port cities, namely Calcutta (Kolkata), Bombay

(Mumbai) and Madras (Chennai), led to a second wave of internal migration. These three newly emerged centers, along with Delhi, reshaped regional economies and triggered large inter-regional migration flows within India. Small and medium-sized industries flourished in these cities, which became dependent on unskilled laborers coming from the surrounding countryside. For example, during the second half of the twentieth century the majority of workers in the Calcutta jute industry came from the less developed states of Bihar, Uttar Pradesh, Odisha and Andhra Pradesh. In Mumbai, where a large number of cotton textile industries were established, migrants initially came from adjoining districts within the state of Maharashtra (Bhagat and Jones 2014), reinforcing regional disparities in development (Raza and Habeeb 1976). Regional disparities have continued to widen and remain an important driver of inter-state migration, particularly to the cities of Mumbai, Kolkata, Chennai and Delhi. While there is a tradition of scholarship in India into population mobility dating back to the 1970s, the unique contribution of this project is its adoption of a highly structured approach using new measures and analytical techniques. This chapter adopts a robust analytical framework based around several discrete dimensions of migration to provide a detailed account of current internal migration processes in India. After reviewing the types of migration data and the administrative geography used to collect and disseminate migration data in India. The project concludes by examining the impacts and implications of current and prospective migration trends.

Data Source and Data Description

The census is the principal source of internal migration data in India and is complemented by regular surveys conducted by the National Sample Survey Office (NSSO). This study is based 2011 census data for migration within state and across states in India during last ten years. The migration data is estimated using current and last place of residence. The last place of residence for migration data has its own limitations. The duration of migrant has no significance in considering migrant if it is within last ten year. The person migrating nine years back and nine days back gets same treatment.

In the following project we will conduct an analysis on the basis of gender and literacy from the data for inter-state rural to urban migration of the following states-

WESTBENGAL

Area Name	Moved from Last area	Age -group	Population with 'Work/Employment'			Illiterate			Literate		
			as reason for migration								
			Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
State - WEST BENGAL	(i) From rural area within the State	All ages	220,864	176,323	44,541	46,614	31,147	15,467	174,250	145,176	29,074
State - WEST BENGAL	(i) From rural area within the State	0-4	0	0	0	0	0	0	0	0	0
State - WEST BENGAL	(i) From rural area within the State	5-9	0	0	0	0	0	0	0	0	0
State - WEST BENGAL	(i) From rural area within the State	10-14	1,953	960	993	613	259	354	1,340	701	639
State - WEST BENGAL	(i) From rural area within the State	15-19	9,836	5,541	4,295	2,331	1,170	1,161	7,505	4,371	3,134
State - WEST BENGAL	(i) From rural area within the State	20-24	23,338	15,189	8,149	4,850	2,711	2,139	18,488	12,478	6,010
State - WEST BENGAL	(i) From rural area within the State	25-29	34,233	26,314	7,919	7,074	4,816	2,258	27,159	21,498	5,661
State - WEST BENGAL	(i) From rural area within the State	30-34	34,276	28,488	5,788	6,547	4,687	1,860	27,729	23,801	3,928
State - WEST BENGAL	(i) From rural area within the State	35-39	34,449	29,268	5,181	6,788	4,844	1,944	27,661	24,424	3,237
State - WEST BENGAL	(i) From rural area within the State	40-44	27,513	23,482	4,031	5,681	3,983	1,698	21,832	19,499	2,333
State - WEST BENGAL	(i) From rural area within the State	45-49	20,490	17,450	3,040	4,516	3,125	1,391	15,974	14,325	1,649
State - WEST BENGAL	(i) From rural area within the State	50-54	14,074	12,022	2,052	3,170	2,186	984	10,904	9,836	1,068
State - WEST BENGAL	(i) From rural area within the State	55-59	9,196	7,910	1,286	1,878	1,274	604	7,318	6,636	682
State - WEST BENGAL	(i) From rural area within the State	60-64	5,379	4,591	788	1,439	980	459	3,940	3,611	329
State - WEST BENGAL	(i) From rural area within the State	65-69	2,828	2,445	383	740	501	239	2,088	1,944	144
State - WEST BENGAL	(i) From rural area within the State	70-74	1,454	1,211	243	457	292	165	997	919	78
State - WEST BENGAL	(i) From rural area within the State	75-79	561	467	94	175	123	52	386	344	42
State - WEST BENGAL	(i) From rural area within the State	80+	978	753	225	289	166	123	689	587	102
State - WEST BENGAL	(i) From rural area within the State	Age not stated	306	232	74	66	30	36	240	202	38
State - WEST BENGAL	(ii) From urban area within the State	All ages	128,744	107,498	21,246	13,030	9,493	3,537	115,714	98,005	17,709
State - WEST BENGAL	(ii) From urban area within the State	0-4	0	0	0	0	0	0	0	0	0
State - WEST BENGAL	(ii) From urban area within the State	5-9	0	0	0	0	0	0	0	0	0
State - WEST BENGAL	(ii) From urban area within the State	10-14	598	323	275	126	54	72	472	269	203
State - WEST BENGAL	(ii) From urban area within the State	15-19	3,043	1,908	1,135	493	257	236	2,550	1,651	899
State - WEST BENGAL	(ii) From urban area within the State	20-24	8,088	5,938	2,150	974	660	314	7,114	5,278	1,836
State - WEST BENGAL	(ii) From urban area within the State	25-29	16,404	12,949	3,455	1,814	1,420	394	14,590	11,529	3,061
State - WEST BENGAL	(ii) From urban area within the State	30-34	19,758	16,424	3,334	1,753	1,373	380	18,005	15,051	2,954
State - WEST BENGAL	(ii) From urban area within the State	35-39	20,827	17,829	2,998	1,956	1,469	487	18,871	16,360	2,511
State - WEST BENGAL	(ii) From urban area within the State	40-44	17,647	15,262	2,385	1,723	1,290	433	15,924	13,972	1,952
State - WEST BENGAL	(ii) From urban area within the State	45-49	14,231	12,446	1,785	1,404	1,022	382	12,827	11,424	1,403
State - WEST BENGAL	(ii) From urban area within the State	50-54	10,707	9,250	1,457	1,094	797	297	9,613	8,453	1,160
State - WEST BENGAL	(ii) From urban area within the State	55-59	7,613	6,628	985	585	405	180	7,028	6,223	805
State - WEST BENGAL	(ii) From urban area within the State	60-64	4,489	3,911	578	504	345	159	3,985	3,566	419
State - WEST BENGAL	(ii) From urban area within the State	65-69	2,594	2,285	309	266	178	88	2,328	2,107	221
State - WEST BENGAL	(ii) From urban area within the State	70-74	1,216	1,058	158	148	103	45	1,068	955	113
State - WEST BENGAL	(ii) From urban area within the State	75-79	558	479	79	71	46	25	487	433	54
State - WEST BENGAL	(ii) From urban area within the State	80+	773	643	130	96	55	41	677	588	89
State - WEST BENGAL	(ii) From urban area within the State	Age not stated	198	165	33	23	19	4	175	146	29
State - WEST BENGAL	(iii) From rural area outside the State	All ages	95,590	83,257	12,333	33,695	25,031	8,664	61,895	58,226	3,669
State - WEST BENGAL	(iii) From rural area outside the State	0-4	0	0	0	0	0	0	0	0	0
State - WEST BENGAL	(iii) From rural area outside the State	5-9	0	0	0	0	0	0	0	0	0
State - WEST BENGAL	(iii) From rural area outside the State	10-14	1,379	858	521	929	501	428	450	357	93
State - WEST BENGAL	(iii) From rural area outside the State	15-19	6,385	4,829	1,556	2,900	1,730	1,170	3,485	3,099	386
State - WEST BENGAL	(iii) From rural area outside the State	20-24	13,424	11,054	2,370	4,566	2,927	1,639	8,858	8,127	731
State - WEST BENGAL	(iii) From rural area outside the State	25-29	17,471	15,199	2,272	5,182	3,703	1,479	12,289	11,496	793
State - WEST BENGAL	(iii) From rural area outside the State	30-34	15,317	13,591	1,726	4,571	3,395	1,176	10,746	10,196	550
State - WEST BENGAL	(iii) From rural area outside the State	35-39	12,893	11,591	1,302	4,533	3,579	954	8,360	8,012	348
State - WEST BENGAL	(iii) From rural area outside the State	40-44	9,589	8,683	906	3,775	3,134	641	5,814	5,549	265
State - WEST BENGAL	(iii) From rural area outside the State	45-49	7,123	6,487	636	2,878	2,411	467	4,245	4,076	169
State - WEST BENGAL	(iii) From rural area outside the State	50-54	4,884	4,460	424	1,909	1,611	298	2,975	2,849	126
State - WEST BENGAL	(iii) From rural area outside the State	55-59	3,005	2,732	273	979	807	172	2,026	1,925	101
State - WEST BENGAL	(iii) From rural area outside the State	60-64	1,960	1,793	167	743	626	117	1,217	1,167	50
State - WEST BENGAL	(iii) From rural area outside the State	65-69	936	863	73	303	253	50	633	610	23
State - WEST BENGAL	(iii) From rural area outside the State	70-74	497	455	42	178	149	29	319	306	13
State - WEST BENGAL	(iii) From rural area outside the State	75-79	212	199	13	76	66	10	136	133	3
State - WEST BENGAL	(iii) From rural area outside the State	80+	397	355	42	147	119	28	250	236	14
State - WEST BENGAL	(iii) From rural area outside the State	Age not stated	118	108	10	26	20	6	92	88	4
State - WEST BENGAL	(iv) From urban area outside the State	All ages	39,512	35,039	4,473	4,052	3,341	711	35,460	31,698	3,762
State - WEST BENGAL	(iv) From urban area outside the State	0-4	0	0	0	0	0	0	0	0	0
State - WEST BENGAL	(iv) From urban area outside the State	5-9	0	0	0	0	0	0	0	0	0
State - WEST BENGAL	(iv) From urban area outside the State	10-14	180	122	58	41	24	17	139	98	41
State - WEST BENGAL	(iv) From urban area outside the State	15-19	1,239	1,048	191	236	183	53	1,003	865	138
State - WEST BENGAL	(iv) From urban area outside the State	20-24	3,571	2,977	594	459	345	114	3,112	2,632	480
State - WEST BENGAL	(iv) From urban area outside the State	25-29	6,213	5,301	912	603	506	97	5,610	4,795	815
State - WEST BENGAL	(iv) From urban area outside the State	30-34	6,877	6,125	752	619	527	92	6,258	5,598	660
State - WEST BENGAL	(iv) From urban area outside the State	35-39	6,008	5,434	574	556	458	98	5,452	4,976	476
State - WEST BENGAL	(iv) From urban area outside the State	40-44	4,729	4,297	432	464	396	68	4,265	3,901	364
State - WEST BENGAL	(iv) From urban area outside the State	45-49	3,550	3,228	322	363	309	54	3,187	2,919	268
State - WEST BENGAL	(iv) From urban area outside the State	50-54	2,678	2,445	233	260	222	38	2,418	2,223	195
State - WEST BENGAL	(iv) From urban area outside the State	55-59	2,006	1,837	169	181	155	26	1,825	1,682	143
State - WEST BENGAL	(iv) From urban area outside the State	60-64	1,103	1,000	103	123	99	24	980	901	79
State - WEST BENGAL	(iv) From urban area outside the State	65-69	612	554	58	55	41	14	557	513	44
State - WEST BENGAL	(iv) From urban area outside the State	70-74	299	275	24	37	32	5	262	243	19
State - WEST BENGAL	(iv) From urban area outside the State	75-79	154	144	10	15	13	2	139	131	8
State - WEST BENGAL	(iv) From urban area outside the State	80+	219	193	26	29	22	7	190	171	19
State - WEST BENGAL	(iv) From urban area outside the State	Age not stated	74	59	15	11	9	2	63	50	13

UTTAR PRADESH

Area Name	Moved from Last area	Age -group	Population with 'Work/Employment'			Illiterate			Literate		
			as reason for migration			Persons	Males	Females	Persons	Males	Females
			Persons	Males	Females						
State - UTTAR PRADESH	(i) From rural area within the State	All ages	610,895	504,144	106,751	160,210	106,865	53,345	450,685	397,279	53,406
State - UTTAR PRADESH	(i) From rural area within the State	0-4	0	0	0	0	0	0	0	0	0
State - UTTAR PRADESH	(i) From rural area within the State	5-9	0	0	0	0	0	0	0	0	0
State - UTTAR PRADESH	(i) From rural area within the State	10-14	4,451	2,710	1,741	1,954	1,101	853	2,497	1,609	888
State - UTTAR PRADESH	(i) From rural area within the State	15-19	22,679	14,489	8,190	7,708	4,132	3,576	14,971	10,357	4,614
State - UTTAR PRADESH	(i) From rural area within the State	20-24	70,565	44,348	26,217	19,559	8,711	10,848	51,006	35,637	15,369
State - UTTAR PRADESH	(i) From rural area within the State	25-29	93,908	71,224	22,684	24,758	14,136	10,622	69,150	57,088	12,062
State - UTTAR PRADESH	(i) From rural area within the State	30-34	90,935	79,123	11,812	21,063	15,094	5,969	69,872	64,029	5,843
State - UTTAR PRADESH	(i) From rural area within the State	35-39	93,136	83,273	9,863	21,676	16,353	5,323	71,460	66,920	4,540
State - UTTAR PRADESH	(i) From rural area within the State	40-44	72,483	65,242	7,241	17,730	13,630	4,100	54,753	51,612	3,141
State - UTTAR PRADESH	(i) From rural area within the State	45-49	54,401	48,732	5,669	13,254	9,943	3,311	41,147	38,789	2,358
State - UTTAR PRADESH	(i) From rural area within the State	50-54	38,607	34,683	3,924	9,638	7,325	2,313	28,969	27,358	1,611
State - UTTAR PRADESH	(i) From rural area within the State	55-59	25,000	22,085	2,915	6,519	4,619	1,900	18,481	17,466	1,015
State - UTTAR PRADESH	(i) From rural area within the State	60-64	18,822	16,424	2,398	6,935	5,152	1,783	11,887	11,272	615
State - UTTAR PRADESH	(i) From rural area within the State	65-69	9,566	8,290	1,276	3,585	2,610	975	5,981	5,680	301
State - UTTAR PRADESH	(i) From rural area within the State	70-74	5,478	4,644	834	2,391	1,767	624	3,087	2,877	210
State - UTTAR PRADESH	(i) From rural area within the State	75-79	1,959	1,634	325	789	535	254	1,170	1,099	71
State - UTTAR PRADESH	(i) From rural area within the State	80+	3,699	2,973	726	1,422	954	468	2,277	2,019	258
State - UTTAR PRADESH	(i) From rural area within the State	Age not stated	5,206	4,270	936	1,229	803	426	3,977	3,467	510
State - UTTAR PRADESH	(ii) From urban area within the State	All ages	302,178	260,958	41,220	46,667	35,393	11,274	255,511	225,565	29,946
State - UTTAR PRADESH	(ii) From urban area within the State	0-4	0	0	0	0	0	0	0	0	0
State - UTTAR PRADESH	(ii) From urban area within the State	5-9	0	0	0	0	0	0	0	0	0
State - UTTAR PRADESH	(ii) From urban area within the State	10-14	1,236	834	402	340	212	128	896	622	274
State - UTTAR PRADESH	(ii) From urban area within the State	15-19	6,270	4,607	1,663	1,782	1,257	525	4,488	3,350	1,138
State - UTTAR PRADESH	(ii) From urban area within the State	20-24	20,789	15,351	5,438	4,070	2,636	1,434	16,719	12,715	4,004
State - UTTAR PRADESH	(ii) From urban area within the State	25-29	38,600	31,332	7,268	6,116	4,514	1,602	32,484	26,818	5,666
State - UTTAR PRADESH	(ii) From urban area within the State	30-34	46,280	40,305	5,975	6,300	5,056	1,244	39,980	35,249	4,731
State - UTTAR PRADESH	(ii) From urban area within the State	35-39	48,248	42,933	5,315	6,917	5,567	1,350	41,331	37,366	3,965
State - UTTAR PRADESH	(ii) From urban area within the State	40-44	40,174	36,032	4,142	5,893	4,712	1,181	34,281	31,320	2,961
State - UTTAR PRADESH	(ii) From urban area within the State	45-49	32,416	29,138	3,278	4,536	3,547	989	27,880	25,591	2,289
State - UTTAR PRADESH	(ii) From urban area within the State	50-54	24,962	22,442	2,520	3,322	2,539	783	21,640	19,903	1,737
State - UTTAR PRADESH	(ii) From urban area within the State	55-59	17,352	15,557	1,795	2,178	1,605	573	15,174	13,952	1,222
State - UTTAR PRADESH	(ii) From urban area within the State	60-64	11,090	9,708	1,382	2,275	1,643	632	8,815	8,065	750
State - UTTAR PRADESH	(ii) From urban area within the State	65-69	5,532	4,893	639	1,081	785	296	4,451	4,108	343
State - UTTAR PRADESH	(ii) From urban area within the State	70-74	2,933	2,513	420	707	492	215	2,226	2,021	205
State - UTTAR PRADESH	(ii) From urban area within the State	75-79	1,151	1,002	149	244	167	77	907	835	72
State - UTTAR PRADESH	(ii) From urban area within the State	80+	1,883	1,572	311	432	312	120	1,451	1,260	191
State - UTTAR PRADESH	(ii) From urban area within the State	Age not stated	3,262	2,739	523	474	349	125	2,788	2,390	398
State - UTTAR PRADESH	(iii) From rural area outside the State	All ages	138,770	107,740	31,030	55,598	33,703	21,895	83,172	74,037	9,135
State - UTTAR PRADESH	(iii) From rural area outside the State	0-4	0	0	0	0	0	0	0	0	0
State - UTTAR PRADESH	(iii) From rural area outside the State	5-9	0	0	0	0	0	0	0	0	0
State - UTTAR PRADESH	(iii) From rural area outside the State	10-14	2,218	1,287	931	1,529	804	725	689	483	206
State - UTTAR PRADESH	(iii) From rural area outside the State	15-19	8,306	5,687	2,619	4,110	2,359	1,751	4,196	3,328	868
State - UTTAR PRADESH	(iii) From rural area outside the State	20-24	20,206	14,164	6,042	8,205	4,278	3,927	12,001	9,886	2,115
State - UTTAR PRADESH	(iii) From rural area outside the State	25-29	25,825	19,710	6,115	9,628	5,532	4,096	16,197	14,178	2,019
State - UTTAR PRADESH	(iii) From rural area outside the State	30-34	23,432	18,683	4,749	8,544	5,101	3,443	14,888	13,582	1,306
State - UTTAR PRADESH	(iii) From rural area outside the State	35-39	19,495	15,852	3,643	7,471	4,684	2,787	12,024	11,168	856
State - UTTAR PRADESH	(iii) From rural area outside the State	40-44	13,525	11,124	2,401	5,515	3,715	1,800	8,010	7,409	601
State - UTTAR PRADESH	(iii) From rural area outside the State	45-49	9,226	7,518	1,708	3,757	2,449	1,308	5,469	5,069	400
State - UTTAR PRADESH	(iii) From rural area outside the State	50-54	5,920	5,004	916	2,525	1,816	709	3,395	3,188	207
State - UTTAR PRADESH	(iii) From rural area outside the State	55-59	3,570	2,930	640	1,388	910	478	2,182	2,020	162
State - UTTAR PRADESH	(iii) From rural area outside the State	60-64	2,612	2,179	433	1,181	863	318	1,431	1,316	115
State - UTTAR PRADESH	(iii) From rural area outside the State	65-69	1,327	1,116	211	573	413	160	754	703	51
State - UTTAR PRADESH	(iii) From rural area outside the State	70-74	721	585	136	343	242	101	378	343	35
State - UTTAR PRADESH	(iii) From rural area outside the State	75-79	295	241	54	125	93	32	170	148	22
State - UTTAR PRADESH	(iii) From rural area outside the State	80+	674	515	159	292	188	104	382	327	55
State - UTTAR PRADESH	(iii) From rural area outside the State	Age not stated	1,418	1,145	273	412	256	156	1,006	889	117
State - UTTAR PRADESH	(iv) From urban area outside the State	All ages	118,845	100,679	18,166	12,290	8,946	3,344	106,555	91,733	14,822
State - UTTAR PRADESH	(iv) From urban area outside the State	0-4	0	0	0	0	0	0	0	0	0
State - UTTAR PRADESH	(iv) From urban area outside the State	5-9	0	0	0	0	0	0	0	0	0
State - UTTAR PRADESH	(iv) From urban area outside the State	10-14	441	303	138	106	70	36	335	233	102
State - UTTAR PRADESH	(iv) From urban area outside the State	15-19	2,373	1,736	637	589	367	222	1,784	1,369	415
State - UTTAR PRADESH	(iv) From urban area outside the State	20-24	8,254	6,216	2,038	1,254	823	431	7,000	5,393	1,607
State - UTTAR PRADESH	(iv) From urban area outside the State	25-29	17,262	13,621	3,641	1,808	1,261	547	15,454	12,360	3,094
State - UTTAR PRADESH	(iv) From urban area outside the State	30-34	21,935	18,655	3,280	1,820	1,337	483	20,115	17,318	2,797
State - UTTAR PRADESH	(iv) From urban area outside the State	35-39	20,407	17,915	2,492	1,797	1,359	438	18,610	16,556	2,054
State - UTTAR PRADESH	(iv) From urban area outside the State	40-44	15,051	13,332	1,719	1,438	1,100	338	13,613	12,232	1,381
State - UTTAR PRADESH	(iv) From urban area outside the State	45-49	10,772	9,514	1,258	1,125	873	252	9,647	8,641	1,006
State - UTTAR PRADESH	(iv) From urban area outside the State	50-54	7,486	6,608	878	765	603	162	6,721	6,005	716
State - UTTAR PRADESH	(iv) From urban area outside the State	55-59	5,350	4,640	710	464	340	124	4,886	4,300	586
State - UTTAR PRADESH	(iv) From urban area outside the State	60-64	3,849	3,310	539	463	334	129	3,386	2,976	410
State - UTTAR PRADESH	(iv) From urban area outside the State	65-69	2,002	1,771	231	213	162	51	1,789	1,609	180
State - UTTAR PRADESH	(iv) From urban area outside the State	70-74	1,000	856	144	152	106	46	848	750	98
State - UTTAR PRADESH	(iv) From urban area outside the State	75-79	449	378	71	52	37	15	397	341	56
State - UTTAR PRADESH	(iv) From urban area outside the State	80+	687	562	125	106	75	31	581	487	94
State - UTTAR PRADESH	(iv) From urban area outside the State	Age not stated	1,527	1,262	265	138	99	39	1,389	1,163	226

MAHARASHTRA


Area Name	Moved From Last area	Age -group	Population with 'Work/Employment'			Illiterate			Literate		
			as reason for migration								
			Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
State - MAHARASHTRA	(i) From rural area within the State	All ages	1,370,782	1,094,777	276,005	243,463	138,184	105,279	1,127,319	956,593	170,726
State - MAHARASHTRA	(i) From rural area within the State	0-4	0	0	0	0	0	0	0	0	0
State - MAHARASHTRA	(i) From rural area within the State	5-9	0	0	0	0	0	0	0	0	0
State - MAHARASHTRA	(i) From rural area within the State	10-14	10,014	5,533	4,481	2,631	1,217	1,414	7,383	4,316	3,067
State - MAHARASHTRA	(i) From rural area within the State	15-19	54,782	35,584	19,198	9,438	4,404	5,034	45,344	31,180	14,164
State - MAHARASHTRA	(i) From rural area within the State	20-24	184,270	134,518	49,752	23,121	10,697	12,424	161,149	123,821	37,328
State - MAHARASHTRA	(i) From rural area within the State	25-29	275,018	221,308	53,710	33,846	18,657	15,189	241,172	202,651	38,521
State - MAHARASHTRA	(i) From rural area within the State	30-34	247,452	207,514	39,938	34,400	20,197	14,203	213,052	187,317	25,735
State - MAHARASHTRA	(i) From rural area within the State	35-39	196,520	163,710	32,810	33,689	19,531	14,158	162,831	144,179	18,652
State - MAHARASHTRA	(i) From rural area within the State	40-44	140,543	116,431	24,112	29,696	17,679	12,017	110,847	98,752	12,095
State - MAHARASHTRA	(i) From rural area within the State	45-49	93,031	75,891	17,140	22,991	13,599	9,392	70,040	62,292	7,748
State - MAHARASHTRA	(i) From rural area within the State	50-54	63,330	51,698	11,632	17,445	10,714	6,731	45,885	40,984	4,901
State - MAHARASHTRA	(i) From rural area within the State	55-59	39,365	31,733	7,632	10,944	6,389	4,555	28,421	25,344	3,077
State - MAHARASHTRA	(i) From rural area within the State	60-64	26,923	20,770	6,153	10,233	6,041	4,192	16,690	14,729	1,961
State - MAHARASHTRA	(i) From rural area within the State	65-69	16,817	12,864	3,953	6,881	4,150	2,731	9,936	8,714	1,222
State - MAHARASHTRA	(i) From rural area within the State	70-74	8,570	6,563	2,007	3,851	2,430	1,421	4,719	4,133	586
State - MAHARASHTRA	(i) From rural area within the State	75-79	3,356	2,593	763	1,378	849	529	1,978	1,744	234
State - MAHARASHTRA	(i) From rural area within the State	80+	5,136	3,859	1,277	1,686	968	718	3,450	2,891	559
State - MAHARASHTRA	(i) From rural area within the State	Age not stated	5,655	4,208	1,447	1,233	662	571	4,422	3,546	876
State - MAHARASHTRA	(ii) From urban area within the State	All ages	800,554	672,486	128,068	64,694	44,285	20,409	735,860	628,201	107,659
State - MAHARASHTRA	(ii) From urban area within the State	0-4	0	0	0	0	0	0	0	0	0
State - MAHARASHTRA	(ii) From urban area within the State	5-9	0	0	0	0	0	0	0	0	0
State - MAHARASHTRA	(ii) From urban area within the State	10-14	3,250	1,964	1,286	409	223	186	2,841	1,741	1,100
State - MAHARASHTRA	(ii) From urban area within the State	15-19	17,410	12,520	4,890	1,821	1,125	696	15,589	11,395	4,194
State - MAHARASHTRA	(ii) From urban area within the State	20-24	71,304	53,826	17,478	5,121	3,314	1,807	66,183	50,512	15,671
State - MAHARASHTRA	(ii) From urban area within the State	25-29	140,515	114,453	26,062	8,456	6,081	2,375	132,059	108,372	23,687
State - MAHARASHTRA	(ii) From urban area within the State	30-34	154,207	132,872	21,335	9,793	7,261	2,532	144,414	125,611	18,803
State - MAHARASHTRA	(ii) From urban area within the State	35-39	128,491	111,619	16,872	9,452	6,751	2,701	119,039	104,868	14,171
State - MAHARASHTRA	(ii) From urban area within the State	40-44	94,289	81,966	12,323	8,164	5,600	2,564	86,125	76,366	9,759
State - MAHARASHTRA	(ii) From urban area within the State	45-49	66,563	57,379	9,184	6,478	4,356	2,122	60,085	53,023	7,062
State - MAHARASHTRA	(ii) From urban area within the State	50-54	48,582	42,052	6,530	4,860	3,258	1,602	43,722	38,794	4,928
State - MAHARASHTRA	(ii) From urban area within the State	55-59	32,176	27,697	4,479	3,186	2,078	1,108	28,990	25,619	3,371
State - MAHARASHTRA	(ii) From urban area within the State	60-64	19,123	16,123	3,002	2,783	1,726	1,057	16,432	14,397	2,035
State - MAHARASHTRA	(ii) From urban area within the State	65-69	10,565	8,832	1,733	1,762	1,075	687	8,803	7,757	1,046
State - MAHARASHTRA	(ii) From urban area within the State	70-74	5,068	4,135	933	1,055	627	428	4,013	3,508	505
State - MAHARASHTRA	(ii) From urban area within the State	75-79	2,376	1,907	469	422	251	171	1,954	1,656	298
State - MAHARASHTRA	(ii) From urban area within the State	80+	3,242	2,559	683	541	308	233	2,701	2,251	450
State - MAHARASHTRA	(ii) From urban area within the State	Age not stated	3,301	2,582	719	391	251	140	2,910	2,331	579
State - MAHARASHTRA	(iii) From rural area outside the State	All ages	936,856	859,296	77,560	171,533	138,067	33,466	765,323	721,229	44,094
State - MAHARASHTRA	(iii) From rural area outside the State	0-4	0	0	0	0	0	0	0	0	0
State - MAHARASHTRA	(iii) From rural area outside the State	5-9	0	0	0	0	0	0	0	0	0
State - MAHARASHTRA	(iii) From rural area outside the State	10-14	6,194	4,980	1,214	1,716	1,180	536	4,478	3,800	678
State - MAHARASHTRA	(iii) From rural area outside the State	15-19	102,469	95,595	6,874	16,528	14,029	2,499	85,941	81,566	4,375
State - MAHARASHTRA	(iii) From rural area outside the State	20-24	247,486	229,713	17,773	35,573	29,731	5,842	211,913	199,982	11,931
State - MAHARASHTRA	(iii) From rural area outside the State	25-29	218,389	200,839	17,550	34,372	27,954	6,418	184,017	172,885	11,132
State - MAHARASHTRA	(iii) From rural area outside the State	30-34	138,285	127,025	11,260	25,463	20,365	5,098	112,822	106,660	6,162
State - MAHARASHTRA	(iii) From rural area outside the State	35-39	90,204	82,157	8,047	20,252	15,931	4,321	69,952	66,226	3,726
State - MAHARASHTRA	(iii) From rural area outside the State	40-44	52,108	46,983	5,125	13,805	10,786	3,019	38,303	36,197	2,106
State - MAHARASHTRA	(iii) From rural area outside the State	45-49	31,259	27,871	3,388	8,833	6,802	2,031	22,426	21,069	1,357
State - MAHARASHTRA	(iii) From rural area outside the State	50-54	18,708	16,563	2,145	5,682	4,340	1,342	13,026	12,223	803
State - MAHARASHTRA	(iii) From rural area outside the State	55-59	10,475	9,158	1,317	2,970	2,230	740	7,505	6,928	577
State - MAHARASHTRA	(iii) From rural area outside the State	60-64	7,062	6,040	1,022	2,481	1,838	643	4,581	4,202	379
State - MAHARASHTRA	(iii) From rural area outside the State	65-69	3,835	3,278	557	1,251	911	340	2,584	2,367	217
State - MAHARASHTRA	(iii) From rural area outside the State	70-74	2,282	1,968	314	804	601	203	1,478	1,367	111
State - MAHARASHTRA	(iii) From rural area outside the State	75-79	986	844	142	246	181	65	740	663	77
State - MAHARASHTRA	(iii) From rural area outside the State	80+	2,947	2,602	345	738	565	173	2,209	2,037	172
State - MAHARASHTRA	(iii) From rural area outside the State	Age not stated	4,167	3,680	487	819	623	196	3,348	3,057	291
State - MAHARASHTRA	(iv) From urban area outside the State	All ages	390,835	340,898	49,937	41,797	33,458	8,339	349,038	307,440	41,598
State - MAHARASHTRA	(iv) From urban area outside the State	0-4	0	0	0	0	0	0	0	0	0
State - MAHARASHTRA	(iv) From urban area outside the State	5-9	0	0	0	0	0	0	0	0	0
State - MAHARASHTRA	(iv) From urban area outside the State	10-14	1,638	1,245	393	305	206	99	1,333	1,039	294
State - MAHARASHTRA	(iv) From urban area outside the State	15-19	22,557	20,466	2,091	3,394	2,868	526	19,163	17,598	1,565
State - MAHARASHTRA	(iv) From urban area outside the State	20-24	69,682	59,913	9,769	7,512	6,195	1,317	62,170	53,718	8,452
State - MAHARASHTRA	(iv) From urban area outside the State	25-29	90,804	77,070	13,734	8,297	6,680	1,617	82,507	70,390	12,117
State - MAHARASHTRA	(iv) From urban area outside the State	30-34	71,550	63,186	8,364	6,664	5,386	1,278	64,886	57,782	7,104
State - MAHARASHTRA	(iv) From urban area outside the State	35-39	47,992	42,853	5,139	5,003	4,022	981	42,989	38,831	4,158
State - MAHARASHTRA	(iv) From urban area outside the State	40-44	30,459	27,237	3,222	3,716	2,910	806	26,743	24,327	2,416
State - MAHARASHTRA	(iv) From urban area outside the State	45-49	20,126	17,760	2,366	2,388	1,856	532	17,738	15,904	1,834
State - MAHARASHTRA	(iv) From urban area outside the State	50-54	13,956	12,279	1,677	1,655	1,279	376	12,301	11,000	1,301
State - MAHARASHTRA	(iv) From urban area outside the State	55-59	8,883	7,786	1,097	935	700	235	7,948	7,086	862
State - MAHARASHTRA	(iv) From urban area outside the State	60-64	5,162	4,368	794	768	561	207	4,394	3,807	587
State - MAHARASHTRA	(iv) From urban area outside the State	65-69	2,597	2,206	391	397	277	120	2,200	1,929	271
State - MAHARASHTRA	(iv) From urban area outside the State	70-74	1,475	1,220	255	233	161	72	1,242	1,059	183
State - MAHARASHTRA	(iv) From urban area outside the State	75-79	740	601	139	112	67	45	628	534	94
State - MAHARASHTRA	(iv) From urban area outside the State	80+	1,385	1,179	206	221	156	65	1,164	1,023	141
State - MAHARASHTRA	(iv) From urban area outside the State	Age not stated	1,829	1,547	282	197	134	63	1,632	1,413	219

KERALA

Area Name	Moved from Last area	Age -group	Population with 'Work/Employment'			Illiterate			Literate		
			as reason for migration								
			Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
State - KERALA	(i) From rural area within the State	All ages	161,773	117,811	43,962	5,012	2,978	2,034	156,761	114,833	41,928
State - KERALA	(i) From rural area within the State	0-4	0	0	0	0	0	0	0	0	0
State - KERALA	(i) From rural area within the State	5-9	0	0	0	0	0	0	0	0	0
State - KERALA	(i) From rural area within the State	10-14	530	269	261	12	7	5	518	262	258
State - KERALA	(i) From rural area within the State	15-19	2,311	1,386	925	106	65	41	2,205	1,321	884
State - KERALA	(i) From rural area within the State	20-24	7,511	4,691	2,820	251	165	86	7,260	4,526	2,734
State - KERALA	(i) From rural area within the State	25-29	14,684	9,556	5,128	342	230	112	14,342	9,326	5,016
State - KERALA	(i) From rural area within the State	30-34	22,892	16,086	6,806	423	268	155	22,469	15,818	6,651
State - KERALA	(i) From rural area within the State	35-39	29,976	21,925	8,051	602	351	251	29,374	21,574	7,800
State - KERALA	(i) From rural area within the State	40-44	26,831	20,418	6,413	645	366	279	26,186	20,052	6,134
State - KERALA	(i) From rural area within the State	45-49	21,249	16,311	4,938	715	416	299	20,534	15,895	4,639
State - KERALA	(i) From rural area within the State	50-54	14,296	11,149	3,147	577	343	234	13,719	10,806	2,913
State - KERALA	(i) From rural area within the State	55-59	9,835	7,690	2,145	487	297	190	9,348	7,393	1,955
State - KERALA	(i) From rural area within the State	60-64	5,596	4,195	1,401	312	183	129	5,284	4,012	1,272
State - KERALA	(i) From rural area within the State	65-69	2,913	2,128	785	234	142	92	2,679	1,986	693
State - KERALA	(i) From rural area within the State	70-74	1,593	1,045	548	158	76	82	1,435	969	466
State - KERALA	(i) From rural area within the State	75-79	795	487	308	73	35	38	722	452	270
State - KERALA	(i) From rural area within the State	80+	611	374	237	73	33	40	538	341	197
State - KERALA	(i) From rural area within the State	Age not stated	150	101	49	2	1	1	148	100	48
State - KERALA	(ii) From urban area within the State	All ages	67,688	49,763	17,925	1,418	932	486	66,270	48,831	17,439
State - KERALA	(ii) From urban area within the State	0-4	0	0	0	0	0	0	0	0	0
State - KERALA	(ii) From urban area within the State	5-9	0	0	0	0	0	0	0	0	0
State - KERALA	(ii) From urban area within the State	10-14	184	94	90	6	2	4	178	92	86
State - KERALA	(ii) From urban area within the State	15-19	940	636	304	39	29	10	901	607	294
State - KERALA	(ii) From urban area within the State	20-24	3,640	2,583	1,057	111	93	18	3,529	2,490	1,039
State - KERALA	(ii) From urban area within the State	25-29	6,806	4,584	2,222	157	110	47	6,649	4,474	2,175
State - KERALA	(ii) From urban area within the State	30-34	9,479	6,736	2,743	144	99	45	9,335	6,637	2,698
State - KERALA	(ii) From urban area within the State	35-39	11,882	8,569	3,313	152	97	55	11,730	8,472	3,258
State - KERALA	(ii) From urban area within the State	40-44	10,542	7,968	2,574	180	118	62	10,362	7,850	2,512
State - KERALA	(ii) From urban area within the State	45-49	8,676	6,624	2,052	172	103	69	8,504	6,521	1,983
State - KERALA	(ii) From urban area within the State	50-54	6,264	4,928	1,336	123	88	35	6,141	4,840	1,301
State - KERALA	(ii) From urban area within the State	55-59	4,405	3,466	939	101	61	40	4,304	3,405	899
State - KERALA	(ii) From urban area within the State	60-64	2,490	1,935	555	90	55	35	2,400	1,880	520
State - KERALA	(ii) From urban area within the State	65-69	1,169	854	315	68	39	29	1,101	815	286
State - KERALA	(ii) From urban area within the State	70-74	594	405	189	35	21	14	559	384	175
State - KERALA	(ii) From urban area within the State	75-79	316	202	114	17	9	8	299	193	106
State - KERALA	(ii) From urban area within the State	80+	236	138	98	23	8	15	213	130	83
State - KERALA	(ii) From urban area within the State	Age not stated	65	41	24	0	0	0	65	41	24
State - KERALA	(iii) From rural area outside the State	All ages	60,948	52,358	8,590	12,332	9,104	3,228	48,616	43,254	5,362
State - KERALA	(iii) From rural area outside the State	0-4	0	0	0	0	0	0	0	0	0
State - KERALA	(iii) From rural area outside the State	5-9	0	0	0	0	0	0	0	0	0
State - KERALA	(iii) From rural area outside the State	10-14	205	133	72	43	22	21	162	111	51
State - KERALA	(iii) From rural area outside the State	15-19	5,622	4,891	731	848	679	169	4,774	4,212	562
State - KERALA	(iii) From rural area outside the State	20-24	16,021	14,555	1,466	2,289	1,913	376	13,732	12,642	1,090
State - KERALA	(iii) From rural area outside the State	25-29	11,736	10,271	1,465	1,996	1,559	437	9,740	8,712	1,028
State - KERALA	(iii) From rural area outside the State	30-34	7,687	6,580	1,107	1,414	1,042	372	6,273	5,538	735
State - KERALA	(iii) From rural area outside the State	35-39	6,316	5,146	1,170	1,591	1,059	532	4,725	4,087	638
State - KERALA	(iii) From rural area outside the State	40-44	4,493	3,696	797	1,287	912	375	3,206	2,784	422
State - KERALA	(iii) From rural area outside the State	45-49	3,517	2,812	705	1,103	722	381	2,414	2,090	324
State - KERALA	(iii) From rural area outside the State	50-54	2,209	1,780	429	724	493	231	1,485	1,287	198
State - KERALA	(iii) From rural area outside the State	55-59	1,371	1,106	265	431	296	135	940	810	130
State - KERALA	(iii) From rural area outside the State	60-64	891	693	198	298	201	97	593	492	101
State - KERALA	(iii) From rural area outside the State	65-69	456	352	104	156	100	56	300	252	48
State - KERALA	(iii) From rural area outside the State	70-74	194	149	45	83	59	24	111	90	21
State - KERALA	(iii) From rural area outside the State	75-79	79	62	17	33	22	11	46	40	6
State - KERALA	(iii) From rural area outside the State	80+	77	66	11	21	15	6	56	51	5
State - KERALA	(iii) From rural area outside the State	Age not stated	74	66	8	15	10	5	59	56	3
State - KERALA	(iv) From urban area outside the State	All ages	35,409	29,796	5,613	3,229	2,446	783	32,180	27,350	4,830
State - KERALA	(iv) From urban area outside the State	0-4	0	0	0	0	0	0	0	0	0
State - KERALA	(iv) From urban area outside the State	5-9	0	0	0	0	0	0	0	0	0
State - KERALA	(iv) From urban area outside the State	10-14	113	75	38	19	13	6	94	62	32
State - KERALA	(iv) From urban area outside the State	15-19	1,916	1,636	280	268	199	69	1,648	1,437	211
State - KERALA	(iv) From urban area outside the State	20-24	6,118	5,343	775	598	512	86	5,520	4,831	689
State - KERALA	(iv) From urban area outside the State	25-29	5,898	4,918	980	485	399	86	5,413	4,519	894
State - KERALA	(iv) From urban area outside the State	30-34	5,012	4,214	798	394	306	88	4,618	3,908	710
State - KERALA	(iv) From urban area outside the State	35-39	4,354	3,611	743	403	280	123	3,951	3,331	620
State - KERALA	(iv) From urban area outside the State	40-44	3,424	2,875	549	336	234	102	3,088	2,641	447
State - KERALA	(iv) From urban area outside the State	45-49	2,767	2,353	414	247	181	66	2,520	2,172	348
State - KERALA	(iv) From urban area outside the State	50-54	1,922	1,581	341	180	118	62	1,742	1,463	279
State - KERALA	(iv) From urban area outside the State	55-59	1,532	1,273	259	108	81	27	1,424	1,192	232
State - KERALA	(iv) From urban area outside the State	60-64	1,169	937	232	93	55	38	1,076	882	194
State - KERALA	(iv) From urban area outside the State	65-69	663	554	109	40	31	9	623	523	100
State - KERALA	(iv) From urban area outside the State	70-74	282	225	57	31	20	11	251	205	46
State - KERALA	(iv) From urban area outside the State	75-79	129	113	16	14	10	4	115	103	12
State - KERALA	(iv) From urban area outside the State	80+	74	57	17	8	5	3	66	52	14
State - KERALA	(iv) From urban area outside the State	Age not stated	36	31	5	5	2	3	31	29	2

EXPLORATORY AND BIVARIATE ANALYSIS

WEST BENGAL

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In [6]: `WB = pd.read_csv('west Bengal.csv')`
WB

Out[6]:

	Area Name	Age-group	Total Persons	Total Males	Total Females	Total Illiterate	Illiterate Males	Illiterate Females	Total Literate	Literate Males	Literate Females
0	State - WEST BENGAL	0-4	0	0	0	0	0	0	0	0	0
1	State - WEST BENGAL	5-9	0	0	0	0	0	0	0	0	0
2	State - WEST BENGAL	10-14	1953	980	993	613	259	354	1340	701	639
3	State - WEST BENGAL	15-19	6836	3541	4295	2331	1170	1161	7505	4371	3134
4	State - WEST BENGAL	20-24	23338	15189	8149	4850	2711	2139	18488	12478	6010
5	State - WEST BENGAL	25-29	34233	20314	7919	7074	4616	2258	27159	21498	5661
6	State - WEST BENGAL	30-34	34278	20498	5788	6547	4687	1860	27729	23801	3928
7	State - WEST BENGAL	35-39	34449	20268	5181	6788	4644	1944	27661	24424	3237
8	State - WEST BENGAL	40-44	27513	23482	4031	5681	3983	1698	21832	19499	2333
9	State - WEST BENGAL	45-49	20460	17450	3040	4516	3125	1391	15974	14325	1649
10	State - WEST BENGAL	50-54	14074	12022	2052	3170	2186	984	10904	9836	1068
11	State - WEST BENGAL	55-59	9196	7910	1286	1878	1274	604	7318	6636	682
12	State - WEST BENGAL	60-64	5379	4591	788	1439	980	459	3940	3611	329
13	State - WEST BENGAL	65-69	2828	2445	383	740	501	239	2088	1944	144
14	State - WEST BENGAL	70-74	1454	1211	243	457	292	165	997	919	78
15	State - WEST BENGAL	75-79	561	467	94	175	123	52	386	344	42
16	State - WEST BENGAL	80+	978	753	225	289	186	123	689	567	102

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In [7]: WB.describe()

Out[7]:

	Total Persons	Total Males	Total Females	Total Illiterate	Illiterate Males	Illiterate Females	Total Literate	Literate Males	Literate Females
count	18.000000	18.000000	18.000000	18.000000	18.000000	18.000000	18.000000	18.000000	18.000000
mean	12270.222222	9706.722222	2474.500000	2589.888887	1730.388889	859.277778	9680.555556	8065.333333	1615.222222
std	13214.316780	10814.183480	2775.138832	2821.048398	1829.289098	824.848882	10801.175084	8990.042923	1989.090704
min	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25%	1097.000000	804.750000	229.500000	331.000000	189.250000	133.500000	786.000000	615.500000	84.000000
50%	7287.500000	5088.000000	1139.500000	1658.500000	1075.000000	531.500000	5629.000000	3991.000000	660.500000
75%	22828.000000	18684.750000	4229.000000	4788.500000	3021.500000	1621.250000	17850.500000	13883.250000	2933.750000
max	34449.000000	29268.000000	8149.000000	7074.000000	4844.000000	2258.000000	27729.000000	24424.000000	8010.000000

In [8]: desWB = WB[['Total Persons', 'Total Illiterate', 'Total Literate']].agg(['mean', 'median', 'std', 'quantile'])
desWB

Out[8]:

	Total Persons	Total Illiterate	Total Literate
mean	12270.222222	2589.888887	9680.555556
median	7287.500000	1658.500000	5629.000000
std	13214.316780	2821.048398	10801.175084
quantile	7287.500000	1658.500000	5629.000000

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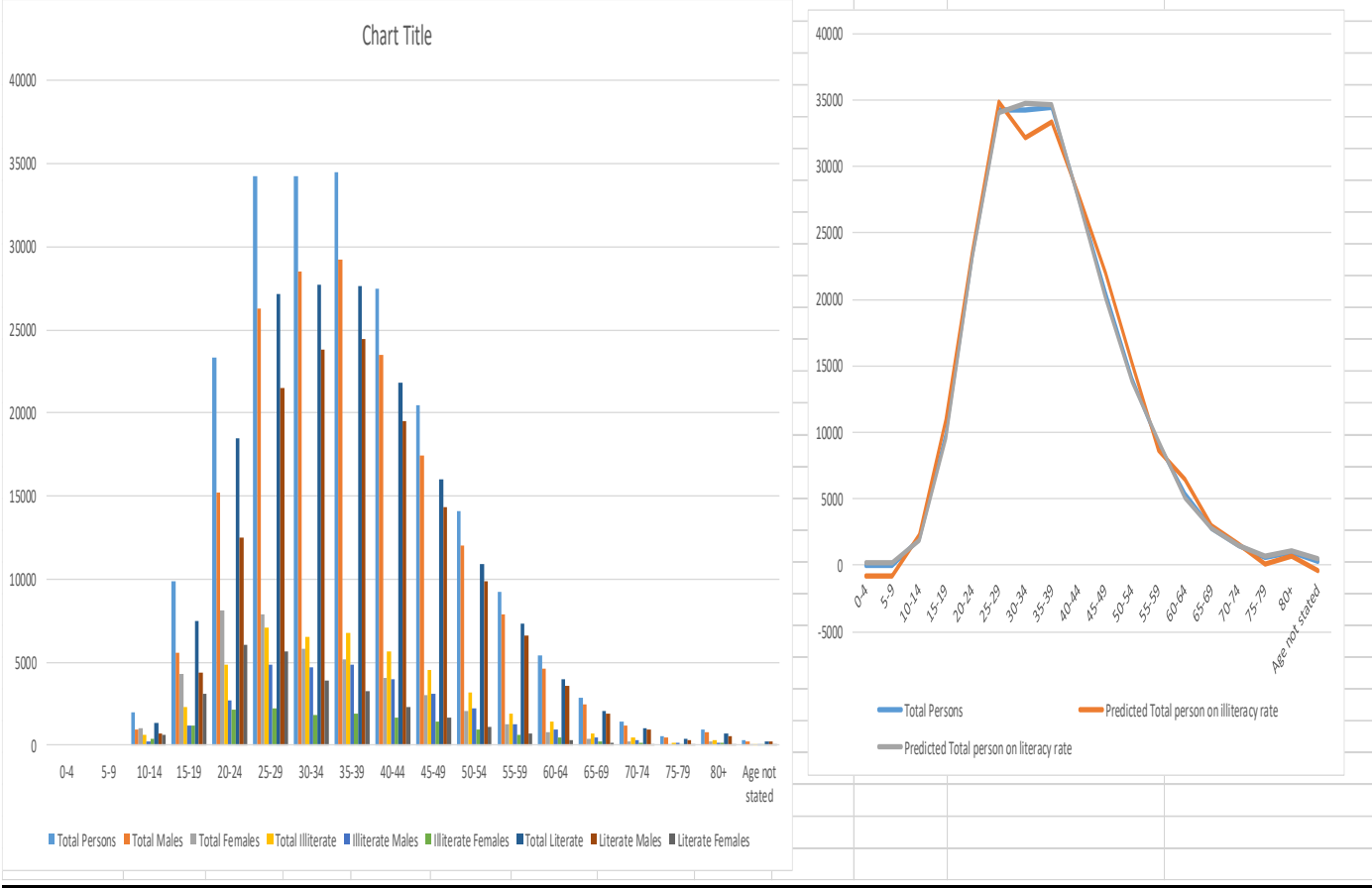
In [11]: totalWB = WB.sum()
totalWB

Out[11]:

Area Name	State - WEST BENGALState - WEST BENGALState - ...
Age -group	0-4 5-9 10-1415-1920-2425-2930-3435-3940-4445-...
Total Persons	220864
Total Males	176323
Total Females	44541
Total Illiterate	46614
Illiterate Males	31147
Illiterate Females	15467
Total Literate	174250
Literate Males	145176
Literate Females	29074
dtype:	object

Census data and graph west Bengal

Area Name	Age -group	Total Persons	Total Males	Total Females	Total Illiterate	Illiterate Males	Illiterate Females	Total Literate	Literate Males	Literate Females	Predicted Total person on illiteracy rate	Predicted Total person on literacy rate
State - WEST BENGAL	0-4	0	0	0	0	0	0	0	0	0	-754.29	205.24
State - WEST BENGAL	5-9	0	0	0	0	0	0	0	0	0	-754.29	205.24
State - WEST BENGAL	10-14	1953	960	993	613	259	354	1340	701	639	2328.74	1875.29
State - WEST BENGAL	15-19	9836	5541	4295	2331	1170	1161	7505	4371	3134	10969.26	9558.80
State - WEST BENGAL	20-24	23338	15189	8149	4850	2711	2139	18488	12478	6010	23638.35	23247.03
State - WEST BENGAL	25-29	34233	26314	7919	7074	4816	2258	27159	21498	5661	34823.76	34053.80
State - WEST BENGAL	30-34	34276	28488	5788	6547	4687	1860	27729	23801	3928	32173.26	34764.19
State - WEST BENGAL	35-39	34449	29268	5181	6788	4844	1944	27661	24424	3237	33385.35	34679.45
State - WEST BENGAL	40-44	27513	23482	4031	5681	3983	1698	21832	19499	2333	27817.79	27414.70
State - WEST BENGAL	45-49	20490	17450	3040	4516	3125	1391	15974	14325	1649	21958.53	20113.81
State - WEST BENGAL	50-54	14074	12022	2052	3170	2186	984	10904	9836	1068	15188.94	13795.01
State - WEST BENGAL	55-59	9196	7910	1286	1878	1274	604	7318	6636	682	8690.94	9325.74
State - WEST BENGAL	60-64	5379	4591	788	1439	980	459	3940	3611	329	6483.03	5115.70
State - WEST BENGAL	65-69	2828	2445	383	740	501	239	2088	1944	144	2967.47	2807.53
State - WEST BENGAL	70-74	1454	1211	243	457	292	165	997	919	78	1544.15	1447.81
State - WEST BENGAL	75-79	561	467	94	175	123	52	386	344	42	125.86	686.31
State - WEST BENGAL	80+	978	753	225	289	166	123	689	587	102	699.21	1063.95
State - WEST BENGAL	Age not stated	306	232	74	66	30	36	240	202	38	-422.35	504.35




Summary output-illiteracy rate West Bengal

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.997580517			Y = -754.2899 + 5.02941X				
R Square	0.995166888							
Adjusted R Square	0.994864818							
Standard Error	946.9402594							
Observations	18							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	2954161263	2954161263	3294.496397	5.85934E-20			
Residual	16	14347133.68	896695.8549					
Total	17	2968508397						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-754.2899287	318.2887695	-2.369828914	0.03070572	-1429.031978	-79.54787968	-1429.031978	-79.54787968
Total Illiterate	5.029416457	0.087624001	57.39770376	5.85934E-20	4.843661873	5.215171041	4.843661873	5.215171041
			Illiteracy RATE					

Summary output-literacy rate West Bengal

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.999852269			Y = 205.23706 +1.246311X				
R Square	0.99970456							
Adjusted R Square	0.999686095							
Standard Error	234.1227491							
Observations	18							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	2967631382	2967631382	54140.55766	1.14001E-29			
Residual	16	877015.3867	54813.46167					
Total	17	2968508397						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	205.2370608	75.72199942	2.710402028	0.015439414	44.71359292	365.7605286	44.71359292	365.7605286
Total Literate	1.246311236	0.005356303	232.6812361	1.14001E-29	1.234956381	1.257666092	1.234956381	1.257666092
				Literacy RATE				

UTTAR PRADESH

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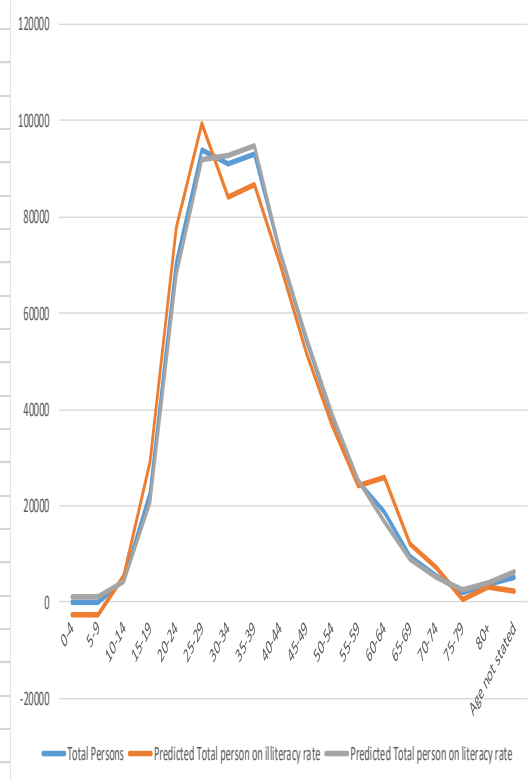
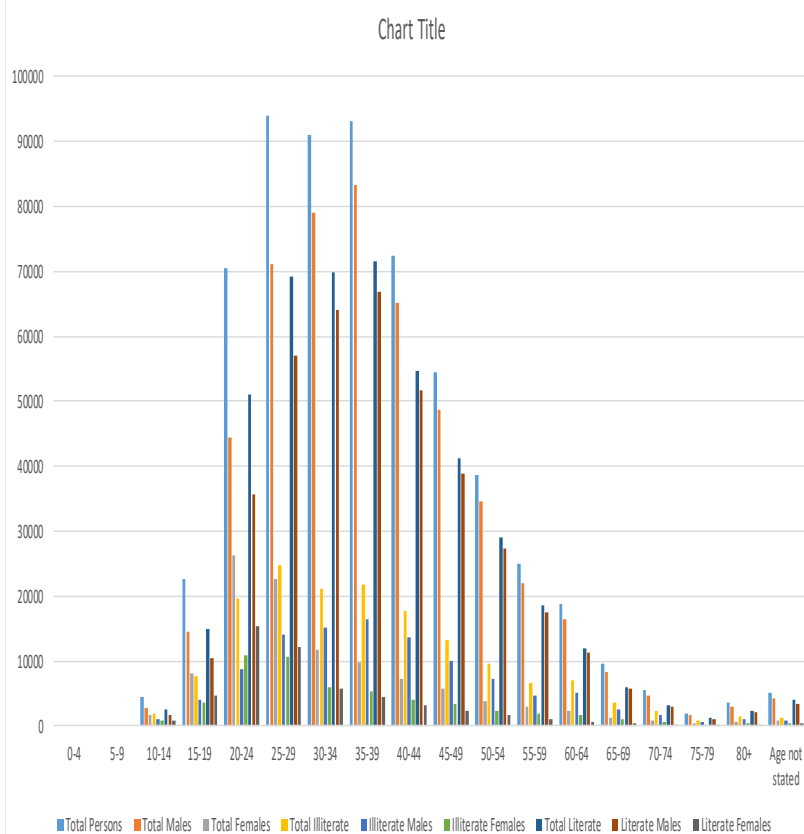
Out[10]:

	Area Name	Age-group	Total Persons	Total Males	Total Females	Total Illiterate	Illiterate Males	Illiterate Females	Total Literate	Literate Males	Literate Females
0	State - UTTAR PRADESH	0-4	0	0	0	0	0	0	0	0	0
1	State - UTTAR PRADESH	5-9	0	0	0	0	0	0	0	0	0
2	State - UTTAR PRADESH	10-14	4451	2710	1741	1954	1101	853	2497	1609	888
3	State - UTTAR PRADESH	15-19	22879	14489	8390	7708	4132	3576	14971	10357	4614
4	State - UTTAR PRADESH	20-24	70585	44348	26237	19559	8711	10848	51026	35637	15389
5	State - UTTAR PRADESH	25-29	93908	71224	22684	24758	14136	10622	69150	57088	12062
6	State - UTTAR PRADESH	30-34	90835	70123	11812	21083	15094	5989	69752	55029	5843
7	State - UTTAR PRADESH	35-39	93136	83273	9863	21678	16353	5323	71458	66920	4540
8	State - UTTAR PRADESH	40-44	72483	65242	7241	17730	13830	4100	54753	51412	3141
9	State - UTTAR PRADESH	45-49	54401	48732	5669	13254	9943	3311	41147	38789	2358
10	State - UTTAR PRADESH	50-54	38807	34883	3924	9638	7325	2313	29169	27558	1611
11	State - UTTAR PRADESH	55-59	25000	22085	2915	6519	4819	1700	18481	17266	1015
12	State - UTTAR PRADESH	60-64	18822	16424	2398	6035	5152	1783	11887	11272	615
13	State - UTTAR PRADESH	65-69	9586	8290	1276	3585	2810	975	5981	5480	301
14	State - UTTAR PRADESH	70-74	5478	4844	634	2381	1787	624	3087	2877	210
15	State - UTTAR PRADESH	75-79	1959	1634	325	789	535	254	1170	1099	71
16	State - UTTAR PRADESH	80+	3899	2973	726	1422	954	468	2277	2019	258
17	State - UTTAR PRADESH	Age not stated	5206	4270	936	1229	803	426	3977	3467	510

pynb#

Census data and graph Uttar Pradesh

Area Name	Age-group	Total Persons	Total Males	Total Females	Total Illiterate	Illiterate Males	Illiterate Females	Total Literate	Literate Males	Literate Females	Predicted Total person on illiteracy rate	Predicted Total person on literacy rate
State - UTTAR PRADESH	0-4	0	0	0	0	0	0	0	0	0	-2722.59	1074.61
State - UTTAR PRADESH	5-9	0	0	0	0	0	0	0	0	0	-2722.59	1074.61
State - UTTAR PRADESH	10-14	4451	2710	1741	1954	1101	853	2497	1609	888	5325.74	4352.08
State - UTTAR PRADESH	15-19	22679	14489	8190	7708	4132	3576	14971	10357	4614	29025.89	20724.95
State - UTTAR PRADESH	20-24	70565	44348	26217	19559	8711	10848	51006	35637	15369	77838.98	68023.05
State - UTTAR PRADESH	25-29	93908	71224	22684	24758	14136	10622	69150	57088	12062	99253.14	91838.14
State - UTTAR PRADESH	30-34	90935	79123	11812	21063	15094	5969	69872	64029	5843	84033.80	92785.81
State - UTTAR PRADESH	35-39	93136	83273	9863	21676	16353	5323	71460	66920	4540	86558.69	94870.15
State - UTTAR PRADESH	40-44	72483	65242	7241	17730	13630	4100	54753	51612	3141	70305.51	72941.21
State - UTTAR PRADESH	45-49	54401	48732	5669	13254	9943	3311	41147	38789	2358	51869.31	55082.52
State - UTTAR PRADESH	50-54	38607	34683	3924	9638	7325	2313	28969	27358	1611	36975.37	39098.17
State - UTTAR PRADESH	55-59	25000	22085	2915	6519	4619	1900	18481	17466	1015	24128.52	25332.04
State - UTTAR PRADESH	60-64	18822	16424	2398	6935	5152	1783	11887	11272	615	25841.98	16677.02
State - UTTAR PRADESH	65-69	9566	8290	1276	3585	2610	975	5981	5680	301	12043.67	8925.04
State - UTTAR PRADESH	70-74	5478	4644	834	2391	1767	624	3087	2877	210	7125.70	5126.49
State - UTTAR PRADESH	75-79	1959	1634	325	789	535	254	1170	1099	71	527.22	2610.31
State - UTTAR PRADESH	80+	3699	2973	726	1422	954	468	2277	2019	258	3134.49	4063.31
State - UTTAR PRADESH	Age not stated	5206	4270	936	1229	803	426	3977	3467	510	2339.54	6294.67



Summary output-illiteracy rate Uttar Pradesh

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.992691747			Y = -2722.589 +4.1189X				
R Square	0.985436905							
Adjusted R Square	0.984526712							
Standard Error	4412.579734							
Observations	18							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	21080469040	21080469040	1082.667593	3.99906E-16			
Residual	16	311533758.6	19470859.91					
Total	17	21392002798						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-2722.589307	1524.182723	-1.786261756	0.093018918	-5953.712339	508.5337241	-5953.712339	508.5337241
Total Illiterate	4.118978887	0.125182032	32.90391456	3.99906E-16	3.853604834	4.38435294	3.853604834	4.38435294
			Illiteracy RATE					

Summary output-literacy rate Uttar Pradesh

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.999270029				Y = 1074.6149 +1.31256X			
R Square	0.99854059							
Adjusted R Square	0.998449377							
Standard Error	1396.864633							
Observations	18							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	2.14E+10	21360783105	10947.33799	4.04388E-24			
Residual	16	31219693	1951230.804					
Total	17	2.14E+10						
	Coefficients	andard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1074.614994	455.0381	2.361593343	0.031211081	109.9772729	2039.252715	109.9772729	2039.252715
Total Literate	1.312561834	0.012545	104.6295273	4.04388E-24	1.285967938	1.33915573	1.285967938	1.33915573
					Literacy RATE			

MAHARASHTRA

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Out[17]:

	Area Name	Age-group	Total Persons	Total Males	Total Females	Total Illiterate	Illiterate Males	Illiterate Females	Total Literate	Literate Males	Literate Females
0	State - MAHARASHTRA	0-4	0	0	0	0	0	0	0	0	0
1	State - MAHARASHTRA	5-9	0	0	0	0	0	0	0	0	0
2	State - MAHARASHTRA	10-14	10014	5533	4481	2831	1217	1414	7383	4316	3067
3	State - MAHARASHTRA	15-19	54782	35584	19198	9438	4404	5034	45344	31180	14164
4	State - MAHARASHTRA	20-24	184270	134518	49752	23121	10897	12424	161149	123821	37328
5	State - MAHARASHTRA	25-29	275018	221308	53710	33846	18657	15189	241172	202651	38521
6	State - MAHARASHTRA	30-34	247452	207514	39938	34400	20197	14203	213052	187317	25735
7	State - MAHARASHTRA	35-39	196520	163710	32810	33689	19531	14158	162831	144179	18652
8	State - MAHARASHTRA	40-44	140543	116431	24112	29896	17679	12017	110647	98752	12095
9	State - MAHARASHTRA	45-49	93031	75891	17140	22991	13599	9392	70040	62292	7748
10	State - MAHARASHTRA	50-54	63330	51898	11432	17445	10714	6731	45885	40684	4901
11	State - MAHARASHTRA	55-59	36395	31733	7662	10944	6389	4555	25451	25344	3077
12	State - MAHARASHTRA	60-64	26923	20770	6153	10233	6041	4192	16690	14729	1961
13	State - MAHARASHTRA	65-69	19817	12864	3953	6881	4150	2731	9936	8714	1222
14	State - MAHARASHTRA	70-74	8570	6563	2007	3851	2430	1421	4719	4133	586
15	State - MAHARASHTRA	75-79	3356	2593	763	1378	849	529	1978	1744	234
16	State - MAHARASHTRA	80+	5136	3859	1277	1886	968	718	3450	2891	559
17	State - MAHARASHTRA	Age not stated	5655	4208	1447	1233	662	571	4422	3546	876

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Code

```
In [18]: M.describe()
```

```
Out[18]:
```

	Total Persons	Total Males	Total Females	Total Illiterate	Illiterate Males	Illiterate Females	Total Literate	Literate Males	Literate Females
count	18.000000	18.000000	18.000000	18.000000	18.000000	18.000000	18.000000	18.000000	18.000000
mean	78154.555556	60820.944444	15333.611111	13525.722222	7876.888889	5648.833333	62628.833333	53144.055556	9484.777778
std	91802.572111	74880.835088	17687.805943	12854.858892	7383.397225	5560.687159	79737.328122	68045.735199	12580.235668
min	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25%	8383.750000	4539.250000	1587.000000	1922.250000	1030.250000	892.000000	4496.250000	3692.750000	658.500000
50%	33144.000000	26251.500000	8892.500000	9835.500000	5222.500000	4373.500000	22555.500000	20038.500000	3072.000000
75%	128865.000000	108298.000000	22883.500000	23088.500000	12877.750000	11360.750000	100645.250000	89637.000000	13648.750000
max	275018.000000	221308.000000	53710.000000	34400.000000	20197.000000	15189.000000	241172.000000	202851.000000	38521.000000

```
In [19]: desM= M[['Total Persons','Total Illiterate','Total Literate']].agg(['mean','median','std','quantile'])
desM
```

```
Out[19]:
```

	Total Persons	Total Illiterate	Total Literate
mean	78154.555556	13525.722222	62628.833333
median	33144.000000	9835.500000	22555.500000
std	91802.572111	12854.858892	79737.328122
quantile	33144.000000	9835.500000	22555.500000

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Code

```
In [21]: totalM = M.sum()
totalM
```

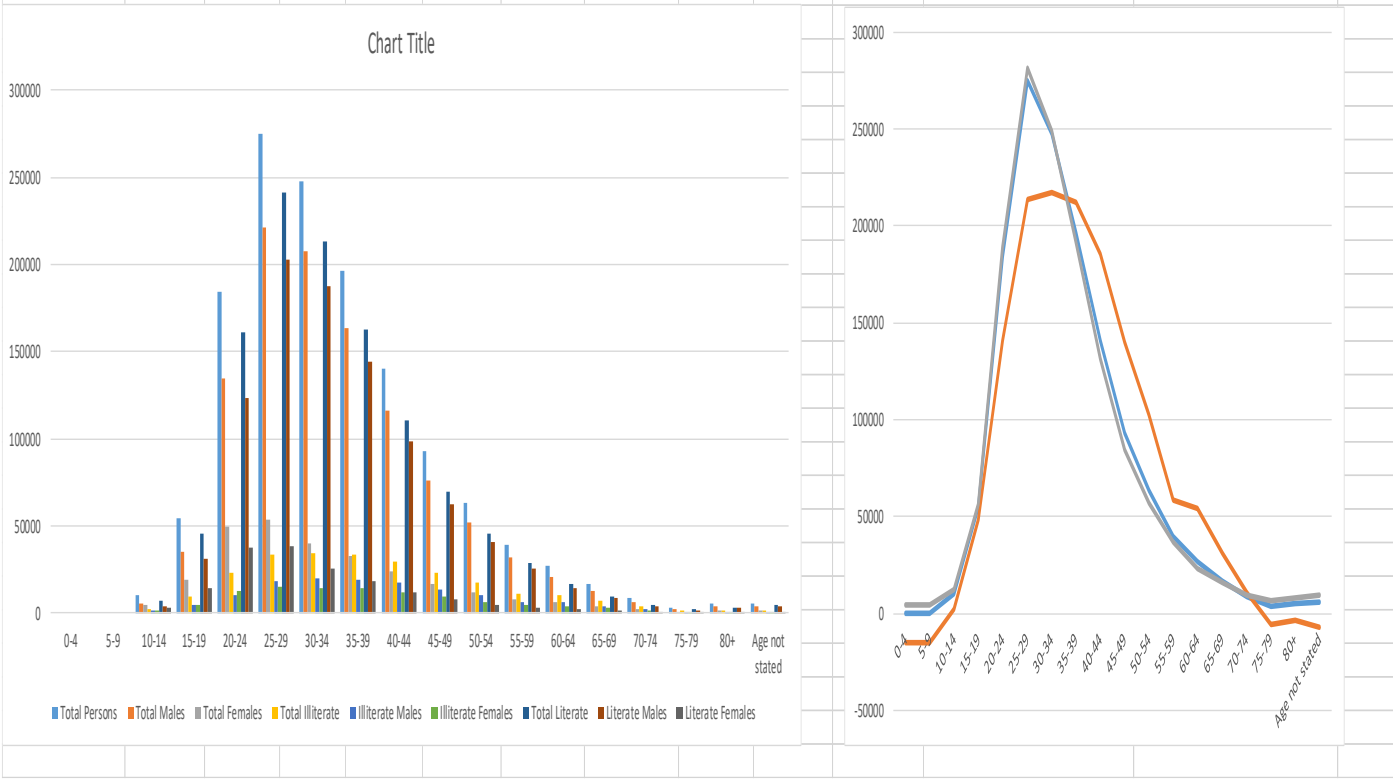
```
Out[21]:
```

Area Name	State - MAHARASHTRState - MAHARASHTRState - ...
Age -group	0-4 5-9 10-1415-1920-2425-2930-3435-3940-4445-...
Total Persons	1370782
Total Males	1094777
Total Females	276005
Total Illiterate	243463
Illiterate Males	136184
Illiterate Females	105279
Total Literate	1127319
Literate Males	956593
Literate Females	170726

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Census data and graph Maharashtra

Area Name	Age -group	Total Persons	Total Males	Total Females	Total Illiterate	Illiterate Males	Illiterate Females	Total Literate	Literate Males	Literate Females	Predicted Total person on illiteracy rate	Predicted Total person on literacy rate
State - MAHARASHTRA	0-4	0	0	0	0	0	0	0	0	0	-15313.63	4146.09
State - MAHARASHTRA	5-9	0	0	0	0	0	0	0	0	0	-15313.63	4146.09
State - MAHARASHTRA	10-14	10014	5533	4481	2631	1217	1414	7383	4316	3067	2478.59	12634.81
State - MAHARASHTRA	15-19	54782	35584	19198	9438	4404	5034	45344	31180	14164	48511.13	56281.05
State - MAHARASHTRA	20-24	184270	134518	49752	23121	10697	12424	161149	123821	37328	141042.83	189429.62
State - MAHARASHTRA	25-29	275018	221308	53710	33846	18657	15189	241172	202651	38521	213570.96	281437.29
State - MAHARASHTRA	30-34	247452	207514	39938	34400	20197	14203	213052	187317	25735	217317.40	249105.89
State - MAHARASHTRA	35-39	196520	163710	32810	33689	19531	14158	162831	144179	18652	212509.25	191363.53
State - MAHARASHTRA	40-44	140543	116431	24112	29696	17679	12017	110847	98752	12095	185506.46	131594.13
State - MAHARASHTRA	45-49	93031	75891	17140	22991	13599	9392	70040	62292	7748	140163.70	84675.65
State - MAHARASHTRA	50-54	63330	51698	11632	17445	10714	6731	45885	40984	4901	102658.71	56903.07
State - MAHARASHTRA	55-59	39365	31733	7632	10944	6389	4555	28421	25344	3077	58695.50	36823.57
State - MAHARASHTRA	60-64	26923	20770	6153	10233	6041	4192	16690	14729	1961	53887.34	23335.67
State - MAHARASHTRA	65-69	16817	12864	3953	6881	4150	2731	9936	8714	1222	31219.34	15570.16
State - MAHARASHTRA	70-74	8570	6563	2007	3851	2430	1421	4719	4133	586	10728.88	9571.83
State - MAHARASHTRA	75-79	3356	2593	763	1378	849	529	1978	1744	234	-5994.86	6420.33
State - MAHARASHTRA	80+	5136	3859	1277	1686	968	718	3450	2891	559	-3912.00	8112.78
State - MAHARASHTRA	Age not stated	5655	4208	1447	1233	662	571	4422	3546	876	-6975.43	9230.35



Summary output-illiteracy rate Maharashtra

SUMMARY OUTPUT								
Regression Statistics		Y = -15313.6274 +6.76253X						
Multiple R	0.946924359							
R Square	0.896665742							
Adjusted R Square	0.890207351							
Standard Error	30418.75829							
Observations	18							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	1.28466E+11	1.28466E+11	138.8373237	2.67914E-09			
Residual	16	14804813697	925300856					
Total	17	1.43271E+11						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-15313.62746	10567.22581	-1.449162508	0.166608677	-37715.14544	7087.890532	-37715.14544	7087.890532
Total Illiterate	6.762535967	0.573926755	11.78292509	2.67914E-09	5.545865597	7.979206337	5.545865597	7.979206337
		Illiteracy RATE						

Summary output-literacy rate Maharashtra

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.998656295			Y = 4146.09162 +1.1497653X				
R Square	0.997314395							
Adjusted R Square	0.997146545							
Standard Error	4903.88598							
Observations	18							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	1.42886E+11	1.42886E+11	5941.689873	5.32052E-22			
Residual	16	384769563.4	24048097.71					
Total	17	1.43271E+11						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	4146.091627	1486.166084	2.789790234	0.013114593	995.5602704	7296.622984	995.5602704	7296.622984
Total Literate	1.149765373	0.014916064	77.08235773	5.32052E-22	1.11814473	1.181386016	1.11814473	1.181386016
				Literacy RATE				

KERALA

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Out[2]:

	Area Name	Age -group	Total Persons	Total Males	Total Females	Total Illiterate	Illiterate Males	Illiterate Females	Total Literate	Literate Males	Literate Females
0	State - KERALA	0-4	0	0	0	0	0	0	0	0	0
1	State - KERALA	5-9	0	0	0	0	0	0	0	0	0
2	State - KERALA	10-14	530	288	281	12	7	5	518	282	258
3	State - KERALA	15-19	2311	1388	925	108	65	41	2205	1321	884
4	State - KERALA	20-24	7511	4891	2820	251	165	86	7260	4826	2734
5	State - KERALA	25-29	14884	9558	5128	342	230	112	14342	9328	5018
6	State - KERALA	30-34	22892	16088	8806	423	268	155	22469	15818	8651
7	State - KERALA	35-39	29978	21925	8051	602	351	251	29374	21574	7800
8	State - KERALA	40-44	28831	20418	8413	645	368	278	28186	20052	8134
9	State - KERALA	45-49	21248	16311	4938	715	418	299	20534	15895	4639
10	State - KERALA	50-54	14298	11149	3147	577	343	234	13719	10806	2913
11	State - KERALA	55-59	9835	7890	2145	487	297	190	9348	7393	1955
12	State - KERALA	60-64	5598	4195	1401	312	183	129	5284	4012	1272
13	State - KERALA	65-69	2913	2128	785	234	142	92	2679	1986	693
14	State - KERALA	70-74	1593	1045	548	158	78	82	1435	969	466
15	State - KERALA	75-79	785	487	308	73	35	38	722	452	270
16	State - KERALA	80+	611	374	237	73	33	40	538	341	197
17	State - KERALA	Age not stated	150	101	49	2	1	1	148	100	48

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In [3]: `k.describe()`

Out[3]:

	Total Persons	Total Males	Total Females	Total Illiterate	Illiterate Males	Illiterate Females	Total Literate	Literate Males	Literate Females
count	18.000000	18.000000	18.000000	18.000000	18.000000	18.000000	18.000000	18.000000	18.000000
mean	8987.388889	8545.055556	2442.333333	278.444444	185.444444	113.000000	8708.944444	8379.611111	2329.333333
std	10181.400742	7668.071014	2878.791660	245.211807	145.792852	100.528803	9981.494339	7435.208808	2598.379472
min	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25%	657.000000	402.250000	272.750000	73.000000	33.500000	38.500000	584.000000	368.750000	259.500000
50%	4254.500000	3181.500000	1183.000000	242.500000	153.500000	89.000000	3981.500000	2999.000000	1078.000000
75%	14587.000000	10750.750000	4490.250000	471.000000	289.750000	181.250000	14186.250000	10438.000000	4207.500000
max	29978.000000	21928.000000	8051.000000	715.000000	416.000000	299.000000	29374.000000	21574.000000	7800.000000

In [4]: `desk= K[['Total Persons','Total Illiterate','Total Literate']].agg(['mean','median','std','quantile'])`
`desk`

Out[4]:

	Total Persons	Total Illiterate	Total Literate
mean	8987.388889	278.444444	8708.944444
median	4254.500000	242.500000	3981.500000
std	10181.400742	245.211807	9981.494339
quantile	4254.500000	242.500000	3981.500000

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In [6]: `totalK = K.sum()`
`totalK`

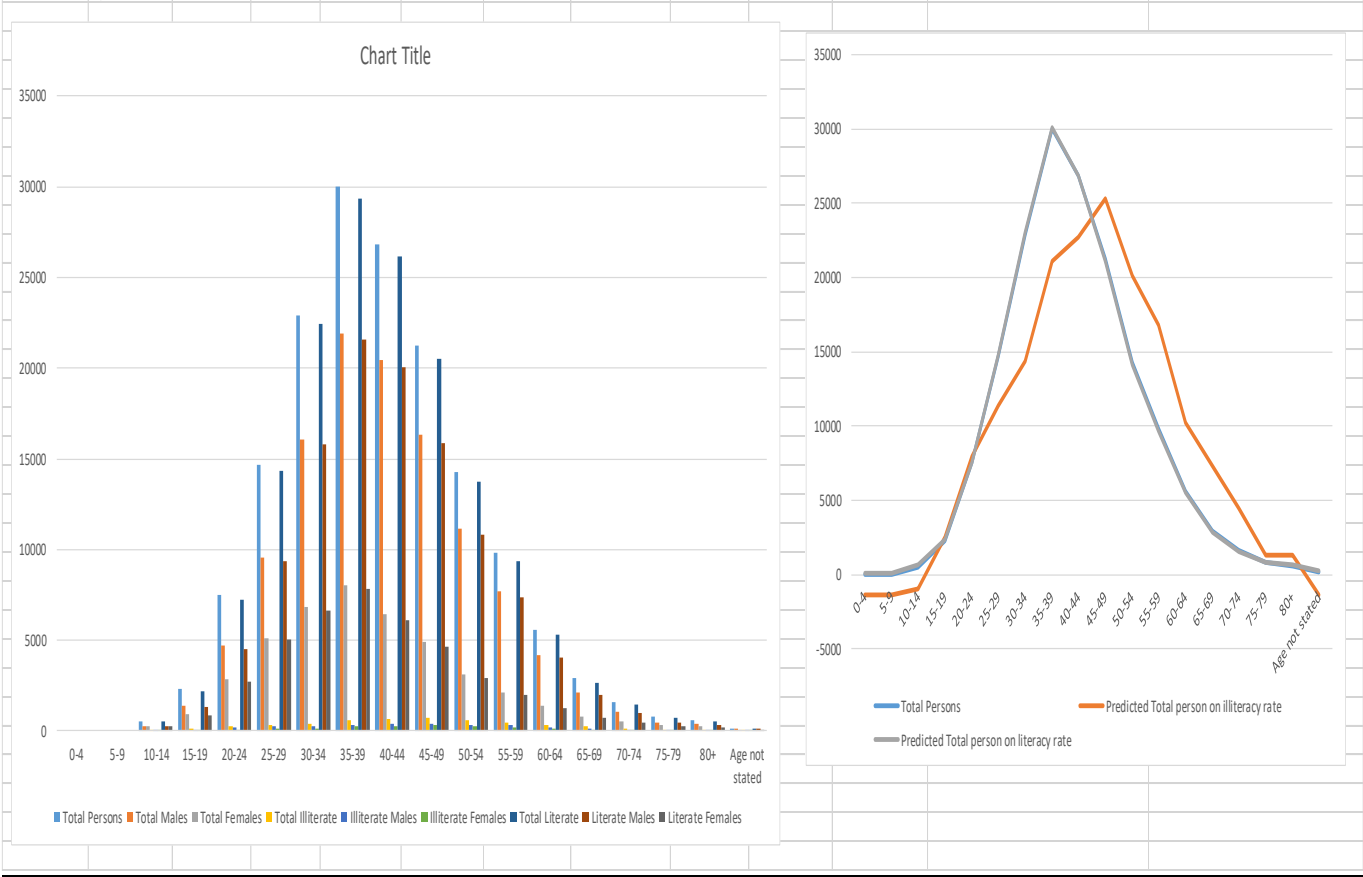
Out[6]:

Area Name	State - KERALA	State - KERALA	State - KERALA	State - KERALA
Age -group	0-4	5-9	10-14	15-19
Total Persons	161773	117811	43962	5812
Total Males	117811	43962	5812	2978
Total Females	43962	5812	2978	2834
Total Illiterate	5812	2978	2834	156761
Illiterate Males	2978	2834	156761	114833
Illiterate Females	2834	156761	114833	41928
Total Literate	156761	114833	41928	
Literate Males	114833	41928		
Literate Females	41928			

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Census data and graph Kerala

Area Name	Age-group	Total Persons	Total Males	Total Females	Total Illiterate	Illiterate Males	Illiterate Females	Total Literate	Literate Males	Literate Females	Predicted Total person on illiteracy rate	Predicted Total person on literacy rate
State - KERALA	0-4	0	0	0	0	0	0	0	0	0	-1408.02	86.71
State - KERALA	5-9	0	0	0	0	0	0	0	0	0	-1408.02	86.71
State - KERALA	10-14	530	269	261	12	7	5	518	262	256	-960.06	616.11
State - KERALA	15-19	2,311	1,386	925	106	65	41	2,205	1,321	884	2548.96	2340.24
State - KERALA	20-24	7,511	4,691	2,820	251	165	86	7,260	4,526	2,734	7961.81	7506.50
State - KERALA	25-29	14,684	9,556	5,128	342	230	112	14,342	9,326	5,016	11358.84	14744.37
State - KERALA	30-34	22,892	16,086	6,806	423	268	155	22,469	15,818	6,651	14382.57	23050.25
State - KERALA	35-39	29,976	21,925	8,051	602	351	251	29,374	21,574	7,800	21064.64	30107.23
State - KERALA	40-44	26,831	20,418	6,413	645	366	279	26,186	20,052	6,134	22669.83	26849.06
State - KERALA	45-49	21,249	16,311	4,938	715	416	299	20,534	15,895	4,639	25282.93	21072.66
State - KERALA	50-54	14,296	11,149	3,147	577	343	234	13,719	10,806	2,913	20131.39	14107.66
State - KERALA	55-59	9,835	7,690	2,145	487	297	190	9,348	7,393	1,955	16771.69	9640.45
State - KERALA	60-64	5,596	4,195	1,401	312	183	129	5,284	4,012	1,272	10238.94	5487.01
State - KERALA	65-69	2,913	2,128	785	234	142	92	2,679	1,986	693	7327.2	2824.67
State - KERALA	70-74	1,593	1,045	548	158	76	82	1,435	969	466	4490.12	1553.29
State - KERALA	75-79	795	487	308	73	35	38	722	452	270	1317.07	824.60
State - KERALA	80+	611	374	237	73	33	40	538	341	197	1317.07	636.55
State - KERALA	Age not stated	150	101	49	2	1	1	148	100	48	-1333.36	237.96



Summary output-illiteracy rate Kerala

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.899159776			Y = -1408.02 +37.33X				
R Square	0.808488303							
Adjusted R Square	0.796518822							
Standard Error	4592.716658							
Observations	18							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	1424746917	1424746917	67.54581093	3.90181E-07			
Residual	16	337488740.8	21093046.3					
Total	17	1762235658						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-1408.028625	1664.844948	-0.845741597	0.410167256	-4937.342252	2121.285002	-4937.342252	2121.285002
Total Illiterate	37.33390169	4.542596578	8.218625854	3.90181E-07	27.70402713	46.96377624	27.70402713	46.96377624
			Illiteracy RATE					

Summary output-literacy rate Kerala

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.999941976			Y = 86.7053 +1.02201X				
R Square	0.999883954							
Adjusted R Square	0.999876702							
Standard Error	113.0540652							
Observations	18							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	1762031159	1762031159	137860.9343	6.45874E-33			
Residual	16	204499.5465	12781.22166					
Total	17	1762235658						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	86.70537401	35.8429998	2.419032293	0.027843237	10.72160879	162.6891392	10.72160879	162.6891392
Total Literate	1.022016339	0.002752563	371.296289	6.45874E-33	1.016181166	1.027851511	1.016181166	1.027851511
				Literacy RATE				

Hypothesis Testing

The Data set of migration has been tested on Anova: Single Factor,
Null hypothesis on Mean–

H0: $\mu_{\text{Literate persons of WB}} = \mu_{\text{Literate persons of UP}} = \mu_{\text{Literate persons of MH}} = \mu_{\text{Literate persons of KL}}$

Alternate hypothesis –

H1 : $\mu_{\text{Literate persons of WB}} \neq \mu_{\text{Literate persons of UP}} \neq \mu_{\text{Literate persons of MH}} \neq \mu_{\text{Literate persons of KL}}$

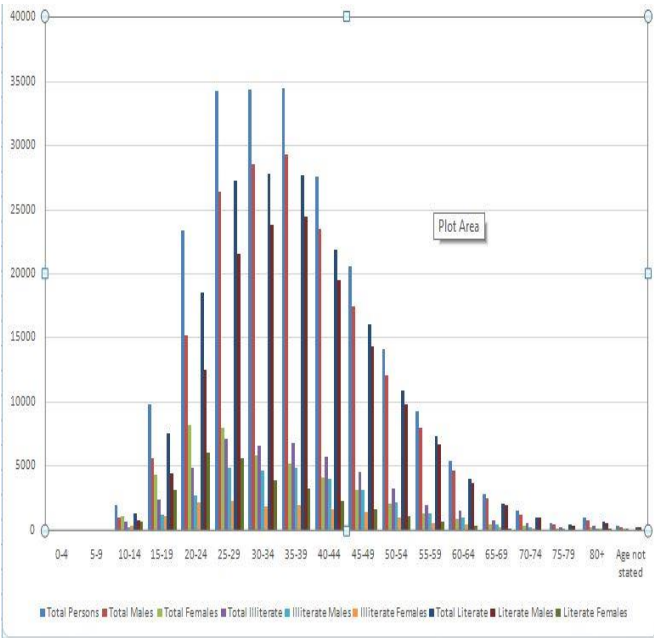
Age -group	Total Literate persons of WB	Total Literate persons of UP	Total Literate persons of MH	Total Literate persons of KL										
0-4	0	0	0	0										
5-9	0	0	0	0	Anova									
10-14	1340	2497	7383	518	Ho: Mean of WB = Mean Of UP = Mean of MH = Mean of KL									
15-19	7505	14971	45344	2,205	H1 : Mean of WB > Mean Of UP > Mean of MH > Mean of KL									
20-24	18488	51006	161149	7,260										
25-29	27159	69150	241172	14,342										
30-34	27729	69872	213052	22,469	Rejecting Null hypothesis	P value is less than significance level(0.05)								
35-39	27661	71460	162831	29,374										
40-44	21832	54753	110847	26,186										
45-49	15974	41147	70040	20,534										
50-54	10904	28969	45885	13,719	Anova: Single Factor									
55-59	7318	18481	28421	9,348										
60-64	3940	11887	16690	5,284	SUMMARY									
65-69	2088	5981	9936	2,679		Groups	Count	Sum	Average	Variance				
70-74	997	3087	4719	1,435		Total Literate persons of WB	18	174250	9680.55556	112384913				
75-79	386	1170	1978	722		Total Literate persons of UP	18	450685	25038.0556	729337771				
80+	689	2277	3450	538		Total Literate persons of MH	18	1E+06	62628.8333	6358041177				
Age not stated	240	3977	4422	148		Total Literate persons of KL	18	156761	8708.94444	99231369.5				
						ANOVA								
						Source of Variation	SS	df	MS	F	P-value	F crit		
						Between Groups	3.4323E+10	3	1.1441E+10	6.26994065	0.00080488	2.7395		
						Within Groups	1.2408E+11	68	1824748807					
						Total	1.5841E+11	71						

As according to tested result p-value is 0.00080488 which is less than significance level (0.05). Hence rejecting null hypothesis.

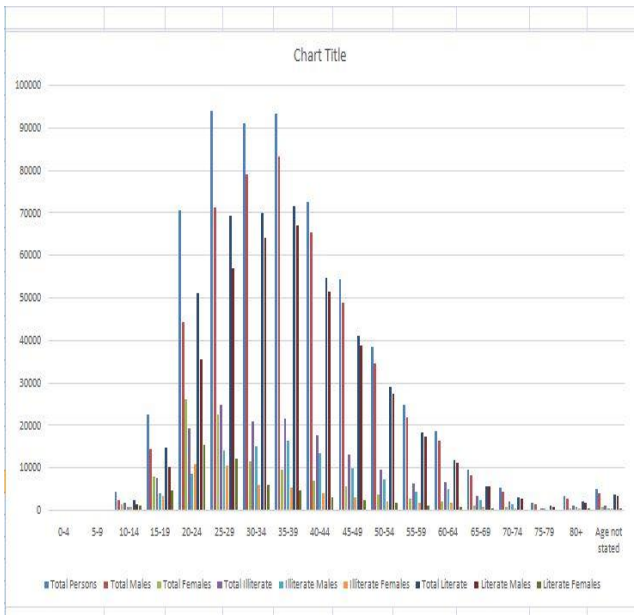
Highest mean value achieved for Maharashtra with 62k literate persons migration.

SIDE BY SIDE ANALYSIS OF MIGRATION FROM RURAL TO URBAN IN INDIA

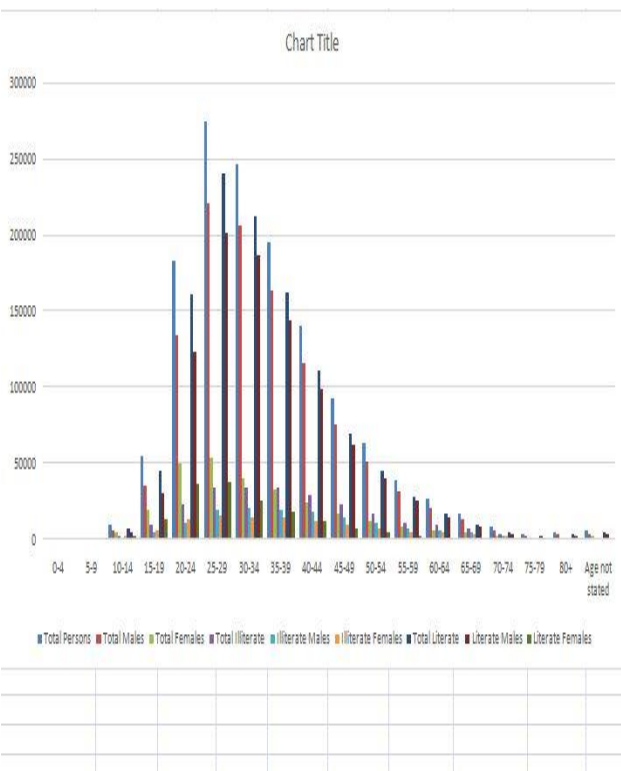
WEST BENGAL



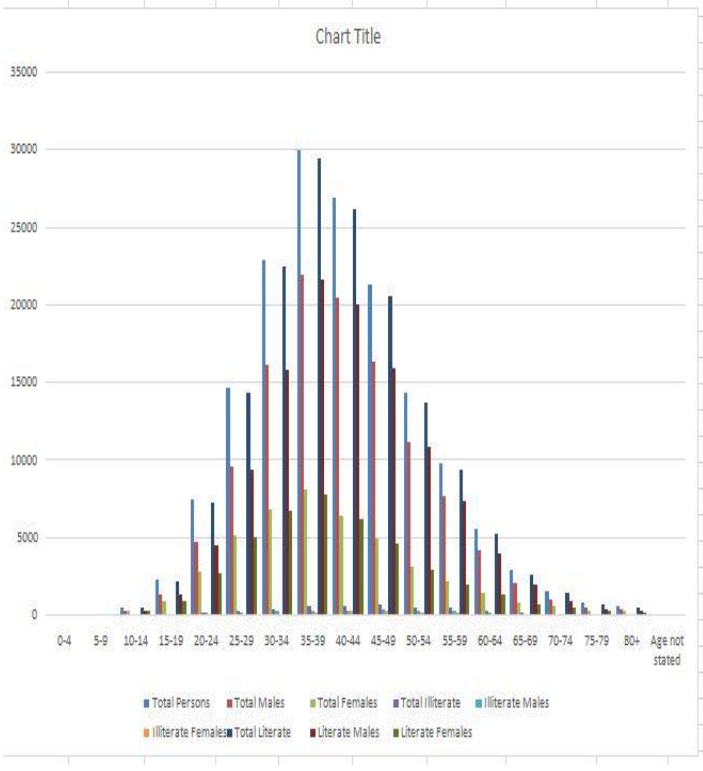
UTTAR PRADESH



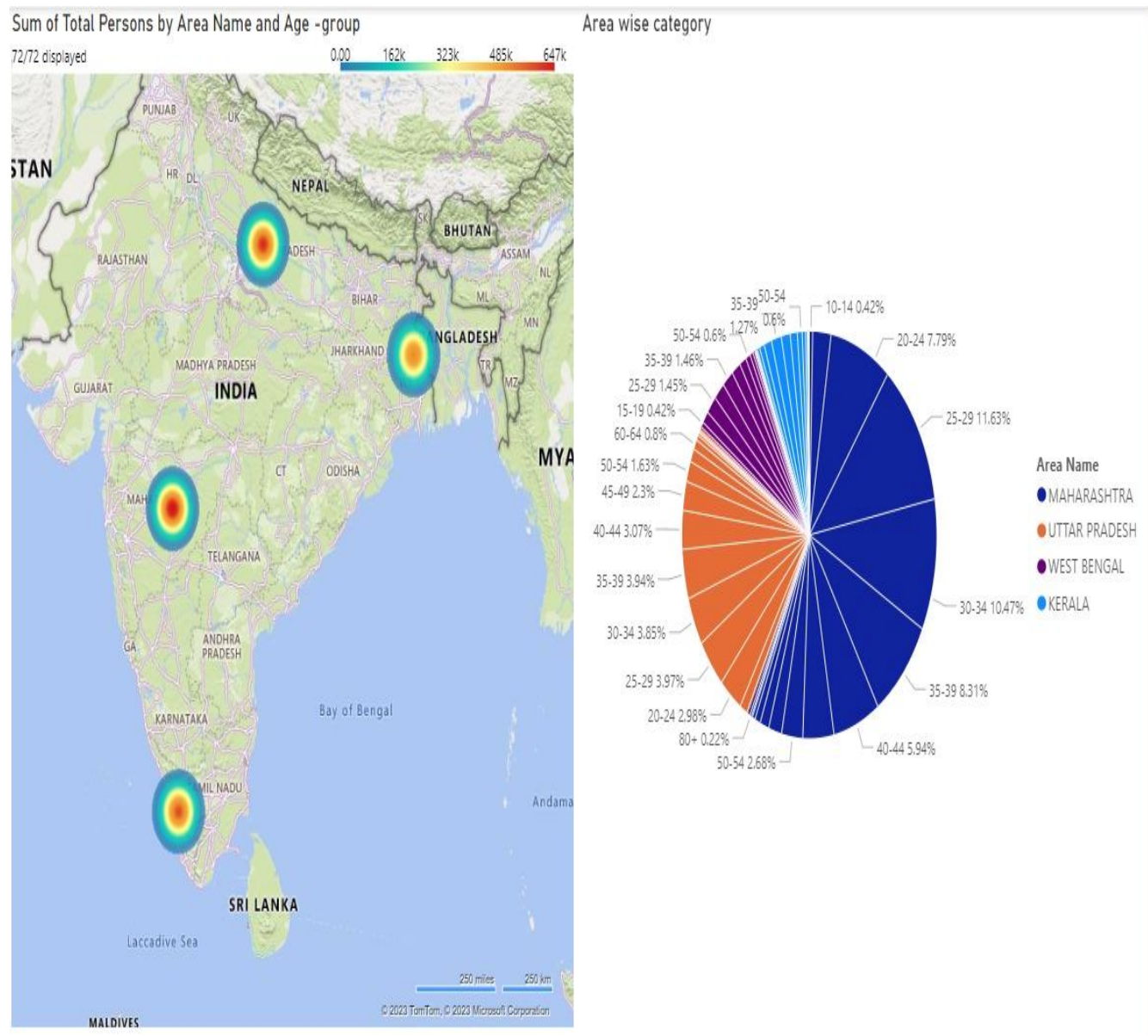
MAHARASHTRA



KERALA

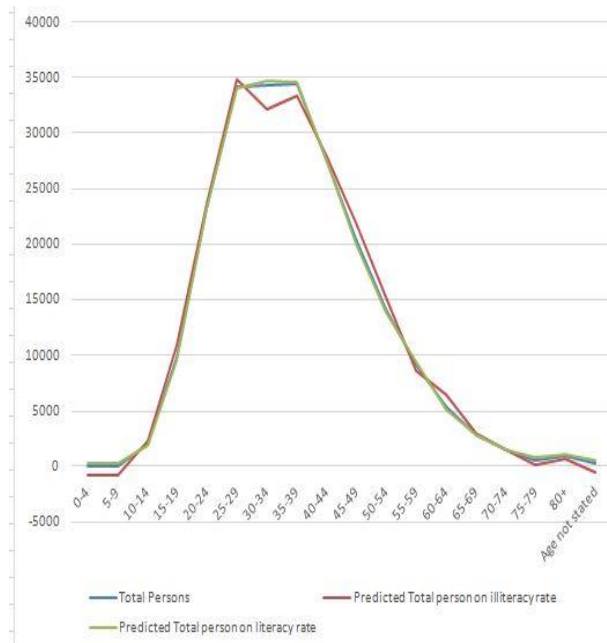


ANALYSIS OF MIGRATION ON WORK/EMPLOYED

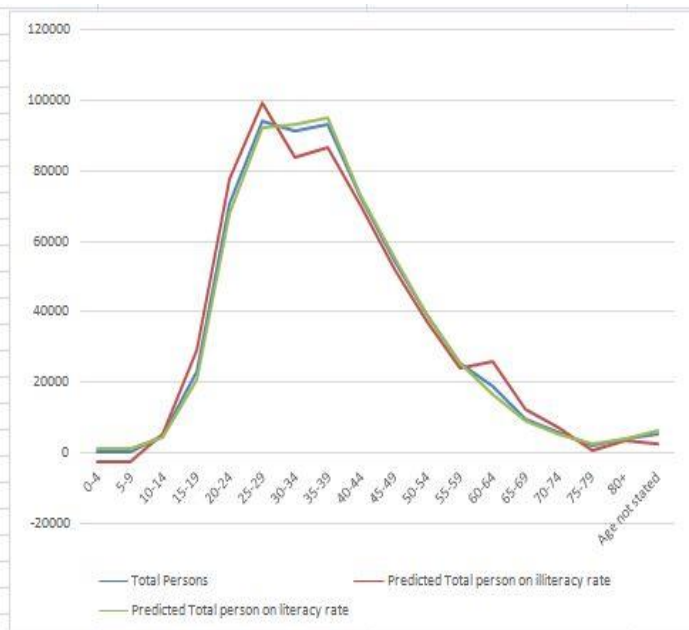


Above pie chart and map showing category wise difference of 4 states, which is showing maximum numbers of migrants from Maharashtra and Uttar Pradesh which is more than 82.7% of total migrants based on Employed migration.

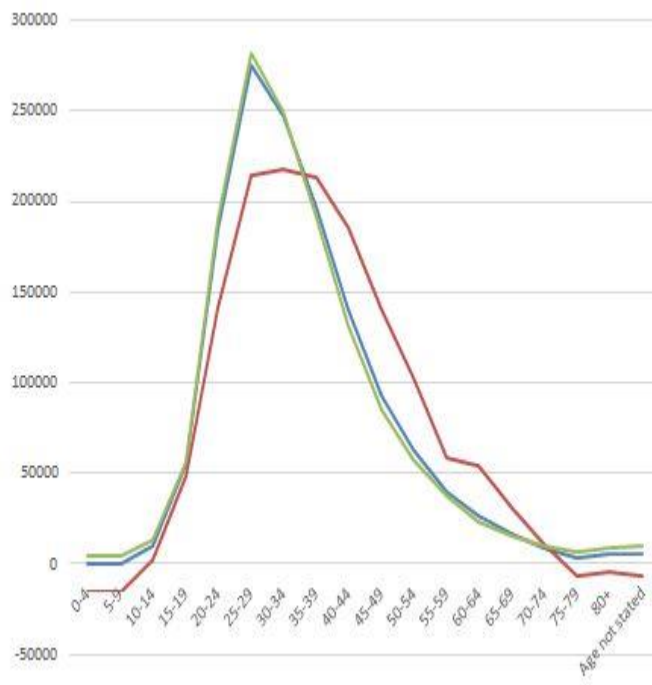
WEST BENGAL



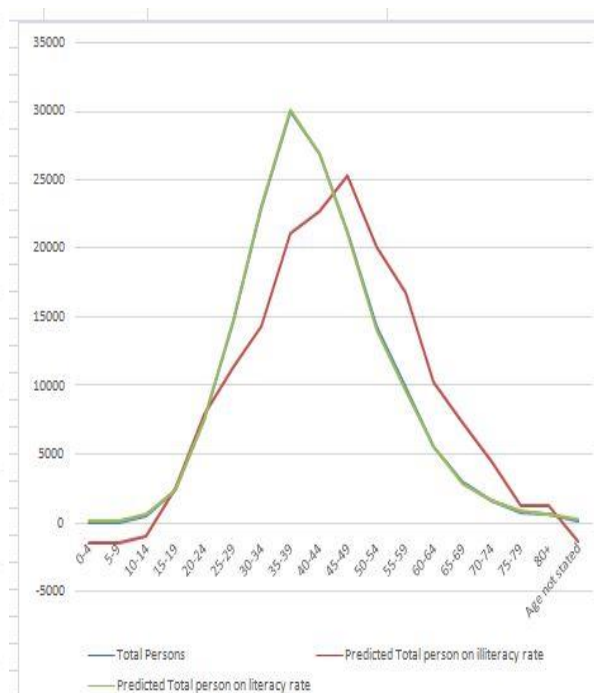
UTTAR PRADESH



MAHARASHTRA



KERALA



CONCLUSION

Our understanding of India's migration trends and patterns is generally based on census data, which is deficient in terms of capturing temporary, seasonal and circular migration. It has thus perpetuated the 20 impressions that mobility in India has been low. On the other hand, census data suggest that inter-state migration has been on the rise and migration has also become more feminized, primarily due to marriage-migration.

- Between 2001 and 2011, there was an increase in the growth rate of migrants headed for other destinations within their own states as compared to those headed outward.**
- The number of so-called inter-state migrants grew at 55% between the 1991 and the 2001 Census. This came down to just 33% between the 2001 and 2011 Census.**
- In contrast, the rate of growth in inter-district migrants (within the same state) increased from 30% between the 1991 and 2001 census to 58% between 2001 and 2011**

As per previous graph comparison, Maharashtra and Uttar Pradesh is showing maximum number of migrations.

Also, predicted total migrants will also be more for Uttar Pradesh in coming times based on literacy rate.

Also in West Bengal predicted total migrants will increase based on literacy.

The literacy rate among migrants in 2011 was 61.3% (76.7% for males and 54.0% for females) which was about 13% lower than the total population.

While male literacy rate stands at 80.9 per cent – which is 5.6 per cent more than the previous census, the female literacy rate stands at 64.6 per cent — an increase of 10.9 per cent than 2001

Literacy rate in India in 2011 has increased by 8 per cent to 73 per cent in comparison to 64.8 per cent in 2001.

THANK YOU