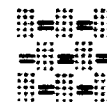


RANK SIZE RELATIONSHIP OF URBAN CENTRES



-
- 6.1 Introduction
- 6.2 Regional analysis
- References

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6.1 INTRODUCTION :

Urbanisation is never (and) even process as some cities grow at more a rapid rate than others. The process of urbanisation reflects the spatial geographical characteristics of the region. The rank size rule was first develop by Zipf (1949), and later on it was evaluated by H.A.Simon (1955), C.T.Stewart (1968), B.J.L.Berry and W.L.Garison (1958) and N.B.K.Reddy (1969).

The rank size rule is an investigative hypothesis, a theoreotical model or a norm to express the relationship of the often observed empirical regularities in the city size. It present a generalised picture of urban settlement in a region. " The belief that cities are related to each other in some orderly way forming into a system, is the basis for the postulation of rank size rule," (N.B.K.Reddy,1969). To identifying whether the rank size rule (Zipf,1949) is applicable in the study region or not, it has been applied to find out the actual size distribution of urban centres in the study region.

The rank size rule which states that if all the urban centres in an area are ranked in a descending order of population of n^{th} town will be $1/n$ th. The size of the largest city and the population of other urban centres will be arranged according to series 1, $1/2$, $1/3$, $1/4$... $1/n$ th. This is, if the population of the n^{th} city is multiplied by its rank. It

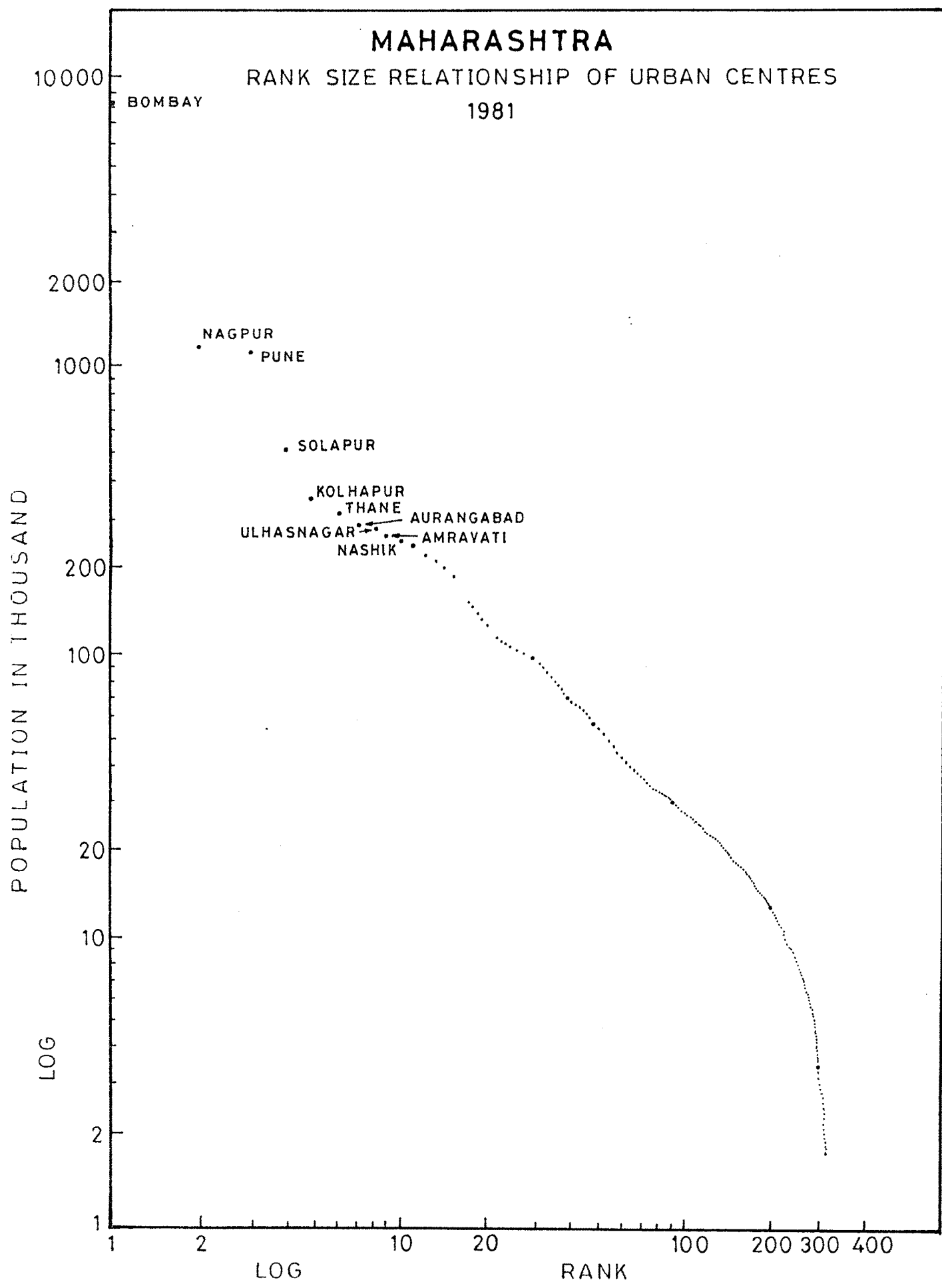


Fig.6.1

would approximately equal to the population of the largest city. This is expressed by the equation as -

$$P_1 = \frac{P}{IR}$$

Where, P_1 = Population of the first city
 P = Total population of the region
 IR = Reciprocal of R

The rank size rule is an empirical observation based on the study of actual population statistics. If we examine any region it is lighty to contain many small towns, a less number of medium size town and a few large cities. This pattern of city size has been observed to be quite regular from one region to another.

There are number of ways to express the rank size relationship and deviation from it. One is to plot the rank by size of place on a Log Log scale graph. Another way is to calculate both the numbers and places and the population which would be anticipated in various size classes when compaired this figures to actual distribution (Fig.6.1).

In the present study, the rank size rule has been expressed by first method. Table 6.1 illustrates the details of actual and expected population and difference between actual and expected population.

Table 6.1 : Maharashtra - Ranksize relationship (1981).

Rank No.	Name of the Urban centres	District	Reciprocal I/R	Actual population Pa	Expected population Pe
1	2	3	4	5	6
	MAHARASHTRA	STATE		21,993,594	
1	Gr. Bombay	Gr. Bombay	1.0000	8,243,405	-3495652.00
2	Nagpur	Nagpur	0.5000	1,210,461	-1747826.00
3	Pune	Pune	0.3333	1,203,351	1165217.30
4	Solapur	Solapur	0.2500	514,860	873913.00
5	Kolhapur	Kolhapur	0.2000	340,625	699130.40
6	Thane	Thane	0.1666	309,897	582608.66
7	Aurangabad	Aurangabad	0.1428	298,937	499378.85
8	Ulhasnagar	Thane	0.1250	273,668	436956.50
9	Nasik	Nasik	0.111	262,428	388405.77
10	Amravati	Amravati	0.1000	261,404	349565.20
11	Malegaon	Nasik	0.0909	245,883	317786.54
12	Akola	Akola	0.0833	225,412	291304.33
13	Pimprichinchwad	Pune	0.0769	220,966	268896.30
14	Dhule	Dhule	0.0714	210,759	249689.42
15	Nanded	Nanded	0.0666	191,269	233043.46
16	Sangli	Sangli	0.0625	152,389	218478.25
17	Jalgaon	Jalgaon	0.0588	145,335	205626.58
18	Ahmednagar	Ahmednagar	0.0555	143,037	194202.88
19	Kalyan	Thane	0.0526	136,052	183981.68
20	Ichalkaranji	Kolhapur	0.0500	133,751	174782.60
21	Bhusawal	Jalgaon	0.0476	123,133	166459.61
22	Jalana	Jalana	0.0454	122,276	158893.27
23	Chandrapur	Chandrapur	0.0434	115,777	151984.86
24	Bhiwandi	Thane	0.0416	115,298	145652.16
25	Latur	Osmanabad	0.0400	111,986	139826.08
26	Parbhani	Parbhani	0.0384	109,364	134448.15
27	Miraj	Sangli	0.0370	105,455	129468.59
28	Dombivli	Thane	0.0357	103,222	124844.71

Conti..

Table 6.1 conti..

1	2	3	4	5	6
29	Gondia	Bhandara	0.0344	100,423	120539.72
30	Ambarnath	Thane	0.0333	196,347	116521.73
31	Yeotmal	Yeotmal	0.0322	89,071	112762.96
32	Wardha	Wardha	0.0312	88,495	109239.12
33	Pune (Cant.)	Pune	0.0303	85,986	105928.84
34	Satara	Satara	0.0294	83,336	102813.29
35	Achalpur	Amravati	0.0285	81,186	99875.77
36	Kirkee Cant.	Pune	0.0277	80,835	97101.44
37	Bhir	Bhir	0.0270	80,287	94477.08
38	Nasik Road Deolali	Nasik	0.0263	77,666	91990.84
39	Barsi	Solapur	0.0256	72,537	89,632.10
40	Amalner	Jalgaon	0.0250	67,516	87,391.30
41	Kamptee	Nagpur	0.0243	67,364	85259.80
42	Nandurbar	Dhule	0.0238	65,394	83229.80
43	Pandharpur	Solapur	0.0232	64,380	81294.23
44	Khamgaon	Buldhana	0.0227	61,992	79446.63
45	Ballarpur	Chandrapur	0.0222	61,398	77681.15
46	Chalisgaon	Jalgaon	0.0217	59,342	75992.48
47	Hingangaon	Wardha	0.0212	50,075	74375.57
48	Deolali Ct.	Nasik	0.0208	57,745	72826.08
49	Bhandara	Bhandara	0.0204	56,025	713398.36
50	Shrirampur	Ahmednagar	0.0200	55,491	69913.04
51	Karad	Satara	0.0196	54,364	68542.19
52	Akot	Akola	0.0192	51,936	67224.07
53	Manmad	Nasik	0.0188	51,439	65955.69
54	Udgir	Osmanabad	0.0185	50,564	64734.29
55	Majivade	Thane	0.0181	49,400	63557.30
56	Parli	Bhir	0.0178	48,946	62422.35
57	Ratnagiri	Ratnagiri	0.0175	47,036	61327.22
58	Malkapur	Buldhana	0.0172	43,121	60269.86
59	Ambejogai	Bhir	0.0169	42,362	59248.33
60	Hingoli	Parbhani	0.0166	41,568	58260.86
61	Pusad	Yeotmal	0.0163	41,484	57305.77

Conti..

Table 6.1 conti..

1	2	3	4	5	6
62	Chopda	Jalgaon	0.0161	40,931	56,381.48
63	Sangamner	Ahmednagar	0.0158	40,088	55,486.53
64	Oser	Nasik	0.0156	39,905	54,619.56
65	Washim	Akola	0.0153	39,804	53,779.26
66	Karanja	Akola	0.0151	39,749	52,964.42
67	Osmanabad	Osmanabad	0.0149	39,086	52,173.91
68	Ahmednagar Contonment	Ahmednagar	0.0147	37,273	51,406.64
69	Baramati	Pune	0.0144	37,121	50,661.62
70	Panvel	Raigarh	0.0142	37,073	49,937.88
71	Kopargaon	Ahmednagar	0.0140	36,886	49,234.53
72	Lonavala	Pune	0.0138	36,260	48,550.72
73	Buldhana	Buldhana	0.0136	35,919	47,885.64
74	Vasai	Thane	0.0135	34,940	47,238.54
75	Tumsar	Bhandara	0.0133	34,840	46,608.69
76	Warana	Chandrapur	0.0131	34,187	45,995.42
77	Shirpur	Dhule	0.0129	34,013	45,398.07
78	Umner	Nagpur	0.0128	33,910	44,816.05
79	Phaltan	Satara	0.0126	33,859	44,248.75
80	Anjangaon	Amravati	0.0125	33,583	43,695.65
81	Dehu Road Contonment	Pune	0.0123	33,267	43,156.19
82	Urun Islam- pur	Sangli	0.0121	33,016	42,629.90
83	Badnera	Amravati	0.0120	32,351	42,116.28
84	Khopoli	Raigarh	0.0119	32,102	41,614.90
85	Wani	Yeotmal	0.0117	31,773	41,125.31
86	Shegaon	Wardha	0.0116	31,580	40,647.11
87	Pachora	Jalgaon	0.0114	31,564	40,179.90
88	Pulgaon	Wardha	0.0113	31,358	39,723.31
89	Arvi	Wardha	0.0112	31,119	39,276.98
90	Kalwa	Thane	0.0111	30,504	38,840.57
91	Kabnur	Kolhapur	0.0109	30,275	38,413.75
92	Basmath	Parbhani	0.0108	29,918	37,996.21
93	Nagaon	Thane	0.0107	29,513	37,587.65

Table 6.1 conti..

1	2	3	4	5	6
94	Murtijapur	Akola	0.0106	28,991	37,187.78
95	Dharangaon	Jalgaon	0.0105	28,736	36,796.33
96	Akkalkot	Solapur	0.0104	28,371	36,413.04
97	Yevala	Nasik	0.0103	28,343	36,037.64
98	Deglur	Nanded	0.0102	27,625	35,669.91
99	Chikhli	Buldhana	0.0101	27,606	35,309.61
100	Chiplun	Ratnagiri	0.0100	27,250	34,956.52
101	Varanagaon	Jalgaon	0.0099	26,553	34,610.41
102	Digras	Yeotmal	0.0098	26,503	34,271.09
103	Tasgaon	Sangli	0.0097	26,159	33,938.36
104	Daryapur Banosa	Amravati	0.0096	25,904	33,612.03
105	Dondaicha	Dhule	0.0095	24,890	33,291.92
106	Narpoli	Thane	0.0094	25,788	32,977.84
107	Warud	Amravai	0.0093	25,761	32,669.64
108	Bhayandar	Thane	0.0092	25,646	32,367.14
109	Daund (Nim)	Pune	0.0091	25,575	32,070.20
110	Balapur	Akola	0.0090	25,422	31,778.65
111	Yawal	Jalgaon	0.0090	25,049	31,492.36
112	Shahade	Dhule	0.0089	24,955	31,211.17
113	Sailu	Parbhani	0.0088	24,779	30,934.97
114	Wai	Satara	0.0087	24,661	30,663.61
115	Nandura	Buldhana	0.0086	24,402	30,396.97
116	Parola	Jalgaon	0.0086	24,328	30,134.93
117	Vita	Sangli	0.0085	24,081	29,877.36
118	Katol	Nagpur	0.0084	24,033	29,624.16
119	Jaysingpur	Kolhapur	0.0084	24,012	29,375.22
120	Rahuri	Ahmednagar	0.0083	23,721	29,130.43
121	Umerkhed	Yeotmal	0.0082	23,316	28,889.68
122	Virar	Thane	0.0081	23,303	28,652.88
123	Kalamba	Pune	0.0081	23,129	28,419.93
124	Erandol	Jalgaon	0.0080	22,797	28,190.74
125	Purna	Parbhani	0.0080	22,697	27,965.21
126	Mumbra	Thane	0.0079	22,657	27,743.26

Conti..

Table 6.1 conti..

1	2	3	4	5	6
127	Manjlegaon	Bhir	0.0078	22,555	27,524.81
128	Talegaon	Pune	0.0078	22,520	27,309.18
129	Dabhade Mehkar	Buldhana	0.0077	22,382	27,098.07
130	Sinnar	Nasik	0.0076	21,926	26,889.63
131	Manwath	Parbhani	0.0076	21,830	26,684.36
132	Ashta	Sangli	0.0075	21,333	26,482.21
133	Paithan	Aurangabad	0.0075	21,126	26,283.09
134	Satana	Nasik	0.0074	20,821	26,086.95
135	Vaijapur	Aurangabad	0.0074	20,657	25,893.71
136	Hadapsar	Pune	0.0073	20,563	25,703.72
137	Morshi	Amravati	0.0072	20,524	25,515.70
138	Kirloskarwadi	Sangli	0.0072	20,512	25,330.81
139	Igatpur	Nasik	0.0071	20,461	25,148.57
140	Raver	Jalgaon	0.0071	20,346	24,968.94
141	Jintur	Parbhani	0.0070	20,251	24,791.85
142	Talode	Dhule	0.0070	20,055	24,617.26
143	Katemanivali	Thane	0.0069	20,028	24,445.11
144	Satpur	Nasik	0.0069	19,952	24,275.36
145	Darwha	Yeotmal	0.0068	19,772	24,107.94
146	Gangakhed	Parbhani	0.0068	19,739	23,942.82
147	Kurduvadi	Solapur	0.0068	19,554	23,779.94
148	Mohone	Thane	0.0067	19,354	23,619.27
149	Ayare	Thane	0.0067	19,320	23,460.75
150	Daund	Pune	0.0066	19,318	23,304.36
151	Dharmabad	Nanded	0.0066	19,146	23,150.01
152	Nawapur	Dhule	0.0065	19,115	22,997.71
153	Pauni	Bhandara	0.0065	18,699	22,847.39
154	Sawantwadi	Ratnagiri	0.0064	18,671	22,699.03
155	Gadhinglaj	Kolhapur	0.0064	18,535	22,552.59
156	Tirora	Bhandara	0.0064	18,452	22,408.02
157	Duttapur Dhamangaon	Amravati	0.0063	18,344	22,265.29
158	Junnar	Pune	0.0063	18,311	22,124.37
159	Jalgaon	Buldana	0.0062	17,901	21,985.23

Conti..

Table 6.1 conti..

1	2	3	4	5	6
160	Mangrulpur	Akola	0.0062	17,875	21,847.82
161	Nandgaon	Nasik	0.0062	17,768	21,712.12
162	Faizpur	Jalgaon	0.0061	17,629	21,578.09
163	Pandharkuda	Yeotmal	0.0061	17,588	21,445.71
164	Aurangabad Cantonment	Aurangabad	0.0060	17,434	21,314.95
165	Malvan	Ratnagiri	0.0060	17,328	21,185.16
166	Sendurjana	Amravati	0.0060	17,282	21,058.14
167	Nilanga	Osmanabad	0.0059	17,201	20,932.04
168	Kurundvad	Kolhapur	0.0059	17,084	20,807.45
169	Tuljapur	Osmanabad	0.0059	16,941	20,684.33
170	Lohagaon	Pune	0.0058	16,918	20,562.65
171	Mangalvedhe	Solapur	0.0058	16,802	20,442.40
172	Ausa	Osmanabad	0.0058	16,761	20,323.55
173	Ramtak	Nagpur	0.0057	16,734	20,206.08
174	Karmala	Solapur	0.0057	16,739	20,089.95
175	Khadakvasla	Pune	0.0057	16,654	19,975.15
176	Kagal	Kolhapur	0.0056	16,545	19,861.65
177	Ahmadpur	Osmanabad	0.0056	16,537	19,749.44
178	Pathri	Parbhani	0.0056	16,480	19,638.49
179	Kinwat	Nanded	0.0055	16,476	19,528.78
180	Partar	Parbhani	0.0055	16,434	19,420.28
181	Kannad	Aurangabad	0.0055	16,391	19,312.99
182	Umarga	Osmanabad	0.0054	16,087	19,206.87
183	Savda	Jalgaon	0.0054	15,989	19,101.92
184	Narkhed	Nagpur	0.0054	15,878	18,998.10
185	Savner	Nagpur	0.0054	15,541	18,895.41
186	Desaigani	Chandrapur	0.0053	15,503	18,793.82
187	Georai	Bhir	0.0053	15,415	18,693.32
188	Kamptee Cat.	Nagpur	0.0053	15,241	18,593.89
189	Ghugus	Chandrapur	0.0052	15,214	18,495.51
190	Mahad	Raigarh	0.0052	15,196	18,398.16
191	Uran	Raigarh	0.0052	15,168	18,301.84

Conti..

Table 6.1 conti..

1	2	3	4	5	6
192	Sangole	Solapur	0.0052	148,54	18,206.52
193	Pen	Raigarh	0.0051	14,772	18,112.18
194	Mhasvad	Satara	0.0051	14,749	18,018.82
195	Koregaon	Satara	0.0051	14,594	17,926.42
196	Vadgaon Kasaba	Kolhapur	0.0051	14,430	17,834.95
197	Patur	Akola	0.0050	14,269	17,744.42
198	Deulgaon R.	Buldana	0.0050	14,088	17,654.80
199	Alibag	Raigarh	0.0050	14,051	17,566.09
200	Mukhed	Nanded	0.0050	14,006	17,478.26
201	Kullam	Osmanabad	0.0049	13,788	17,391.30
202	Shrivardhan	Raigarh	0.0049	13,740	17,305.20
203	Chandur	Amravati	0.0049	13,612	17,219.96
204	Gajabundhan Patharli	Thane	0.0049	13,494	17,135.54
205	Murum	Osmanabad	0.0048	13,451	17,051.96
206	Kulgaon	Thane	0.0048	13,207	16,969.18
207	Revalgaon	Nasik	0.0048	13,253	16,887.20
208	Vadgaon sheri	Pune	0.0048	13,050	16,806.01
209	Dharur	Bhir	0.0047	12,836	16,725.60
210	Bhor	Pune	0.0047	12,834	16,645.96
211	Khapa	Nagpur	0.0047	12,722	16,567.07
212	Ghatanji	Yeotmal	0.0047	12,628	16,488.92
213	Sasvad	Pune	0.0046	12,526	16,415.10
214	Palghar	Thane	0.0046	12,481	16,334.82
215	Vengurla	Ratnagiri	0.0046	12,339	16,258.84
216	Kandhar	Nanded	0.0046	12,317	16,183.57
217	Shirur	Pune	0.0046	12,181	16,108.99
218	Kanhan (Pipri)	Nagpur	0.0045	12,060	16,035.10
219	Sangvi Havdi	Pune	0.0045	11,969	15,961.88
220	Chandur Bazar	Amravati	0.0045	11,923	15,889.32

Conti..

Table 6.1 conti..

1	2	3	4	5	6
221	Kalamnuri	Parbhani	0.0045	11,845	15,817.42
222	Roha Ash-tami	Raigarh	0.0045	11,781	15,746.18
223	Rahimatpur	Satara	0.0044	11,666	15,675.56
224	Kundalvadi	Nanded	0.0044	11,617	15,605.58
225	Deoli	Wardha	0.0044	11,566	15,536.23
226	Gangapur	Aurangabad	0.0044	11,468	15,467.48
227	Bhapur	Nasik	0.0044	11,243	15,399.34
228	Murnd	Raigarh	0.0043	11,225	15,331.80
229	Telhara	Akola	0.0043	11,204	15,264.85
230	Ambad	Aurangabad	0.0043	11,200	15,198.48
231	Madhavnagar	Sangli	0.0043	11,144	15,132.69
232	Hadgaon	Nanded	0.0043	11,127	15,067.46
233	Maindargi	Solapur	0.0042	11,079	15,002.79
234	Kailas	Pune	0.0042	11,058	14,938.68
235	Paranda	Osmanabad	0.0042	10,894	14,875.11
236	Satara Rd.	Satara	0.0042	10,867	14,812.08
237	Gandhinagar	Kolhapur	0.0042	10,767	14,749.58
238	Rajura	Chandrapur	0.0042	10,569	14,687.61
239	Ekalhare	Nasik	0.0041	10,318	14,621.15
240	Bhum	Osmanabad	0.0041	10,204	14,565.21
241	Wari	Ahmednagar	0.0041	10,259	14,504.78
242	Khed	Ratnagiri	0.0041	10,203	14,444.84
243	Kolshet	Thane	0.0041	10,190	14,385.39
244	Chikanghar	Thane	0.0040	9,976	14,326.44
245	Chandvad	Nasik	0.0040	9,946	14,267.96
246	Sindi	Wardha	0.0040	9,897	14,209.96
247	Mudkhed	Nanded	0.0040	9,865	14,152.43
248	Bhakardan	Aurangabad	0.0040	9,681	14,095.37
249	Naldurg	Osmanabad	0.0040	9,665	14,038.76
250	Manikpur	Thane	0.0040	9,531	13,982.60
251	Neral	Raigarh	0.0039	9,523	13,926.90

Conti..

Table 6.1 conti..

1	2	3	4	5	6
252	Kalmeshwar	Nagpur	0.0039	9,439	13,871.63
253	Indapur	Pune	0.0039	9,418	13,816.80
254	Vada	Thane	0.0039	9,384	13,762.40
255	Mahabaleshwar	Satara	0.0039	9,061	13,708.43
256	Balkum	Thane	0.0039	9,019	13,654.89
257	Kandari	Jalgaon	0.0038	9,009	13,601.75
258	Rajapur	Ratnagiri	0.0038	8,884	13,549.03
259	Shahapur	Thane	0.0038	8,824	13,496.72
260	Lasalgaon	Nasik	0.0038	8,638	13,444.81
261	Panchgani	Satara	0.0038	8,636	13,393.30
262	Murgud	Kolhapur	0.0038	8,613	13,342.18
263	Chincholi	Nagpur	0.0038	8,541	13,291.45
264	Chole	Thane	0.0037	8,444	13,241.10
265	Malyan	Thane	0.0037	8,322	13,191.13
266	Khuldabad	Aurangabad	0.0037	8,315	13,141.54
267	Dudhani	Solapur	0.0037	8,300	13,092.32
268	Ghansoli	Thane	0.0037	8,062	13,043.47
269	Karjat	Raigarh	0.0037	7,970	12,994.98
270	Sandor	Thane	0.0037	7,927	12,946.85
271	Sonpeth	Parbhani	0.0036	7,917	12,899.08
272	Dapoli	Ratnagiri	0.0036	7,832	12,851.66
273	Biloli	Nanded	0.0036	7,776	12,804.58
274	Dehu	Pune	0.0036	7,569	12,757.85
275	Alandi	Pune	0.0036	7,523	12,711.46
276	Dahanu	Thane	0.0036	7,344	12,665.40
277	Ashti	Beed	0.0036	7,290	12,619.68
278	Revdanda	Raigarh	0.0035	7,246	12,574.28
279	Sasti	Chandrapur	0.0035	7,193	12,529.21
280	Jawhar	Thane	0.0035	7,055	12,484.47
281	Shivatkar (Nira)	Pune	0.0035	7,054	12,440.04
282	Mohadi	Bhandara	0.0035	7,026	12,395.92
283	Mowad	Nagpur	0.0035	6,971	12,352.12

Conti..

Table 6.1 conti..

1	2	3	4	5	6
284	Trimbak	Nasik	0.0035	6,759	12,308.63
285	Kegaon	Raigarh	0.0035	6,635	12,265.44
286	Path Umri	Nanded	0.0034	6,625	12,222.55
287	Mohpa	Nagpur	0.0034	6,430	12,179.97
288	Dabhol	Ratnagiri	0.0034	6,363	12,137.68
289	Goregaon	Raigarh	0.0034	5,813	12,095.68
290	Warthi	Bhandara	0.0034	5,289	12,093.98
291	Jejuri	Pune	0.0034	5,126	12,012.54
292	Malkapur	Kolhapur	0.0034	4,845	11,971.41
293	Pophali	Ratnagiri	0.0034	4,817	11,930.55
294	Harnai	Ratnagiri	0.0034	4,703	11,889.97
295	Sopara	Thane	0.0033	4,337	11,849.66
296	Matheran	Raigarh	0.0033	3,920	11,809.63
297	Warwandi	Ahmednagar	0.0033	3,713	11,769.87
298	Rasayani	Raigarh	0.0033	3,651	11,730.37
299	Vadner (Bhairar)	Nasik	0.0033	3,651	11,691.14
300	Shirgaon	Thane	0.0033	3,616	11,652.17
301	Alove	Ratnagiri	0.0033	3,288	11,613.46
302	Bina	Nagpur	0.0033	3,183	11,575.00
303	Chikalda	Amravati	0.0033	2,620	11,536.80
304	Panhala	Kolhapur	0.0032	2,540	11,498.85
305	Kankavli	Ratnagiri	0.0032	2,203	11,461.15
306	Majari	Chandrapur	0.0032	1,894	11,423.69
307	Davlameti	Nagpur	0.0032	1,771	11,386.48

6.2 REGIONAL ANALYSIS :

The rank size rule distribution of urban centres in the State of Maharashtra when plotted on Log Log scale graph (Fig.6.1) clearly indicate that the actual population of the first rank city in the region is the larger than the expected population, in the same way the third ranking city, Pune indicates more actual population than the expected. All the remaining urban centres show less population than the expected population. In the study region the difference between actual population and expected population is found in the lower ranks of the towns. From the Table 6.1 one can observed that actual population deviations are very high. The last ranking town (Dowlameti of Nagpur district) has an actual population of 1771 persons; on the other hand the expected population of this 307 ranking centres is 11386.48 which shows nearly 85 percent deviation.

Applying the rank size rule in case of Maharashtra (using 1981 data) in this study, a graph using Log-Log scale graph exhibiting population size and the rank of towns, is represented for all the 307 urban centres. The graph clearly reveals that the rule is hardly applicable for the year 1981.

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