**AN OVERVIEW ON THE EFFECTS OF COVID PANDEMIC ON THE CONSTRUCTION SECTOR IN INDIA**

**Deepthi Gopinath**

Assistant Professor in Economics,M.S.M College,Kayamkulam

deepthisreekumar@yahoo.com

**Abstract**

Construction industry plays an important role in the economic upliftment and development of the country. It can be regarded as a mechanism of generating employment and offering job opportunities to millions of unskilled, semi-skilled and skilled work force. It also plays a key role in generating income in both formal and informal sector. It supplements foreign exchange earnings derived from trade in construction material and engineering services. The global corona virus (COVID-19) pandemic has created a whole new set of risks in construction industries generating unprecedented delays, disruptions, and uncertainty on construction projects, and has forced the industries in adopting more sophisticated technologies while combating the reduced workforce on job sites. Further, the post pandemic era of construction is expected to be a lot different as the industries will embrace the technology as the augmentation and collaboration strategy.

Keywords: COVID-19; pandemic; construction project; risk management; use of

technology; recovery and resilience

**INTRODUCTION**

 In India construction industry is the 2nd largest after agriculture sector, and it is therefore critical for the country’s economic and GDP growth. It has an Industry size of INR 10.5 trillion, contributes around 8 per cent of the nation’s GDP and employs 57.5 million people. This being a core sector, there are so many industries that are dependent on the construction activity in the country. For example, the construction plant and machinery manufacturing industry comprise around 500 companies and is estimated to be sized at INR 375 billion. The Construction Industry is an investment-led sector in which the government shows keen interest and negotiates with the sector to develop infrastructure related to health, transport and education .

“The construction industry has contributed an estimated US$ 67.4 billion (8%) to the national GDP in 2010-11” (Business maps of India, 2012). “Construction in India has accounted for more than 40% investment on development over the past 50 years. Nearly 16% of India’s working population depends on construction for its livelihood” (The Indo Italian chamber of commerce and industry, 2008). “It contributes about 78% to the gross capital formation” (Iyer and Jha, 2006).

 The Construction industry plays an important role in the economic upliftment and development of the country. It can be regarded as a mechanism for generating employment as it offers job opportunities to millions of skilled, semi-skilled and unskilled work force. It also plays a key role in generating income in both formal and informal sector. It supplements the foreign exchange earnings derived from trade in construction material and engineering services. The global corona virus (COVID-19) pandemic has created a whole new set of risks in construction industries generating unprecedented delays, disruptions, and uncertainty on construction projects, and has forced the industries in adopting more sophisticated technologies while combating the reduced workforce on job sites. Further, the post pandemic era of construction is expected to be a lot different as the industries will embrace the technology as the augmentation and collaboration strategy. For prosperity of any nation, Construction Industry is quintessential. .

This study aims to identify the critical pandemic impacts on the Construction sector and cites various ways to revive the sector onto the path of normalcy.

**COVID BATTLE**

As COVID-19 expanded across the country in April 2020, the face of the Indian construction industry, which was already battling with inadequate management and a lack of tracking of its labour force, lost its central grip completely, bringing the industry to a halt. COVID wreaked havoc on the value chain at all levels and scales. The availability of construction materials and price inflation became important concerns. Cost overruns, severe delays, and even project cancellations resulted from the lack of timely implementation owing to lockdowns. The cancellation and postponing of projects had a direct impact on MSMEs, with many being forced to close their doors or reduce their operations.

**PROBLEMS DURING COVID**

**EMPLOYEE SAFETY**

 The most important challenge for construction companies was to keep their staff healthy and free from COVID infections on the sites. Obviously, employee safety was a moral imperative. That apart, a large number of people infected at any work site caused turmoil, affected work deliverables, and caused delays. All this ultimately pushed up costs.The net impact was changed working conditions, more onerous compliance efforts, and altered processes that took time to settle in.

**SUPPLY CHAIN DISRUPTION**

Local manufacturers and distributors have lacked enough supply to fill the demand, resulting in postponed or cancelled projects.

**LOWER SPENDING BY CONSUMERS**

 Job losses and wage reduction became widespread across the economic spectrum. The uncertainty that prevailed played on the minds of consumers and investors. In commercial real estate, there were concerns about the impact of widespread “work from home” policies adopted by Indian corporates during the lockdowns. In several well-publicized examples, mostly from the technology or services sectors, companies embraced long-term remote working policies. The companies authorized most or all of their employees to work from home so as to save on real estate costs.

**RISE IN MATERIAL COSTS**

The pandemic disrupted both national and international supply chains considerably and it will take a while before everything returns to pre-COVID levels. The construction sector had braced itself to face frequent price hikes of raw materials due to a shortage of supply. Additionally, governments across states or the central government have added extra cess on taxes to strengthen their finances which have directly affected the price of materials.

 **IMPACT ON LABOUR**

The COVID-19 crisis hit labour-intensive sectors particularly hard. In the construction industry alone, migrant workers who comprise a large part of the workforce typically stayed in labour colonies at construction sites. As per CREDAI,” prior to the lockdown, there were around 20,000 ongoing projects across the country. The work was being undertaken in as many as 18,000 sites and more than 30 per cent of workers were staying away from sites due to the fear of corona virus infection”.

**REVIVING CONSTRUCTION SECTOR POST COVID**

**1. Prioritise Projects**. - Labour and Capital can be expected to be in short supply as such there should be Immediate and Incremental Impact Assessment of Covid 19 on projects by considering the geographic spread and supply- chain disruptions.

**2**. **Re visit project definition and delivery strategy –** Project Owners should chalk out an effective plan to minimize the impact of COVID 19 in a time bound manner. They should explore off site modular technologies to optimize resources while enabling a controlled working environment for Labour.

**3. Build resilience –**Construction projects can be addressed using a three pronged approach in the future.

a) Enhancing labour health and safety norms at work sites. It is essential to use appropriate digital technologies to enable timely detection and prevention of spread of illnesses .

b) Focus should be on undertaking capacity building by setting up of independent, empowered project monitoring units to ensure timely and within budget projects.

 c) Leveraging business continuity planning clear guidelines for critical project and organisation operations. By giving clear guidelines and providing a digital environment for remote ‘working’ including an ‘online’ project monitoring etc...

**4. Strengthen contractual provision -** Post COVID-19, the construction sector could consider the introduction of new clauses in future contracts, to set out clear guidelines for action and relief in extreme eventualities, and to minimise disputes that may arise at such a time. The possibilities of contractual relief to be passed on by the project authorities and project owners to the contractors, sub-contractors. There should be clear guidelines on facilities to be provided by contractor for workers, which need to be mandated by project owners in the contract. There should be an implementation on integrated Project Delivery Framework, which is based on a joint contract between the key stakeholders within a project environment and share mutual risks and rewards, with an overall focus on successful project delivery.

*5.* **Accelerating Green Infrastructure –**Investments in green infrastructure can play a vital role in kickstarting economic recovery post-COVID-19. Construction firms can aid recovery by embracing green infrastructure. However, there must be an adoption of eco-friendly projects on the national level, influencing the transport sector towards adopting electrified transportation systems and promoting the restoration of the ecosystem.

6. **Infrastructure and Economic Growth –**Infrastructure is recognised as a prominent enabler of economic growth. It triggers a big multiplier effect, churning the development cycle through industries like steel, cement, technology, construction equipment, etc. This, in turn, increases employment and improves supply chain efficiency while developing robust public infrastructure. In order to nurse the economy back to health, the government of India has increased capital spending to 26%, with special emphasis on the infrastructure sector.

 **POST COVID SCENARIO**

India has seen a calibrated opening-up of the economy and a healthy recovery in economic growth and corporate earnings in 2022. The Government estimates it to grow by 9.2% in 2022. The Budget has increased India’s capital expenditure this year by 35% to INR 7.5 lakh crore, most of which is likely to be spent on critical connectivity projects and infrastructure. The government’s thrust on infrastructure is also evident from the announcement last year of the $1.4 trillion National Infrastructure Pipeline called PM’s Gati Shakti Scheme.

**CONCLUSION**

Fortunately, the worst seems to be behind us, and the industry has already started regaining its lost rhythm even with the new norms in place. The changes ushered in by the pandemic are likely to prevail in the years ahead, enabling trustworthy, transparent, and technology-driven home construction companies to gain momentum .The construction sector may hold the key to reviving the economy ravaged by the fallout from COVID-19. Though it suffered some setbacks, the construction industry on a more significant level has remained resilient amidst the barrage of economic disruptions.

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