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Impact of Covid-19 on Infrastructure Sector in India

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Abstract:
In June 2020, COVID-19 cases increased, making India the third-worst affected nation globally. However, the lockdown had a considerable effect on the infrastructure sector's output, including but not limited to the transportation, power, and construction subsectors. Although there are several causes for this, the lack of human capital made it more difficult. This paper aims to evaluate the fundamental situation in India and discuss possible impact on the infrastructure sector.
Keywords: COVID- 19, Lockdown, Infrastructure, Transportation, Power

1. Introduction

The infrastructure of a country directly affects its economic and social development. Because of the tremendous expansion of their economic and social infrastructures, many industrialised nations make significant progress. In the late 1880s, the French words "infra" (beneath) and "structure" (building) were combined to form the term infrastructure. Infrastructure is the bedrock that an economy's organisational structure is built upon. The term "infrastructure" describes a broad range of structures and systems that require physical parts, such as the electrical grid that runs throughout a city, state, or country. Infrastructure not only enables residents to participate in the social and economic community and provides them with needs like food and water, but also facilities, equipment, or equivalent physical assets like bridges and highways that are crucial to a country's economy. Infrastructure is usually financed, controlled, monitored, or regulated by the public since it frequently involves the production of either public goods or goods that lend themselves to production. In most cases, this takes the form of production that is carried out directly by the government or by a body that is

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subject to stringent legal limitations. Hence, it is the basic systems and services, such as transport and power supplies, that a country or organization uses in order to work effectively.
A strong infrastructure facilitates the work process, which leads to positive and high production. In India, the foundational infrastructure, including ports, railroads, posts and telegraphs, and water transportation, was created during the colonial era[1], but not for the benefit of the general populace. The drawback of poorly constructed roads, particularly during the rainy season, was that they were unfit for use in contemporary India and could not connect rural communities.
The development of India's core infrastructure, including its ports, railroads, posts, and telegraphs, occurred during the colonial era, although not for the benefit of the general populace. The drawback of poorly constructed roads, particularly during the rainy season, was that they were unfit for use in contemporary India and could not connect rural communities. However, one of the most significant achievements made by the British in 1850 was the development of the railway system. In two ways, this project changed the Indian economy.
Firstly, it encouraged long distance travel and let people cross geographical barriers. Secondly, it commercialised Indian agriculture, which had a negative impact on the viability of the rural economy in India. The colonial government took attempts to strengthen the sea lanes and inland trade along with the development of roads and railways. However, even though the postal services provided valuable aid to society, it was still insufficient.
The COVID-19 pandemic's emergence in India has caused a significant change in the growth trajectory of the infrastructure industry in India. This sector has been the focus of the government's agenda as a gauge to demonstrate its efforts, improve development, and offer long-term growth for the nation. It is one of the greatest economic growth-driving industries and one of the biggest in terms of giving employment possibilities.
The impact of the pandemic will be felt more in this sector than in others, though, because it entails a substantial inflow of financial capital and the utilisation of human capital (labourers, technicians, engineers, etc.; whether organised or unorganised) in India, much like any other country.
This might indicate anything from a delay in project completion to decreased investment levels, postponed dates, and paranoia among human stakeholders, all of which would inevitably result in the sector's decline in the short- to medium-term.

2. Infrastructural Developments in India since Economic Reform

India's economic growth will be slowed down if infrastructure improvements are not made[2]. In order to meet the challenge of sustaining and managing fast growth, the Indian government's top goal is to invest in the infrastructure sector, among other things.
After the economic reform of 1991, infrastructure development was never a top priority. The management of the economic crisis and the requirement for both internal and external

[1] Wang, E.C., 2002. Public infrastructure and economic growth: a new approach applied to East Asian economies. *Journal of Policy Modeling*, *24*(5), pp.411-435.
[2] Straub, S., 2008. Infrastructure and growth in developing countries: recent advances and research challenges. World Bank policy research working paper, (4460).

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stabilisation constituted the main reform agenda. To regain macroeconomic stability and implement a comprehensive set of efficiency-oriented reforms that aimed to deregulate the domestic economy, the fiscal deficit was primarily focused on being reduced. Infrastructure services in India are gradually transitioning from being under government control to being provided by the private sector. Up until 1991, the public sector dominated the private sector, which merely supported the economy. With the assistance of the public and private sectors, India has experienced tremendous growth in the industrial and infrastructure sectors in recent years. Infrastructure services in India are gradually transitioning from being under government control to being provided by the private sector[3]. Up until 1991, the public sector dominated the private sector, which merely supported the economy. With the assistance of the public and private sectors, India has experienced tremendous growth in the industrial and infrastructure sectors in recent years. Due to different challenges encountered in project finance of various conventional projects, PPP[4] is required in many roads' infrastructure projects. PPP is required to shift government responsibility to the private sector. Additionally, the government sector's authority upholds the quality of the work. The use of PPP also ensures the use of private technology and innovation to produce work of higher calibre.

2.1 Public Private Partnership (PPP) Model

Public Private Partnership are long-term contractual alliances between 'public and private sector' organisations, with a focus on funding, designing, putting into place, and running infrastructure facilities and services that were previously delivered by the public sector. Three PPPs that are approved by the Indian government are modified design-build (turnkey) contracts, performance-based management/maintenance contracts, and user-fee based BOT models. There are hundreds of PPP projects in distinct stages of completion throughout the nation right now.

India's infrastructure is subpar when compared to other comparably developed countries. PPP was chosen by the Indian government as a strategy for improving the nation's infrastructure. PPPs were promoted in a number of ways during India's initial wave of liberalisation in the 1990s. However, it fell short in some industries, including water as well as sanitation. India was viewed as being excessively risky, and the business sector was strongly opposed. The first PPPs weren't signed and put into effect until the first part of the twenty-first century. In India, building infrastructure involves significant capital investments, and there is a shortage of resources. PPP is the foundation of more than 50% (fifty percent) of the state of Maharashtra's key infrastructure development projects.

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[3] Fox, W.F. and Smith, T.R., 1990. Public infrastructure policy and economic development. Economic Review, 75(Mar), pp.49-59.

[4] A Public-Private-Partnership (PPP) is a commercial legal relationship defined by the Government of India in 2011. It can be defined as, "an arrangement between a government or statutory entity or government-owned entity on one side and a private sector entity on the other, for the provision of public assets and/or related services for public benefit, through investments being made by and/or management undertaken by the private sector entity for a specified time period, where there is a substantial risk sharing with the private sector and the private sector receives performance-linked payments that conform (or are benchmarked) to specified, predetermined and measurable performance standards.".

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In order to speed up the construction of infrastructure, Manmohan Singh, the nation's then-prime minister, abolished the restriction on the transfer of government-owned land in August 2012[5], eased land transfer regulations, and eliminated the requirement for Cabinet approval for PPP projects.

2.2 An Overview of PPPs in Indian Infrastructure

India currently has one of the largest PPP infrastructures in worldwide. India is one of the top nations in terms of PPP capability, with about approx. more than 1000 PPP projects in various phases of implementation[6]. India is one of the top most in the world for ‘Operational Maturity PPP projects’, third for ‘sub-national PPP’, and fifth overall for providing a perfect environment for PPP projects, according to the 2015 Infra-scope Report of the Economist Intelligence Unit. In 2006, the Department of Economic Affairs created the PPP cell . It is in responsible for PPP-related matters at the government level, comprising Policies, Schemes, Programs, Model Concession Agreements, and Capacity Building. The Cell is also in charge of PPPAC, the VGF Scheme for Financial Support to PPPs in Infrastructure, as well as the India Infrastructure Project Development Fund applications and matters that need to be authorised.

Since India is expected to accelerate at a rate of eight to nine percent in the coming years, substantial investments will be needed to close the quality and quantity gaps in order to build world-class infrastructure. As a result, PPPs must be used to close the infrastructure gap in all areas, including transportation, energy, and ports. PPPs in the infrastructure sector, including power, transportation, and urban infrastructure, have recently been made possible by legislative and regulatory developments. For instance, the Energy Act permits the private sector to participate as a "franchisee" in the distribution of electricity in certain locations. This acceptance of the "franchisee" function is a crucial first step in encouraging PPP in the provision of energy. In certain instances, a different PPP model has been used, and the advantages are already apparent[7]. The first Build-Operate-Transfer (BOT) experience at the Jawaharlal Nehru Port serves as a good illustration. In contrast to the 15 years specified in the Agreement, the latter's Minimum Guaranteed Traffic condition was satisfied in just 2 years. As a result, this experiment is also being repeated in other significant ports. India's road sector has been the most active in luring private investment, with the National Highways Development Project being the largest PPP project to date. The road sector accounts for about 75% (seventy-five percent) of projects that have been finished. Compared to the highways sector, the ports industry has seen a lot of private engagement. Even though the PPP model has had considerable success in India, it still has to be improved upon and developed further

[5] Planning Commission, Government of India (2013) Twelfth Five Year Plan (2012-2017): Faster, More Inclusive and Sustainable Growth, Vol. 1, SAGE Publications India Pvt Ltd., New Delhi, 42.
[6] NITI Aayog. India, 2015. Web Archive. Retrieved from the Library of Congress, www.loc.gov/item/lcwaN0030483/ [last access on 08.12.2022 at 11:39 AM]
[7] Ziipao, R.R., 2018. Look/Act east policy, roads and market infrastructure in North-East India. Strategic Analysis, 42(5), pp.476-489.

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in order to become a more attractive investment[8]. The necessity to satisfy the competing interests of various stakeholders is one of the major problems. The latter group consists of the government, businesses, users, financial institutions, and others.

2.3 The COVID-19 Pandemic's Immediate Effects on the Infrastructure Sector

There is a notion that the infrastructure industry is slowing down for obvious reasons, despite the fact that post-pandemic appraisals are uncertain given a variety of conditions. While the pandemic brought with it its own degree of mass hysteria, India's populace mobilised as unorganised workers in the sector went to the streets, causing a migratory labourer exodus across the whole country. The lockdown had a considerable effect on the infrastructure sector's output, including but not limited to the transportation, power, and construction subsectors. Although there are several causes for this, the lack of human capital made it more difficult.

Projects in the lockdown have been delayed since there is a significant financial capital outlay in this industry. This has ultimately resulted in higher expenses, both operational and related to investments. The associated industrial indices even have a direct effect on valuations. For instance, the S&P BSE India Infrastructure index had a loss of value of around 35% from January to March 2020, and the effect is still being felt. Other than this, the demand for the infrastructure subsector of transportation has been significantly reduced across the board; toll plaza collections were negligible; and electricity sector collections fell significantly because the majority of users were only commercial or industrial.

Along with supply and demand risk, the industry has also experienced problems with financing and liquidity. To secure the repayment of loans, the payment of wages, the dispelling of urban legends, etc., liquidity is necessary. Given that the sector has received a considerable amount of foreign finance, the government may be best positioned to deliver projects using the EPC mode and assist the domestic financing entities, at least in the short and medium terms. Following key consideration comes into preview[9] : -

“1. The infrastructure sector utilises people and equipment (largely fixed costs), thus companies and contractors with high levels of debt and low cash reserves may face a liquidity crisis.

2. Supply chain interruptions will likely continue, affecting the availability of parts and equipment, and eventually impact projects.

3. Counterparty risk leading to the liquidation of existing assets over the inability to continue operations.

4. Insurance settlements may be triggered if insurance policies were taken on such assets.

5. There has been a downward spiral in demand and usage of major infrastructure assets like transportation, due to the lock down. This may continue to affect demand even post COVID-19, as well as revenue generated.

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[8] Kim, M.J. and Nangia, R., 2010. Infrastructure development in India and China: A comparative analysis. In Physical infrastructure development: Balancing the growth, equity, and environmental imperatives (pp. 97-139). Palgrave Macmillan, New York.

[9] Earley, R. and Newman, P., 2021. Transport in the aftermath of COVID-19: lessons learned and future directions. Journal of Transportation Technologies, 11(02), p.109.

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6. Projects initially executed in foreign currency face the risk of exchange rate fluctuations, and such existing assets may take a toll for the worse, if not previously hedged or structured.
7. Force Majeure clauses may be triggered, where it is established that the clause mentions specific relevant events and also depending on whether the list of events is exhaustive or non-exhaustive.
8. Possibility of lawsuits arising as a result of failure to keep to the terms of the agreement by relevant participating parties"

3. Regulatory environment overview and a quick assessment of several key infrastructure sectors

Since 1991, many autonomous regulatory agencies have been established on a sectoral basis by either a Ministry at the Centre or other State Governments. The fact that many ministries within the central government are in charge of various sectors and that these sectors operate through complex executive bodies that create bureaucratic obstacles is also significant. Although infrastructure is acknowledged as being essential for economic growth, it is rife with both simple and complicated issues. For instance, the Government of India's Committee on Infrastructure claims that there is currently no agreed-upon definition of infrastructure (CoI). However, the CoI looked at numerous Indian statutes that mention infrastructure to produce a comprehensive list that covers, among many other things, the telecom and power industries. Surprisingly, the list omits vital social infrastructure sectors like hospitals and educational institutions that are crucial to the general development of the nation.

3.1 Ports

Along its lengthy coastline, India has 187 minor ports in addition to 12 large ports. The utmost ports, which control roughly seventy-four percentage of all traffic, moved more than 463 million tonnes of cargo in the most recent fiscal year, a rise of 9.5% from the year before. In the past, governments have always owned and developed ports around the globe. Similar to how the government of India used to control port development, the private sector and international corporations are now encouraged to invest in port development activities and operations. Over 90% of all foreign trade in India passes through ports, which act as gates to the rest of the world.

The Indian government is promoting flexible finance strategies to create public-private partnerships in light of the intrinsic paramount of port projects, which typically include a long development period, high expenses, and budget limits and budget overruns (PPPs). With foreign companies like Maersk, P & O Ports, and Dubai Ports International participating in BOT terminals on a revenue-share basis, several major ports now function primarily as landlord ports. The Adani Group is one Indian stakeholder interested in the development of small ports. Subject to a few limitations, the government permits FDI in port privatisation and development projects. FDI that falls under this category is allowed through the automatic route, whereby up to 51% of foreign equity is allowed in projects that provide services to the water transportation industry, such as the operation and maintenance of piers and the loading and unloading of vehicles, and up to 74% of foreign equity is allowed in projects that build and maintain ports and harbours. In addition, port development projects are eligible for 100%

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FDI via the automatic route. It is significant to remember that such investments are not subject to tax for ten years[10]. Numerous marine and non-maritime businesses are thinking about investing in this industry in light of this. Some of India's main ports are regulated by the Central Authority for Ports in India, while the governments of the states where the ports are located are in charge of the others.

The 1997-established Tariff Authority for Big Ports is responsible for overseeing revenue-related issues affecting all major ports and their operators, but not minor ports. The Tariff Authority for Major Ports seeks to create a stand-alone organisation to control tariffs, cargo traffic, and rental costs for real estate under the control of the Major Port Trusts[11]. However, this authority can only levy tariffs; it is powerless to control other facets of this industry.

Recent events have led to the Indian government creating for the first time a comprehensive national maritime development policy that will encourage increased private investment, better service quality, and boost competition. To achieve the medium- and long-term goals, this policy also aims to promote increased port project investments at significantly greater levels.

2.4 Railways

With more than 63,000 kilometres of railroad tracks under its control, the Indian Railway is one of the world's biggest railway systems. It’s financial commitment is significant enough to warrant the presentation of a budget distinct from the overall federal budget. The Railway Board, which consists of the Chairman, the Financial Commissioner, and additional functional Members for Traffic, Engineering, Mechanical, and Electrical issues, is responsible for setting policies and overseeing the railroads under the auspices of the Indian Railway Ministry[12].

The most widely used method of long-distance transportation is the railroad, which is both quite efficient and affordable. However, in recent years, low-cost aeroplanes have increased in popularity as a result of high aviation fuel prices, putting pressure on the railroad. The present rail track networks are under a tremendous amount of stress because the Indian Railway has a monopoly on both freight and passenger trains. In light of this, the Indian government has agreed to spend around $5 billion to improve India's rail infrastructure. Additionally, it has developed a well-planned strategy to eliminate bottlenecks and increase the capacity of the trains to meet demand[13]. The Government of India has also undertaken a number of projects, including low-cost and high-return investments with a focus on port connectivity, gauge conversion, signalling and telecom, asset renewal and passenger terminal renovation. The requirement for rail transportation has also increased quickly as a result of the containerization of cargo. To enhance infrastructure and subsequently promote PPPs,

[10] Bajpai, N. and Sachs, J.D., 1999. The progress of policy reform and variations in performance at the sub-national level in India.
[11] De, P., 2009. Globalisation and the changing face of port infrastructure: The Indian perspective. Peter Lang.
[12] Pradhan, R.P. and Bagchi, T.P., 2013. Effect of transportation infrastructure on economic growth in India: The VECM approach. Research in Transportation economics, 38(1), pp.139-148.
[13] Jadhav, P. and Choudhury, R.N., Infrastructure Planning and Management in India.

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container transport, which was formerly a monopoly of the public sector, has now been opened to competition and private businesses.

The Rail Land Development Authority was recently established to promote and oversee PPP developments in light of this[14]. For the construction of railroad stations, freight terminals, and rail link projects throughout the nation, the Indian Railway has made property offers totalling more than 500 acres to private developers[15]. A further 22 railway stations have been identified by the Indian Railway for modernization under the PPP model of development.

The government has suggested investing Rs. 50,000 crores in rail infrastructure from 2018 to 2030. The "Make in India" campaign have launched the Vande Bharat semi-high-speed train. India will also have to built 400 new Vande Bharat trains by 2025. All unattended intersections on vast gauge railroads have indeed been eliminated.

The Indian Railways completed the largest electrification in a single year 6,015 Route km in 2020–21. Electrification grew by more than 5 times when compared to the previous seven years (2014–21). If this pace continues, electricity will be used to power Indian railways by 2024.

3.3 Highways and Roads

India has the second-largest road network in the world, with 3.3 million kilometres in total distance. Although roads carry around 65percent of total of India's freight and 80 percent of its passenger traffic, their size and quality are insufficient, making them a top-priority subject for improvement. The Indian government promotes both domestic and foreign investment in this sector while spending about $4 billion annually on building roads. The degree of engagement from the private sector is increasing, and it often takes the shape of building contracts or BOT models, which represent about 36% of the total investment based on open competition or the lowest percentage of total government spending. The National Highways Authority of India (NHAI) is the supreme government entity in charge of managing road construction throughout the nation that falls under its purview. The NHAI uses competitive bidding to award all contracts, whether they are for BOT or construction.

The government has provided a 100% income tax exemption for all road development projects for a period of ten years as an incentive to enhance investment in highways and roads[16]. The NHAI also takes into account grants or viability gap money for unprofitable projects. Additionally, the government has created sample concession agreements.

By 2024–2025, two lakh km of national highways are anticipated to be completed under PM Gati Shakti. The National Highways Network will expand by 25,000 kilometres in 2022–2023, according to the government. NH development is progressing more quickly around the nation. National highways were constructed at an average length of 37 km in 2020–21. The

[14] Mishra, B.R. and Satpathy, L.D., 2022. Economic Security of India: Position, Policies, and Prospects. In Varying Dimensions of India's National Security (pp. 153-177). Springer, Singapore.

[15] Isler, C.A., Blumenfeld, M. and Roberts, C., 2022. Assessment of railway infrastructure improvements: valuation of costs, energy consumption and emissions. Sustainable Energy Technologies and Assessments, 52, p.102179.

[16] Lall, S.V., Wang, H.G. and Deichmann, U., 2010. Infrastructure and city competitiveness in India (No. 2010/22). WIDER Working Paper.

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eight-lane, 1,380 km long Delhi-Mumbai expressway, which is currently being built in India, is scheduled to be completed in March 2023.

Among the key Bharatmala Pariyojana projects that have been completed are the Eastern Peripheral Expressway, the Delhi-Meerut Expressway, the Narmada Bridge, the Chenani - Nashri Tunnel, and the Dhaula-Sadia Bridge.

3.4 Airports

In the most recent fiscal year, airports in India handled 95 million passengers and 1.5 million tonnes of cargo, an increase of more than 30% from 2005–2006 to 2006–2007. Over the previous year, the volume of cargo increased by nearly 11%. In particular, between 2003 and 2007, India's aviation traffic increased by 21.75% yearly, and in the first three quarters of 2007, there was a record increase of 37.74% in this sector, which was predicted to bring in US $30 billion by 2020[17].

The International Air Transport Association predicts that by 2030, India would surpass both China and the United States as the third-largest air passenger market in the world. (IATA). During the previous three years, India's civil aviation industry has become one of the country's fastest expanding industries. India has surpassed the United Kingdom to become the world's third-largest domestic aviation market, with the UK predicted to be eclipsed by India as the world's third-largest air passenger market by 2024. As of June 2020, there were 153 airports in the nation. Only 114 of the 153 airports were utilised for domestic flights. These airports were either owned by the Airport Authority of India or the states in which they were located, or they were privately owned or part of a joint venture.

Prior to being turned over to the Airports Authority of India in 1994, the government of India used to build and manage airports across the country. India revised the Airports Authority of India Act, 1994 in 2003 to make private sector investments easier in practically every aspect of airport development.[18] The Build-Own-Operate-Transfer (BOOT) model or concession agreements are typically used to develop airports. In joint ventures with the private sector, the government typically owns a 26% ownership, however two projects in Chennai and Kolkata were recently built as totally owned businesses. The Airport Authority of India owns and manages 126 airports around India. These include five airports located in the major urban areas that handle the bulk of the traffic.

At 25 city airports, the government is considering private company investment. In addition, the Indian government is developing a new civil aviation strategy that calls for corporate ownership of the air traffic control system. The Indian government intends to promote India's rich heritage and natural beauty to foreign leisure travellers now that air travel is cheaper. As a result, it is predicted that over the next five years there will be a considerable demand for investments in aviation infrastructure, amounting to nearly US$ 9 billion for airport construction.

[17] Srivastava, G.K. and Chaurasia, P., 2015. Problems and prospects of civil aviation industry in India after new economic policy. Anusandhanika, 7(2), p.126.

[18] Yadav, M. and Dhingra, T., 2022. Emerging Scope of Airport Infrastructure: Case of India. In Infrastructure Planning and Management in India (pp. 35-51). Springer, Singapore.

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When a private company or a public-private partnership enters into Build-Own-Transfer (BOT) or Build-Own-Run (BOO) contracts, they build and operate a brand-new airport. However, new airports in either the public or private sectors cannot be started without the government's prior approval. Both the simultaneous operation of a Greenfield airport and the replacement of an existing airport are permitted. Under the automatic approach, the government allows 100% FDI for Greenfield airports. The Foreign Investment Promotion Board's permission is required for investments totalling more than 74% in other airport expansion projects (FIPB).

The UDAN programme was created by the government to reduce the cost of air travel for the general public and increase provincial air connections from the country's underserved and unserved airports. As part of the scheme, 66 airports and 415 routes have been operationalized.

The Krishi Udan initiative assists farmers in finding domestic and international markets for their products. The volume of agricultural items transported through the programme increased by 22.5% on an annual year-over-year basis in FY 21-22.

Recent airport construction projects have prioritised passenger needs over cargo facilities primarily. This rise is being driven by an increase in domestic economic activity and the development of perishable commodities businesses, which necessitate rapid and dependable transportation. In order to take corrective action, the government has stipulated that all new Greenfield airports contain distinctive cargo facilities with storage, ground handling, and loading capabilities[19].

3 Managing the Impact of COVID-19 on the Infrastructure Sector

Work on projects has been hindered and negatively impacted by the limitations put in place by the Indian government, state governments, and union territories to control the spread and impact of the virus. Delays to completion of projects are unavoidable with accompanying losses, cost and expenses. There have been some recent investments and initiatives in India's infrastructure industry. Here are a few current government infrastructure initiatives and financial commitments:

- *"In June 2022, Mr Nitin Gadkari, Minister of Road Transport and Highways, opened 15 national highway projects worth Rs. 13,585 crores ($1.7 billion) in Patna and Hajipur, Bihar.*
- *Nitin Gadkari, Minister of Road Transport and Highway, opened 19 National Highway projects in Rajasthan and Haryana in March 2022, investing a total of Rs. 1,407 crores (US$ 183.9 million).*
- *The Asian Development Bank (ADB) approved a loan in November 2021 for US$250 million to support the National Industrial Corridor Development Program (NICDP). This is a portion of the 500-million-dollar loan for constructing 11 industrial corridors connecting 17 states.*

[19] Ohri, M., 2012. Discussion paper: airport privatization in India. Networks and Spatial Economics, 12(2), pp.279-297.

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- *With the launch of the "Infrastructure for the Resilient Island States" initiative in November 2021, India will have a significant opportunity to improve the lives of other vulnerable nations around the globe.*
- *The Dubai government and India signed a contract in October 2021 to build infrastructure in Jammu and Kashmir, including industrial parks, IT towers, multipurpose towers, logistics centres, medical colleges, and specialized hospitals.*
- *Road building will be accelerated in FY22 by government initiatives like the National Infrastructure Pipeline, National Monetization Pipeline, Bharatmala Pariyojana, modifications to the Hybrid Annuity Model (HAM), and a quick pace of asset monetization.*
- *The PM Gati Shakti National Master Plan, which includes implementation, monitoring, and support mechanisms, was approved by the Indian Union Cabinet in October 2021.*
- *For a redesigned, reform-based, and result-linked fresh electricity distribution sector scheme over the next five years, the government declared Rs. 305,984 crores (US$ 42 billion).*
- *The Mega Investment Textiles Parks (MITRA) scheme was introduced to create seven textile parks over three years and world-class infrastructure for the textile industry.*
- *The Ministry of Railways intends to monetize a number of assets, including the Eastern and Western Dedicated Freight Corridors once they have been put into service, the introduction of 150 modern rakes via PPP, station renovation via PPP, railway land parcels, multifunctional complexes (MFC), railway colonies, hill railways, and stadiums".*

Finance for infrastructure is anticipated to be a lengthy process. In the short to medium term, a declining trend. Some practical next steps to navigate the distress are mention below-

- Taking use of the current crisis as a trigger to re-evaluate infrastructure investments and assets ought to be organised.
- Planning and managing ongoing projects. This will involve determining how much of an impact delay in project completion due to supplies.
- Study and analysis of the original assessment of the contract's consideration of including specific key clauses (force majority clause, aspens clause) in order to mitigate risks brought on by unanticipated occurrences in the future. Consider using derivative contracts as well the dangers of making investments, such as mortgage rate swaps.
- Investing in infrastructure with credit guarantees and making sure that the investments are a part of a well-diversified portfolio.
- Create triggers around the prudential rules guiding the portfolio's

4 Conclusion

India's recent economic growth is one of the most notable trends in the global economy. The emotions have been encouraged by India's progress, particularly in

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manufacturing and services both domestically and overseas. The investment boom and strong macroeconomic fundamentals have a positive impact on India's outlook going forward. Many observers believe that India could achieve its full potential if it improved infrastructure facilities, which are now insufficient to fulfil the expanding economic demand. After the pandemic has been contained, we should, however, turn our attention from handling crises to aiding in the adequate investment in infrastructure that is required for advancement, as well as mitigating and reducing the consequences of future epidemics under contracts.

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