A survey of research in Industrial Geography in India

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Abstract

Though, industries play a dominant role in the development of a country, yet researches on industrial phenomenon, especially in geography can be counted on fingers. Among Indian geographers, it has never been an issue of interest. However, some studies, surely, attract the scholars of industrial geography but there is a lack of specific studies on industrial development. Before independence, a few works were done in the field by Indian geographers who have mainly worked on different themes related to location and distribution pattern of industries, resource base for industries, industrial impact on urbanisation, environment impact, socio-economic impacts, industrial finance, industrial linkages, and analysis of some specific industries. Besides, policy oriented studies, de-industrialisation, impact of globalisation on industrial development and specific studies on sickness of industries and its management, are least accounted for research. The main purpose of the present paper is to outline a survey of researches in industrial geography done by Indian geographers.

Key Words: Industrial geography, industrial development, globalization, industrial complex, location of industries, industrial growth, industrial policy, industrial linkages, distribution pattern, rural industrialization.

Introduction

Industrial geography is an important branch of economic geography. After the World War II, the process of industrialization had been started in the most of the developing countries of the world and studies on industrial phenomena had taken place in industrial geography. Clark (1987), Massey and Meegen (1986), described the industrial geography as regional and industrial economic-geography. Industrial geography has dramatically changed over the past 15 years when the traditional and village industries slowly started to disappear and several new types of industries came into existence. Besides, small scale industries have also expanded considerably. Due to these changes, the nature of industrial structure has become more diversified and expanded. As a result, most of geographers are attracted towards the studies associated with industrialisation and urbanisation. Later on, studies of industrial location, industrial resource base, inter industry linkages and industrialization and regional development were main concern of geographers. This paper presents a survey of research in industrial geography done by Indian geographers.
Objectives and Methodology

The main objective of this paper is to survey the research work undertaken in industrial geography in India especially by Indian geographers. This survey is mainly based on the literature available/obtained from the books, theses, journals and related web contents. Attempt has been made to make thematic review of literature classifying the words into seven categories i.e., Location of industry, industrial growth, industrial policy, industrial distribution, small scale industry, cottage industry and rural industrialization, industrial complexes, industry and environment and miscellaneous researches.

Location of Industry

Studies of spatial distribution of industries, geographical factors operating in their location and the major features of industrial landscape were, for the first time, systematically analysed in the work of Loknathan (1931). He studied the problems of migration of labour in south India and found that seasonal migration took place mainly from the upland districts to the irrigated deltaic tracts of the Krishna, Godavari and Kavery and to the tea, coffee and rubber plantations in the Nilgiri, Mysore and Kerla. Loknathan (1932) traced important factors of location in the establishment of cotton and jute textile, sugar, iron and steel, paper, cement and heavy chemical industries, and presented a critique on the distribution of industry in India. An attempt was made by Prakash Rao (1941) to understand the role of geographical factors in the location of ship building industries. These researches were concerned to explain the geographical factors of industrial location and spatial distribution of industrial landscape. However, the first serious attempt to understand the importance of geographical factors in the industrial location was made by Prakash Rao (1942). Ghosh (1946) felt that there was need for decentralization of manufacturing industries for regional development which are concentrated in few regions such as Bombay and Bengal. Kuriyan (1962) drew attention to glaring uneven distribution of industrial activity in the country, as these caused regional economic imbalances. He analysed the present structure of cotton and jute textile and iron industry and suggested measures for expansion of industries in many other areas. Chaudhuri (1962) studied the location and growth of major Indian industries and emphasised upon the appraisal, utilization and conservation of natural resources of West Bengal. Jai Nathan and Bhanumati (1963) examined various aspects of the location and development of manufacturing industries in Poona. Dayal (1964) studied the role of geographical factors in the localisation of iron and steel industry in India. Tiwari (1967) took stock of the current trends of the small scale industries in eastern Uttar Pradesh. Exploring the possibilities of future development in the context of the available raw material and a ready market, he suggested the establishment of a large number of small scale industries in the region. Patni (1969) studied the factors affecting location of selected Indian industries and presented a review on change in this pattern from 1950 to 1965. Mukherjee (1970) analysed various aspects of recent

**Industrial Growth**

Many geographers have studied the growth and development of industries in different
parts of India. Sengupta (1958) worked on intricate factors of industrial growth in the Hoogly region of West Bengal, where concentration of industries has been at the cost of Bihar and Orissa. Gupta (1967) traced the remarkable industrial growth of Faridabad during first decade of independence due to supportive nature of the concerned government. He noted that many problems, including shortage of labour, power supply and transport had proved detrimental to a steady growth. Sinha (1968) analysed the state of growth of industries in Bihar that contribute a poor share of 7% of state economy. Prasad (1980) studied the level of industrial development in India giving reasoned account of its causes and consequences. Chaudhuri (1981) has described the performance and problems of public sector industries in India. Singh (1983a) explained in detail different processes and patterns of industrial landscape in Madhya Pradesh. Thiagarajan (2010) assumed the growth opportunities and challenges of market size and avenues for growth of air conditioning industry in India.

**Industrial Policy**


**Distribution of Industries**

Agro-based industry was the main concern in this category of research. The cotton

Distribution of mineral-based industry was studied by several geographers. Ganguli (1949) studied iron and steel industry of Bengal and Bihar industrial belt mainly concentrated in Chhotanagpur plateau region. Krishnan (1952) emphasised the role of geographical factors such as proximity to raw materials and power in the location of mineral-based industries with reference to iron and steel industry. Dayal (1958) noted the new trends in the development of aluminium industry that is mostly power and mineral based. The study revealed that the inadequate supply of cheap hydropower was the main factor which hampered the full utilization and growth of the existing capacity production of the plants and growth prospects of the industry. Jhonson (1966) focussed on the development and problems encountered by steel industry in India. Thapan (1967) presented a comparative study on manufacturing industry of steel towns namely Jamshedpur, Bokaro and Bhilai. Basu (1972) studied the development of the Integrated Iron and Steel Industry of India. The geo-economic analysis includes the state of industry of time and its future prospects. Sharma (1973) focussed on the appraisal of mineral resource and prospects of industrial establishment in Chhattisgarh region, Madhya Pradesh. Chaubey (1975) made a study on Bhilai steel project and its impact on the towns of Chhattisgarh. Mathur (1991) presented a valuable study on problems of child labours in gem (stone) polishing industry of Jaipur city.

Small, Rural and Cottage Industries
A significant feature of the Indian economy, since independence, is the rapid growth of the small scale industry sector. Industrial Policy Resolutions of 1948 and 1956 considered the cottage and small scale industry for creating additional employment opportunities to semi-skilled and skilled labour with low capital investment. Small and medium enterprises play crucial role in socio-economic development of working class people of our country on account of their inherent advantages namely low capital requirement, employment generation, decentralization of industrial activity, utilization of locally available resources and widening of entrepreneurial base. Rao (1930) described the cottage industry in Coimbatore region which included handloom, carpet, khadi and metallic industry. Sinha (1960) studied salient characteristics of small and medium scale industries in Orissa. Pal (1974) studied the issues of development

**Industrial Complex**

Sharma (1997) has studied the correlation between industrial complex and regional development of Bhilai Industrial Complex. According to him, Bhilai industrial complex played an important role in the development of surrounding areas. Sharma (2004) presented a theoretical review of industrial complexes and their role in the process of regional economic development.

**Industry and Environment**


**Miscellaneous Researches**


**Conclusion**

Major trends of research in industrial geography have been to analyse the variety aspects of distribution of industries on a regional basis and to delineate major industrial zones of country side. The region which received the serious academic attention includes Bihar, West Bengal, Orissa, Eastern Uttar Pradesh, Madhya Pradesh, and Maharashtra. Industrial structure, problems and prospects of growth and development of industries in a number of states such as Madhya Pradesh, Punjab and Andhra Pradesh were major focuses of study among Indian geographers. Among the metallurgical industries, the iron and steel industry has attracted more attention of geographers. Most of these studies focused on the location and development of industries. The portion of West Bengal, Bihar, Orissa and Madhya Pradesh were core of the country for public sector iron and steel industry, while the cotton textile industry has been studied in detail on a regional as well as national basis. Jute, woollen and other textiles industries have so far failed to inspire the geographers. Tea, coffee, rubber and processing industries attracted interest of geographers for study of distribution pattern and problems of these industries. A few geographers have given attention to the problems and prospects of sugar industry, both on a regional as well as a country basis. The problems of the forest-based industry, basically paper have been studied by geographers in detail. The review reveals that only a few geographers were free from the attraction of economic theories of industrial location rather than the real geographical factors. However, the contributions of some Indian geographers have significant role in the careful planning of industrial location with a distinct regional basis. Under the impact of globalisation, industries are now diverting, adjusting and moving towards global demands and diversifying their production under open market. Advantages and issues of footloose eco-friendly and interregional linkages in material as well as technological flow have made their bearing on global scenario. These aspects should be widely considered by new generation of researchers in geography. There are large and serious gaps in the study.
of industrial geography that need immediate attention. A large programme of research based on new techniques, will have to be promoted to highlight the contribution of geographers in the planning of industries in India.

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