

Importance of Chemical Industries

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I Introduction :- India chemical and petrochemical industry now ranks twelfth in the world. The Indian chemical industry contributes 35 percent of India's gross domestic products. The total investment in Indian chemical sector is approximately US 60 billion dollar generating an employment of 1 million. Currently per capita consumption of chemical products in India is about 1/10th of that of the world average. Now India is a leading contributor in chemical industrial market. The states like Gujarat, Maharashtra, Tamilnadu, and West Bengal are more successful in this field than Bihar.

An ample use of chemical products in any industry indicates its diversity and excellence in production process. Present day civilization is solely dependent on chemical products. Without fluent supply of industrial chemicals such as sulphuric acid, soda ash, Caustic Soda, Chlorine, Nitric acid, the industries like textile, petro-chemicals, soap, drugs and medicines, sugar, chemical fertilizers, insecticides, plastics became nonexistent. The location of chemical industries mainly depending on knowledge of science and technology, capital and steady market. With the help of these three factors and availability of natural raw materials Gujarat and Maharashtra are able to capture the first two positions in chemical production in India. The state like Bihar needs enormous efforts to reach there.

Bihar is one of the fastest growing states in India. During the periods 2005-06 to 2014-15, the GSDP of Bihar at constant prices grew annually at 10.5 percent, which is one of the highest among all major Indian States. The scale and pace of economic change that Bihar has witnessed over the past few years has been the result of a comprehensive, home-grown reform program initiated by the government. These reforms ranged from changes in managing public

finance and reforming government expenditures, public investments in building infrastructure, and most importantly revamping the law and order machinery. All these changes have provided an enabling environment for private investment in the state and greater industry commitment.

Bihar is aggressively working on developing supporting infrastructure in the state. In the absence of adequate roads no state can amplify its economic growth. With this background, the state government has resolved to connect the capital city of Patna to the remotest areas in the state, so that people can reach the capital within a maximum of six hours from any place.

Promoting inclusive employment-intensive chemical industry and building resilient infrastructure are vital factors for economic growth and development. The government is taking several sector-specific measures in this direction. Apart from structural reforms like Goods and Services Tax, Insolvency and Bankruptcy Code and measures to facilitate Ease of Doing Business, the Government has initiated sector-specific reforms in steel, Apparel, Leather and power sectors to address specific challenges associated with each of these sectors. Various reforms undertaken by the Government over the last 3 years, have been recognized by international rating agencies such as Moody's Investor Services and up-gradation in the ranking of Ease of Doing Business of the World Bank Report 2018. Several key measures and achievements in the industry and infrastructure sector have been discussed. There has been considerable progress in roads, Railway, Metro Rail, Shipping Civil Aviation, Power and Logistics Infrastructure sectors that is expected to step up the growth momentum in the short term.

II. Position of Chemical Industries in Bihar

The erstwhile state of Bihar was bifurcated in November, 2000, and the present Bihar does not have any mineral resources. The state also lost the important industrial sector that went to present Jharkhand. Therefore, Bihar has got only an agricultural sector to rely upon. The base of Bihar's agriculture is its fertile soil and abundant water resources, particularly ground water. Because of its favourable agro-climatic conditions, Bihar produces a variety of crops, vegetables and fruits. Recently, the state is producing flowers on a large scale for its domestic and outside market. The state government is stressing for higher

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agricultural growth with a variety of intervention for technological change. Agriculture road Map II contains a number of programs. The rise in productivity has led to higher rate of growth of GSDP during the last decade. This rise has also led to higher generation of agricultural surplus during the recent years. This surplus has got invested in secondary and tertiary sectors, helping them to grow at high rates.

III. Employment Chemical industries in Bihar

One can notice that the total employment in the large industries (covered by ASI) in Bihar in 2013-14 was 1.14 lakh, which accounts for less than 1 percent of the total employment across all states at 135.38 lakh. The industrial employment opportunities for workers who were earlier employed in low-productivity agriculture. Unfortunately, Bihar is yet to reach that stage of industrial development where substantial transfer of agricultural workers is possible, freeing its rural economy of large under-employed workers. The annual wages for workers in Bihar is only Rs. 99.40 thousand, less than half of the national average of Rs.202.36 thousand. This wage level is indeed the lowest among all the states in India. There could be two reasons for such low level of wages industrial workers in Bihar first, the technological base of the industries in Bihar is comparatively lower and hence the skill level of its workers is also lower and, secondly, the high rate of unemployment in Bihar which exerts obvious downward pressure on wage rates.

• **Prime Minister Employment Generation Programme (PMEGP)**

Under PMEGP, a total of 50,460 units were assisted at all-India level with Rs. 1075 crore involved as margin money and estimated employment generation of 3.69 lakh in 2013-14. As against this, in Bihar, 3645 units were sanctioned the margin money amounting to Rs. 82.80 crore. However, only 3039 (85 Percent) were disbursed a sum of Rs. 76.76 crore, with an estimated employment generation of 19.9 thousand. This credit-linked subsidy scheme is implemented through Khadi and Village Industries Commission (KVIC), Khadi and Village Industries (KVI) Board and District Industries Centres (DICs). Of these three agencies, DIC has been a major player with the disbursement of 82.2 percent of the total margin money (Rs. 63.07 crore), disbursed to 2576 or 83.3 percent of the units with estimated employment generation of 16.7 thousand persons (83.9 percent). The involvement of KVIC and

KVI Board in disbursement remained around 11 and 6 percent, respectively.

IV. Nature of chemical industry in different states of India :

Though the chemical industry is spread over the country, there is relatively a high concentration along the west coast of Gujarat. Gujarat contributes about 53 percent of the total chemical production in the country, followed by Maharashtra, contributing 9 Percent. The other major chemical producing states include Uttar Pradesh, Tamilnadu and Madhya Pradesh. In the case of heavy chemicals, especially inorganic chemicals, availability of fuel is a determining factor, and therefore there is a tendency of these companies to concentrate around power plant. Due to the regional concentration of chemical companies in certain products, logistics costs for the industry have tended to become a significant position of total costs.

There has been large scale change in industrial environment due to economic liberalization, privatization and globalization. Strong emphasis is being placed on Micro, Small and Medium Enterprises (MSME). Cluster based development is being promoted by the state Government and it is in the process of setting up specialized cluster for development of leather, small machinery, Plastics, garments, Jute & textiles, and food processing to boost the manufacturing sector and well-being of MSME entrepreneurs.

Bihar is progressively adopting practices to create an investor friendly environment in the state, so as to facilitate investments. Some of the key reform measures taken are implementation of UDYOG SAMWAD portal for grievance redressal, effective implementation of single window system, development of an online inspection system; provision for submission of single integrated return under various labour laws; differentiated compliance inspection requirement based on risk profile of industries; provision of synchronized/joint inspection under various labour laws etc.

The present policy aims at creating industry-friendly environment for maximizing investment, especially, in priority sectors i.e. food processing; tourism; , small machine manufacturing ; IT, ITeS, electrical and electronic hardware manufacturing; textile; plastic and rubber; renewable energy; leather and technical education sector. The overall objective is to maximize the value addition to state's natural resources by setting up industries across the state, generating revenue

and creating employment. This policy has been drafted in consultation with representatives of industry association, investors, subject matter experts, etc. and efforts have been made to accommodate their views. It is expected that implementation of the policy will facilitate industrialization of the state, generate employment and add to its overall growth.

Industrial Land

A. Bihar is one of the largest states of the country in terms of land area. Its total geographical area is around 93.6 lakh hectares. Because of its topographical nature, the proportion of total land area of the state, around 57% is under agriculture. Looking at the facts that agriculture is the mainstay of the economy and that the population of the government to be able to carve out land for industrial uses or to convert open lands to industrial lands.

B. BIADA is the key agency for allotting lands/industrial plot to the prospective units in Bihar. BIADA has four regional offices at Patna, Darbhanga, Muzaffarpur and Bhagalpur. At present, there are 50 industrial Areas (IA)/Industrial Estates (IE)/ Large Industrial Estates (LIE)/ Growth centres (GC)/ Mega Industrial parks (MIP) under the purview of BIADA.

C. BIADA allots the land in an industrial area after developing necessary infrastructure like roads, power, water and drainage facilities, etc. As on Dec. 2015, 1544 industrial units were in operation in various industrial areas.

D. Garment Manufacturing park : It is situated in Bihta (Patna) having 25 acres of land.

All these parks have well developed infra structural facilities for setting up of an industrial unit.

Industrial Policy Of Bihar, 2016

The state government had earlier formulated an industrial Policy in 2011. Based on the working experience, it had prepared a new policy document 'Industrial Investment Promotion Policy' in 2016. This policy aims to achieve an annual growth rate of 15 percent for the industrial sector, so that its contribution to the GSDP can gradually reach to about 25 percent. To achieve this goal, the main strategy of this policy is to focus on

- Development of support infrastructure,
- Prioritising core sectors with emphasis on advanced technology,

- Modified structured package of assistance, and
- Balanced regional development.

Towards strengthening the support infrastructure, the policy includes allotment of vacant industrial land for priority sector projects, establishment of new industrial area and expansion of existing ones, recovery of land from sick/closed units, promotion of private participation for increased availability of industrial land, establishment of air cargo complex, upgradation of facilities at container freight terminal, increasing the supply of quality/reliable power, establishment of gas pipeline framework, promotion of MSME cluster, and Promotion of private industrial parks. After careful considerations, the policy has identified the following 10 sectors as the priority sectors for industrial development of Bihar (i) Food processing, (ii) Tourism, (iii) Small machine manufacturing, (iv) IT, ITeS, electrical and Electronics Hardware manufacturing, (v) Textile, (vi) Plastic and Rubber (vii) Renewable Energy (viii) Healthcare, (ix) Leather, and (x) Technical Education. The above list of sectors, however is only indicative and the state government may suitably revise the list from time to time.

Conclusion :

With rapid industrialization and urbanization of Bihar, in order to ensure easy availability of land, government intends to introduce the concept of land use planning to ensure optimum utilization of land. It will identify specific sites in backward regions of the state, which could be developed for the setting up of industrial estates with necessary infrastructural arrangements. One of the main objectives of zoning is based on land use planning for industries in clusters so that the environmental protection measures can be adopted through setting up of common effluent treatment plants, disposal of treated effluents etc.

Bihar is one of the strongest states in agriculture which provide employment and livelihood to about 80% of its people. It is the largest producer of vegetables and the second largest producer of fruits in India. Food processing dairy, sugar, manufacturing and healthcare are among the fast growing industries in the state.

In Bihar chemical industry is the main stay of industrial and agricultural development of the country and provides building blocks for several downstream industries, such as textile, papers, paints, soaps, detergents, pharmaceuticals, varnish etc. It is one of the most diversified

of all industrial sectors covering thousands of commercial products. Petrochemicals constitute a very important segment of world chemicals market, with a share of nearly 40percent. The industry is important as it has several linkages with other industries in petroleum refining, natural gas processing and forward linkages with industries that deal in a variety of downstream products.

Without chemical industry, there would be no electronics or microelectronics, refrigerators, recording tapes, automobiles, laser discs, super magnets, processed foods and virtually all consumer products etc. even the power industry depends on the chemical industry for its operations. The use of chemicals (ion exchange resins) becomes indispensable for removing dissolved salts needs in boilers and other application. In gold mining, cyanide solution is used for extracting gold. The crude oil refining process uses chemicals, catalysts, heat, and pressure to separate and combine the basic types of hydrocarbon molecules naturally found in crude oil into groups of similar molecules.

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