

Efficacy of different nodes in Delhi Mumbai Industrial Corridor

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Abstract - India is on a fast track development program with a robust economic growth, in order to maintain this growth pattern there is a urge to develop reliable and efficient infrastructure. The graph below provides an insight into the changing GDP rate on a quarterly basis from the year 2001-2008. Despite the global economic meltdown due to the fall of Lehman brothers Corporation, India witnessed a steady downward momentum with change in only about 2-3%. This complimented by the ever increasing demand in domestic market lead to the joint partnership between India and Japan to elevate the Industrial Corridor concept to the next level. The Delhi Mumbai Industrial Corridor (DMIC) is a joint trade program between India and Japan under the CEPA (Comprehensive Economic Partnership Agreement). In this paper the study of various nodes in each state in connection with DMIC has been carried out. This paper shows how and why these nodes are selected and what are the various advantages arising due to these nodes which will help in developing the proposed components for each state.

Keywords – India, Industrial, Economic, Corridor and Delhi.

I. INTRODUCTION

1.1 Definition of Industrial Economic Corridor

Industrial Economic Corridors are zones which are of huge potential revenue generating areas. It has been observed that these corridors have been built along major road and rail networks. These zones integrate the industry and infrastructure by providing better connectivity and access. They are termed more recently as ‘Mega-regions’ in a research paper by Massachusetts Institute of Technology Engineering Systems Division on “Comparative study on HSR”. Industrial Corridors are essential in generating higher employment with competitive environment for various business establishments.

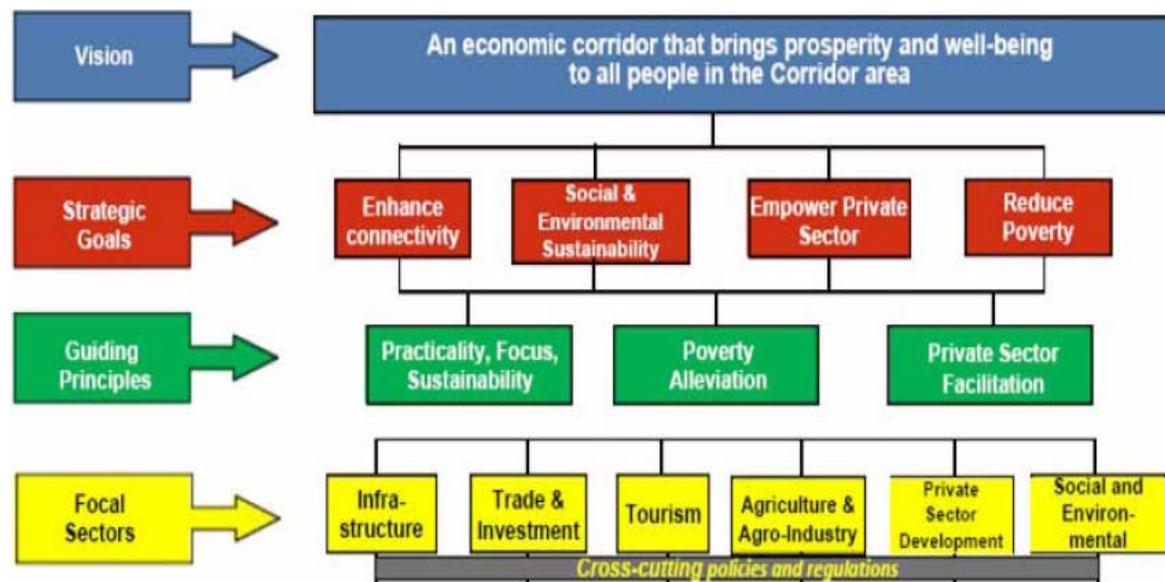


Fig. 1.1 Lean Six Sigma Principles

1.2 Characteristics of Industrial Corridor

Industrial Corridors recognize the inter-dependence of various sectors of the economy and offer effective integration between industry and infrastructure leading to overall economic and social development. Industrial corridors constitute world class infrastructure such as

- High-speed transportation (rail, road) network.

- Ports with state-of- the-art cargo handling equipment.
- Modern airports.
- Special economic regions/ industrial areas.
- Logistic parks/transshipment hubs.
- Knowledge parks focused on feeding industrial needs.
- Complementary infrastructure such as townships/ real estate, and
- Other urban infrastructure along with enabling policy framework.

1.3 Opportunities for Private Sector Investors:

Industrial corridor provides opportunities for private sector investment in the provision of various infrastructure projects associated with the exploitation of industrial opportunity. However, the successful utilization of opportunities that arises from industrial corridors depends on availability of efficient transport and other infrastructure support systems. Corridor approach for industrial development primarily takes advantage of the existence of proven, inherent and underutilized economic development potential within the influence region. Apart from the development of infrastructure, long-term advantages to business and industry along the corridor include benefits arising from smooth access to the industrial production units, decreased transportation and communications costs, improved delivery time and reduction in inventory cost.

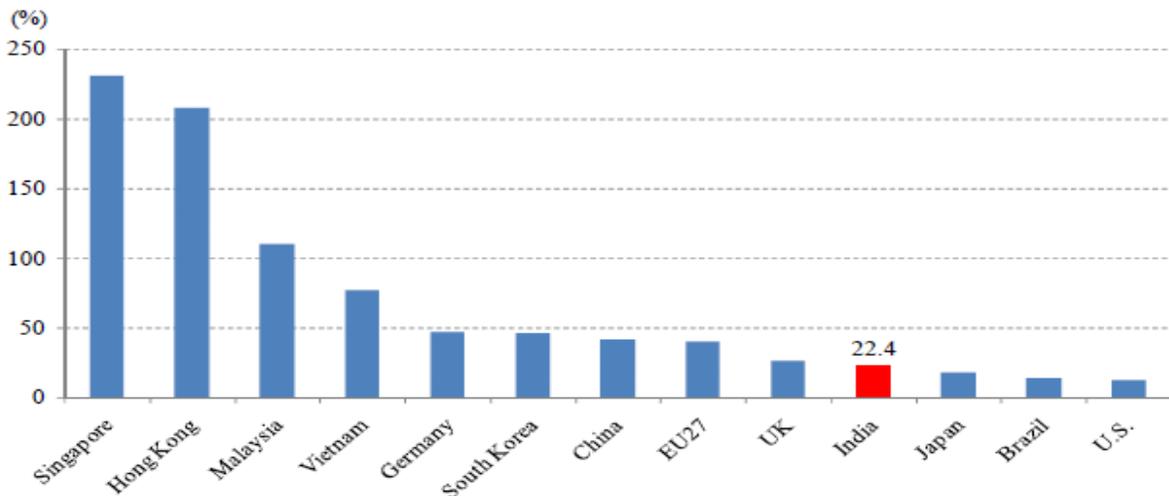


Fig 1.2: India's percentage share of exports
Source: CEIC database

Further due to the increase in demand in the manufacturing sector lead by the positive IIP (Index of Industrial Production) levels ascertaining the need to have Industrial Economic Corridor. As per the Financial Times review, the IIP for the month ending October 2010 has gradually elevated to double figure at 10.8%. Hence the requirement to have better infrastructure to sustain this demand and therein increase the export quantity backed by an equally important quality of the product. The graph above represents the percentage dependence of business units upon exports of different countries. It can be observed that India is well short as compared to other countries but these figures are bound to change with the culmination of phase 1 of the DMIC.

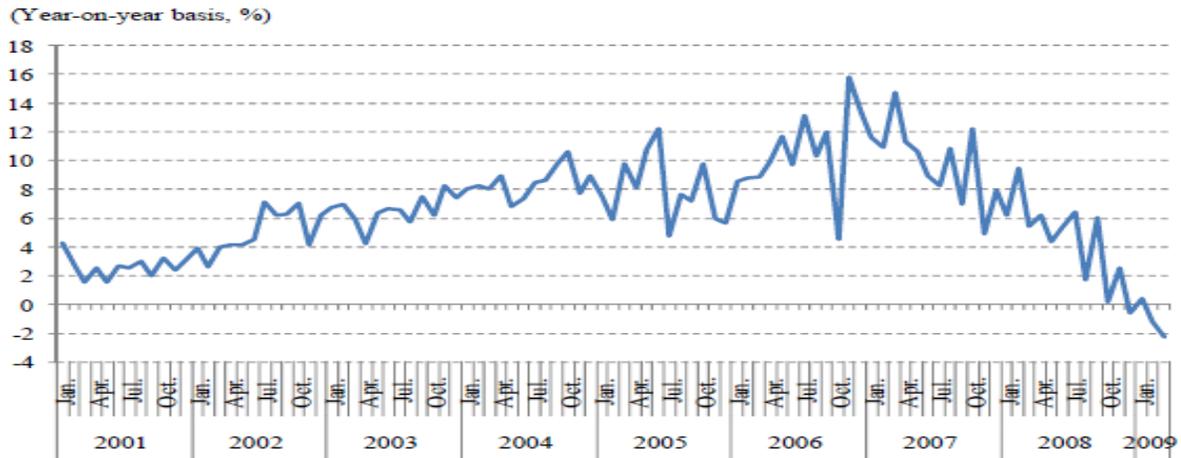


Fig 1.3: India's IIP figures year on year basis from 2001-2009

Source: CEIC database

II. DELHI MUMBAI INDUSTRIAL CORRIDOR

2.1 Introduction

Delhi-Mumbai Industrial Corridor is a mega infra-structure project of \$90 billion with the financial & technical aids from Japan, covering an overall length of 1483 KMs between the political capital and the business capital of India. A MoU was signed in December 2006 between Vice Minister, Ministry of Economy, Trade and Industry (METI) of Government of Japan and Secretary, Department of Industrial Policy & Promotion (DIPP). Finally Government of India has announced establishing of the Multi-modal High Axle Load Dedicated Freight Corridor (DFC) between Delhi and Mumbai, covering an overall length of 1483 km and passing through the six States – Uttar Pradesh, NCR of Delhi, Haryana, Rajasthan, Gujarat and Maharashtra, with end terminals at Dadri in the National Capital Region of Delhi and Jawaharlal Nehru Port near Mumbai.

Distribution of length of the corridor indicates that Rajasthan (39%) and Gujarat (38%) together constitute 77% of the total length of the alignment of freight corridor, followed by Haryana and Maharashtra 10% each and Uttar Pradesh and National Capital Region of Delhi 1.5 % of total length each. This Dedicated Freight Corridor envisages a high-speed connectivity for High Axle Load Wagons (25 Tonne) of Double Stacked Container Trains supported by high power locomotives. The Delhi - Mumbai leg of the Golden Quadrilateral National Highway also runs almost parallel to the Freight Corridor. This corridor will be equipped with an array of infrastructure facilities such as power facilities, rail connectivity to ports en route etc. Approximately 180 million people, 14 percent of the population, will be affected by the corridor's development.

This project incorporates

- Nine Mega Industrial zones of about 200-250 sq. km.
- High speed freight line
- Three ports and
- Six air ports,
- A six-lane intersection-free expressway connecting the country's political and financial capitals and
- A 4000 MW power plant.

Several industrial estates and clusters, industrial hubs, with top-of-the-line infrastructure would be developed along this corridor to attract more foreign investment. Funds for the projects would come from the Indian government, Japanese loans and investment by Japanese firms and through Japan depository receipts issued by the Indian companies. This high-speed connectivity between Delhi and Mumbai offers immense opportunities for development of an Industrial corridor along the alignment of the connecting infrastructure. A band of 150 km (Influence region) has been chosen on both sides of the Freight corridor to be developed as the Delhi-Mumbai Industrial Corridor. It is also envisaged that the alignment of the proposed corridor will have nine junction stations for exchange of traffic between the existing railway system and the DFC.

2.2 Integrated Corridor Development Approach for DMIC

Integrated Investment Regions (IRs) and Industrial Areas (IAs) have been identified within the corridor to provide transparent and investment friendly facility regimes. These regions are proposed to be self-sustained industrial townships with world-class infrastructure, road and rail connectivity for freight movement to and from ports and logistics hubs, served by domestic/ international air connectivity, reliable power, quality social infrastructure, and provide a globally competitive environment conducive for setting up businesses.

An Investment Region (IRs) would be a specifically delineated industrial region with a minimum area of over 200 square kilometers (20,000 hectares), while an Industrial Area (IAs) would be developed with a minimum area of over 100 square kilometers (10,000 hectares). 24 such nodes - 9 IRs and 15 IAs spanning across six states have been identified after wide consultations with the stakeholders i.e the State Governments and the concerned Central Ministries. It is proposed that 6 IR and 6 IAs would be taken up for implementation in the First Phase during 2008-2012 and rest of the development would be phased out in the next 4 years. The nodes identified for Phase I are:

Short listed Investment Regions (IRs):

- Dadri – Noida - Ghaziabad Investment Region in Uttar Pradesh as General Manufacturing Investment Region.
- Manesar – Bawal Investment Region in Haryana as Auto Component/ Automobile Investment Region.
- Khushkhera – Bhiwadi – Neemrana Investment Region in Rajasthan as General Manufacturing/ Automobile/ Auto Component Investment Region.
- Pitampura – Dhar – Mhow Investment Region in Madhya Pradesh.
- Bharuch – Dahej Investment Region in Gujarat as Petroleum, Chemical and Petro Chemical Investment Region (PCPIR).
- Igatpuri – Nashik-Sinnar Investment Region in Maharashtra as General Manufacturing Investment Region.

Short listed Industrial Areas (IAs):-

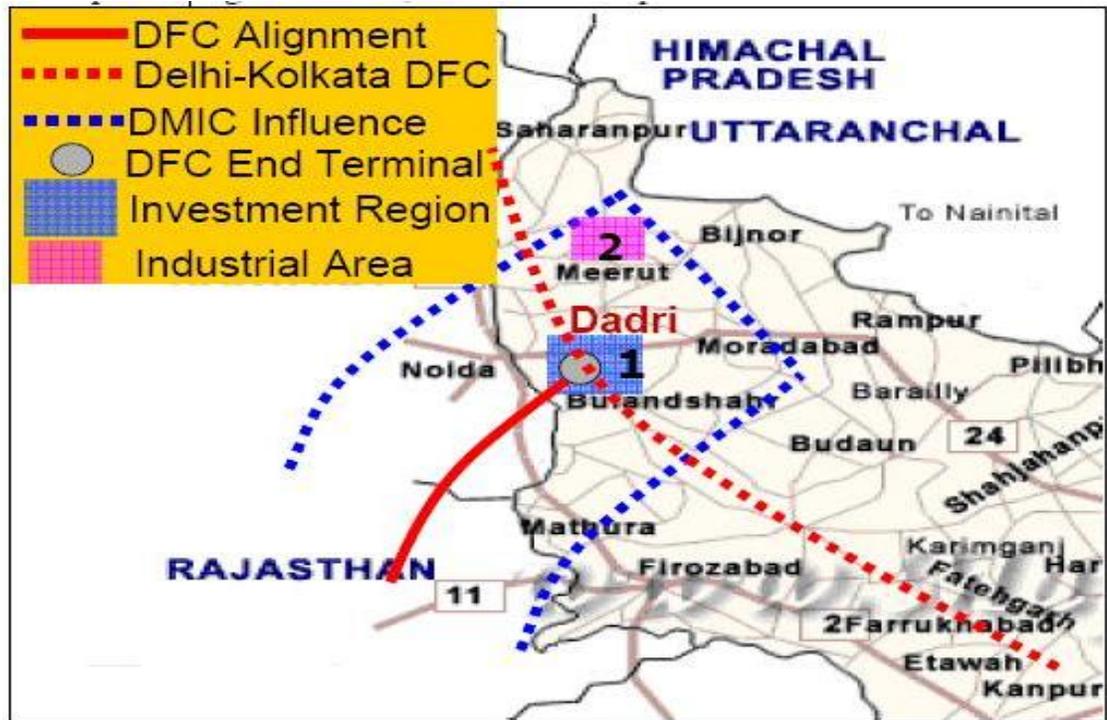
- Meerut – Muzaffarnagar Industrial Area in Uttar Pradesh, Engineering/ Manufacturing.
- Faridabad – Palwal Industrial Area in Haryana, Engineering & Manufacturing.
- Jaipur – Dausa Industrial Area in Rajasthan, Marble/Leather/Textile.
- Neemuch – Nayagaon Industrial Area in Madhya Pradesh.
- Industrial Area with Greenfield Port at Alewadi/ Dighi in Maharashtra, Greenfield Port.

III. EFFICACY OF DIFFERENT NODES IN DMIC

3.1 DMIC Uttar Pradesh:

Node – I (Dadri – Noida – Ghaziabad Industrial Area Uttar Pradesh)

- The proposed Dadri-Noida-Ghaziabad Investment Region would be located close to Delhi, the National Capital. This region has good connectivity by road and rail to rest of India.
- Besides, it comprises of Noida, the vibrant satellite town of Delhi with IT/ITES and electronics industries.
- Ghaziabad, the hub of light engineering and electronics industries.
- Greater Noida, the city with well-developed road network, state of the art physical and social infrastructure with quality residential commercial, recreational and institutional areas.
- Moreover, a 3500MW power plant is being developed close to Dadri through private sector participation.



Location Map for Proposed Development Node in DMIC -Uttar Pradesh

Fig. 3.1: Location Map for proposed development nodes in DMIC - UP

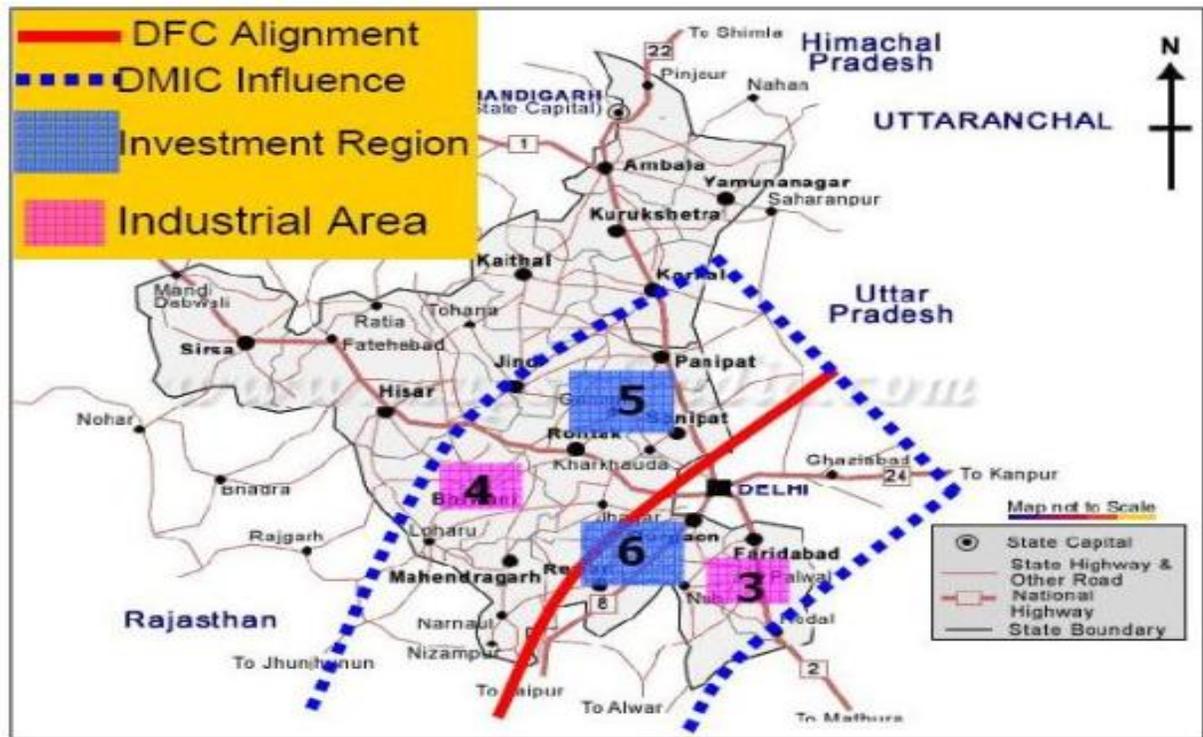
Node-2: Meerut-Muzaffarnagar Industrial Area – Uttar Pradesh:

- The proposed Meerut-Muzaffarnagar Industrial Area would be located at a distance of 100 to 150km from Delhi, the National Capital.
- This region has good connectivity by road (NH-58 and other State Highways) and rail (Delhi-Meerut-Lucknow/Saharanpur) to rest of the State and India.

3.2 DMIC Haryana:

Node – 3 (Faridabad – Palwal Industrial Area – Haryana)

The proposed Faridabad-Palwal Industrial Area would be located in close proximity of the western Dedicated Freight Corridor at Dadri. The nearest major urban centres include Faridabad, with a population over 1 Million, and Delhi. Faridabad is one of the major industrial towns of the state, especially with a large concentration of light engineering, electrical appliances and auto component industries.



Location Map for Proposed Development Nodes in DMIC-Haryana

Fig. 3.2 Location Map for proposed development nodes in DMIC - Haryana

Node – 4 (Rewari – Hissar Industrial area Haryana):

- Rewari-Hissar Industrial Area, located in west central Haryana, would be directly linked with the Dedicated Freight Corridor at Rewari.
- The nearest major urban centers include Rohtak, Bhiwani and Gurgaon, the happening IT destination in the country, and Delhi.
- Potential industry sectors at the region include Leather, Handloom, Bio-technology, high tensile fasteners and engineering industries.

Node – 5 (Kundli – Sonapat Industrial Area Haryana):

- Kundli-Sonepat Investment Region, in the north-western Haryana, would be located within 50-100km distance from the alignment of Dedicated Freight Corridor at Dadri.
- The nearest major urban centers are Delhi and Panipat, the base of Indian Oil Corporation (IOC) Refinery in the state.
- Potential industry sectors at the investment region include agro-processing industry, Leather, carpet, textile/handloom and handicraft industries.
- Proposed 1200MW Coal based power plant at Hissar.

Node – 6 (Manesar – Barwal Industrial Area):

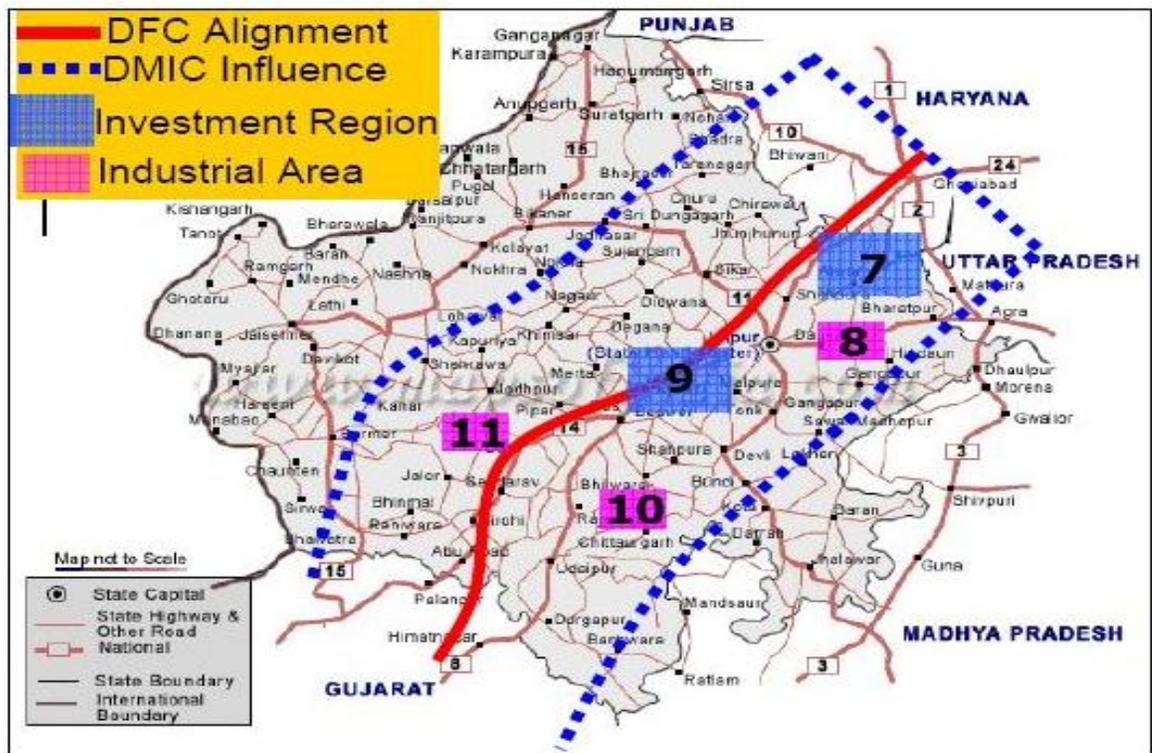
- Manesar-Bawal Investment Region, in South-Western Haryana, would be located within 50km of the Rewari-Dadri alignment of Dedicated Freight Corridor.
- The nearest major urban centers are Delhi and Gurgaon, the IT/Automobile destination of the country.
- This region is proposed to be located in close proximity to the National Highway No.8, the Golden Quadrilateral Corridor between Delhi and Mumbai.
- Potential industry sectors at the investment region include automobiles, Electronics, Biotechnology, and IT/ITES.

- It is important to note that an 'Auto/ Automobile Investment Region', to be spread over 800Sqkm, is also being planned at Rewari-Manesar-Bawal to promote investment in the Automobile and Auto Component Industries.

3.3 DMIC Rajasthan

Node-7: Khushkhhera-Bhiwadi-Neemrana Investment Region – Rajasthan:

- Khushkhhera-Bhiwadi-Neemrana Investment Region, in North-Eastern Rajasthan, would be located within 50km from the alignment of Dedicated Freight Corridor.
- This region also falls under the National Capital Region of Delhi and is located close to the National Highway No.8 which forms part of the Golden Quadrilateral.
- Government of Rajasthan has set out ambitious plans for the region by developing a Global City, to be spread over 40,000 Acres, between Shahjahanpur, Neemrana and Behror and expected to cater to 1 Million Population.



Location Map for Proposed Development Nodes in DMIC-Rajasthan

Fig. 3.3 Proposed Development Nodes in DMIC - Rajasthan

Node-8: Jaipur-Dausa Industrial Area – Rajasthan

- Jaipur-Dausa Industrial Area would be located within 50km-100km from Phulera, an important junction on DFC.
- Government of Rajasthan is considering development of a Growth Pole at Sikandra and initiated the study for preparation of detailed project report.
- Growth Pole will cater to multi-sectoral clusters as stone, carpet, leather and dairy and will cover an area of 1250sqkm and 350 villages.

Node-9: Ajmer-Kishangarh Investment Region – Rajasthan

- Ajmer-Kishangarh Investment Region would be located close by the alignment of Dedicated Freight Corridor at Ajmer.
- Main minerals of the area are feldspar, quartz, asbestos, soapstone, manganese, calcite, limestone, mica, emerald, marble, granite, and masonry stone.
- This investment region will be served by two National Highways viz. NH-8 for Delhi-Mumbai and NH-79 for Ajmer-Chittaurgarh-Indore.
- Four/Six laning of NH-8 is completed.

Node-10: Rajsamand-Bhilwara Industrial Area – Rajasthan:

- Rajsamand-Bhilwara Industrial Area is located between NH-8, NH-79 and in close proximity to Dedicated Freight Corridor at Marwar. Bhilwara, also known as 'Textile City of India is the leading manufacturer, exporter and supplier of world-class Suiting (BSL, Mayur & Suzuki Suiting), Flock Fabrics and Yarn.
- Located in the western part of Rajasthan, Bhilwara is also famous for its Mineral and Stone Industry.
- Rajsamand is renowned for its marble and has several prominent large and medium scale industries including Marble, Tyre and Zinc.
- Cottage & Artisan units based on handloom, leather, terracotta & livestock are other major attractions. The items having export potential are terracotta, silver miniature, and decorative marble articles etc.
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Node-11: Pali-Marwar Industrial Area – Rajasthan

- Pali-Marwar Industrial Area will be located within 50km from the Dedicated Freight Corridor at Marwar.
- Pali is renowned for its textile industry and Marble cutting/ finishing, leather, agriculture instruments, chemicals, cement and mineral based units.
- This industrial area is served by NH-14, NH-8, NH-76, and NH-65.
- While the widening of NH-8 and NH-76 to four lanes has been completed, widening and strengthening of NH-14 and NH-65 to four lanes is being implemented under Phase-2 and Phase-3A respectively.

3.4 DMIC Gujarat:

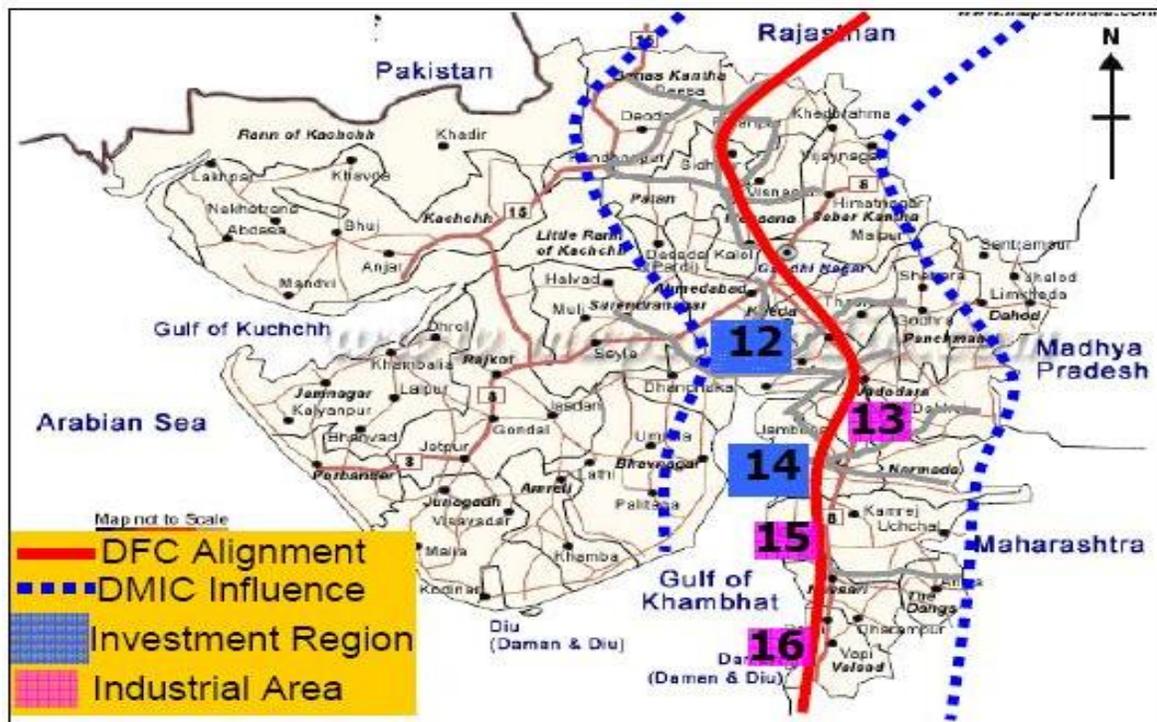


Fig. 3.4 Location of Nodes in DMIC Gujarat

Node-12: Ahmedabad-Dholera Investment Region – Gujarat:

- Ahmedabad-Dholera Investment Region would be located at a distance of approximately 100km from the Dedicated Freight Corridor at Vadodara/Ahmedabad.
- Government of Gujarat has designated Dholera as the Special Investment Region and has already initiated preparation of plans for development.
- Government of Gujarat has also short listed Dholera for developing a Greenfield port development.

Node-13: Vadodara-Ankleshwar Industrial Area – Gujarat

- The proposed Vadodara-Ankleshwar Industrial Area would be located along side the Dedicated Freight Corridor.
- Prominent industries in Vadodara-Ankleshwar Region are Engineering, Ceramics, Petroleum, Petro-Chemicals, Chemicals, Pharma and Textile.
- The region has key industrial estates as Ankleshwar and Jhagadia.
- The nearest urban center is Vadodara with population over one million.

Node-14: Bharuch-Dahej Investment Region – Gujarat

- Bharuch-Dahej Investment Region would be located within 50km from the Dedicated Freight Corridor.
- Dahej Port is being developed by Gujarat Maritime Board through joint sector participation.
- It includes development of Chemical terminal, LNG Terminal and a Dry Bulk Cargo Terminal.
- In a demand assessment study carried out by GMB, Dahej Port has potential to cater to 30 MTPA in 2015.

Node-15: Surat-Navsari Industrial Area – Gujarat

- The proposed Surat-Navsari Industrial Area would be located alongside the Dedicated Freight Corridor.

- Surat had a Multi-Product Special Economic Zone, one of the first such regions in the country, in Gems & Jewellery sectors prior to the initiation of SEZ Act-2005.
- This region is served by NH-8 and NH-6. Gems & Jewelry Industry in Surat contributes to about 70 percent of total Gems & Jewelry Exports of India. Hazira, near Surat has emerged as another mega industrial hub (oil & gas, power, petro-chemicals, fertilizers) supported by a number of captive Jetties.

Node-16: Valsad-Umbergaon Industrial Area – Gujarat

- The proposed Valsad-Umbergaon Industrial Area would be located within 50km from the Dedicated Freight Corridor.
- At present, this region has no major industrial developments.
- Government of Gujarat has short listed Maroli as the potential Greenfield port.
- This industrial area is served by NH-8. Valsad District is renowned for horticulture produce (Mango, Chikoo/Sapodilla) in the state.

3.5 DMIC MAHARASTRA

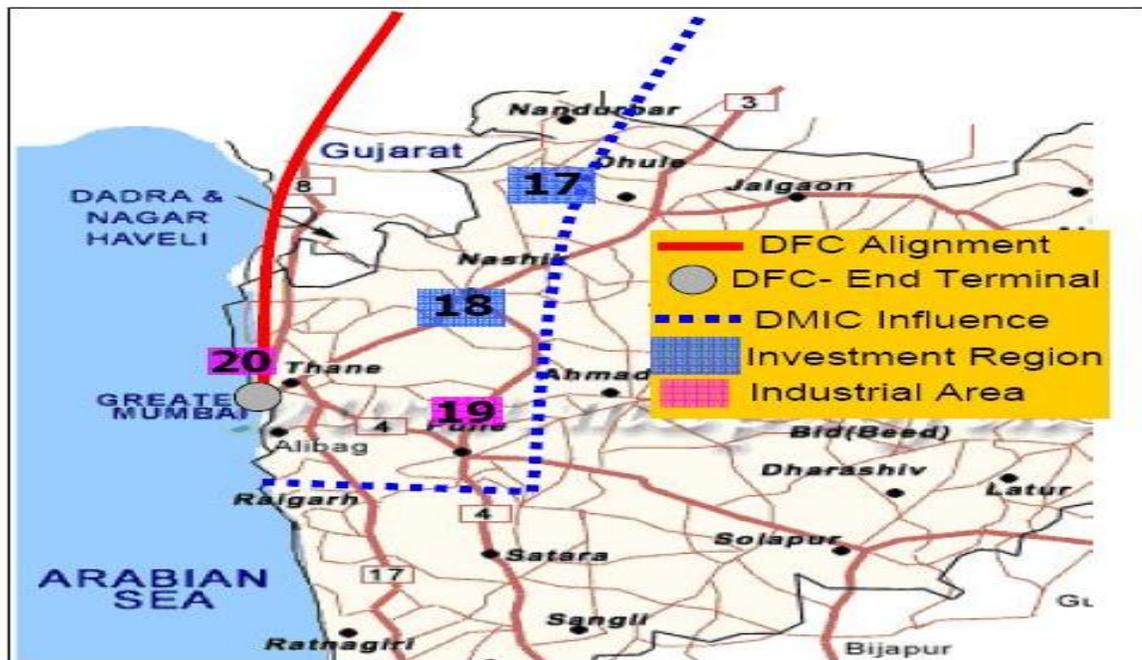


Fig. 3.5 Location of Nodes in DMIC Maharashtra

Node-17: Dhule-Nardhana Investment Region – Maharashtra

- The proposed Dhule-Nardhana Investment Region would be located close to the intersection of three national highways namely NH-6 (Surat-Kolkata), NH-3 (Mumbai-Agra) and NH-211 (Dhule-Solapur).
- Thus the region is strategically located with respect to connectivity with ports and hinterland.
- Government of Maharashtra has proposed development of Textile Park at Nardhana, over 600Ha of land parcel.
- With an abundant supply of raw materials and human resources, this region is also strategically located for the manufacturing of textile products.
- It is important to note that though this region has good potential in textile/agroprocessing industries, this region has been so far unattractive to industrial investments because of drought prone ness of the region and absence of requisite irrigation infrastructure in the region resulting in unemployment.
- As part of the successful development of the region under DMIC, there is a need to focus on ensuring requisite irrigation infrastructure for ensuring availability of water through out the year.

Node-18: Igatpuri-Nashik-Sinnar Investment Region - Maharashtra

- The proposed Igatpuri-Nashik-Sinnar Investment Region would be located close by the Mumbai-Kalyan-Igatpuri-Manmad-Jalgaon trunk road.
- Prominent Industrial sectors in Nashik include Engineering, Automobile, Aluminium, Raisins, and Steel Furniture.

Node-19: Pune-Khed Industrial Area – Maharashtra

- Pune-Khed (along Pune-Nashik Road) Region located at a distance of 100-150km from the Dedicated Freight Corridor at Vasai Road.
- It also has direct access to JN Port and Mumbai Port via Karjat-Panvel and Karjat-Kalyan.
- Prominent industrial sectors in Pune include automobile, engineering goods, chemicals, consumer durables and IT/ITES.
- It also has high concentration of wine and grape processing industries.

Node-20: Industrial Area at Dighi Port - Maharashtra

- The proposed Industrial Area with development of Greenfield Port Dighi, located in Raigad district, is close to Janjira-Murud Beach along west coast of Maharashtra.
- It is important to note that Dighi has a distinctive advantage for development to panamax size vessels and large bulk carriers.

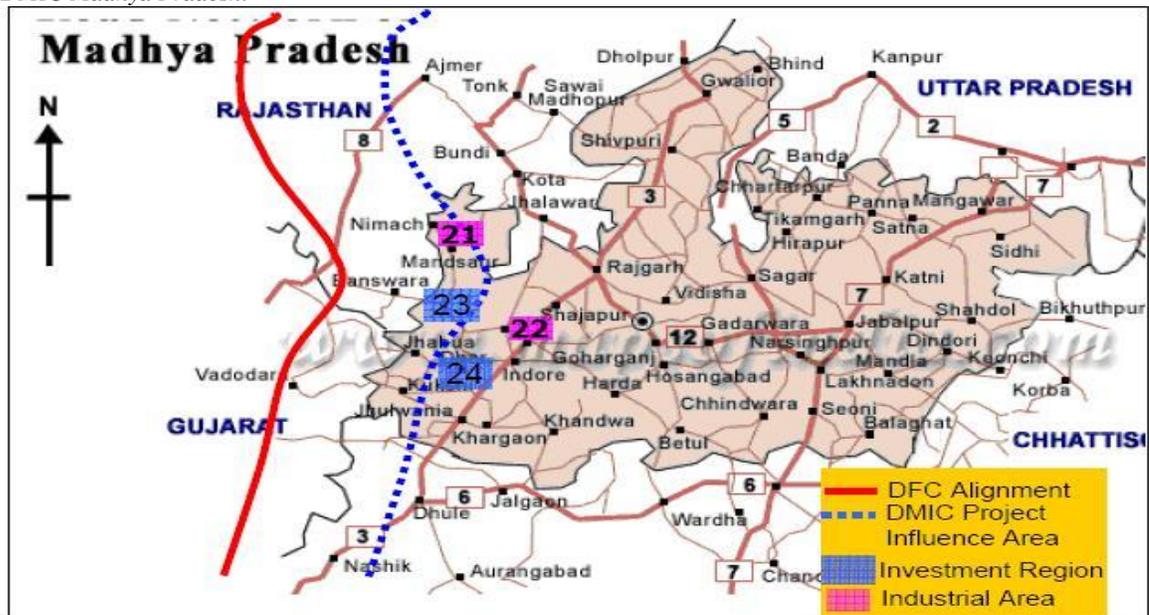
3.6 DMIC Madhya Pradesh:

Fig. 3.6 Location of Nodes in DMIC Madhya Pradesh

Node-21: Neemach-Nayagaon Industrial Area – Madhya Pradesh

- The Proposed Industrial Area at Neemuch-Nayagaon would be located towards east of the alignment of Dedicated Freight Corridor and within the Project Influence Area.
- Located in the Malwa plateau of Madhya Pradesh (North-Western/ Western Region) with fertile medium & deep soils, this region is part of the major agricultural production base for Potato, Jowar and Wheat crops.

Node-22: Shajapur-Dewas Industrial Area – Madhya Pradesh

- The Proposed Industrial Area at Shajapur-Dewas would be located towards east of the alignment of Dedicated Freight Corridor and in the Malwa plateau of west-central region of Madhya Pradesh.
- Well served by NH-3 (Agra-Mumbai), other State Highways as SH-18 and SH-86 and with proximity to Indore Airport, this region has excellent connectivity to rest of India.

Node-23: Ratlam-Nagda Investment Region – Madhya Pradesh

- The Proposed Investment Region at Ratlam-Nagda would be located towards east of the alignment of Dedicated Freight Corridor and in the Malwa plateau of westcentral region of Madhya Pradesh.
- Well served by Ratlam-Chittorgarh broad gauge rail linkage while being the headquarters of Western Railways, NH-79, State Highways 31 and 22 along with proximity to Indore Airport, this region has excellent connectivity to rest of India.
- Ratlam caters to chemical factories, manufacturing of copper wires, plastic ropes, gold and ornament design industries. Nagda, located in Ujjain district, is a major industrial town for textile production being also the base for Grasim Factory, renowned brand in textile/ garment industry, printed dress material and handicrafts.
- Ujjain is the historic city and prominent pilgrimage of ancient India.
- Important crops in Ratlam are Soyabean, Wheat, Jowar, Gram and Maize also well known for Strawberry and Grapes. Based on the region's potential, Government of Madhya Pradesh has formulated mega scale investment plans for the region viz. setting up knitwear manufacturing unit, fabric processing and readymade garments units at Ujjain.

Node-24: Pithampura-Dhar-Mhow Investment Region – Madhya Pradesh

- The Proposed Investment Region at Pithampura-Dhar-Mhow would be located towards east of the alignment of Dedicated Freight Corridor and in the Malwa plateau of west-central region of Madhya Pradesh.
- Well served by NH-3 (Agra-Mumbai), other State Highways, Rail linkages and with Domestic Airport at Indore, this region has excellent connectivity to rest of India.
- This region would be located close to Indore, the commercial capital of the State.
- Based on the region's potential, Government of Madhya Pradesh has formulated mega scale investment plans for the region viz. setting up Apparel Park, Gem & Jewelry Park, Software Technology Park, Herbal Park, Pharmaceutical Cluster, Textile, Food Processing and Autocomponent clusters.
- This region is part of the Audhyogic Kendra Vikas Nigam (AKVN), Indore, a specialized State Govt. Corporation dedicated to the development of Industrial Areas and Infrastructure facilities in the western part of the state.
- The City Development Plan for Indore has envisaged an investment of INR 2746 Crore, over a seven year period, for the development and upgradation of urban infrastructure (transport, water supply, environment management etc) in the urban agglomeration of area of Indore.
- Moreover, mega development plans of the State Government viz. development of Science City over 500 Acres and Integrated Warehousing Hub are proposed to be located in this region.
- It is important to note that this industrial area would be located close to Mandsaur district, renowned for large production of opium compared to rest of the world. It is important to note that this industrial area would be located close to Mandsaur district, renowned for large production of opium compared to rest of the world.

IV. CONCLUSION

The components proposed for various nodes in the different states under DMIC. These components are proposed based on the possibility of enhancing the available facilities and to enrich the investment opportunity under the considered node.

The components vary from:

- Special Economic Zones.
- Export oriented Units.
- Integration and Expansion of Industrial Estates.
- Food/Agro based industries.
- IT/ITES hubs.
- Knowledge hubs.
- Urban development.
- Logistics hubs and improvement of road and rail network.

The consideration of various components/structuring of IEC is carried out state wise with the proposed nodes for Industrial Area's (IA) and Industrial Regions (IR).

The project outline for DMIC envisages development of project influence region as Model Industrial Corridor of international standards with emphasis on expanding the manufacturing and services base and develop DMIC as the 'Global Manufacturing and Trading Hub'.

Accordingly, the project goals for DMIC project include:

- Double employment potential in five years

- Triple industrial output in five years
- Quadruple exports from the region in five years

DMIC would lead to development of enabling environment to activate local commerce, promote global investments with world class industrial, physical and social infrastructure. It is estimated that development of DMIC will offer employment opportunities for 3 Million people with over 67% in the manufacturing / processing industry. In case of Agro/Food Processing, the total employment generation estimated as 200,000 will be primarily involved in processing, distribution and allied backward/forward linkages for agricultural produce.

There will be other beneficiaries with increased agriculture/ farming activity in the DMIC Influence region and corresponding impact on the employment generation. Moreover, as DMIC project involves implementation and operation of various industrial activities (Manufacturing/agro-processing/ IT/ITES) and infrastructure facilities viz roads, railways, airports, ports and logistics infrastructure and integrated townships, there will be furthermore innumerable employment opportunities in construction, operation and maintenance of envisaged facilities under DMIC viz. opportunities for design consultants during project preparation stage; for construction labourers, engineers and managers during implementation stage and other primary, secondary and tertiary employment opportunities during operation & maintenance stage. Accordingly, there is a potential to generate about 10 Million job opportunities during the functional/ Operation & Maintenance stage.

Sectoral development opportunities with DMIC Project

It is expected that DMIC project would lead to:

- Creation of high quality industrial infrastructure region over an area of about 200,000Ha with over 60% of land use under manufacturing areas/ Special Economic Zones/ Processing industries;
- Development of Agro/Food Processing Hubs with requisite forward/backward linkages would lead to development of agricultural production and efficient storage/distribution of produce through utilization of latest technologies;
- Construction/augmentation of about 7000km of road linkages, about 3300km of rail linkages, development of two Greenfield Port Projects (Dholera and Maroli) in Gujarat, one Greenfield Port Project (Dighi) in Maharashtra and augmentation of Dahej and Hazira Ports in Gujarat.
- Augmentation of seven airports and construction of two new air strips, power generation and transmission system for ensuring reliable power supply in DMIC region with provision for at least 10,000MW of power.
- With respect to Logistics infrastructure, construction, operation/ maintenance of state-of-the-art logistics hubs over 17000Ha of land with multi-modal integrated transport infrastructure.
- It was envisaged that each of the identified node will have relevant logistics infrastructure based on the specific requirements viz. integrated logistics parks, inland container depots/ container freight stations, truck terminals with warehousing facilities etc.
- Development of Skill Development Centers/ Centers of Excellence/ Knowledge Cities at select locations for specific/target industry sectors in the vicinity of major industrial areas and as part of proposed investment nodes (investment regions/industrial areas) so as to ensure availability of trained man-power, upgrade skill sets of local people and increase employment opportunities.

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