

The Impact of Covid-19 on Construction and Engineering Sectors in India and Elsewhere

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Abstract: The Covid-19 pandemic has devastated the world of work. Its impact, which varies across sectors, has been significant in the construction sector also. The construction and the engineering sectors were the ones that had to bear the worst brunt of Covid-19, as it was already battling a liquidity crunch as fallout of the non-banking financial institutions in the financial sector since the beginning of 2020. This article analyses the Covid-19 pandemic situation and its effect on construction and engineering sectors in Indian and elsewhere. It is essential to have a thorough rebuilding plan after an analysis of all the risks by each player in their respective universes and a proper execution of the Concrete measures for reviving the construction sector includes ensuring safety of informal labourers, increased remuneration to skilled work force, reduction of interest rates.

Keywords — Construction, Corona virus, Covid-19, Engineering, Financial sector, Liquidity crunch

I. INTRODUCTION

The world today stands under the recovery phase from the severe attack of the Coronavirus or the Covid-19 pandemic. Almost every commercial activity is suffering at the hands of the ruthless Covid-19. The hardest affected sector, the construction and engineering sector is definitely on the wrong end of the curve. (Kohli and Chadha (2020). The COVID-19 pandemic has devastated the world of work. An article by Sigahi *et al.* (2021) presents a systematic review to investigate the impact of Covid-19 on work and workers of all occupations, which reveal research gaps, and help managers to adapt to organizations amid the pandemic. Its impact, which varies across sectors, has been significant in the construction sector (ILO, 2021). The construction and the engineering sectors were the ones that had to bear the worst brunt of Covid-19, as it was already battling a liquidity crunch as fallout of the non-banking financial institutions in the financial sector since the beginning of 2020. According to a new study tracking the results of more than 730,000 COVID-19 tests, it was found that construction workers had the highest positivity rates for asymptomatic cases of any occupation, including healthcare staff, first responders, correctional personnel, elderly care workers, grocery store workers and food service employees (Joe Bousquin, 2020).

This sector, which was already reeling with multiple challenges from lack of capital and credit avenues to insolvencies, multiple frauds and regulatory burden under the Environment Laws and the Real Estate (Regulation and Development) Act, 2016, is now marred by the Covid 19 pandemic, with no likely relief in sight. A very recent study by the KPMG Group describes in detail how the Covid-19 pandemic is affecting the construction sector (Anon.,

2020a). The construction sector represents a key component of countries' economies—it is approximately 13% of global GDP—as such, having the availability to perform construction activities with a minimum spread of COVID-19 may help to the financial response to the pandemic (Felipe Araya, 2021). A literature review of studies on the COVID-19 pandemic in supply chain disciplines by Priyabrata Chowdhury *et al.* (2021) also endorses this situation. Contractors are struggling to find enough skilled craft workers even as they continue to be impacted by pandemic-induced project delays and supply chain disruptions, according to a workforce survey from the Associated General Contractors of America and Autodesk (Anon., 2021). The survey results show how the COVID-19 pandemic has created constraints on the demand for work even as it limits the number of workers that contractors can hire.

Many projects remained in the unfinished stages because of the lack of funds. Those that were finished remained unsold, because of changing buyer preferences. At a time when the stakeholders in the construction industry i.e. developers and contractors were treating this period of change as a learning curve, reassessing needs and working out strategic deals, the pandemic brought all construction activity to a grinding halt. To contain the pandemic, like many nations, Government of India has also imposed a lockdown, in many of its states, restricting the movement of people and gatherings. In the construction sector, hordes of workmen toil together to meet the timelines. However, due to the restrictions put in place by the Government, all the construction activity and most of the business activity across the country has halted.

Beyond the short-term impact of an economic downturn on construction demand, the crisis is also expected to hit long-term supply and demand, resulting in lasting shifts in investment patterns. Although a high level of economic uncertainty persists, research from the McKinsey Global Institute suggests that economic activity could be back on track by early 2021—if the virus is contained within the next few months and the right economic policies are enacted. However, longer-term lockdowns or other severe restrictions, even intermittent ones, could result in a severe and sustained economic downturn, with economic activity returning to 2019 levels by 2023 at the earliest (Anon., 2020b).

There are multiple consequences of the lockdown, which would further stretch the troubles for the sector like reverse migration, disruption of supply chains, amongst others. Cumulatively, the above circumstances would cause hindrance in meeting the obligations under the construction and engineering contracts and would lead to multiple legal wrangles for the industry post lifting of the current restrictions. The problems of the construction and engineering sectors in India is aggravated and difficult to address as there is no standard form or format for contracts followed by the industry. There could be innumerable variations in as many General and Special Conditions of a Construction and Engineering Contract. Although, standard forms of construction and engineering contracts by International Federation of Consulting Engineers (FIDIC), Institution of Civil Engineers (ICE) or Indian Institute of Architects (IIA) are widely adopted, but, at times they are zealously negotiated and hence modified/amended so as to lose uniformity. Additionally, there are separate standard forms of contracts adopted by the National Highway Authority of India (NHAI), Public Works Department (PWD), Delhi Metro Rail Corporation (DMRC), Central Public Works Department (CPWD), National Building Construction Corporation (NBCC), Model Engineering Procurement and Construction (EPC) and contract for construction works by Niti Aayog. The Ministry of Finance (Govt. of India) has issued various standard guidelines for contracts and procurement of works such as item rate contracts and lumpsum contracts, Model EPC Agreement by Indian Railways, etc., making it impossible to exhaustively deal with issues that could arise on account of Covid-19 and their solutions. The contractual implications as detailed by Julian Bailey *et al.* (2020) are many-fold. However, some of the common issues that could arise in some form in most of the construction and engineering contracts can be as follows:

FINDINGS

A. The toll on residential and commercial real estate

The exodus of migrant workers or informal sector workers (a bulk of whom find employment in the construction industry in Tier I and Tier II cities), took a toll on the supply chain due to a ban on inter-state travel. It also

pushed up operating costs as commodity prices (raw materials for the construction industry) were in short supply. The demand for residential real estate was also on a back foot, as aspirational homeowners kept their purchase decisions on hold because of various reasons and the uncertainty triggered by the pandemic situation. Additionally, the uncertainty regarding cash flows discouraged the potential buyers to take on the additional burden of loans and EMIs. Home rentals too, took a dip as people renting apartments in the metropolitan cities chose to go back to their hometowns.

Commercial real estate demand also took a beating as work from home/remote work became the new normal that resulted in under-utilization of office spaces. Closure of malls, gyms, cinema theaters and eateries also killed the appetite for commercial infra space. The festival season beginning from October that normally gives a boost to residential purchase, failed to uplift the mood of the affordable segments of population from buying/investing in residential properties.

B. Negative impact on the construction sector and the lowering of GDP

Though the Union Government took a decision of recognizing the pandemic as a *Force Majeure* incident, the onus was on the construction industry to deal with the double whammy of Covid - 19 in addition to the already existing sluggish conditions. As the second biggest employment generator, the impact of Covid - 19 on the construction sector, thus led to the lowering of GDP not only in real estate but also several associated sectors. Although the economy of the country is on the recovery mode and steady progress on the administration of the vaccine, the revised standard operating practices with respect of usage of PPE, social distancing, personal hygiene etc. are resulting in the delay of under-development projects. This will further push up financing cost and continue to impact the stakeholders in the construction industry.

Time is the essence of contract

In many construction and engineering contracts, parties generally specify the time for completion and/or expressly state that time is the essence of the contract. A contractor should be careful about such clause(s), as any breach would make the contract voidable at the cost and consequence of the defaulting contractor. Alternatively, the contractor under force of law may be obligated to complete the project beyond the stipulated completion date and also pay compensation for delay to the opposite party/Employer. Section 55 of the Indian Contract Act, 1872 provides for the effect of failure to meet the specified timeline. However, the intention of the parties has to be looked at and not the letter of the clause. The time is generally considered to be the essence of the contract.

However, the Law in certain situations permits extension of

time to the contractor. Generally, construction and engineering agreements also provide for a buffer period, beyond the stipulated completion date. Such conditions are generally subject to payment of damages or deductions from the payments due to the contractor. However, in case of failure to perform, even in the extended period(s), the aforementioned rigors of Section 55 of the Contract Act would be invoked against the defaulting contractor. It is stated that even in contracts, where time may not be the essence of the contract, upon delay in performance, the innocent party/employer may sue for any loss that may be caused by delay. Thus, it is imperative that any delay beyond the stipulated completion date, is condoned by the doctrine of *force majeure* or the doctrine of frustration of the contract can be applied in favour of the contractor. It is imperative to evaluate if Covid-19 can be considered as *force majeure* event or can be invoked for frustration of a contract.

SUGGESTIONS

Concrete measures to revive and revitalize

The need of the hour for the stakeholders is to unite to give a shot in the arm to the ailing construction sector. Concrete measures such as ensuring safety of informal labourers, increased remuneration to skilled work-force for early completion, removal of liquidity crunch by financial institutions, reduction of interest rates, one-time financing for those about to be completed structures etc. would help the sector overcome these times of crisis.

The use of technology is going to redefine construction industry in days to come. Not only are stakeholders rethinking on the use of technology to minimize the impact of human capital shocks in the form of migrant labor exodus, Government initiatives such as the Light House Projects in six Indian cities that will showcase the use of new-age state of the art technology will reduce costs and accelerate the pace of construction in the sector.

II. CONCLUSION

1) Discussing on the effects of Covid-19 on global construction industry, The Civil Engineering Portal (2021) pinpoints the five most essential results for a more straightforward outlook on the situation. Some of the most important effects that created havoc around the world are: 1). The decline in import and export, 2). Reduction in manpower, 3). Decline in income, 4). Burden of paused construction works, and 5). Deduction in the budget. Summarizing the situation, it is essential to have a thorough rebuilding plan after an analysis of all the risks by each player in their respective universes and a proper execution of the plan which should primarily start with an announcement to all stakeholders including financial institutions about the plan so that stakeholders are satisfied and give their thumbs up to the road to recovery.

To say that the companies engaged in the construction and engineering sector, would be affected due to the current

unprecedented situation would be an understatement. The various restrictions put in place by the Governments to control the effects of the virus may trigger shortage of raw material and manpower, disrupted supply chain, further creating handicaps in performing contractual obligations. Contraction in consumption demand should be the least of the worries for the sector. Some elements in construction and engineering are imported from countries, which may be more badly affected, creating a domino effect on the entire sector. However, one must safeguard against the inevitable by adopting corrective measures in time. The first step is to evaluate the contract clause(s) to ascertain the extent of liabilities upon breach and the last step is to proactively adopt all measures to mitigate the liability by timely invoking the correct legal doctrine(s).

Now here is the silverline. As per a study undertaken by Research And Markets.com (2021), the global construction market size is declined from USD 11,217.4 billion in 2019 to USD 10,741.2 billion in 2020. However, the industry is showing signs of recovery since the beginning of 2021 and reach a market size of USD 13,572.4 billion in 2024, projecting a CAGR of 6.0% between 2020 and 2024. It is also predicted that heavy and civil engineering sector will be the fastest-growing construction type during the forecast period. The suggestions which include concrete measures to revive and revitalize the construction industry includes safety of workers, increase remuneration to skilled work force.

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