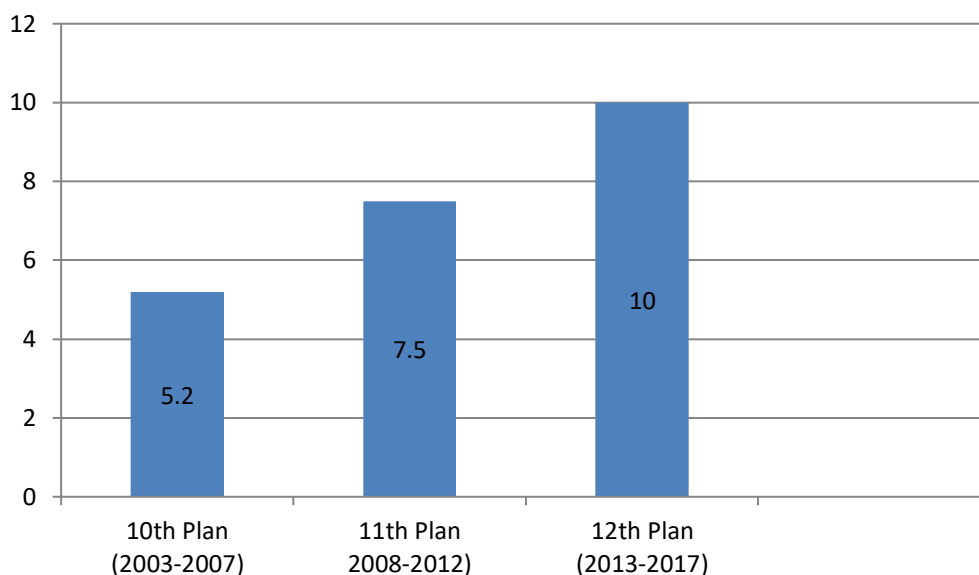


Infrastructure: Part II

Transport and communications

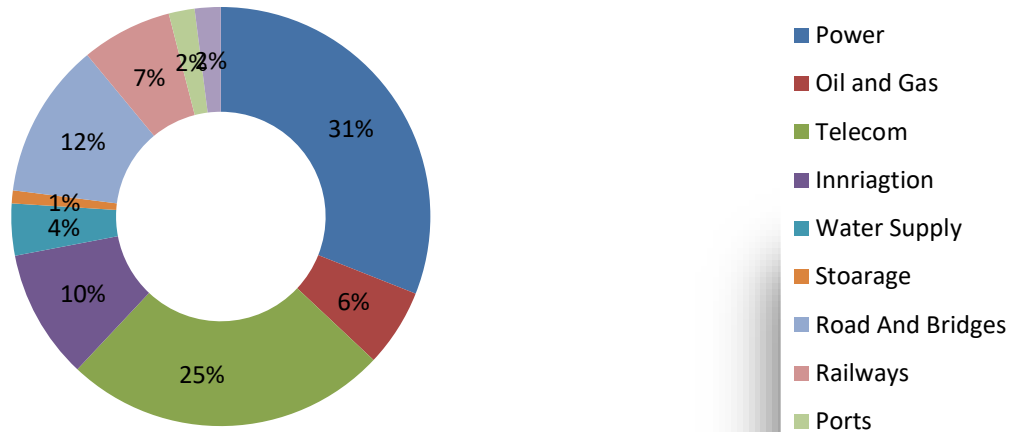
Inadequate Infrastructure in India is widely recognized as a constraint to growth. The wheels of growth require well oiled infrastructure in every segment, be it airports or rural roads, a mega power station or a rural supply line. It is also a critical input for broad based and inclusive growth aimed at improving the quality of life, generating employment and reducing poverty across regions. Developed economies and China have been investing over 10 per cent of their GDP in infrastructure as compared to 4 or 5 per cent in India. It is estimated that the infrastructure sector will need investment of one trillion dollars in the Twelfth Plan (I.e. about Rs. 74 lakh crores)

Chart1: Infrastructure Investment in India as a Share of GDP: during 10th, 11th and 12th Plan Periods.



The widening deficit of infrastructure is characterized by i) the demand has grown beyond the anticipated levels and ii) the creation of infrastructure during Plans fell short of targets. In view of the availability of limited public resources under Plan grants towards infrastructure, private investments in the form of Public Private Partnership (PPP) is unavoidable. While private investments in Ports, Airports, Railways and Road network are already put into operation, there is a need to step up investments particularly in Railways to modernize, expand and to ensure safety. The share of private sector participation in infrastructure need to be increased substantially in the next decade.

Chart2: Sectoral Investment Planned in 12th Five-Year Plan



Major investments towards infrastructure in XII Plan are in Power (31%), Telecom sector (25%), and irrigation (10%),

INFRASTRUCTURE INVESTMENTS REQUIREMENT IN INDIA

India is expected to grow at an average 7 to 8 per cent per annum in next few years, even though there will be a set back in 2019-20 and 2020-21 with a slow down in growth to less than 5 per cent. Accompanying this growth will be an increase in demand for infrastructural services in the coming decade. The infrastructure investment has increased in the past few years, driven by government initiatives and private participation, but that need to be escalated in coming years. The Government of India expects that 22-25 per cent of the investment (of \$ 1.6 Trillion) required is to come from private sector. According to the Committee on Infrastructure, headed by the Indian Prime Minister, these investments are to be achieved through a combination of public investment, public- private-partnerships (PPPs) and exclusive private investments, wherever feasible. To sum up, the Indian infrastructure space has gained much importance in the past few years and provides immense opportunities for growth and development. Therefore, it is clear that there is substantial infrastructure needs in infrastructure sector in India, which, in other words, also offers large investment opportunities. Many of the new investments (such as gas pipelines) seem to be viable on commercial terms and should be suitable for partnership with private investors. Introduction of Fastag at Toll Plazas all over India in recent times is a good initiative for a faster movement of Transport in the country, that would help the economy.

Transport System:

Importance of Transport System: An efficient transport system is a prerequisite for sustained economic development. It is not only the key infrastructural input for the growth process but also plays a significant role in promoting national integration, which is particularly important in a large country like India. In a liberalized set-up, an efficient transport network becomes all the more important in order to increase productivity and enhancing the competitive efficiency of the economy in the world market. The transport system also plays an important role of promoting the development of the backward regions and integrating them with the mainstream economy by opening them to the markets, trade and investment.

Worldwide, transport growth has been consistently higher than the economic growth due to specialization, sourcing of material on a wider scale, the use of just-in-time strategies, increase and dispersal of retail and wholesale activities etc. the transport system in India has not been able to keep pace with these developments and considerable effort is required to correct the shortcomings.

Transport sector bears a close and complex relationship with all other sectors of the economy. While it tends to act as the prime mover of the development process, it must also respond to the development process, if the latter has to be smooth.

Economic Liberalization and Transport System:

The liberalization of the economy has brought home the urgency of recognizing that an efficient transportation system is necessary for increasing productivity and enabling the country to compete effectively in the world market. Adequacy and reliability of transport infrastructure and services are important factors, which contribute towards the ability of the country to compete in the field of international trade and attract foreign direct investment. The Government has a major role to play in this sphere. Even in a market economy, the framework that national governments provide for the transport sector largely determines the level of cost and transport operations. It is, therefore, necessary to create a policy environment that encourages competitive pricing and coordination between alternative modes in order to provide an integrated transport system that assures alternative modes in order to provide an integrated transport system that assures the mobility of goods and people at maximum efficiency and minimum cost.

In the recent years, economic liberalization has quickened the impulses of economic growth. A rapidly-growing middle class. International trade, large-scale mobility of working population to longer distances and growing demographic pressure have fuelled further demand for transport. The new economic

policies have opened new resources as also increasing the scope of commercial orientation to transport operations. At the same time, this development may lead to greater concentration of industrial location around existing growth centres and encourage an untrammled growth of certain modes of transport with regard to their social cost

Indian Railways:

Railways are often referred to as the lifeline of the Indian economy because of its predominance in transportation of bulk freight and long distance passenger traffic. Railways network criss-cross the nation, binding it together by ferrying freight and passengers across the length and breadth of the country. As the Indian economy moves into a higher growth trajectory Indian Railways has also stepped up developments efforts and is preparing itself for an even bigger role in the future.

- The Indian Railways is the fourth largest network in the world in terms of route in KMs (67,348 KM) in 2017. It is also the largest Passengers and fourth largest freight transporting railway system in the world.
- 13,329 (2017) passenger Trains carried over 22.24 million passengers daily. which is almost equal to the population of Australia, while the freight transported was 1.1 Billion tonnes.
- The Revenue of the Indian Railways increased at a CAGR of 5.7 per cent to \$ 25.1 Billion in US dollars in 2017. led by strong demand and increasing Urbanization and raising incomes.
- Indian Railways Golden Quadrilateral and its diagonals make up only 15 per cent of the total route of the Railways but it transports 52 per cent of passengers traffic and 58 per cent of total freight load.

The dedicated Freight Corridors (DFCs):

The rapid rise in international trade and domestic cargo has placed a great strain on the Delhi-Mumbai and Delhi-Kolkata rail tracks. The government has, therefore, decided to and its dig dedicated freight corridors in the Western and Eastern high-density routes. This will help to decongest the two routes for freight movement and will increase the economic potential of the hinterland areas which will benefit from the reduced cost of transport. It will also provide spin off benefits in terms of location of industrial clusters along the new corridors attracting potential investment in a number of states.

Roads and Road Transport

Importance of Roads and Road Transport:

Roads are the key to the development of an economy. A good road network constitutes the basic infrastructure that propels the development process through connectivity and opening up the backward regions to trade and investment. Roads also play a key role in inter-modal transport development, establishing links with airports, railway stations and ports. In addition, they an important role in promoting national integration, which is particularly important in a large country like India.

Road transport has close linkages with the economic development and social integration of the country. It is the prime motorized mode of transport linking the remote and hilly areas with rest of the economy. The easy accessibility, flexibility of operation, door-to-door service and reliability have earned road transport an increasingly higher share of both passenger and freight traffic vis-à-vis other transport modes. Substantial investment being made in the improvement of highways further boost the demand for road transport services

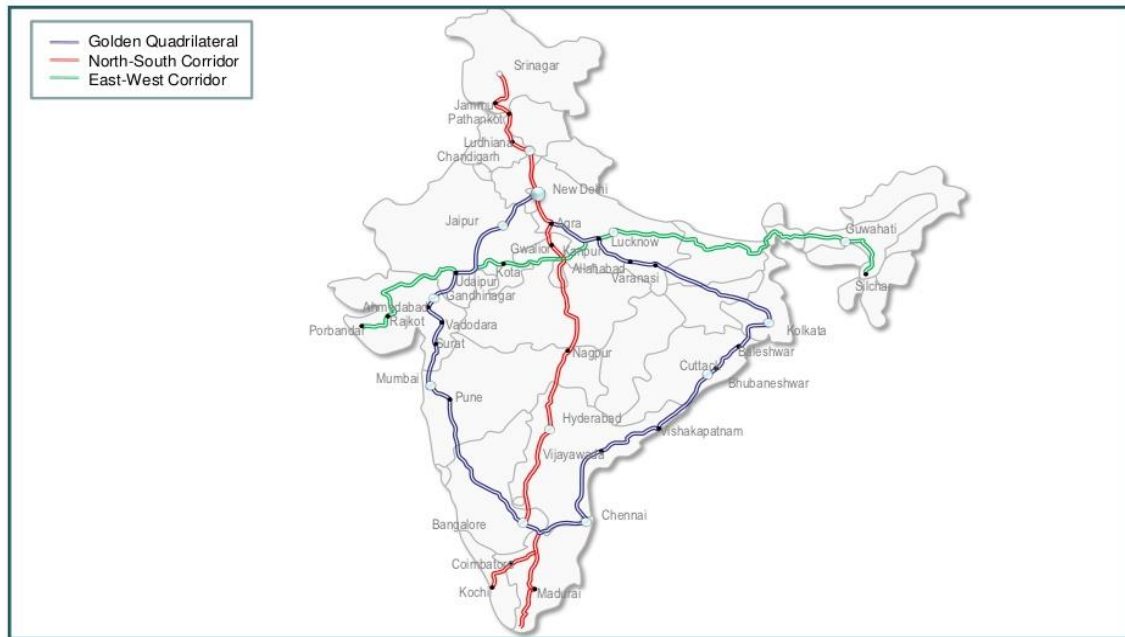
A good road network is a critical infrastructure requirement for rapid growth. It provides connectivity to remote areas, provides accessibility to markets, schools, hospitals, opens up backward regions to trade and investment. Roads also play an important role in inter-modal transport development, establishing links with airports, railways stations and ports.

Over the years, roads have grown in prominence as a mechanism for moving goods and people in the country. This is partly reflected in greater innate flexibility of road transpiration. However, this development, is giving tough competition to the Indian railways.

National Highways Development Project (NHDP):

Infrastructure Trend: Can New Infrastructure Catalyze R&D & Manufacturing?

Large-Scale Transportation Upgrades Catalyze Full Range of Investments



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Source: Exolus Research 6

NHDP – the largest highways project ever undertaken by the country – was initiated in 2005 in a phased manner with the National Highways Authority of India (NHAI) as its implementing agency. Beginning with Phase I and II, the programme was expanded to seven phases.

NHDP Phase I and II envisaged 4/6 lining of about 14,000 kilometers of National Highways, at an estimated cost of about Rs.65,000 crore at 2004 prices. These two phases comprised the Golden Quadrilateral (GQ), North-South and East-West Corridors (NSEW), port connectivity and other projects. The GQ consists of 5,846 kilometers and connects four major cities, viz. Delhi, Mumbai, Chennai and Kolkata. The NSEW corridors of 7,142 kilometers connects Srinagar in the North to Kanyakumari in the South (including a spur from Salem to Kochi) and Silchar in the East to Porbandar in the West. The NHDP also includes the Port Connectivity 12 major ports in the country. Other projects involving a length of 965 km. are included in NHDP Phase-I and II.

These highways, which will give sustained speeds of 80 kmph, will transform the movement of goods and people in the country. The successful completion of NHDP, with projects completed on time and on budget, and the successful maintenance of the new roads, are key areas for focus.

The massive 10 – year programme (2005-15) is being implemented in a phased manner with an investment of Rs.2,35,690 crore. It includes the following.

1. Completion of the works under NHDP Phase I and II.
2. Up gradation of 12,109 kilometers of national highways on build, operate and transfer (BOT) basis in Phase III.
3. Widening of 20,000 kilometers of National Highways to two lanes with paved shoulders in NHDP Phase IV.
4. Six-laning of 6,500 kilometers length of selected National Highways in Phase V.
5. Construction of 700 kilometers of ring roads in major towns and bypasses and construction of other standalone structures such as flyovers, elevated roads, tunnels, underpasses, grade separated interchanges etc. on national highways in NHDP Phase VII.

National highways stretch that are not covered by NHDP are being developed through other programmes of the Ministry of Road Transport and Highways.

In order to cater to the needs of remote, isolated and backward areas, two programmes, viz. Special Accelerated Road Development Programme in North – East (SARDP-NE) and development of roads in Left Wing Extremism Affected Areas have been launched.

Bharatmala Pariyojana:

It is a new umbrella programme to the highways sector that focuses on optimizing efficiency of the freight and passenger movement across the country by bridging critical infrastructure gap through effective interventions like development of Economic Corridors Inter Corridors and Feeder Routes. national Corridor Efficiency improvement, border and international connectivity roads, Coastal and Port connectivity roads and Greenfield expressways.

Shipping and Ports

Importance of Maritime Activities:

Although endowed with a strategic location in the Indian Ocean and an extensive coastline, India has not emerged as a forerunner in maritime activities. This has been due to several reasons including her conscious policy of self-reliance through import substitution and lack of adequate thrust on export promotion. However, in the post-1991 era, India has started to reach out and partake in the windfall that globalization has bought in its wake. The recent accelerated growth in Indian economy and trade underscores the increasing critically of the shipping sector for India, as the bulk of the country's export-

import trade takes place through the maritime route. The up gradation and expansions of ports is vital to strengthen India's position in world trade and to handle growing volume of international trade.

A national shipping fleet commensurate with India's overseas cargo needs would help in reducing the freight costs of Indian cargo. Tran chart and right of first refusal policy also help to discourage undue freight increases. A thriving shipping sector encourages the growth of associated industry and service providers required for servicing this industry. Most importantly, national tonnage is decisive in maintaining the supply line of essential cargo during international emergencies, as was also demonstrated during the Iraq war, when every drop of crude imports from the Middle East came on Indian Ships.

Sagarmala Programme:

The Sagarmala programme is an initiative by the Government of India to enhance the performance of the country's logistic sector. The programme envisages unlocking the potential of waterways and the coastline to minimize infrastructural investments required to meet the targets.

Vision of the Sagarmala programme is to reduce logistics cost for Exim and domestic trade with minimal infrastructure investments. This includes:

- Reducing cost of Transporting domestic cargo through optimizing model mix.
- Lowering logistics cost of bulk commodity by locating future industrial capacities near the coast.
- Improving exports competitiveness by developing port proximate discreet manufacturing clusters.
- Optimizing time/cost of EXIM container movement.

Civil Aviation

Importance of Civil Aviation:

Air transport worldwide is the preferred mode of transport especially for long distance travel, business travel, accessing difficult terrains and for transporting high value and perishable commodities mainly on account of the speed of travel and saving of time. With the opening up of domestic skies to private carriers, air services have become affordable and are now effectively computing with other modes of transport.

The main advantage of civil aviation vis-à-vis railways and road transport is the speed of travel and consequent saving of time. A part of this gain is, however, nullified for short-haul flights due to time taken in reporting, security checks, flying, luggage clearance etc. air travel, nevertheless, retain a substantial edge over other modes of transport for long distance travel. It is particularly useful for business travel, international tourism and for transporting high value and perishable commodities. Air transport also provides easy accessibility to remote regions, which has implications for national integration and security. The advantage, however, has to be weighed against high cost of air travel and cost to the economy because of its high fuel intensity.

The civil aviation sector plays an important role in India's economy. It provides fast and reliable mode of transport across the country and is particularly important for many areas/places still not adequately connected by rail or road. With increasing globalization, this sector will play a more significant role in intergrading the Indian economy with the rest of the world.

It is now increasingly recognized that aviation, far from being a mere mode of transpiration for a small elite group, makes an important contribution to the national economy and it is crucial for sustainable development of trade and tourism. The civil aviation sector has made significant strides in coping with the growth of international and domestic traffic. This sector provides three categories of services, viz. operational, infrastructure and regulatory-cum-development.

Airports Economic Regulatory Authority (AERA):

The Airports Economic Regulatory Authority of India Act, 2008 has been enacted to establish Airports Economic Regulatory Authority (AERA) to regulate tariff and other charges for the aeronautical services rendered at major airports and to monitor performance standards of such airports. Following its establishment, the Authority has issued a White Paper in December 2009, listing out major issues impacting its regulatory philosophy, objectives, principles, systems and procedures, the stakeholders were also made part of the consultation process and comments/submissions were received from the stake holders on the White Paper. Besides , the Authority also considered the statutory procedures, contractual requirements, international practices etc. based on the inputs received from the stakeholders and other sources, AERA has prepared a "Constitutional Paper" listing out the major issues, the Authority's proposed position/approach and the rationale there of.

UDAN (Ude Desh Ka Aam Nagarik) is a regional airport development and Regional Connectivity Scheme (RCS) of Government of Indi, with the objective of "letting the common citizen of the country

fly”, aimed at making air travel affordable and wide spread, to boost inclusive national economic development job.

GAGAN – The Indian Satellite Based Augmentation System (SBAS) for Air Navigation Services

(ANS) :

GAGAN, the Indian SBAS (Satellite Based Augmentation System) is a project jointly undertaken by the Airport Authority of India and ISRO to achieve smooth transition to satellite-based navigation and seamless air traffic management across continents. GAGAN is designed to provide additional accuracy, availability, and integrity necessary to enable user to rely on GPS for all phases of flight, from en route through approach, for all qualified airports within the GAGAN service volume. GAGAN will provide the capability for increased accuracy in position reporting thereby making possible high-quality Air Traffic Management (ATM). GAGAN will provide benefits beyond aviation to all modes of transportation, including maritime, highways, railways and public services such as defense services, security agencies, and disaster recovery management by aiding in search and rescue to locate the disaster zone accurately, telecom industry and personal users of position location applications.

After USA, Japan and Europe, India has taken up the challenge of establishing the regional SBAS that will redefine the navigation in India and in adjacent regions. The footprint of GAGAN will cover huge area beyond Indian Territory, from Africa to Australia and can support seamless navigation across the globe. The system is also interoperable with other such systems of WAAS of USA, ENCOSS of Europe and MSAT of Japan

The lead taken by the Ministry of Civil Aviation in implementing GAGAN and possible certification by 2014 will propel India as the only fourth country to have this facility in the world

(Source: Twelfth Five Year Plan 2012-17)

Importance of Telecommunications:

The telecommunications sector has undergone a total transformation throughout the world over last two decades. Technological advances have revolutionized the quality and range of services available. Moreover, developments in the sphere of information technology, satellite-based television broadcasting, new forms of communication such as data communication through e-mail and associated services through the internet, are transforming the way people communicate and conduct business.

Clearly, a country's ability to benefit from this revolution depends heavily on the modernity of its telecommunication network. Countries that can acquire and access information on demand and then integrate them usefully into their industrial structure through a modern telecommunications network are most likely to experience high rates of growth, large-scale use of information and telecommunications technologies directly influences productivity, cost effectiveness and competitiveness in industries with the high levels of product differentiation and low levels of unit prices. In these industries, prompt availability of information about demand trends or price movements can boost competitive advantage. International competitiveness of the textile, garment, toy and consumer to be electronics industries in Taiwan and the Philippines have been found to be effective due to advanced telecommunications services that allow tight links between commercial distribution in American and European markets and local production.

An advanced telecommunications system is equally important for service industries like banking, trading, retailing, transportation, and maintenance and insurance where information and real-time communication are vital to the production process. A reduction in the costs of these services will indirectly enhance international competitiveness within the entire economic system, since lower marketing costs mean lower costs for manufacturing firms exposed to international trade. The extraordinary efficiency of financial markets of Hong Kong and Singapore is based on the extensive use of such advanced telecommunications services.

Thus, improved communication is vital for productivity in all spheres of activity: agriculture, industry, trade and commerce. In addition, with the increasing movement of people within and outside the country, easy communication is essential for enhancing human welfare so that families, friends and acquaintances can overcome the barriers of distance. For a developing economy like India, it is thus important that policies and programmes be initiated, and resources committed to bring about rapid growth in the sector.

Telecommunications Regulatory Authority of India (TRAI):

TRAI performs the regulatory functions of telecom sector. It has taken various performs the regulatory functions of telecom sector. It has taken various measures in recent years within a view to obtain a sound framework for competition between multiple technologies and vendors.

SMART Cities:

- SMART Cities is an approach to Urban Development characterized by area-based development efficient delivery of basic infrastructure and services in an equitable manner and with Citizens participation.

- The GOT has so far selected 99 cities with an outlay of Rs 2.04 lakh crores
- These cities have started implementing projects such as smart command and control centres, smart area-based development, smart roads, solar roofing, intelligent transport systems and smart parks.
- The projects have the unique feature of integration between different infrastructural elements of the projects.

SMART Cities Mission is an urban renewal and retrofitting programme by the GOI with the Mission to develop 100 smart cities across the country to provide better lifestyle and amenities to the people to make them citizen- friendly and sustainable.

Housing

According to Economic Survey 2020, to prevent 'lack of infrastructure' becoming a 'binding constraint' on the growth of Indian economy that aspires to become a USD 5 trillion by 2024-25, the country needs to spend about USD 1.4 trillion on infrastructure,

India will require investments of \$1 trillion over the next 5-7 years to meet demand from infrastructure and housing with banks, private equity and NBFCs likely to be main sources of funds, says a report of PWC.

Around 70-80 per cent of the demand for investments will be from housing, while the balance from smart city projects, infra-linked real estate projects like airports, railways, urban transport and development of industrial corridors, according to the report based on a survey.

As per recent NSO survey in 2018, about 76.7% of the households in the rural and about 96.0 % in the urban areas had the house of pucca structure. Pradhan Mantri Awaas Yojana-Gramin (PMAY-G) and Pradhan Mantri Awaas Yojana-Urban (PMAY-U) are two important schemes for achieving the target of housing for all by 2022.

Priorities for Indian Infrastructure:

1. **New Roads:** The country is constructing 20,000 KMs of new and upgraded roads over the next few years. The six-lining of National Highway Projects of Golden Quadrilateral, once completed will boost the country's economy. Some of the significant deficiencies that affected PPP Projects of NHAI include over engineering, delays in land acquisition etc.

2. **Industrial Corridor:** Government have taken up ambitious industrial corridor along with the East-West and North-South National Highways. Mumbai-Delhi Industrial Corridor with aid from Japanese companies and Chennai-Bangalore Industrial Corridor have been taken up during the last two years. Creation of new townships along with the industrial corridors to absorb the migrants to industrial corridors in the coming years is a welcome feature.

3. **Freight Corridor for Railways:** Construction of exclusive freight corridor along with the already doubled Railway Line along with the Highways. Industrial Corridors along with new townships and the exclusive freight corridor will enhance the Indian Infrastructure in the coming decade if properly implemented. However, neglect of Railway Infrastructure so far, requires stepping up of PPP in Railways infrastructure.

4. **Airports:** Air transport has undergone a significant transformation over the last five years. Air traffic was projected at 259 million passengers for the Tenth Plan (2002-07). However, it turned out to be 24 per cent higher, at 321 million. The opening of the skies to competition brought in new airline, better services, and lower fares in the backdrop of a robust growth of the economy. This has, indeed, been a success story that has demonstrated the role of competition in acerbating investment and improving air services. However, public investment in airport infrastructure was only Rs. 38 billion against a target of Rs 67 billion (at 2006-07 prices) for the Tenth Plan. Thus, traffic increased by 24 per cent as compared to the anticipated level while investment fell short by 43 per cent of the investment target.

5. **Ports:** Congestion at Ports increased substantially during 10th Plan period since demand escalated and capacity addition fell short of the target. The average turnaround time and average pre-berthing time at major ports have worsened during 11th Plan period During twelfth Plan , to meet the overall projected traffic of 1758.26 million tonnes by 2016-17, the total capacity of the port sector is envisaged to be 2289.04 million tonnes .The Plan will need to ensure adequate investments in the Ports sector to meet the growing capacity needs of international trade, improve efficiency by reducing dwell time and introducing institutional reforms proposed by B.K. Chaturvedi. Committee.

GOVERNMENT POLICY ON INFRASTRUCTURE DEVELOPMENT: PUBLIC – PRIVATE PARTNERSHIP (PPP)

Government is actively pursuing PPPs to bridge the infrastructure deficit in the country. Several initiatives have been taken during the last three years to promote PPPs in sectors like power, ports, highways, airports, tourism and urban infrastructure. Under the overall guidance of the Committee of Infrastructure headed by

the Prime Minister, the PPP programme has been finalized and the implementation of the various schemes is being closely monitored by the constituent Ministries/Departments under this programme.

Indian experience shows that competition and PPPs can help in improving infrastructure. The opening of the telecoms sector is a case in point. Opening up the sector has led to massive investments and expansion in supply coupled with improvement in quality. The target of 15 percent tele-density set for the year 2010 was realized in 2007. Further, the cost of service today is lower than that in any other country in the world. Similarly, competition in the aviation sector has resulted in the creation of new capacities and much greater choice for travelers. The annual growth in air traffic has been in excess of 20 percent and fares have dropped significantly. Even in the road sector, PPPs have demonstrated their efficacy wherever they have been used such as on the Jaipur-Kishengarh highway.

THE ROLE OF FDI IN INFRASTRUCTURE

The economic model followed by India after independence relied on import substitution and selective foreign capital inflow, both through portfolio investment and the Foreign Direct Investment (FDI) route. This changed radically with the liberalization measures post-1990. Both portfolio and Foreign Direct Investment were not only allowed but also actively encouraged. The Foreign Investment Promotion Board (FIPB) was created to approve FDI proposals speedily and in most sectors, particularly infrastructure.

The Reserve Bank of India gives automatic approvals for investments. During the decade of the nineties, the 'ceilings' on FDI in different sectors were progressively raised. From 2001, 100 per cent foreign investments were allowed in several industrial sectors. Currently, 100 per cent Foreign Direct Investment is allowed in almost all the infrastructure sectors. The role of Foreign Direct Investment in an economy goes beyond simply easing financial constraints. FDI inflows are associated with multiple benefits such as technology transfer, market access and organizational skills. Consequently, there is an increasing and intense competition between countries to maximize the quantity of FDI inflows. Any successful policy for attracting FDI has to keep this competitive scenario in mind.

The Benefits of FDI Inflows can be broadly identified as:

Bridging the financial gap between the quantum of funds needed to sustain a level of growth and the domestic availability of funds. Technology transfer coupled with knowledge diffusion that leads to improvement in productivity. It can thus fasten the rate of technological progress through a 'contagion' effect that permeates domestic firms.

FDI Inflows in India - Sectoral Analysis of Top 10 Sectors Sector-wise FDI Inflows in India from April 2010-Dec 2010

Sector-wise FDI Inflows (Rupees in Crores) Modes of Foreign Direct Investment in India

FDI can enter India through two possible channels:

- The automatic route under which companies receiving Foreign Direct Investment need to inform the Reserve Bank of India within 30 days of receipt of funds and issuance of shares to the foreign investor
- For sectors that are not covered under the automatic route, prior approval is needed from the Foreign Investment Promotion Board (FIPB)

Other determinants of FDI in Infrastructure

While a liberal 'entry' policy can go a long way in encouraging foreign investments in infrastructure, the willingness to invest in infrastructure projects has been restrained by a number of constraints across a number of economies. Thus, any successful strategy of attracting Foreign Direct Investment into these sectors will have to deal with these issues directly.

- **Subsidized prices:** In most developing countries, infrastructure services are priced below the cost of supply. Subsidies may be hidden as increasing arrears to the banking system or outstanding payments to State agencies (like State Electricity Boards). This undermines the financial viability of projects.
- **Mixed signals from different constituencies:** Many diverse groups with varying levels of influence on Government policy have a stake in the policy that affects private infrastructure operations. Consumers benefitting from subsidized prices may resent price increases associated with privatization. Managers and employees of public utilities are understandably concerned about their jobs. This often influences policy related to private infrastructure and affects the investment environment.

FDI Norms in Infrastructure Sectors

Automatic clearance for foreign investment (not requiring the approval of the FIPB) was first introduced for infrastructure sectors like power and roads

- **Loss of authority:** Governments are often reluctant to abdicate control over key sectors of the economy particularly where foreign ownership is involved. Most Governments do not have a strong record of regulating private industries because the public sector has been so dominant. This often results in rules prohibiting private entry into certain sectors, imposing limits on foreign ownership.
- Misunderstanding regarding what private involvement can offer and what investors require:

Although private sector involvement does offer extra financing and the willingness to manage some risks (construction and operation risks), they are unwilling to bear risks that they cannot control (policy or regulatory risk).

GOVERNMENT POLICY FOR INVITING PRIVATE AND FOREIGN INVESTMENT

To encourage foreign funds flow into the infrastructure sector, the Financing Ministry has allowed Foreign Institutional Investors (FIIs) also to invest in unlisted companies. This was aimed at helping infrastructure companies as they would not be in a position to list their shares in the initial phase. FIIs now deploy 100 per cent of their funds in corporate debt. However, the Ministry has not dispensed with the 20 percent withholding tax on such investment as per the suggestions of the IIR report. Speaking at the World Infrastructure Forum, John Taylor, Director, Infrastructure, Energy and Financial Sector Department, ADB, emphasized that the “counter guarantee” scheme was designed to cover specific risks including “discriminatory government action of various kinds, non-delivery of inputs or non-payment for output by State-owned entities, availability of essential public services, changes in the agreed regulatory framework or tax regime, provision of essential complementary infrastructure, compensation or delays caused by government action or political uncertainty, transfer risks, foreign currency availability and convertibility.” In a bid to make the core sector attractive for FDI, the Cabinet Committee on Foreign Investment (CCFI) has modified the 49 percent cap on foreign equity in the infrastructure sector to render fund mobilization easier. This major policy decision which will indirectly raise the foreign equity investment in infrastructure sector to well over 51 per cent if a domestic partner fails to meet his commitment from internal sources, including borrowing, should help the large industrial houses. The new mechanism is designed to overcome the constraints for foreign equity cap in the infrastructure sector. Under the norms, companies operating in the sector can bring in equity through the mechanism of an investing company for the purpose of making investment in a licensee company and the service sector where there is a prescribed foreign equity cap.

CONCLUSION:

Provision of quality and efficient infrastructure services is essential to realize the full potential of the emerging Indian economy. Indian government’s first priority is therefore rising to the challenge of maintaining and managing high growth through investment in infrastructure sector, among others. Sustain 9 percent growth at least from 2021-22 onward; the Government of India has estimated that an investment of over US\$ 1.60 Trillion during 2020-2025) is required. Therefore, there is substantial infrastructure needs in infrastructure sector in India, which, in other words, also offers large investment opportunities. Public-Private-Partnership (PPP) is emerging as the preferred instrument, where the private sector gets its normal financial rates of return while the public sector partner provides concessional funding based on the long-term direct and indirect benefits to the economy. New instruments such as Viability Gap Funding (VGF)

through a special purpose vehicle (SPV) set up recently by the Government of India to fund mega infrastructure projects may be relevant for other Asian countries as well. The cross-border infrastructure component is an important determinant of regional integration. If countries are not inter-linked each other through improved transportation network, regional integration process will not move ahead at a desired pace. In India, development of cross-border infrastructure, especially transportation linkages and energy pipelines with neighboring countries is underway and expected to contribute to the regional integration in Asia by reducing transportation costs and facilitating intra-regional trade and services. Nevertheless, there are many challenges. It is important for India to enhance its overland connectivity with East Asia in order to effectively facilitate the Asian regional integration. Investments in infrastructure will generate demand in several fronts like steel, cement, power, and several housing construction material thus increasing the over all productivity of the country and as a result higher growth rate. Addition of new infrastructure will contributr to asset building which self generates more and more additional income. Additional infra structure will connect the production centres with markets world over. Rural Infrastructure if properly worked out will avoid wastage by 30% of Agro and perishable products and help in efficient exports by shipment or by air which will contribute to over all economic growth

India's rising growth trajectory requires rapidly expanding world class infrastructure facilities to support it. The Government recognizes the fact that domestic resources alone may not be adequate to sustain the required expansion in infrastructure. Thus, it has followed a strategy to create incentives for Foreign Direct Investment. India, today, has an extremely liberal regime for FDI in terms of entry norms. International experience shows that there can potentially be a number of other barriers to the willingness to invest in infrastructure projects.

The Government has taken systematic initiatives to address these problems largely through comprehensive reforms in sectors like power and telecommunications. The combination of domestic private foreign investment and multilateral investments is likely to propel India's economic growth momentum in future.

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Mains Questions:

1. Justify the need for FDI for the development of the Indian economy. Why there is gap between MOUs signed and actual FDIs ? Suggest remedial steps to be taken for increasing actual FDIs in India. (2016)
2. What are 'Smart Cities' ? Examine their relevance for Urban development in India. Will it increase rural urban differences? Give arguments for Small Villages in the light of 'PURA' and RURBAN Mission.(2016)
3. Examine the developments of Airports in India through Joint Ventures under Public-Private Partnership(PPP) model. What are the challenges faced by the authorities in this regard?
4. . Discuss the role of FDI in Indian Infrastructure sector-wise?
- 5.. There is greater focus on infrastructure development during XII Plan with Public Private Partnership(PPP). How far Government succeeded in implementing Public Private Partnership Projects to improve the infrastructure
- 6 "Slow down in the pace of infrastructure development in India during the last Plan periods resulted in the reduction of GDP growth rate". Critically examine the above statement with facts and figures.

Suggested reading:

1. Twelfth Five Year Plan: volume (economic Sectors) Planning Commission of India.
2. Economic Survey 2019-20, Ministry of Finance
3. Infrastructure 2013: Ernest & Young.
4. India Year Book- 2020
5. Role of FDI in infrastructure Development of India: Ananth Kumar, Tyagi, Achol Ravi.J and H.M. Joshi (A Research Paper Published in March 2013.)
6. Infrastructure statistics 2019-20(CSO).

