
CHAPTER - II

PROCESS OF INDUSTRIALIZATION

The term industrialization has been used for interpreting the growth of industrial activities. The term industrialization incorporates many phases to explain the socio-economic phenomena which have been experienced, are being experienced and will be experienced (Singh, 1983 : 1). Alan Pred (1965 : 158-185) has taken the number of rail produced, pig iron output, steel ingots, casting produced and index of manufacturing production for the comparative study of industrialization. Others treat industrialization as the process indicating the growth manufacturing industries. Therefore, industrialization covers all sorts of economic activities which are directly related with industrial development. The main object of industrialization is to provide work for growing population to meet the demand for manufactured goods and to raise the standard of living through a steady increase in the efficiency of factor of production (Shukla, 1979 :1). The main purpose of this chapter is to examine the spatio-temporal development of industries in the Indore-Dewas-Ujjain region of Madhya Pradesh also known as the Industrial Triangle.

GROWTH OF INDUSTRIES

The growth of industries in the Indore, Dewas, Ujjain industrial triangle region dates back to the second half of the 18th century. Earlier, the population was very small in the region and there was a persistent trend of growth of small and widely spaced villages of varying sizes. The requirements of the people were limited and their needs of non-agricultural

nature were fulfilled by the local craftsmen and artisans. But later, with the growth of population and with the advancement in the march of people towards modernization, the needs of people in the region increased and the process of industrial development was initiated. "There were no arts or manufacture of any importance in the region". The usual common cloth and blankets were produced in most of the villages while dyeing of cloth was being carried at Sawer village (Indore Gazetteer, 1908: 178). This statement gives a partial picture of the traditional industries found practically everywhere like handloom, weaving, dyeing, printing, tanning, clay, pottery making, blacksmithy, bamboo and basket making, were existing in this district also. At one stage these industries were the only units engaged in the production of consumer goods to meet the requirements of the rural/urban population in the region. It is the characteristic of the rural economy of India that these industries in their pristine form still exist everywhere in the region and continue to satisfy the requirements of rural population.

Among the princely states in India, Holker state (Indore) was one of the most progressive and was known for its efficient administration. As far as industrial development is concerned, the progressive attitude of the rulers can be seen from the fact that as early as in the year 1864, than the ruler of the state conceived the idea of starting a textile mill at Indore, with a view to augmenting the resources of the state through trade. Construction of the building for the cotton mill was started in 1864. Arrangement were made to get the required

machinery from England. Two or three trained Englishmen were brought from there to work on the imported machinery. Thus against heavy odds and costs, a venture was launched in the shape of the Indore Cotton Mills which was the first of its kind not only in the region but in the whole of the central India (Indore Gazetteer, 1971 : 233).

Except for the units manufacturing arms and ammunitions, there were no large scale manufacturing units till the end of the 19th century. It was in the 20th century that the foundation of large industries in this region was laid with the opening of the Indore Malwa United Mills (Cotton Textile) at Indore in 1909, followed by the establishment of Hukamchand Mill at Indore in the year 1912.

In the beginning of the 20th century, a slow start was made in the industrial field. This was accompanied by the development of railways and roads. The outbreak of the First world war in 1914 gave impetus to the industrial growth and many new enterprises were established during the war period. By 1925 five large scale units had been installed in the region which provided employment to some 5,000 persons. State workshops and cotton textile manufacturing units almost wholly formed the industrial structure of the region.

Materially the industrial pattern of the region was not altered. The most important addition after the war period was the establishment of the well known cotton mill of the Indore State, which started in 1924-25. Most of the industrial establishments were really of small or medium size and were

engaged in the manufacturing of the products of primary nature.

The progress of industrial development continued to be slow till 1930, when the worldwide depression set in. By the end of the year 1948 only one large scale unit was established and could provide employment only to about 300 persons. This indicates that mainly the increase was in the total number of industrial units contrary to this the increase in total number of labourers was marginal. After the Second World War, the rulers of the erstwhile princely states encouraged and favoured the development of their states. This resulted in the unplanned and heterogenous development of the large scale and small scale industries in the region.

Some old industries were closed down in this decade due to their uneconomic industrial structure. At the same time, several new industrial units were installed and progressed rapidly because of the favourable industrial policy of the states. It may however be mentioned that these units were not planned with a long-term perspective, and the location, size of market, availability of raw materials, sufficiency of technical know-how financial organisation etc. were also not assessed prior to the establishment. Ofcourse certain concessions were offered by the administration for the establishment of industries. As an example, there was no customs duty on the imported machinery for textile mills, and free land was granted for the erection of mills and other industrial units. Most of these industries thrived because of non-legislation of labour or factory laws and absence of income and other taxes in the princely states

of the region. On certain imported articles of daily use which could be produced locally, heavy duty was imposed to discourage the import of such items. Thus the cessation of foreign competition and the increasing demand for certain war time goods assured a boom period for the specific industries of the region. After the war, some of the factories installed in the war period to meet the additional demand of certain products ceased.

During the decade 1941 to 1951 the total industrial employment recorded an increase of 1364 persons over the previous decade but surprisingly 92 additional industrial units were establishment in the region during the same period. The significant increase in the number of wage earners was mainly due to the establishment of some new large scale industrial units, e.g., chemical and engineering industries and oil mills in some of the erstwhile princely states of the region. Establishment of these large scale industrial units created a nucleus for industrial development in certain under developed princely state but they could not record satisfactory progress until they were merged into one compact unit at the time of the reorganisation of states in 1949. It may be pointed out that the pace of industrial development in the erstwhile princely states was not only fast and hetrogenous but industrially it was lopsided. Indore state was the only well developed and managed state in the region. Except for Indore till 1945, the states of the region were lacking in large scale industrial units. Even till 1945, all large scale industrial units in the region were concentrated in and around Indore city. The growth of industries in the region was exclusively confined to the state of Indore, that too the Indore city.

Table 2.1
INDUSTRIAL TRIANGLE : INDUSTRIAL UNITS AND INDUSTRIAL WORKERS
1931 - 1947

Districts	Small-Scale-Industries						Large and Medium Scale Industries					
	1931-1941		1941-1951		Upto 1947		1931-1941		1941-1951		Upto 1947	
	Total Unit	Total Emp.	Total Unit	Total Emp.	Total Unit	Total Emp.	Total Unit	Total Emp.	Total Unit	Total Emp.	Total Unit	Total Emp.
Indore	18	262	69	1165	44	527	2	10413	2	470	6	18968
Dewas	3	14	13	56	44	737	0	0	1	633	1	633
Ujjain	13	108	44	527	9	31	0	0	1	750	3	10750
Region	34	384	126	1748	97	1295	2	10413	4	1853	10	30251

Source : Directorate of Industries, M.P., Bhopal.

At the time of the integration of the states (1947) the total number of factories in the region was 107 out of which 10 were large scale units (Table 2.1). Thus at the time of the integration of the states, the region emerged as one of the underdeveloped region of the country. The whole region remained deficient in large scale industries till 1947.

GROWTH AND DEVELOPMENT OF INDUSTRIES IN THE PRE INDEPENDENCE PERIOD

In the past a number of factors were responsible for retarding the industrial development of the region. As mentioned earlier, till the merger of the princely states, some of the states were small not only in size but also in their resources. Natural and financial resources of the princely states were also not enough to enable them to undertake any ambitious development plans. During that period, inter-state cooperation for economic development was very limited. The shortage of water and power resources was the second main drawback in the development of the large scale industries. Absence of the canal system proved a stumbling block for raising of the area and enhancing the production of commercial and food crops. Though prior to 1945, a number of schemes were prepared by the princely states of the region, but failed in initiating the implementation of the major irrigation and power generation projects, probably due to the scarcity of sufficient funds and the prevailing inter-state disputes over repartition rights. Consequently generation of hydroelectricity was also not possible. On the otherhand, owing to the non-availability of quality coal from local areas, even the generation of thermal power was difficult.

Inadequate means of modern and efficient transport and communication facilities was another major handicap in the industrial development of the region.

The progressive attitude of Holker state in regard to the industrial development was confirmed when the Indore Factories Act in the year 1904 was passed to regulate the working conditions of the existing factory establishment in the state. (Shrivastava, 1971 :233).

In the year 1906 the construction of a power generating plant at Indore, was undertaken with an investment of Rs. 2.25 lakhs. The installation of the plant was completed in the year 1907 and was commissioned in August 1907.

There has been a reference to the existence of a separate department looking after the textile mills and other industries, in the administrative report of the state for the year 1912 (Shrivastava, 1971 : 233). Industrial activities in the State were under the direct control of the excise department.

Looking to the climatic conditions and the possibilities for the thriving silk industry a silk industries department was created under the silk expert in the year 1912. In continuation an area was demarcated for planting the mulberry trees along with a rearing house, a central nursery, a museum and library were also developed in this connection to meet the requirements of the silk industries and the work of reeling, spinning, bleaching, dyeing weaving and twisting was started (Indore Gazetteer, 1971: 233).

The lack of knowledge about the resources was also the problem which adversely influenced the growth of industries. This becomes evident from the fact that some of the princely states decided to form various boards. These boards were expected to advise their respective governments on all possible schemes of economic and industrial development and also on the problems of coordinating different industrial activities. The quality and quantity of mineral resources were not fully known, while the known deposits could not be exploited due to the lack of mining equipment consequently large scale industries which required minerals as raw material could not be set up.

Availability of labour was not the problem due to have a skilled labour within the region was definitely a difficult task. Availability of the assured technically trained personnel had been another important restricting factor. Without modern technical institutions in the region, it was difficult to extend training for certain jobs to the labourers and the proportion of literate population was also small.

Finally, the absence of industrial enterprises had also proved a deterrent factor in the industrial development of the region. The atmosphere of political instability was the major handicap in creating a favourable climate which could attract indigenous capital for investment in the development of industries in the region, since the banking facilities were restricted only in the towns.

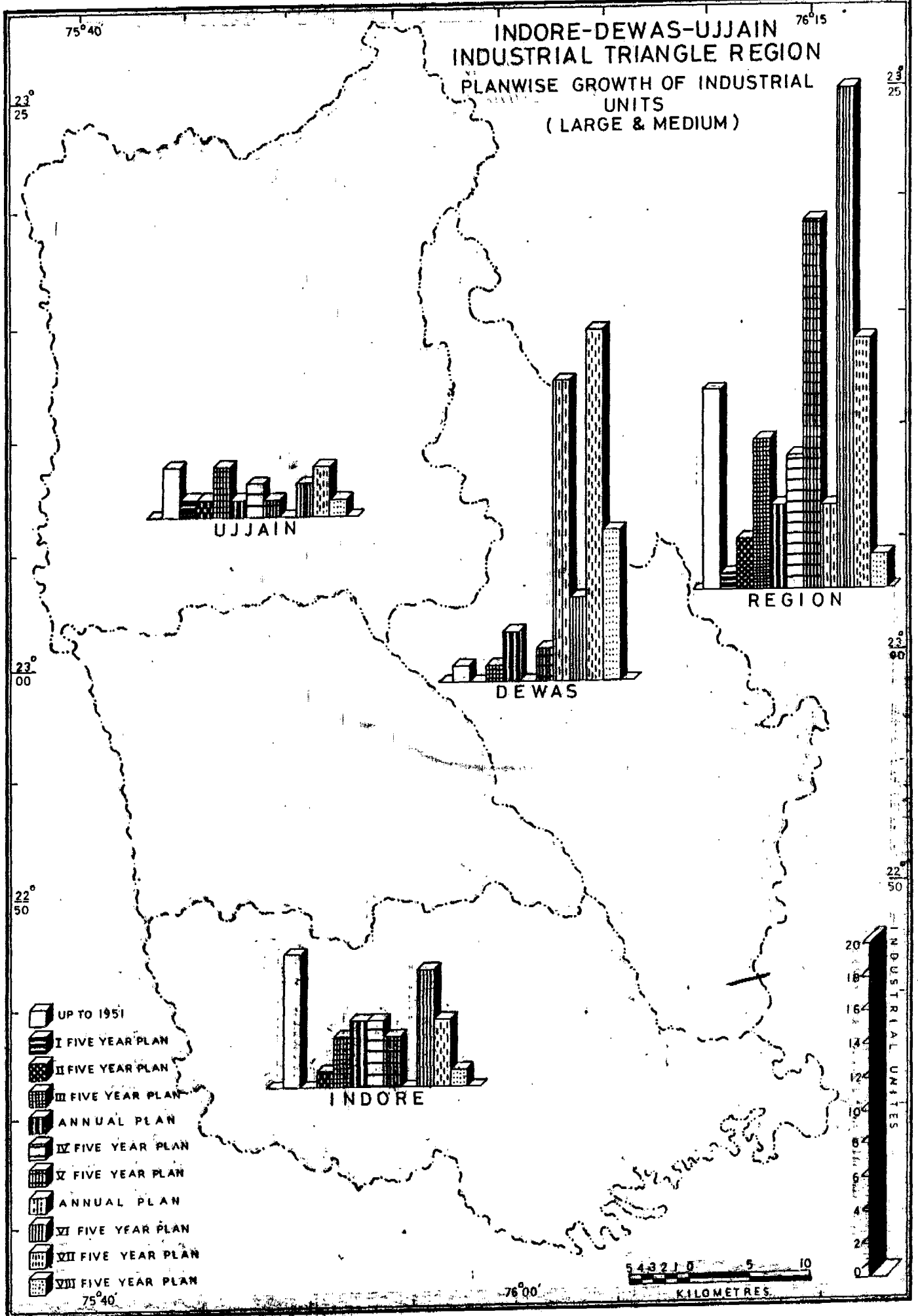
A legacy of feudal attitudes and interstate barriers, inadequate and lopsided development of transport and communication lines, ignorance about the local resources and shortage of

cheap and adequate hydroelectric power were mainly responsible for impending growth and development of industrial activities in the study region.

POST INDEPENDANCE PERIOD

After independence, the region made a beginning in those areas which had been developed by the enterprising rulers of various states where industrial base was available vigorously followed by the Madhya Pradesh government with the implementation of the first five-year-plan to achieve the balanced regional growth of economic and industrial sector since 1951. In due course, to achieve the balanced economic development, efforts were made by the state government of Madhya Pradesh for co-ordinating the industrial and agricultural growth in the region. But during the first five-year-plan period the region was preoccupied with the problems of integration of services, laws, administrative system etc., and could not do much in the industrial field. During this plan period, a sizable amount was allocated for the development of industrial activities in the region. One large scale unit with an investment of Rs. 1248 lakh was installed during this period, namely Gwalior Rayon Silk Manufacturing Co., at Ujjain. In spite of difficulties imposed by capital scarcity and the multiple bottlenecks of fuel, raw materials, imported machinery and technical know-how, transport links with rural areas and electric power, which constituted a serious means to industrial development, a few of the large scale units were working at their full capacity. During the second plan period more attention was given to the development of small scale and cottage industries. Some attempts

were made for the establishment of large scale units and licences were issued for the installation of Rai Bahadur Kanahaiyalal Bhandari Mills (1958) at Indore, Dewas Flour and Oil Cake Unit (1960) at Dewas etc. During the third plan period the Madhya Pradesh Government adopted a bold and vigorous policy of creating a proper atmosphere for the balanced industrial development of the region, and certain concessions and facilities were announced for industrialists for setting up of various large scale industrial units in different part of the region. Among the concessions offered were the facilities of cheap and adequate hydroelectric power, allotment of developed land at nominal cost or on lease, provisions of financial assistance for the purchase of imported machines along with the technical guidance, and facility of making the payments of sales tax and octroi duties in easy instalments was assured. As a result of these efforts a rapid expansion of industrial sector in the recent past could take place in the region. During the third plan period (1961-66), Nine large scale units were installed like the steel Tubes of India (1963-64) at Dewas ; Sanghi Beverage (1965-66) at Indore, Bimal Mill (1563-64) at Ujjain, and Gajara Gears (1962-63) at Dewas etc. With the addition of these units more than 5000 (5038 persons) persons were provided the assured employment. Among these units textiles, Steel tubes, automobiles were important. The planwise growth of large and medium scale units in the region has been shown in the Table 2.2 (Plate 2.1).



SOURCE: DIRECTORATE OF INDUSTRIES, M. P., BHOPAL.

Table 2.2

INDUSTRIAL TRIANGLE : PLAN WISE GROWTH OF LARGE AND MEDIUM SCALE INDUSTRIES

Plan	Indore			Dewas			Ujjain			Industrial Region		
	No.of Indus.	Invest (in lakh)	Employes	No.of Indus.	Invest (in lakh)	Employes	No.of Indus.	Invest (in lakh)	Employes	No.of Indus.	Invest (in lakh)	Employes
Upto 1951	8	1203.03	19407	1	204.11	633	3	951.00	10750	12	2358.14	30690
I 1951-56	-	-	-	-	-	-	1	1248.00	5000	1	1248.00	5000
II 1956-61	1	214.00	3050	1	30.00	44	1	189.00	2225	3	433.00	5325
III 1961-66	3	310.41	851	3	499.27	1937	3	137.00	2250	9	946.68	5038
Annual Plan 1966-69	4	123.21	285	-	-	-	1	955.00	750	5	1078.21	1035
IV 1969-74	4	145.74	979	2	20022.00	1880	2	1361.00	1500	8	21528.74	4359
V 1974-79	3	155.56	229	18	2278.21	2833	1	31.75	2000	22	2465.52	5062
Annual Plan 1979-80	-	-	-	5	870.37	1474	-	-	-	5	870.37	1474
VI 1980-85	7	966.82	820	21	114110.22	1195	2	1525.19	557	30	116602.23	2572
VII 1985-90	4	918.65	261	9	2625.00	885	3	2050.00	707	16	5593.65	1852
VIII 1990-91	1	166.00	30	-	-	-	1	303.00	41	2	469.00	71
Total	35	4203.42	25982	60	140639.18	10880	18	8750.94	25780	113	153593.54	62478

Source : Directorate of Industries, M.P., Bhopal.

The increase in the quality and the quantity and the variety of industrial products too has been initiated as a change in the industrial pattern of the region with an addition of modern large scale units producing highly specialised goods which include heavy industrial chemical, quality cotton textile; synthetic yarn and fabrics, oil mills, sugar mills, agricultural instruments, woollen textile and leather goods. Production in selected industries, i.e. oil mills; sugar mills and textile units too has recorded a significant market increase.

THE REGION'S POSITION IN THE INDUSTRIAL ECONOMY OF INDIA

Though the region has made a considerable headway in industrial expansion, it is still one of the industrially developing regions, in the country as well as in the state. The relative industrial backwardness of the region is indicated by the low percentage of the country's labour force engaged in different activities with only 3.1 per cent of total workers.

As compared with India's registered factory employment value of output and value by manufacturing, the region lags far behind most of other regions of the country in industrial development. Industrially developed states of Maharashtra, West Bengal, Gujarat, Bihar and Uttar Pradesh accounted for about 63.3 per cent of the total registered factories and 71.7 per cent of country's industrial employments.

The region has a total of 5.5 per cent of registered factories of M.P. whereas the percentage of industrial employment in the region is about 11.37 per cent of the State's total industrial employment as has been shown in the Table 2.3 .

Table 2.3
**INDUSTRIAL TRIANGLE : INDUSTRIAL UNITS, INVESTMENT
 AND EMPLOYMENT 1991**

Region/State	Number of Units	Investment (In lakh)	Employment
Region	14621	157341.82	1,20,701
M.P.	265518	481459.00	10,61,000
Region's Share in the State	5.5	32.7	11.37

Source : Directorate of Industries, M.P., Bhopal.

REGIONAL VARIATION IN INDUSTRIAL GROWTH, 1948-1991

The industrial growth has not been uniform all over the region. Apart from this, industry wise and area wise disparities also exist. There are difficulties in analysing regional disparities of industrial growth in the region due to the non-availability of detailed data and information. The methods adopted for this analysis in the chapter is based on the quantum industrial employment. The changes have been measured in absolute as well as in relative terms. In terms of absolute growth, the quantum of industrial employment in Ujjain district has recorded a net increase of 688.4 per cent, and ranks first followed by Dewas district with a net increase 5405.2 per cent and Indore district has recorded a net increase of 278.8 per cent only for the period 1948-91. The total region has recorded a net increase of 468.4 per cent for the period 1948-91 as has been tabulated in the Table 2.4. It is significant that not a single district in the region has registered a downward trend as far as industrial employment is concerned.

Table 2.4
INDUSTRIAL TRIANGLE : INDUSTRIAL EMPLOYMENT
1948 TO 1991

District	Industrial Employment		Per cent increase Industrial Employment
	1948	1991	
Indore	16,496	62,489	278.80
Dewas	442	24,333	5,405.20
Ujjain	4,297	33,879	688.40
Region	21,235	1,20,701	468.40

Source : Directorate of Industries, M.P., Bhopal.

Industrial employment in Indore has increased after the establishment of some new industrial units, viz., chemical, Textile, Drug and Pharmaceuticals, Metal units, Electric powerwire, Electric appliance and Scientific instruments etc. The increase in industrial employment in Dewas may be accounted with the establishment of large, medium and small scale industries whereas Ujjain is attributable due to the establishment of cotton textile, Sugar, Chemical and Synthetic yarn and cloth manufacturing etc.

As a result of these changes since 1948 in industrial employment the rank of leading industrial districts has been changed considerably by the year 1991.

INDUSTRIAL TRENDS DURING 1948-91

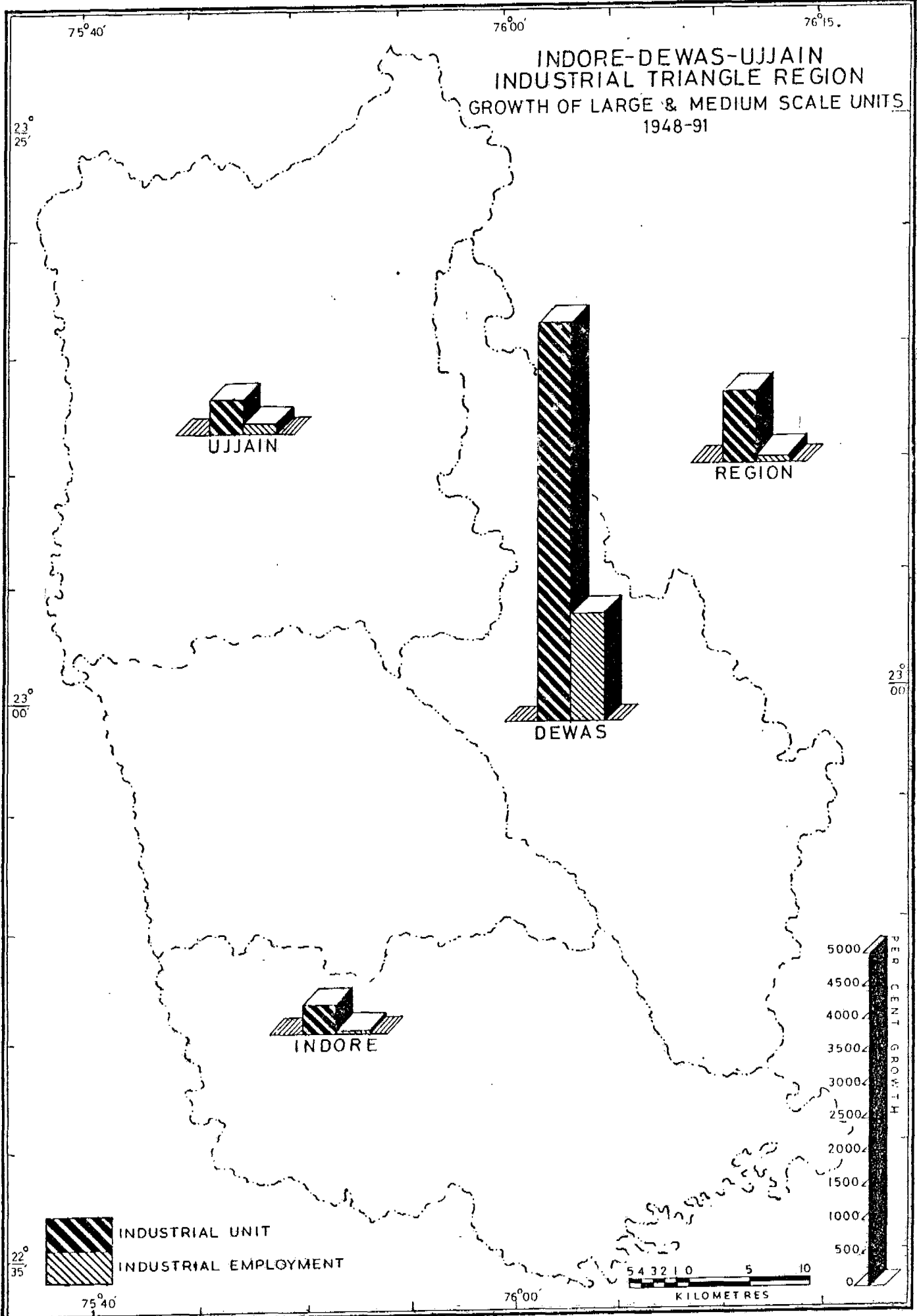
Table 2.5 shows the districtwise per cent growth of large and medium industrial units in the industrial triangle region during the period 1948-91 (Plate 2.2).

The per cent increase of large and medium units ranges from 483.00 to 5900.00 (Table 2.5). The maximum and minimum increase has been recorded in Dewas and Indore district respectively. The district of Dewas has recorded higher percentage increase while Indore and Ujjain districts have registered a lower percentage of increase than the regions average.

The percentage of employment increase in large and medium units ranges from 37.00 per cent in Indore district to 1619.00 per cent in Dewas district. Dewas and Ujjain districts have recorded a higher proportion of increased in employment than the region's average while Indore district has recorded lower proportion of increase in employment than the region's average of 107.00 per cent.

The region has recorded an increase of investment in large and medium scale industries between 1948 to 1991. The per cent increase in investment ranges from 340.00 per cent in Indore district to 58488.00 per cent in Dewas district. Increase in industrial investment was much higher in Dewas district and other districts have registered a lower increase of investment than the region's average.

The Table 2.6 shows the districtwise per cent growth of small scale industrial units in the region during the period 1948-91 (Plate 2.3) .



SOURCE: DIRECTORATE OF INDUSTRIES, M. P., BHOPAL

Table 2.5
INDUSTRIAL TRIANGLE : GROWTH OF LARGE AND MEDIUM SCALE UNITS
1948 - 1991

District	Number of Units			Number of Employment			Total Investment (in lakhs Rs.)		
	1948	1991	Per cent Growth	1948	1991	Per cent Growth	1948	1991	Per cent Growth
Indore	6	35	483.00	18968	25982	37.00	957.03	4203.42	340.00
Dewas	1	60	5900.00	633	10880	1619.00	204.11	140639.18	58488.00
Ujjain	3	18	500.00	10750	25780	140.00	951.00	8750.94	820.18
Region	10	113	1030.00	30251	62642	107.00	2112.14	153593.54	7172.00

Source : Directorate of Industries, M.P., Bhopal.

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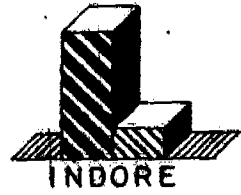
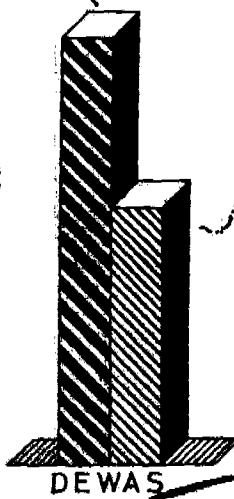
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INDORE-DEWAS-UJJAIN INDUSTRIAL TRIANGLE REGION GROWTH OF SMALL SCALE UNITS 1948-91



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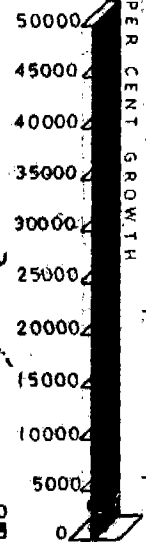


Table 2.6
INDUSTRIAL TRIANGLE : GROWTH OF SMALL SCALE INDUSTRIES
1948-91.

District	Number of Units			Name of Employments		
	1948	1991	Per cent Growth	1948	1991	Per cent Growth
Indore	65	8063	12304.61	1181	36507	2991.20
Dewas	10	4132	41220.00	51	12550	24507.84
Ujjain	54	2313	4183.33	706	7815	1007.00
Region	129	14508	11146.51	1938	56872	2824.60

Source : Directorate of Industries, M.P., Bhopal.

The per cent increase of small scale units ranges from 4183.33 to 41220.00. The maximum and minimum increase has been recorded in Dewas and Ujjain district respectively. The districts of Dewas and Indore have recorded higher percentage of increases while Ujjain district has registered a lower percentage of increase than the region's average.

The percentage of employment increase in small scale units ranges from 1007.00 per cent in Ujjain district to 24507.84 per cent in Dewas district. Dewas and Indore districts have recorded a higher proportion of increases in employment than the regions average, while Ujjain district has recorded lower proportion of increase in employment than the regions average of 2834.60 per cent.

INDUSTRIAL STRUCTURE OF TRIANGLE REGION

The industrial structure of a region may be defined as the aggregate of individual industries that account for all

the manufacture in the region ranked by magnitude (Alexzander, 1977 : 407). The magnitude of each industry can be measured proportionally in terms of given criteria. For the analysis of the industrial groups in the region's industrial structure, viz., industrial employment and value added by manufacturing.

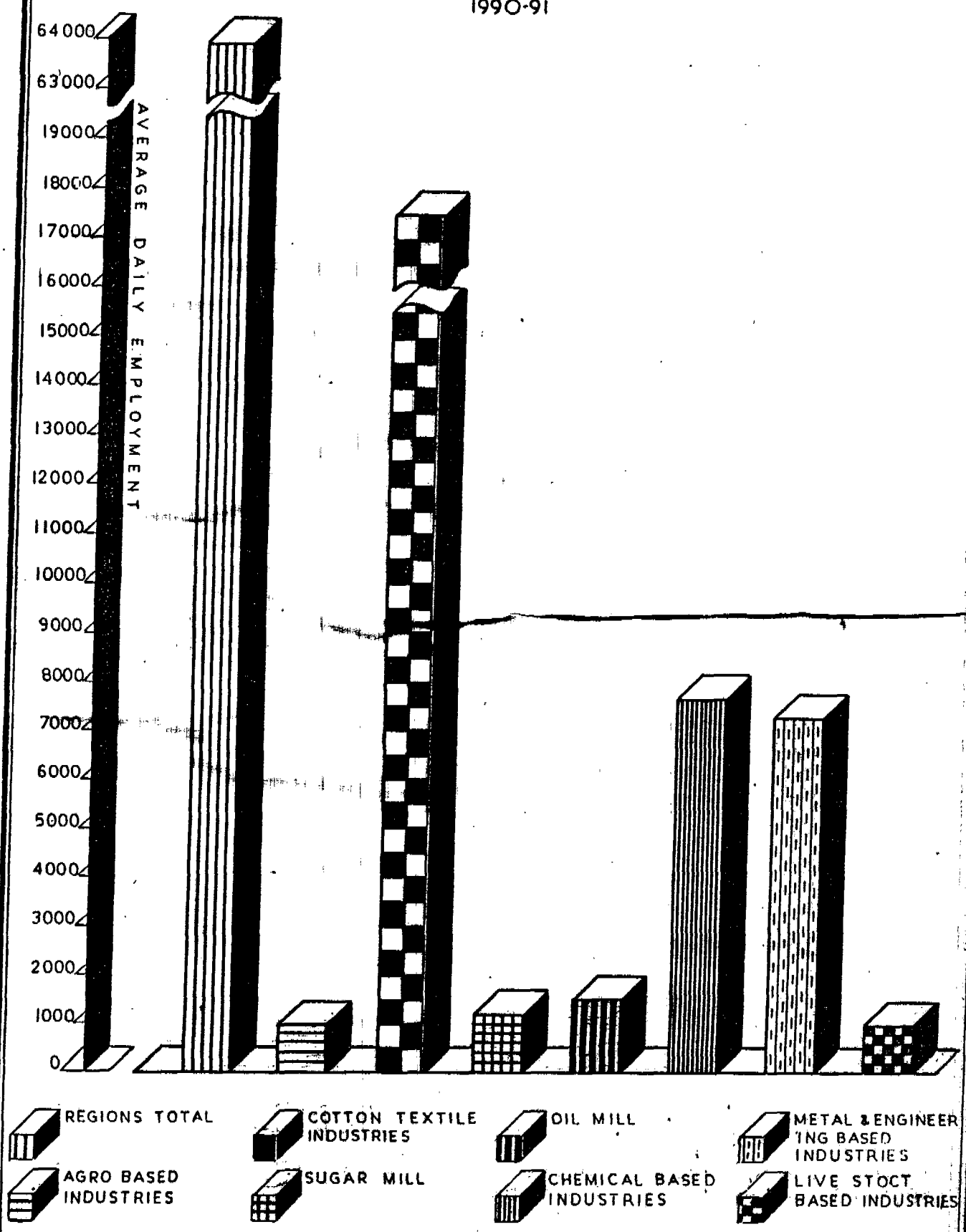
On the basis of average daily employment, the main industrial groups in the region comprise of textiles, chemical based, metal and engineering based industries. The percentage of worker's in these groups was 62.5, 12.5 and 11.6 per cent respectively.

Table 2.7
INDUSTRIAL TRIANGLE : INDUSTRIAL STRUCTURE 1990-91

Industrial Groups (Large & Medium units)	Average daily Employment	
	Numbers of labourers	Per cent of the Region's Total
1. Agro-Based Industries	942	1.47
2. Cotton Textile Industries	39,879	62.47
3. Sugar Mills	1,213	1.90
4. Oil Mills	1,519	2.37
5. Chemical Based Industries	7,790	12.20
6. Metal and Engineering Based Industries	7,394	11.58
7. Live stock Industries	1,025	1.60
8. Other Industries	4,367	6.84
Region's Total	63,829	100.00

Source : Directorate of Industries, M.P., Bhopal.

INDORE-DEWAS-UJJAIN INDUSTRIAL TRIANGLE REGION INDUSTRIAL STRUCTURE 1990-91



SOURCE: DIRECTORATE OF INDUSTRIES, M.P., BHOPAL.

The figures in Table 2.7 reveals that in terms of total factory employment, manufacturing of cotton textile is the largest industry in the region. In the year 1990-91, 25 cotton textile mills were employing approximately 39,879 persons. Apart from the textile industries the chemical based industries, Metal and engineering based industries provide employment to about 11.6 per cent respectively in the total industrial force of the region. Other major industrial groups are Agro-based, livestock-based, sugar mills and other industries provide with 1.5, 1.6, and 6.8 per cent of employment respectively of the total industrial workers (Plate 2.4) in the region under study.

DISTRIBUTION OF INDUSTRIES

Regionally, the industrial development of the triangle region has been uneven. Large scale units are concentrating in a few districts, leaving vast area in the region with a few or without any industrial unit.

As Miller stated, it is important therefore that one familiarize oneself with some of the criteria and the methods of using them-in order to understand better the maps which portray the locational pattern of this economic activity (Miller, 1962: 13).

The most commonly used methods are the number of industrial establishment, number of employees, number of factory-workers, percentage of total industrial labour force and power. These, methods, have helped to work out the regional contrasts of manufacturing activity in the area under study. Table 2.7 reveals that in the region about 113 large and medium scale

industries are producing large variety of industrial products Out of which 60 industrial units or 53.09 per cent are concentrated only in Dewas district with 35 industrial units (30.97 per cent) and most of these are concentrated in Indore district while Ujjain district has only 18 units (16 per cent of the total industrial establishment).

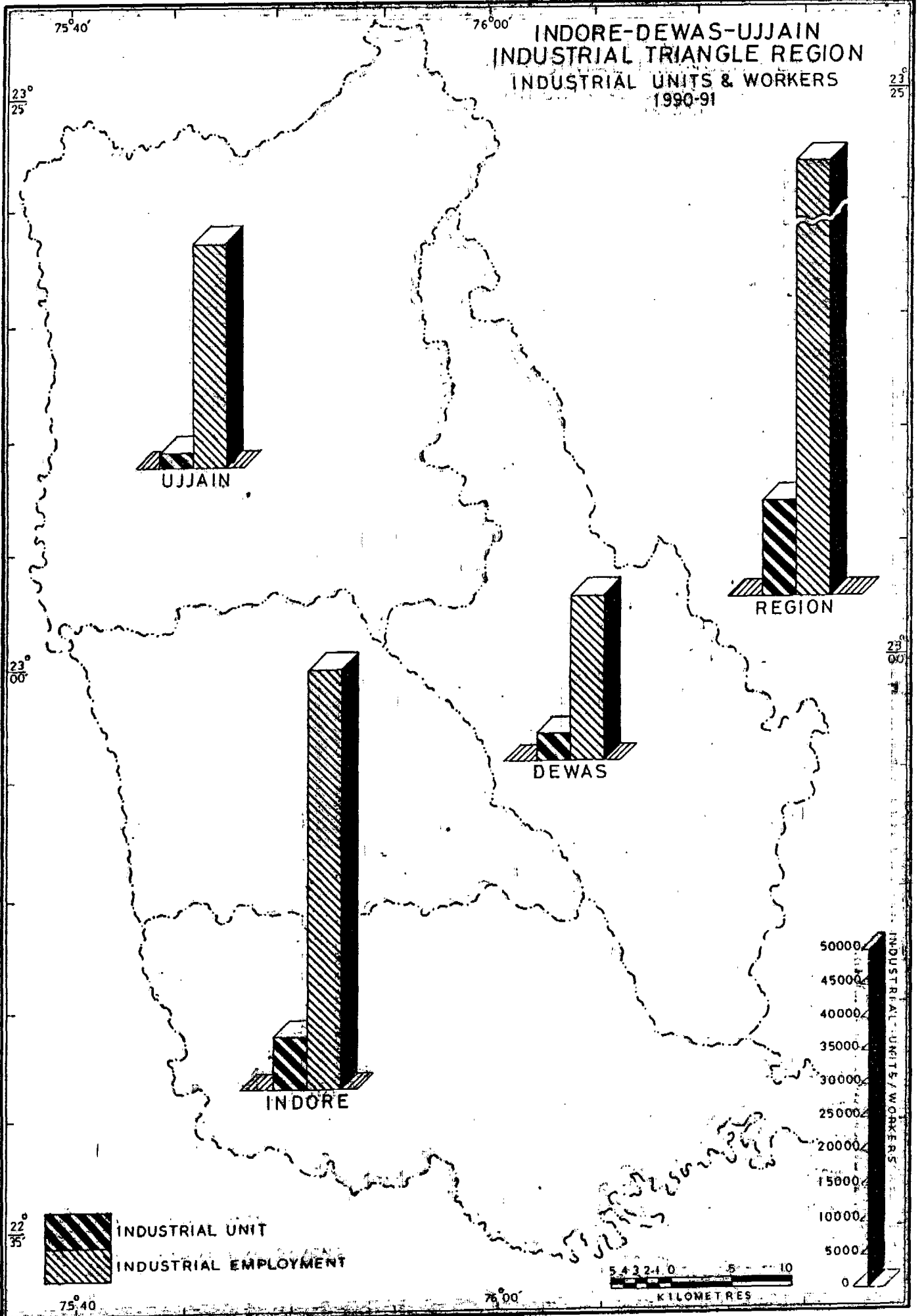
Table 2.8
INDUSTRIAL TRIANGLE : INDUSTRIAL UNITS AND INDUSTRIAL WORKERS
1990-91

Districts	Industrial Units	Per cent of the Region Total Industrial Units	Industrial Employment	Per cent of the Region's total Industrial workers
Indore	8,099	55.38	62,489	51.77
Dewas	4,191	28.66	24,333	20.15
Ujjain	2,331	15.94	33,879	28.06
Total Region	14,621	100.00	1,20,701	100.00

Source : Directorate of Industries, M.P., Bhopal.

The Indore district together accounted for about 55.38 per cent of the total industrial units in the region. Plate 2.5 shows the distribution of industrial units according to the number of industrial workers. Indore is a leading district as well as a centre in industrials units, and also in industrial employment ranks first among all districts (Table 2.8) The number of employees is, perhaps, the traditional and probably the most easily comprehended and widely-used criterion for

INDORE-DEWAS-UJJAIN INDUSTRIAL TRIANGLE REGION INDUSTRIAL UNITS & WORKERS 1990-91



measuring the industrial structure, since its availability is the least confidential in nature. It also has a direct relation with other geographical characteristics of any industrial or agricultural region. The main advantage of the method is that it fails to recognise the effect of mechanisation or differences in the productive methods and their efficiency. According to this criterion, Indore is a leading industrial district of the region, since more than 51.77 per cent of industrial workers are concentrated in this district.

In a real sense, Indore and Dewas are the only important industrial centres having a diversified industrial structure. In the whole of the region Indore has a political and historical background and banking and commercial facilities. Capital is readily available for industrial investment. In comparison with other industrial areas, the industrial development in Indore has been made with the investment of private capital, while the share of public capital is very marginal; and the same pattern of investment can still be witnessed. The 1.8 million population of Indore district provides not only a fairly large urban market but also acts as a source of skilled labour. Indore town is well connected through the trunk routes of railways and roads with most of the important towns of the country as well as with those of the region. Unlike the other princely states of the region, the ruling family of Indore gave greater encouragement for the establishment of industries and also provided certain facilities for industrialists who were willing to start new industries in the area.

The city of Dewas which lies in the eastern part of the region is developing at a very fast rate as the state's and nation's important industrial complex. It enjoys the locational advantage of good rail and road connections. Specially, its central location on the broad-gauge a trunk route of the Western Railways connecting the town with Delhi and Bombay. Other locational advantages include river-front location, rich hinterland, developed level land well suited for industrial establishment, availability of cheap and sufficient power and water supply through the Gandhi Sagar project located on the river Chambal in the region.

Ujjain which lies in northern part of the region, has its importance specially in textiles and other industrial units. Even now 18 large and medium scale units are producing a variety of products in the region.

The above discussion clearly shows that the industrial development of the region has been fast but uneven. Industrial activities are mainly concentrating in southern and eastern parts of the region mainly in big cities and towns which provide better transport facilities and ensure the supply of raw materials, developed consumer market, banking and financial facilities.