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CHAPTER - 1

INTRODUCTION

1. INTRODUCTION:
1.1 GEOGRAPHICAL APPROACH:

Geography is concerned with spatial distribution of various characteristics on the surface of the earth. But in ancient times geographer were concerned with the identification of the phenomena which give distinctive character to different places on the earth. They described what they could see. That means it included description of the phenomena observed by them. These phenomena were mainly related to human beings in different places.

Environment which is created on the surface of the earth is studied deeply in geography. Environmental characteristics are different in different places. All these elements are studied together in geography.

Several branches have been developing and each branch is inter related. Geography is an intergrative discipline which combines natural and social sciences. As such geography is at once, an Art, a Science and a Philosophy, according to sir Alfred mackinder. The Geography studies all the phenomena of nature, land, water, climate, Population, settlement, economic activities which have later on become distinguished sub-branches of geography.
1.2 HUMAN GEOGRAPHY:

Human activities take place on thee environmental setting. There is close relationship between man and environment, Man uses environment for his development, through utilization of the resources. As ‘Human Geography” became more interested in theory and models, “Industrial Geography” was able to benifit from the existig work in economic. The birth of modern location theory goes back to 1909, when the German economist Alfred weber published his uberden standort Industrien (translated into English as Alfred weber’s ‘Theory of Industrial Location” in 1929 ) This book provided the foundation for the variable cost analysis approach to location theory. The most important role of Industrialization will be that the absorbing the human potential (growth of population) to reach a satisfactory level of production. It is also necessary to remember that the problem of poverty and unemployment of national defence and economic regeneration in general can not be solved without industrialization.

One of the ways of achieving this is spread at literacy. Growth of literacy and the spreading of education and knowledge among the people are needed to transform human motivation and new values and a progressive out look. All these items of expenditure which are regarded constituting “human investment, are as important or more important than
investment in material capital for promoting development, power, water supply, transport and cheap means at communication are vital elements in the process of agricultural and industrial development.

1.3 : **ECONOMIC GEOGRAPHICAL APPROACH**:

"Economic geography" is an important branch of geography. Economic Geography is the study of man and his economic activities under varying sets of condition it means the study of the spatial distribution of man's economic activities in relation to its environments. The main objective of economic geography is as to examine man's economic achievement in terms of production and consumption in his environment. The man's basic economic activities classify them into three sectors, namely primary, secondary and tertiary. In the primary sector of occupation of chief factor of production is land. India is an has agro-based country. Land is the main capital of the country. Agriculture is the main occupation about 70% of the population depends upon agriculture. There for the raw material for the industry is derived from the agriculture only.

Secondary sector of occupation involves the process of converting raw material into final products which is of grater value than original while tertiary sector of occupation involves both production and exchange and both sectors of occupation
are characteristically lesser user of land as compared to primary sector of occupation. The primary sector of occupation is spread mostly in villages where as secondary and tertiary sectors occupation is concentrate in towns and cities.

An increasingly high relative proportion of workers engaged in secondary economic activities which is characteristic of the modern world is a symbol of economic metamorphism.

Economic growth is measured by rising per-capita income and output per worker which are basically dependant upon the national income and gross domestic product. But secondary economic activities achieve repaid economic development relatively higher national income and gross output of the nation through harnessing a nations natural resources and rendering them into productive wealth modern economic activity yields a different type of output and employs a larger proportion of the population. Economic growth is also dependant upon the absolute amount of regional earnings and development of tertiary activities.

1.4 : INDUSTRIAL GEOGRAPHY :

"Industrial Geography" is one of the yongest and well established branch of economic geography in true sense,
come into existence in the beginning of 20th century. After the first and second world wars rapid industrialization (Growth of Industries) has started in most of the countries of the world. In other nations systematic study in the field of industrial geography started with the works of Christaller W.Rawston. E.M.Renner, G.T. Hart Shorne, on the contrary systematic contribution in this field have come quite late from Indian geographers. The term 'Industry' which is loosely used in common speech describes a wide range of activities and has many meanings from work performed for economic gain to operations by which raw materials are processed and goods produced. Generally the word industry can be taken to mean any branch of productive work whether it belongs to the primary, secondary, and tertiary activities. It is in this sense that the word 'Industry' is applied in most of the population censuses.

The processing of raw materials to exchange its value is another understanding when we use the term 'Industry'. Therefore on the basis of this meaning industry can be classified into four groups extraction, processing, assembly and service.

Above the term 'Industry' refer mainly to manufacturing activity and essential function of it is the transformation of material or material into a product which is of greater value
than the original material. And the purpose of manufacturing industry is to alter and to process materials so that they serve new ends and satisfy different requirement. Therefore agriculture, mining and most of other services are excluded from the term 'Industry'. And it is in this sense that the term 'Industry' will be mainly used in the entire present study.

1.5 SLOW GROWTH OF INDUSTRIAL GEOGRAPHY IN INDIA:

Industrial Geography a young branch of economic geography. In other nations systematic study in the field of Industrial geography started with the works of Christaller, W. Rawston, Hart Shorne, studies in the field of Industrial Geography by Indian geographers can been traced back to early forties of the 20th century. Before Independence very few work was done in the field of industrial geography, by Indian geographers in which mention can be made of works of Iyengar C.V. (1930) Rao R.H. (1930) Lokanathan P.S. (1931) Rao R.S. (1932) to understand the role of geographical factors in the location of industries.

The above mentioned trend of research in the field of Industrial Geography before Independence shows that the spatial distribution of industries and geographical factors operating in their location and the features of industrial landscape have been systematically analysed by the Indian geographer.
After India attained Independence many studies in the field Industrial Geography have been undertaken by the Indian geographers. Therefore it is found that a dominant trend of research in the field of Industrial geography in India has been evident in the post independent period.

A review of research work done by the Indian geographers in the field of Industrial Geography reveals following Characteristics.

i) A few geographers produce a really geographical Analysis of locational aspects.

ii) The problems of growth and prospects of development of sugar Industry.

iii) A few geographers have analysed different aspects of concentration and dispersal of sugar Industry.

Studies in Industrial Geography need considerable reorientation in both theoretical and applied aspects systematic studies of industrial location sugarcane crop base.

1.6 **INDUSTRIAL GEOGRAPHIC APPROACH**

In the field of Industrial Geography a study in detail is necessary particularly in relation to agriculture area. Traditionally there are two approaches in the industrial geography for studying the distribution of the industries. The
first approach is to account for difference in the development of particular industries and second approach is more useful to analyse the distribution of industries, within a smaller area in that region.

1.7 SUGAR INDUSTRY:

In Sanskrit language sugar is called sharhara for the word "Sharkara" many word are available in Arbi, Parsi, Greek, Latin, Modern European language Indian language sugar is called khand in Arbian language. During 221-120 B.C. in the region of 'Cha' & 'Han' families in Chaina the sugarcane plantation & sugar production was prevalent. Sugar is called chini in Hindi language. That mean Indians learnt the technique of sugar production from chinese.

The production of sugar and syrup was known in India perhaps a few centuries before the Christian era and certainly by 400 A.D. The growth of sugarcane and its use in the form of sugar had spread from India to ceylon, Java, china in the east and to persia in the 6th century.

The first sugar Industry started in California in 1750 to 1917 British Government banned sugar. So in the mediaeval period the sugar was costly. The trade in sugar was dominated by Venice and Genoa and it was particularly an important factor in venetian commercial supremacy. During
the time, however sugar was essentially a luxurious commodity and it was also being used for medical purpose.

The first sugar factory in India was started in 1784 by civilian. Croftes at sooksagar which was privately owned. The second factory was started in 1791 in Bihar by L.T.Patterson. Since then number of sugar factories were established in the private sector till the period of Independence. The protection of Government policy of 1932 was mainly responsible for the development of sugar industry in India. The production of sugar through Co-operative processing of sugar cane was first attempted in India in 1933. There were four Co-operative sugar factories by 1935, one in U.P. and there in Andra Pradesh.

In India 1960-61 there were 174 sugar factories of which 30 were from co-operative sector & 144 private sector. Today in India 1999-2000 there were 430 sugar factories of which 252 co-operative sector & 178 private sector. About total 430 sugar factories were operating during 1999-2000 season out of which 252 factories (58.60%) are co-operatives which account for the total production of sugar 182 lakh Tonne (58%).

The first sugar factory in Maharashtra was established in 1919 and started its curshing seson in the year
1924-25. The second sugar factory was established in 1930
walchand sugar factory. The co-operative movement in the
sugar industry started with the establishment of the first co-
operative sugar factory in 1948 known as Pravara co-operative
sugar factory in Ahmednagar district (Maharashtra). Now co-
operative sugar factories have became a dominant aspect of
agro-industrial picture in Maharashtra.

Maharashtra state ranks first in the country in
successful implementation or co-operative movement. In
Maharashtra 1960-61 there were 27 sugar factories which 14
were from co-operative sector and 13 private sector. Today in
Maharashtra 1999-2000 there were 192 sugar factories at
which 187 co-operative sector & 5 private sector. During
1999-2000 season, 123 sugar factories were in operation of
which 119 (97.54%) are co-operative sector and accounted for
65.04 lakh tonne (97.73%) sugar production in the state.

The sugar industry is one of the important
industry in Solapur district. It is started in 1960 at Malinagar
in Malshiras Tahasil on private sector. After wards Sahakar
Maharshi Shankarrao Mohite Patil were started co-operative
movement from the political point of view & started in 1962
co-operative sugar industry at Yashvantanagar, Sadasivnagar,
and Shreepur in Malshiras Tahsil. Another sugar Industries
started in Kumate (N.Solapur), Venunagar (Pandharpur),
Takali-Sikandar, Anagar (Mohol), Tulshidasnagar (Barshi) and Karmala, Madha Mangalweda and Sangola etc.

In Solapur district during the 1999-2000 season 12 sugar factories were in operation of which 11 sugar factories co-operative and one factory private sector, out of these factories total sugar production of c0-operotive 8308.5 M.T. (91.47%) and 78.46M.T. (8.53%) private sugar factory.

1.8 IMPORTANCE OF THE THEME SELECTED:

The Indian economy is basically an agrarian economy and the livelihood of around 70 percent of the population depends on agriculture. Sugar industry occupies an important position on the industrial map of the state of Maharashtra among the Indian state of Maharashtra is top in sugar production as well as recovery of sugar. Due to the perishable nature of sugarcane almost all sugar factories are established in rural areas. These factories play major role in the socio-economic development of rural areas in Solapur district. Throught the growth of various urban centres is helping to solve the problem of unemployment by providing employment in the growing industries and business, the importance of providing employment to the rural masses without much of their migration centres need no emphasis (Kharche, 1989). This is possible only by developing the various the agro-based industries in the rural areas.
The sugar factories being the large size agro processing industry has got quite a good employment potentialities. A sugar factory of 1250 tonnes crushing capacity per day creates an employment potentiality of around 300 to 350 permanent workers and equal number of seasonal worker. Besides this, for harvesting sugarcane 5000 male and female workers are required to the engaged during the crushing season, like wise around 100 tractors and 1000 bullock-carts are given employment during the crushing season by each sugar factory having 1250 tonnes capacity. The sugar industry in private sector has also provided the above employment potentialities in their areas.

The Co-operative sugar factories in Solapur district are playing the role of catalyst in the process of Socio-economic development of the rural areas. The sugar factories have provided the opportunity to even the smallest cane growers to derive the benefits of the large scale industry. The co-operative sugar factories with their manifold advantages play a very crucial role in bringing out the socio-economic development of rural habites. Due to the Socio-economic impact of the sugar industries, the income and employment generated as also contribution made to regional development. The various sugar factories have under taken the activities in their area of operation for the social, educational and agricultural development.
Integrated development of agricultural, social, cultural and educational can also take place resulting rural transformation. Thus sugar factories in Solapur district are coming up as 'Growth points' in rural areas to uplift the rural masses. In view of the situation described above, it is considered useful to study the socio-economic impact of the sugar industries in solapur district.

1.9 THE STUDY AREA:

The Solapur district lies entirely in the Bhima, Sina-Man basin the border of Karnataka. The Solapur district is bounded by 7.10’to 18.32’ north latitudes and 74.42’ east to 76.15 east longitudes. The east-west extension of the Solapur district is 200 kms and north–south length of Solapur district is 150kms. The Solapur district has a total area of 15021 squar k.m. The district head quarter is located at Solapur. This district consists of 11 tahasil. The area of district is surrounded by Osmanabad district in the east and north-east. Osmanabad and Ahmednagar district in the north, Satara and Sangli district in west Karnataka state to the south. The shape of the Solapur district resembles flying eagle.

The portion of the area of the Solapur district in the Pune divisions is twenty percent (20%) (Fig.No.1.1) The Solapur district is located along the western flank of the
Sahyadri ranges in Maharashtra. It is more or less like a plateau region except two hilly portions in Barshi and Karmala taluka. It is table land with an average height of 550 meters (1700 to 1800 ft.)

1.10 **HYPOTHESIS:**

The following hypothesis are tested in the field.

1) Increase the sugar factories has its positive impact on the concentration of sugarcane cultivation in the district.

2) The major sugar factories growth centres in the western zone of the district.

3) The development of sugar factories is providing large scale employment and economic security for the region.

4) The sugarcane & sugar – industry growth has brought some good effect on the general economy, educational purpose, social, agricultural, cultural of the region as well as has created some socio economic impact on sugar industry.

An overall development in the cane cultivation and sugar factories has shown the signs of the overall improvement in the rural economy of the study region.

1.11 **OBJECTIVES OF THE STUDY:**

1) To examine the locational aspects for the development of sugar industry in study area.
2) To assess the sugarcane cultivated area as basis for the sugar industry.

3) To evaluate the origin & development of sugar industry in Solapur district.

4) To assess the spatio-temporal changes of sugar industries in Solapur district.

4) To study the socio-economic impact of sugar industry in Solapur district. A case study.

5) To examine the problems & further suggestion for sugar industries in Solapur district.

1.12 REVIEW OF LITERATURE:

For the present investigation the Literature of different types has been referred. The role of Geographer is very vital in synthesizing of findings of other disciplines and in presenting comprehensive picture of an issue which may then pass on to the planners for retouching. The geographical studies on sugar industry as such are relatively rare, However, mention is made of some work which have been undertaken in India and abroad.

The research work dealing in progress of co-operative sugar industry in India & their Management problems by Sholar namely Singh & Ram Sagar (1978)In economic geography a study of Resources P.Kumar Roy (1992) has deals Location development of sugar industries in India.


1.13 **DATA BASE & METHODOLOGY**:

The data collected and used for the period 1975-2000 comes both from primary and secondary sources. The primary data is the raw data collected through different sources for which special questionnaires were designed, information collected through various official and workers.

The related information and statistics is collected from the secondary sources like co-operative sugar New Delhi, working results of sugar factories from library of Vasantdada sugar institute pune socio-economic review and district satistical abstracts district census hand books. Solapur district Gazetteer, Annual Reports published by sugar factories monthly bulletin ‘Godva’ published by Maharashtra Sahakari Sakhar Karkhana Sangh Bombay, Indian sugar monthly bulletin published by the Indian sugar Mills association, NewDelhi. Director of sugar Maharashtra state pune, various institutions have been visted by the author for collection of data. All sugar factories in the region were visited and information was collected.
The author has analysed the available data at various statues. The Relief and drainage pattern map is prepared with the help of million to posheet. To represent the population density and intensity of irrigation, choropleth technique is adopted to represent the spatio- -temporal variation in sugar production and sugarcane crushed etc. The choropleth technique is adopted. Growth trends of some aspects of sugar industry is represented with the help of multipal line graph. Average sugar recovery is represented with the help of horizontal bargraphs & the daily crushing capacity propotinate circle method is adopted.

The data thus collected, through primary & secondary were processed and represented by statistical and cartographic techniques. The following method were adopted for the collection of data as such questionnarie, Interviews observations and case study etc. The questionnarie was prepared and canvass to the co-operation to collect the opinions the sugar policies adopted by the Government and working of the sugar co-operative in Solapur district. The researcher contacted some of the managing Directors labour welfare officer and Board of Directors of sugar co-operatives in Solapur district. For this purpose the adopted interview technique to study the problems of sugar factory, labour problems & factory development etc.
Thus after completing the data collection various maps, diagrams, tables, charts etc. Relevant to study were prepared. The data were analysed by using various appropriate cartographic techniques such as quantitative methods, statistical analysis, geographical representation, and photographic method etc. Were adopted in representation of the Data.

1.14 **SCHEME OF CHAPTERS**:

The present study has been divided into Eight chapters.

1. The First chapter deals with introduction, Geographical approach, Human geography, Economical Geographical approach, Industrial Geography, Slow growth of Industrial Geography in India, Industrial Geographic approach, sugar Industry, Importance of theme selected, The study area, Hypothesis, Objective of the study, Review of Literature, Data base and Methodology etc.

2. The second chapter analysis with the region, Physiographic determinants, Drainage pattern, Climate, Soils, Geographical regions.

3. The third chapter deals with locational aspects for the development of sugar industry. Factors responsible for the
industrial location, Geographical factors and Socio-economic factors.

4. Forth chapter describes the sugarcane cultivation and sugar industry, Basic requirements of sugarcane cultivation. Soil requirements, Water management, Sugarcane cultivation basis for sugar industry, Sugarcane concentration and Sugar industry, Zone wise Levels of Sugarcane productivity.

5. The Fifth chapter studied the origin and development of sugar industry in Solapur district, Growth of sugar industry, Industrial location, Taluka wise distribution of sugar industries, Role of the Co-operative sector in the development of sugar industry.

6. The Sixth chapter deals with spatio-temporal growth of sugar industry in Solapur district, Distribution of sugar factories in Solapur district, Growth trends, Crushing capacity, Sugar production, Sugar recovery, sickness of sugar industry

7. The Seventh chapter studied the Socio-economic impact of sugar industry in Solapur district. A case study, Bhogavati S.S. Karkhana Vairag (Barshi) & Sahakar Maharshi Sankarrao Mohite Patil S.S. Karkanha Shankarnagar, Akluj (Malshiras)
8. The eight chapter deals with the problems & further suggestion for development of sugar industry various problems of sugar industry by products & suggestions.

Finally summary and conclusions have been presented with meaningful and further suggestion for the development of sugar industry in Solapur district.
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