

Critical Review for Planning of Logistic Park at Sachin Industrial Corridor, Surat

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Abstract - The trend of Modern logistics' development displays features such as globalization and socialization. To keep up with this trend, countries worldwide have established their own logistic system platforms as an important way to strength their overall national power. A good logistic system planning is one of the most effective means of improving regional logistic system. For the purpose of improving the regional logistic system and logistic park planning, this paper, focusing on the overview of the global and India logistics sector, basic repayments and facilities of a logistic park, demographic profile of Surat, Transport and Communication facilities, And details about Sachin industrial corridor comprises of main fore estate namely Sachin GIDC, Surat SEZ, Surat apparel park and Hojiwala industrial estate for design of logistic system planning and freight transportation.

Key Words: Logistics park, Sachin industrial corridor, planning, repayments and facilities of a logistic park, Transport and Communication

1.INTRODUCTION

Logistic Park would help a user to take care of issues including efficient interface arrangements; goods warehouse facility, quick documentation arrangements and customs offices when import & export are involved. Logistic is defined as management of business operations such as acquisition, storage, transportation, and delivery of goods along the supply chain which involves string of activities through various modes of infrastructure and transport points. Strong economic growth increase in domestic and international trade together with increased outsourcing of logistic needs by industries have driven the logistic sector in India.

A Logistics park is an attributed area that facilitates domestic and foreign trade by providing services including warehousing, cold storage, multimodal transport facilities and ICD/ CFS. Key factors that differentiate a logistics park from a typical ICD/ CFS/Warehouse are value added services such as crossdocking, customization, stacking and labelling. Companies that are located within the facility get benefited in the form of reduced costs (less tied-up capital, economies of scale, and/or logistics outsourcing) or an ability to provide

better services in cooperation with other companies operating within the park.

1.1 Global Logistics Sector - An Overview

For any country, the annual logistics cost varies between 9% and 20% of the GDP, the figure for the US being about 9%. According to US-based Armstrong & Associates, Inc., the global logistics market is currently valued at USD 3.5 trillion. The US logistics market is the largest for a single country in the world capturing one-third of the world logistics market, although most of the large LSPs are headquartered in Europe. (The US logistics market is currently valued at USD 1 Trillion). The logistics industry is growing very fast in southeast Asian countries due to a shift of manufacturing base and increasing volumes of exports from these countries. [3]

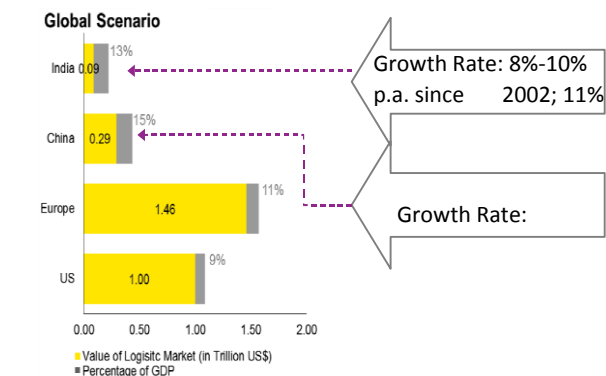


Fig -1: Global scenario of logistics

1.2 India Logistics Sector - An Overview

Development of transportation and logistics-related infrastructure such as dedicated freight corridors, logistics parks, free trade warehousing zones, and container freight stations are expected to improve efficiency. Government reform initiatives, promotion of manufacturing and trade, improving investment climate are expected to transform the industry and drive growth between 2016 and 2020.

The Indian logistics market recorded US \$104.10 billion revenue in 2014 and is likely to reach revenues of US \$150-

\$160 billion by 2020. Transportation accounts for about 60 per cent of the market revenues. Demand for project logistics services will be particularly strong in the manufacturing sector as the Indian Government's push to increase the manufacturing output in the country will spur infrastructural activities in this space. The total market opportunity for project. [3]

2. LITERATURE REVIEW

A Logistics park is an attributed area that facilitates domestic and foreign trade by providing services including warehousing, cold storage, multimodal transport facilities and ICD/ CFS. Key factors that differentiate a logistics park from a typical ICD/ CFS/ Warehouse are value-added services such as cross-docking, customization, stacking and labeling Companies that are located within the facility get benefited in the form of reduced costs (less tied-up capital, economies of scale, and/or logistics outsourcing) or an ability to provide better services in cooperation with other companies operating within the park. The concept of a Logistics Park is a recent phenomenon. It can be traced back to the Foreign Trade Policy of 2004, which led to the development of FTWZs. While FTWZs were aimed at facilitating import and export of goods, the need for one-stop solution that could additionally cater to the domestic market led to the development of Logistics Parks as a part of the infrastructure industry since 2005.

2.1 Basic Requirements of a Logistics Park

The case studies of select Logistics Parks in India and abroad are highlighted in Annexure 1. Based on the case studies, it's observed that the development of a logistics park should have the following basic criteria:

a) Land & Area Requirements

Land parcels involved in Logistics Park projects should be preferably on city peripheries. The area has to be adequate in order to accommodate the facilities planned in the development of the Logistics Park. The site area affects the facilities planning and the vice-versa also holds good. Hence the area of the site plays an important role in the development of Logistics Park.

b) Connectivity

Transportation is an essential and major sub-function of logistics that creates time and place utility in goods. The key transport infrastructure required for moving goods from one place to another in India involve roads, rail, shipping ports and air freight.

Road transportation provides key services like cargo management, trucking related services like fleet management, network optimization and route planning. Rail transportation provides cost effective movement of bulk cargo within the country.

Major ports and airports also facilitate container/export-import (EXIM) movement in the country. In addition, airports account for high value domestic cargo and Express cargo movement within the country.

c) Human Resource Availability

Human resource is an important criterion in the selection of site for development of logistics parks. Skilled manpower is needed to be available in the area. Alternatively, the site should have easy access to the public transportation network of the city. [1]

2.2 Facilities within a Logistics Park

A form of cross-bundling with a wider focus to include almost all the facilities across the Logistics value chain has given birth to the concept of Logistics Parks. A logistics park facilitates both domestic and foreign trade. Some of the base facilities that form the skeleton structure of a logistics park are as follows. [1]

a) Transportation Facility

Based on the project location and its access to the different modes of transportation the following facilities can be proposed in a logistics park.

- Road – Truck parking area/ Truck terminal
- Rail – Inland Container Depot/ Domestic Rail Head (DRH)
- Water – Port/ Container Freight Station (CFS)
- Air – Air Cargo Centre

b) Warehousing Facility - Storage

Storage is an important function of a logistics park and the warehousing component of the park takes care of the same. Based on the products to be stored, the following storage facilities are planned within the park.

- Customized Warehouse
- Cold Storage Warehouse
- Bonded Warehouse
- General Warehouse

c) Support and Social Infrastructure facilities

The support and social infrastructure facilities include both essential infrastructure facilities for the effective functioning of the logistics park and other facilities that address the environmental and land-use regulations within the park.

Support facilities are Central administration facility, Office Spaces and Amenities, Cooler facility, Power back-up, Power Transmission & Distribution network, Water storage & Treatment Plant, Sewerage Treatment Plant, Telecom network Etc.

Social Infrastructure facilities are Eating areas, Toilets, Dormitories, Recreational areas unavoidable.

3. STUDY AREA PROFILE

Surat is a city located on the western part of India in the state of Gujarat. It is one of the most dynamic city of India with one of the fastest growth rate due to immigration from various part of Gujarat and other states of India. unavoidable.

3.1 Demographic profile

District of Surat is divided into ten revenue talukas choryasi, Palsana, Kamrej, Bardoli, Olpad, Mongol, Mandvi, and Surat city are the major developed talukas in the district. [5]

- Area: 7,657 sq. km,
- Population: 6081322
- Sex Ratio: 788
- Density: 1376/ sq. km
- Literacy: 87.89
- Elevation / Altitude: 93 – 139 meters. Above Sea level

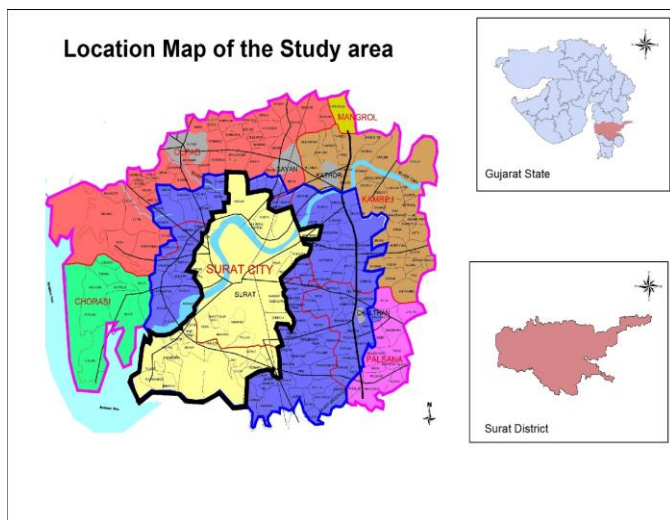


Fig -2: Location map of Surat District

3.2 Transport and Communication

Transport and Communication facilities are considered as administrative necessity as well as a public convenience. Moreover; a well-knit transportation system is a pre-requisite for the social and economic development of any district. The district has a good network of transportation facilities. Towns as well as most of villages in the central and western parts of the district are connected by national and state highways, other roads and railways. Surat is the prominent industrial centre of the district as well as of the state. Surat is also an intermediate port, handling foreign traffic. Domestic airports also adorn the district. [2]

(a) Road

The linking of one place with other by road is very essential to provide good transport system. According to the classification of road, made by Roads and Buildings Department, Government of Gujarat, Gandhinagar road length in the district by category is mentioned below for the years 2006 to 2010. Surat is well connected to various locations through national and state highways. Connectivity to major industrial centres: NH-8 connects Surat with

Mumbai (307 km), Delhi (1,034 km), Kolkata (1,676 km), Chennai (1,371 km) and Hyderabad (824 km). Distance to other major cities of Gujarat: Jamnagar (549 km), Rajkot (461 km), Bhavnagar (447 km), Valsad (77 km), Ahmedabad (278 km) and Vadodara (167 km).

(b) Railway

There are 33 villages having railway facilities in Surat district. Total length of railway line in the district is 380 kms. There are 14 stations on broad gauge line and 39 stations on meter gauge line. Bombay Delhi broad gauge line passes through the district. Almost all the talukas of Surat are well connected with the rail network. Surat is well connected with Valsad, Vapi and Mumbai towards its south and with Bharuch, Vadodara, and Ahmedabad in the north.

Table -1: Taluka Wise Railway Station

Sr no.	Name of Taluka	No. of railway station
1	Olpad	4
2	Mangrol	9
3	Umarpada	3
4	Mandvi	-
5	Chorasli	5
6	Palsana	4
7	Bardoli	4
8	Mahuva	1
9	kamrej	-

(c) Ports

The district has 3 important ports. Among them Hazira and Magdalla are intermediate ports whereas Bhagwa is minor port. All the ports are operative in all seasons. Fertilizer, Sulphur iron scrapes and rock phosphate are the main items imported at these ports whereas salt, betonies, onion and oil cake are principal items of exports through these ports. Magdalla & Hazira Ports in Surat have good rail and road connectivity. Magdalla port is 2 km away from the state highway and 15 km away from NH-8. Hazira Port in Surat has proximity to the high-speed dual carriageway which is under construction. The port is well connected with main Mumbai-Ahmedabad-Delhi broad gauge railway line. The nearest airport is in Surat. The proposed Mumbai-Delhi Freight Corridor is expected to be a major driver for industrial growth of Hazira Port.

3.3 Sachin industrial corridor

Sachin industrial corridor comprises of main fore estate namely Sachin GIDC, Surat SEZ, Surat apparel park and Hojiwala industrial estate. Sachin industrial

corridor has many types of diver’s industry’s like textile weaving, Chemical, Dyeing and printing, Yarn dyeing and digital printing water jet looms, engineering and other. NH 6 is connected, and NH 48 is 8 km away from Sachin industrial corridor. railway line is also connected to Sachin industrial corridor. [4]

more in-depth studies into the logistic planning theory, the selection of the logistic park’s sites and its function layout, and requirement of logistic park based on which we can construct a comprehensive logistic planning methods system that conformed to India’s national conditions.

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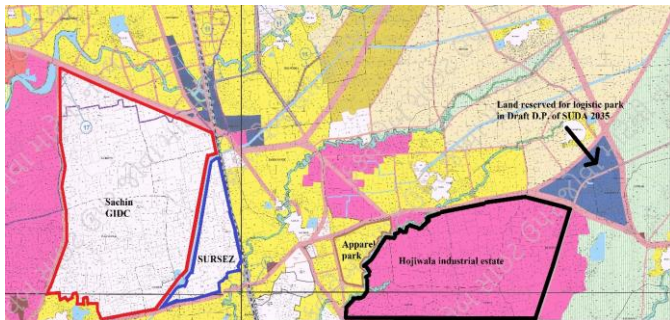


Fig -3: Sachin Industrial Corridor

Table -2: Industrial Estates of Sachin Industrial Corridor

Name of estate	Sachin GIDC	Hojiwala Industrial Estate	SUR SEZ	Apparel park- Surat
Area of Estate Sq. MT, hector	69,20,000 692	33,65,522 336	5,49,600 50	5,66,474 56
Total No. of Plots	2109	2176	162	129
Allotted Plots	2096	2142	150	108
Unallotted Plots	13	34	22	21
Total allotted area in sq. mt.	588,531.98	33,19,036	5,08,888	4,74,257
Total unallotted area in sq. mt.	16,976.77	46,486	40,712	59,217

4. CONCLUSIONS

This paper offers a comprehensive study for the requirement of development of the logistics park at Sachin industrial corridor, and its actual demographic situation, transport, and communication facility for logistic park. Logistic planning and regarding studies are still rather weak in India at the moment. That’s why we need to conduct more specific and