

CHAPTER - V

LOCATIONAL TRENDS IN COTTON TEXTILE INDUSTRY
IN MAHARASHTRA

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IN MAHARASHTRALocational Factors :

The location of an Industry is determined almost exclusively by business motives and that very site is selected which appears to afford the greatest advantage to the particular enterprise. The principal business motives and advantages are the proximity to market, skilled labour, nearness of raw materials, transport facility, access to cheap fuel or other forms of power, capital investment etc. If the individual units are so located the cost of production tends to be as low as possible. It is, therefore, of fundamental importance to study the principles that govern the location of Cotton Textile Industry in Maharashtra.

According to the German Economist Alfred Weber, the location of manufacturing industry is determined by the ratio between the weight of the localized materials and the weight of the final product. He calls it, 'The Material Index'. If the Material Index is greater than one, production is attracted to the place of deposit, if less it lies at the centre of consumption. Cotton fibre is considered to be 'Pure material', in the sense that it does not lose much of its weight in the process of manufacture, therefore, here the 'Material Index' is low, during its initial stages raw

materials influence great in the location of industry. It is for the transport facility, nearness to the markets and capital investment from Parsee and Bhatia merchants at the beginning.

To discuss about the transport facility it must be remembered that in the cotton textile industries the cost of transport from the raw materials to finished products is so small that raw materials and finished product can go very great distance with very little addition to the total cost. Sea transport is always cheaper over long distances and places on the sea coast enjoys favourable transport relations, if harbour facilities are available. Bombay being a port with a fine natural harbour enjoy the advantage of cheap sea freights on her imports of machinery and mill stores and on exports of finished goods to foreign markets. For the transport of raw cotton from the interior to Bombay, the railways, in its initial stages, also offered comparatively cheap rates in the Port Towns. But during the recent years the influence of the cost structure of transport factors has somewhat been diminished due to the practice of railways to charge lower rates for long distances and heavy and bulky materials. This fact shows that it is not only the proximity of raw materials or markets but also the 'transport relation' which is of real economic significance.

The influence of the consumers' market on the location of the industry depends on two factors namely the nature of the finished products and their transport ability and character and size of the consumers' market. Although cotton piece goods like raw cotton, can be carried over long distance without any appreciable increase in the total costs, the existence of consumers' market in close proximity, gives the industry some more advantages. This advantage is likely to be great, if the consumers markets are larger in size and relatively more concentrated. Further, a large and concentrated market has access to other productive factors as labour, capital and organisation and also provides greater opportunities to consumers traders and producers for closer personal contact. All these factors have tended to increase the relative influence of consumers market in the location of the industry. This advantages of consumers' markets which is larger in size and relatively more concentrated at greater Bombay area in Maharashtra and its foreign markets and its high spending power of the town people secure a great economy of production and distribution of finished products.

Power supply to the Mills and also its cost are important factors in the location of the Cotton Mill Industry. It has been estimated that the production of cloth of medium counts, the cost of power and fuel forms about 8 to 10 per cent of the total cost. In the initial stage of cotton textile industry in Maharashtra

Coal, for fuel, was imported from South Africa. Later on with the introduction of railways and discovery of Bihar Coal fields the coal was supplied from Bengal Bihar Coal belt. But with the advent of hydroelectric power not only regular but also cheap energy and power is available for the factories.

Last but not least among the important factor was the availability of raw cotton growing tracts nearby. Those availability of raw cotton does not play a decisive role in the localisation of cotton mills, yet it is not a negligible factor for concentration of both the spinning and weaving sectors. The major portion of the raw cotton produce within the state is consumed by the Mills in the State and cotton of certain varieties is imported from other states and also from foreign countries. The relative position of Maharashtra in the production and consumption of cotton in the country is shown in Table 42.

Table 42

Relative position in production and consumption of cotton in thousands in the mills of Maharashtra in 1970.

		Bales of 100 kg. each	
		<u>Maharashtra</u>	<u>All India</u>
Production	...	1069.7	4931.3
Consumption	...	1251.3	5182.5

Among the previous factors three factors i.e. raw materials power and consumers' market determine the optimum point of

transportation costs and determined the basic frame work of industrial orientation. Besides, there labour and capital also play important role in the location of cotton mills in Maharashtra.

In the Cotton Textile Industry wages form 20 to 27 per cent of the total cost or 40 to 54 per cent of the total works cost depending on the proximity of labour, level of wages and the character of output. The industry in Bombay city draws its labour force mostly from the neighbouring districts of Konkon, Satara and Sholapur. The district of Ratnagri accounts for about 40% of Bombay labour force because the density of population in this district is very high and its precarious agriculture is not able to support it.

Capital is highly a mobile factor of production and it is likely to be equally available for use in any part of the country. It is often suggested that financiers of new enterprises often influence the choice of site by expressing their preference for some place near their homes, so that they might more easily supervise their investment. In the initial stage of cotton textile industry in Maharashtra, the rich Parsee and Bhatia merchants of Bombay played a vital role in investing capital in cotton trade and in establishing mills in Bombay. Most of these merchants had learned, during the course of their trade the methods of modern finance and industrial organisation

and knew the way to utilise their funds and for that they acquired considerable experience of business management and organisation.

Further, Bombay, being an important trading and commercial centre, offered numerous financial, banking and marketing facilities easily obtained at other centres.

Above this, Government policy also contributed indirectly for the growth of concentration at this location. Throughout the Plan periods the Government insisted on greater utilisation of existing plant by more shifts or putting more spindles and looms to use in each shifts. Further, the Government sought to encourage textile exports and maximise exchange earning therefrom. This policy also tended to help concentration at the established location.

Factors like the level of ground, topography of a region drainage facilities and disposal of waste products sometime affect the location of industries. Climate also plays an important role in the determination of location of industries associated with agricultural raw materials. The humid climate of Bombay offered yet another advantage for spinning of yarn, under dry condition the thread becomes brittle and it brakes.

A fortunate combination of all these factors led to the phenomanal extension of cotton mill industry of Bombay till the 20th century.

Distribution of Industry :

The full significance of the distribution of the industry is only realised when it is considered in relation to the distribution of working population. For this purpose, the location quotient of the various steps in respect of cotton textile industry has been worked out. The location quotient gives the degree of concentration of a particular industry in a particular area. The location quotient is obtained by dividing the percentage share of ^{the} region or state in the total number of workers employed in the industry, by its percentage share in the total industrial population. Table 43 shows the location quotient of the cotton textile industry throughout India from 1956 to 1975.

Table 43Location Quotient of Cotton Mill Industry in India

States	Percentage of workers in large industrial establishment	Percentage of workers employed in cotton textile industry	Location quotient
1. Maharashtra	20.33	28.56	1.40
2. West Bengal	16.23	4.87	.31
3. Madras	6.80	12.33	1.81
4. Andhra Pradesh	6.04	2.09	.34
5. U.P.	5.95	6.00	1.00
6. Karnataka	4.60	5.66	1.21
7. M.P.	4.25	6.57	1.31
8. Punjab & Haryana	5.36	2.63	.46
9. Delhi	1.94	1.80	.83
10. Bihar, Orissa & Assam	5.94	1.84	.30
11. Rajasthan	2.11	1.42	.67
12. Gujerat	9.34	22.24	2.38
13. Kerala	4.15	1.56	.36
14. Others	6.96	2.43	.35

The location quotient shows that Maharashtra has the highest concentration of cotton mills industry previously, but now it is found in Gujarat.

Present position of mills :

The heart of the cotton mill industry is found in triangular position formed by Bombay, Sholapur and Nagpur. In 1966-67 cotton mills of these three centres accounted for about 80 per cent of the total. The number and character of distribution of cotton mill in the State is given in Table 44.

Table 44

Number and character of distribution of Cotton Mills

Name of Area	No. of Mills	Name of Area	No. of Mills
1. Bombay City	57	10. Osmanabad	1
2. Thane	2	11. Akola	4
3. Pune	1	12. Nanded	4
4. Kholapur	3	13. Amravati	2
5. Sangli	4	14. Wardha	2
6. Sholapur	9	15. Nagpur	3
7. Dhulia	1	16. Yeatmal	2
8. Jalgaon	7	17. Nasik	1
9. Aurangabad	2	18. Bandera	1
		19. Ahmednagar	1
		Total :	<u>107</u>

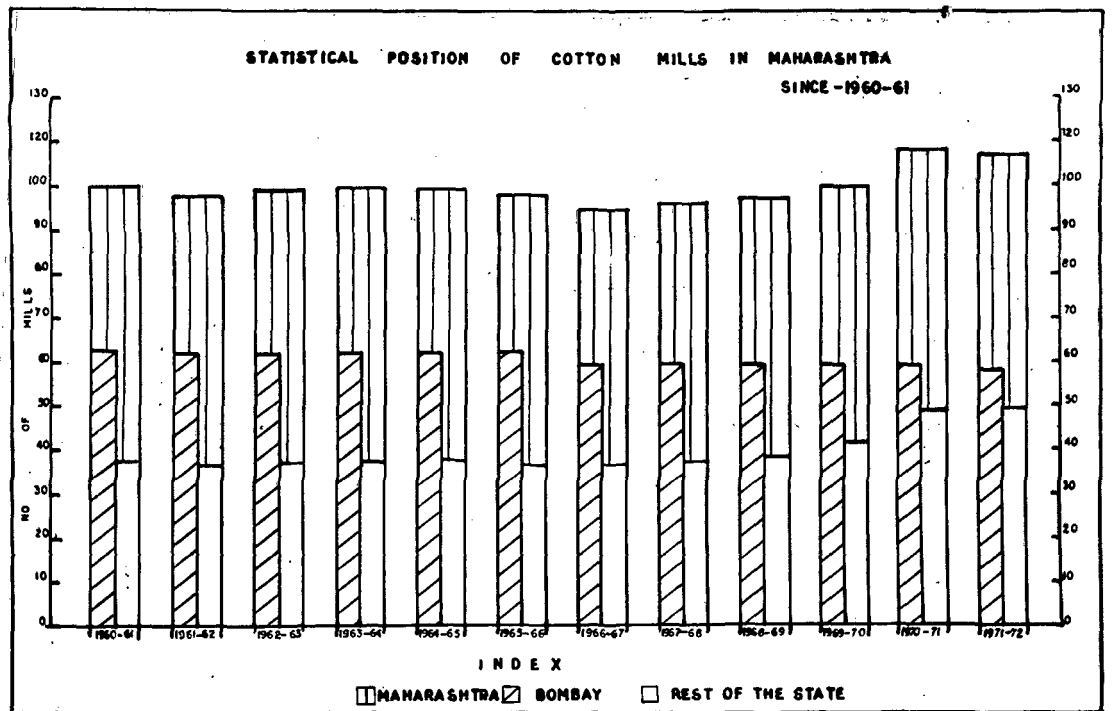


FIG 42

Statistical position of cotton mills in Maharashtra 197

The table shows the main characteristic of the industry i.e. its uneven distribution throughout the State owing to its different geographical, historical and political causes. As many as 59 mills out of 95 in 1966-67 in the State were located in and around Bombay City. In Bombay city mills were mainly situated in Parel and Dadar area in the northern suburbs of the city where industrial houses are so densely built that the skyline is broken by mill chimneys and the area is highly congested by the vast-block of labour force.

The another important point of the distribution of the mills is found that even the industrial units are located within certain regions almost to complete exclusion of the other yet it is found that most of the spinning units are located in the heart of cotton growing districts and on the other hand most of the weaving units are located outside the cotton growing region. It is mainly because 'as in the spinning of yarns the costs of raw materials accounts for about four-fifth of the total costs! Proximity of raw materials is, therefore, an important factor in the location of spinning units and on the other hand the character of the market, i.e. the demand of the people is an important factor in the location of the weaving mills and for that reason they are mainly located in the towns and cities (Fig. 42) Appendix IX shows the inter-regional distribution of spindles, looms and daily average workers in the cotton mill industry in Maharashtra since 1961.

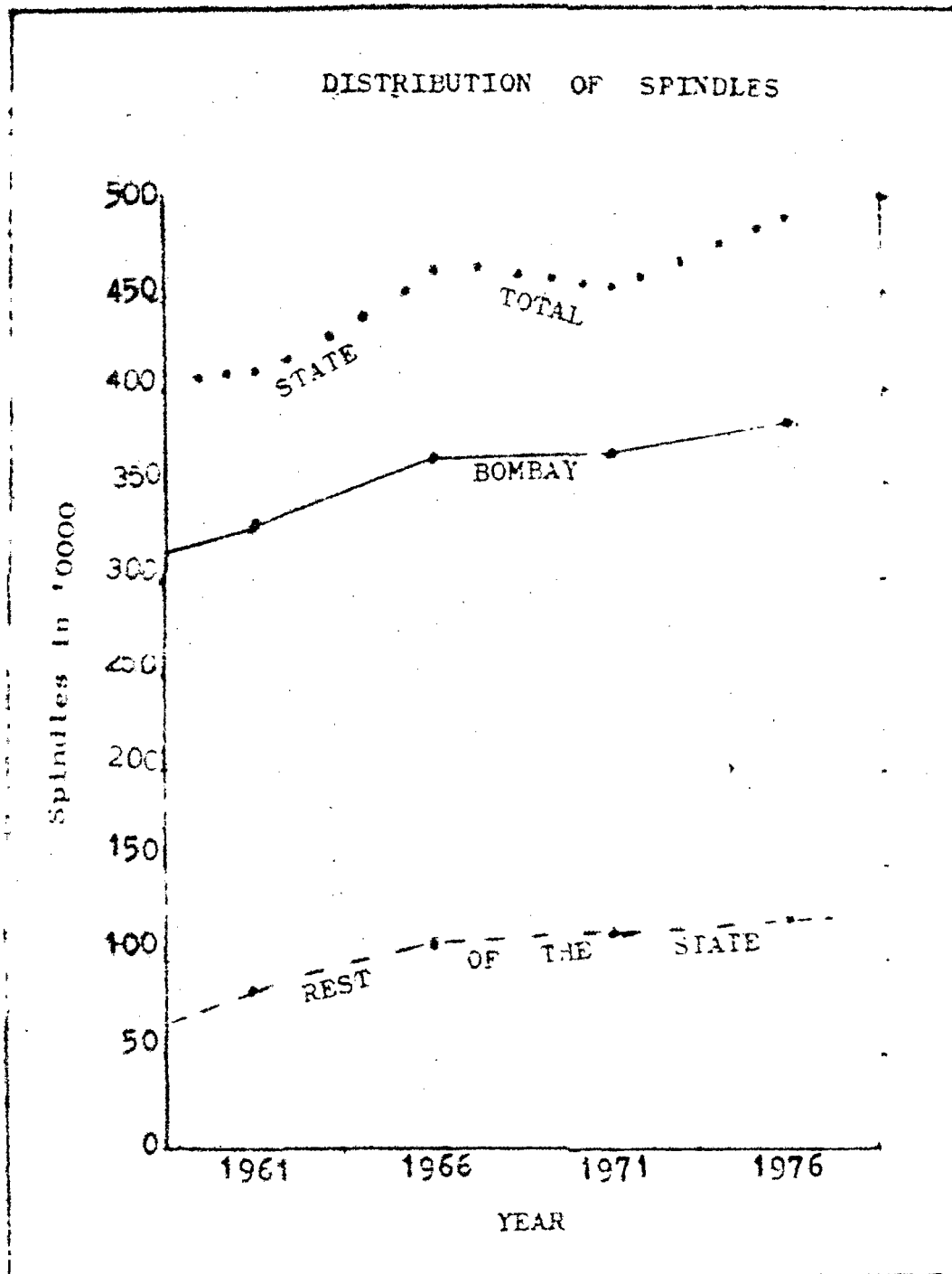


FIG 43

Distribution of spindles

The distribution of spindles shows (Fig. 43 & 44) that Bombay city contained 35,46,488 spindles and the distribution of loomage (Fig. 45) shows that 62,066 of looms are located in Bombay city while rest of the Maharashtra contained only 15,331 of the looms (Fig. 46) installed in 1973. The distribution of workers also shows equally the predominant position of Bombay. Maharashtra consumed about 15 lakh bales of cotton every year which is about 25-26 per cent of the total cost consumption by all the mills in India, the state has 18 spinning and 77 composite mills, i.e. about 15 per cent of the total number are in Maharashtra.

Table 45 shows the economic distribution of cotton mill in Maharashtra and also it compared its position with India.

Table 45

Economic distribution of Cotton Mills in 1967

	<u>Maharashtra</u>	<u>All India</u>
1. Spindles installed (in million)	4.5	17.00
2. Looms installed (in lakhs)	0.78	2.08
3. Workers employed per day (in lakh)	2.39	7.79
4. Cotton bales of 180 kg. consumed in lakhs		
i) Indian	11.85	51.35
ii) Foreign	2.71	6.64
	14.62	57.44
5. Cloth production (in million metres)	1,355	4,048

DISTRIBUTION OF LOOMS

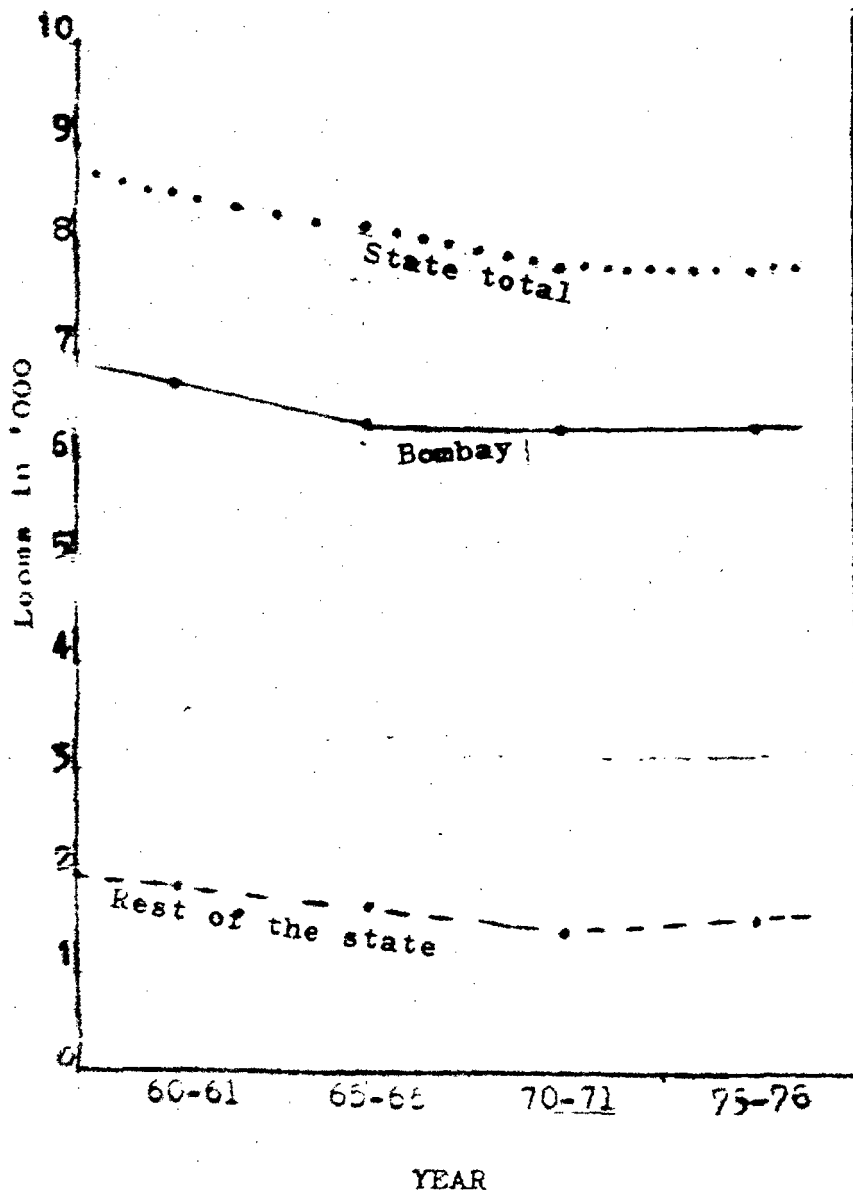


FIG 44

Distribution of looms

The table shows that out of the 17 million spindles and 2.0 lakh looms installed in the country 4.5 million spindles and 78,600 looms are to be found in Maharashtra accounting for a percentage of 26 and 38 to the total respectively. This is the present position of cotton mill industry in Maharashtra and this present position clearly shows its uneven development in the different region of the state.

Factors for the dispersal of the industry

There are different factors for the dispersal to the interior of the state. The development of transport facility played an important role in the dispersal of the cotton mill industry. For a long time the industry could not be established in the interior region as there were no transport facility for collection of raw materials and distribution of finished products. It's only when the country was covered with net work of railways that numerous interior centres sprang up. New mills were established in Sholapur, Nagpur, Jalgaon, Amaravati, Sangli and other centres. These centres were favourably located both in regard to raw materials and consumers market in the surrounding areas. With the completion of railways and diffusing machine technology, those centres gradually began to attract the cotton industry. Thus initial dispersal of industry was mainly due to the development of transport and communication in the interior region. Again not only the introduction of railways but also in the change of the railways rates policy of

discrimination in favour of port towns and the gradual introduction of more uniform rates based on distance have considerably helped in the dispersal of the industry with changes in the nature of the consumers markets and production, Bombay lost the advantage of special transport relations. As the emphasis from the foreign yarn markets shifted to the internal place - goods markets, the enormous distances of land transport involved in the distribution of goods in the different regions of the country increased the transport cost considerably. Therefore, the betterment of transport facilities and more uniform freight rates are important factors for dispersal.

The development of hydroelectric power not only helped the industry in the location but also helped in the industrial dispersal.

The distribution pattern of population in the state has also played a great role in the dispersal of the cotton spinning industry. Because of the widely scattered markets separated by long distances and high transport costs the advantage satisfying local needs from local production are great and are undoubtedly a factor in bringing about dispersal of the industry towards consuming areas.

The shift of the industry from the regions of high to those of low labour costs is also another important cause of centralisation of the cotton mills.

In cotton textile industry wages from 20 to 27 per cent of the total works depending on the productivity of labour level of wages and the character of output. Hence advantages in respect of labour costs has a very decisive influence on the location of the industry. Due to this productive activity of cotton mill industry of Maharashtra has been shifting from the centres of high wages of Bombay city to those of low labour costs of Sholapur, Jalgaon, Nagpur and other interior centres of the state. Therefore, the regional differences in the supply of labour, its efficiency and wages affected the Bombay industry very much. On account of the high rate of absenteeism and the 'Badli system' in the Bombay mills, the improvements in the efficiency of labour could not keep pace with the rise in wages which took place owing to the higher cost of living. Therefore, with the gradual economic development of the regions of the interior the conditions for the establishment of cotton mills there are becoming more favourable and inviting.

A very serious drawback in the way of the Bombay cotton industry is foreign competition from Britain and Japan and China which deprived the cotton industry in Bombay of its overseas market because it could not obtain materials at cheap rates like the foreign countries. The change in the direction of Bombay trade from foreign to internal markets weakened its advantage in transport costs.

Again in the post-war period the increase in land values, rent and taxes, mainly due to its smaller areas i.e. Bombay being an island, the area available for sites for the ever increasing number of mills and factories was naturally limited, therefore, the previous cause came into practice and with them the housing of labour became very acute. All these factors helped in the rise of cost of living. The charges of water was also increased about 50 per cent to the previous.

Another important cause of dispersal is the increasing consumption of mill-spun yarn by the indigenous handlooms. The newly introduced powerlooms and the cotton weaving mills have also helped in the dispersal of cotton spinning mills to many locations.

All these constraints have set a limit to the further growth of the cotton mills industry at Bombay and they are also promoting dispersal of spinning mills from old to new locations. Many new mills at new places enjoy the benefit of low rates of land, rent, taxes electric and water charges and do not incur extra internal transport costs.

Table 46

Trends in the localisation of Cotton Textile Industry from 1956 to 1975 - Variation in location quotient

States	1956			1961			1965			1975		
	P.C.of workers employed in large industrial establishments	P.C. of workers employed in cotton textile industry	Location quotient	P.C.of workers employed in large industrial establishments	P.C.of workers employed in cotton textile industry	Location quotient	P.C.of workers employed in large industrial establishments	P.C.of workers employed in cotton textile industry	Location quotient	P.C.of workers employed in large industrial establishments	P.C.of workers employed in cotton textile industries	Location quotient
	A	B	A/B	A	B	A/B	A	B	A/B	A	B	A/B
Maharashtra	33.2	59.4	1.79	21.28	33.42	1.57	19.31	30.69	1.59	20.33	28.56	1.40
West Bengal	26.3	5.5	.21	22.39	5.59	.25	22.29	5.37	.24	16.23	4.87	.31
Tamil Nadu	8.4	14.3	1.70	8.55	13.23	1.5	8.73	13.45	1.55	6.80	14.33	1.81
Andhra Pradesh	3.8	1.3	.35	4.87	1.59	1.54	5.45	2.25	.41	6.04	2.09	.34
U.P.	9.7	7.0	.73	8.30	7.73	.93	7.63	7.21	.94	5.95	6.00	1.00
Mysore	3.4	3.9	1.14	3.80	4.86	1.28	4.22	4.53	1.07	4.60	5.66	1.21
Madhya Pradesh	1.3	0.9	.75	4.23	5.41	1.28	3.66	4.28	1.17	4.25	6.57	1.31
Panjab & Haryana	2.2	0.8	.39	2.84	1.1	.41	3.48	1.88	.55	5.36	2.63	.46
Bihar, Orissa & Assam	7.4	0.8	.11	7.44	.86	.11	7.30	.80	0.36	5.94	1.84	.30
Rajasthan	1.4	2.0	1.43	1.53	1.36	.88	1.75	1.86	1.06	2.11	1.42	0.67
Gujrat	-	-	-	11.07	6.05	.54	8.45	12.12	1.43	9.34	22.24	2.38
Kerala	1.3	1.6	1.23	4.14	1.14	.28	3.16	1.53	.37	4.15	1.56	.36
Others	-	-	-	1.07	9.50	8.78	1.15	7.45	6.52	6.96	2.43	.35

Table 47

Trends in the localisation of Cotton Textile Industry from 1956 to 1975 - Variation in co-efficient of localisation

States	1956			1961			1965			1975		
	P.C. of workers employed in large industrial establishments	P.C. of workers employed in cotton textile industries	Deviation from total + or -	P.C. of workers employed in large industrial establishments	P.C. of workers employed in cotton textile industries	Deviation from total + or -	P.C. of workers employed in large industrial establishments	P.C. of workers employed in cotton textile industries	Deviation from total + or -	P.C. of workers employed in large industrial establishments	P.C. of workers employed in cotton textile industries	Deviation from total + or -
1	2	3	4	5	6	7	8	9	10	11	12	13
Maharashtra	33.2	59.4	+26.2	21.28	33.42	+12.14	19.31	30.69	+11.38	20.33	28.56	+ 8.23
West Bengal	8.4	14.3	-20.8	22.39	5.59	-16.80	22.29	5.37	-16.92	16.23	4.87	-11.36
Tamil Nadu	8.4	14.3	+ 5.9	8.55	13.23	+ 4.68	8.73	13.45	+ 4.72	6.80	12.33	+ 5.53
Andhra Pradesh	3.8	1.3	- 2.5	4.87	1.59	- 3.22	5.45	2.25	- 3.20	6.04	2.09	- 3.95
U.P.	9.7	7.0	- 2.7	8.30	7.73	- 8.67	7.63	7.21	- .42	5.95	6.00	+ 0.05
Mysore	3.4	3.9	+ .5	3.80	4.86	+ 1.06	4.22	4.53	+ .31	4.60	5.66	+ 1.06
Madhya Pradesh	1.3	0.9	- .4	4.23	5.41	+ 1.18	3.66	4.28	+ .62	4.25	6.57	+ 2.32
Punjab	2.2	0.8	- 1.4	2.84	1.19	- 1.65	3.48	1.88	- 1.60	5.36	2.63	- 2.73
Delhi	1.6	0.25	+ .9	1.38	2.06	+ .68	1.64	2.28	+ .64	1.94	1.80	- .14
Bihar, Orissa & Assam	7.4	0.8	- 6.6	7.44	.86	- 6.58	7.30	.80	- 6.50	5.94	1.84	- 4.10
Rajasthan	1.4	2.00	+ 0.6	1.53	1.36	- 1.17	1.75	1.86	+ .11	2.11	1.42	- .69
Gujarat	-	-	-	11.07	6.05	- 5.02	8.45	12.12	+ 3.67	9.34	22.24	+12.90
Kerala	1.3	1.6	+ 0.3	4.14	1.14	- 3.00	3.16	1.53	- 1.63	4.15	1.56	- 2.59
Others	-	-	-	1.07	9.50	+ 8.43	1.15	7.45	+ 6.30	6.96	2.43	- 4.33
Total deviation			+34.3 -34.0			+28.17 -28.17			+27.75 -27.75			+30.09 -30.09
Co-efficient of localisation			0.34			0.28			0.27			.30