

# Lessons Learned from COVID-19 Impact: Construction Contracts and Future Strategies

Andualem E. Yadeta \*<sup>1</sup>

<sup>1</sup> Department of Civil Engineering, Delhi Technological University, Delhi - 110042, India

Pradeep K. Goyal <sup>2</sup>

<sup>2</sup> Department of Civil Engineering, Delhi Technological University, Delhi - 110042, India

*Abstract* - Construction is a key industry for ensuring development in all sectors. The industry has been impacted by the Coronavirus disease (COVID-19) outbreak since December 2019. The supply chain, labor force, and claims are all having issues for the industry. Recent studies have been undertaken to respond to the pandemic with the agreed contracts, notwithstanding unforeseen occurrence clauses. The lessons acquired during the pandemic are presented in this paper, along with strategies for future contracts to mitigate the impact of similar catastrophes. First, literatures are searched thoroughly to identify the severe impacts of the pandemic on construction contracts in order to propose future strategies. Second, unanticipated situation and contractual clauses are examined from international contract forms such as FIDIC, JCT, and NEC. Then contract strategies are offered to mitigate contractual claims in the construction sector for future comparable situations.

*Index Terms:* COVID-19 pandemic, Construction contracts, Future strategies

## INTRODUCTION

The novel coronavirus SARS-CoV-2 disease was originally discovered in Wuhan city, China, and was later renamed as coronavirus disease 2019 (COVID-19) by the World Health Organization on March 11, 2020 (WHO, 2020). Within a short period of time, the spread of the pandemic has traveled faster than our response plan as the event was underestimated in most sectors across the globe.

Most countries have devised preventive procedures to respond to the virus, such as providing medical services, situating temporary hospitals, creating isolation areas, providing testing facilities, and providing financial help, in attempt to slow the spread of the virus. Most countries had also imposed travel restrictions, lockdowns, and restricted mobility even to important tasks (Jamaludin, Azmir, Mohamad, & Zainal, 2020). Due to these reasons, the pandemic has affected many sectors worldwide including the construction industry. Many construction projects have been harmed by the pandemic, which has resulted in contractual claims and the suspension of most projects (Bailey, Bouchardie, & Madalena, 2020). Since the lockdown was never considered the pandemic case for any construction project, even well-planned projects were also equally affected by this pandemic (Ogunnusi, Hamma-adama, Salman, & Kouider, 2020).

The world community is currently working actively to respond to the pandemic and to mitigate its impact on many industries in different perspectives. When it comes to construction, the pandemic has brought an unprecedented pattern of work contexts for parties in the contract in terms of place of work, and has imposed clear impacts on the industry (Laing, 2020). When the project performance is affected, the issue of contract provision is a key and it must be studied. However, the COVID-19 pandemic makes one or more parties unable to fulfill the contractual obligations and they fail to complete the contract promises. In this case, there is researchers' interest to raise issues related to contracts and COVID-19.

Therefore, this paper attempts to suggest strategies for future construction contracts to minimize the contractual claims taking the past COVID-19 impacts as a lesson. Based on the lessons learnt from COVID-19 pandemic, this paper provides a practical strategy for the global construction industry practitioners to assist in managing their future contracts.

## LITERATURE REVIEW

In this period of uncertainty, parties in a construction contract must examine their contractual clauses more closely in order to resolve disputes. The current COVID-19 pandemic is an example of a period of uncertainty that necessitates rigorous review of the unforeseen event clauses. Parties to contracts must carefully address the issue of making or receiving a force majeure claim under project contracts during this era of the pandemic, particularly during the construction phase of the project life cycle. Since the outbreak of the pandemic, there have been various arguments concerning whether COVID-19 qualifies as an unexpected event beyond the contractor's control under the force majeure clauses (Kabiru & Yahaya, 2020). The inclusion of a force majeure clause is an attempt to limit losses caused by exceptional circumstances, even if the parties have taken all reasonable precautions to mitigate the impact of the occurrences (Hansen, 2020). The provisions of a contract must be thoroughly scrutinized in order to discover whether they can affect the project's schedule and cost (Osborne, 2020). The force majeure clause must be expressed explicitly in the contract and cannot be inferred from the law. If the clause included the term "pandemic" or provided for

unforeseeable, extreme circumstances, and occurrences beyond reasonable control in the contract, it will determine whether the clause pertains to COVID-19 or not.

### **A. *The Impact of COVID-19 on Construction Industry***

The COVID-19 pandemic affected not only the human health, but the effect is also extended to social and economic aspects of life. Many sectors are affected as a result of the pandemic and the impact on global economy is very high. This impact has been felt in both operational and financial aspects of the construction industry (Cherukur, Reshma, & Devi, 2020). Despite the fact that most construction projects are still underway during the pandemic, the pandemic has had a substantial influence on the execution of construction contracts at all stages of the projects (Larasati, Ekawati, Triyadi, Muchlis, & Wardhani, 2021). Prior to the COVID-19 pandemic, the construction sector was focused on increasing productivity, improving project performance, resolving labor shortages, introducing standardization, and improving collaboration (Hatoum & Nassereddine, 2020). Now the pandemic has had an influence on the construction industry, and it will continue to have a detrimental impact on projects.

COVID-19 pandemic has negative impacts on construction projects performance. According to (Gamil & Alhagar, 2020), the common impacts include supply chain disruptions, manpower shortage, material price fluctuations, legal issues and interpretation of contractual terms, and uncertainty of survival. Other authors (Naulleau & Swetchine, 2020) also explained that the severe impacts of the pandemic include: travel restrictions, project suspension, labor shortage, shortage of materials supply, anticipated and prolonged delays, and time and cost overruns. Due to everyday troubles encountered by laborers and ineffective work from home for site-based jobs, the pandemic has mostly aggravated cost and time overrun problems on ongoing projects (Ogunnusi, Hamma-adama, Salman, & Kouider, 2020).

### **B. *Force Majeure and COVID-19***

The construction sector has encountered supply chain interruptions, claims, and labor shortages as a result of the COVID-19 pandemic since its detection. This situation serves as a good lesson to review and understand contract provisions which cover unforeseen events. Most modern contracts include measures that handle the risks associated with force majeure (translated from French as superior force). Force majeure is a concept from French civil law that has been incorporated into English law contracts, but it remains a contract-based concept rather than a common law doctrine.

The term "force majeure" has been defined elsewhere as "irresistible force", an "unforeseen event", an "over powering force", an "Act of God", or a fact or accident which human prudence can neither foresee nor prevent. This legal term, which is tied to physical forfeiture or personal damage, is also found in numerous civil law jurisdictions around the world (Dikmen, Akbiyikli, & Eaton, 2011; Fawzy & El-Adaway, 2012). However, under common law, there is no established definition of force majeure, hence the force majeure provision is based on the specific contractual language used for definitions. From construction contracts point of view, the term force majeure refers to unanticipated occurrences beyond a party's control at the time the contract was entered into that cannot be avoided or overcome, resulting in a party's inability to perform some or all of the contract's duties. War, riots, earthquakes, hurricanes, lightning, explosions, epidemics, energy blackouts, unexpected legislation, lockouts, slowdowns, and strikes are all instances of force majeure events.

Depending on the contract terms, the COVID-19 pandemic could thus be considered as a force majeure event. A force majeure event would typically entitle a contractor to an extension of time for critical delay caused by the event under many types of contracts, including the FIDIC, JCT, and NEC, but not to compensation for costs incurred during the period of delay, unless it is agreed-upon circumstances. As usual, the actual wording of the contract provision is crucial for contract management. So, the COVID-19 pandemic clause in the contract would be appropriate if there is specific mention of events such as "epidemic", "pandemic", or "disease outbreak" in the contract. In another case, if the contract provision limits the force majeure as exclusive of some specified events like floods and earthquakes, then COVID-19 can be considered as a force majeure (Shaughnessy, Underwood, & Cazenave, 2020).

The issue of force majeure in most construction contracts align with the definition of force majeure in sub-clause 19.1 of FIDIC (1999) red book form, where a force majeure is defined as an occurrence or condition that occurs outside of a party's control and is not attributable to the other party in any significant way (FIDIC, 2020). When events or circumstances delay or make performance commercially unfeasible, illegal, inadvisable, or impossible, a force majeure provision excuses that party's performance duties. These clauses usually provide extension of time for covered events, but not for compensation for the delays and consequences of the events. The termination and suspension of a project or contract are two common outcomes of a force majeure incident. Each party in the contract bears its own risk if the occurrence results in contract termination. In other situations, the contractor may be compensated for work completed prior to the occurrence of the force majeure event. If the contract is suspended owing to a force majeure incident, however, the contractor is entitled to extension of time.

## **METHODOLOGY**

The goal of this study is to look at the lessons learned from the COVID-19 pandemic impact on the construction industry in order to propose strategies to prevent contract non-performance in future similar events. To achieve the stated goal, the authors followed a three-step methodological approach: (1) a comprehensive literature review was made from various sources including journals, magazines, and reports by the government and private organizations to identify the various impacts of the pandemic on construction industry. (2) Review of contractual clauses from various contract forms including FIDIC, JCT, and NEC is made to investigate whether COVID-19 is a force majeure event or not. (3) Analysis of the latest developments to find out future contract strategies to mitigate the impact of COVID-19 pandemic on construction contract performance. Various contract forms, guidelines, expert opinions, legal notes, journal publications, and case reports related to the COVID-19 pandemic were used to compile the

data for this study. The purpose of the comparative study was to see if these data could be used to develop methods for reducing contractual damages in the future.

## ANALYSIS AND DISCUSSION

In order to execute a project, most organizations employ international contract forms such as FIDIC, JCT, and NEC. Many unforeseeable situations are covered by force majeure clauses in these contracts. Such events may result in various impacts during the contract period. Many investigations are currently being undertaken to find contractual cases to respond to the COVID-19 pandemic. The impacts of the pandemic on the construction contract performance were explored in this study using data from prior studies, regardless of whether the event was regarded as a force majeure or not. And a number of data analyses were done to identify the appropriate contract strategies for future events. In this analysis, contract clauses interpretation was made on FIDIC, JCT, and NEC contracts to find out whether the contracts have force majeure clauses or not. It was further analyzed to identify if the force majeure event clause include events such as pandemic. As a result, in order to achieve the goal of the study, a comparative analysis was conducted to suggest contract strategies for similar circumstances.

Different contract forms have their own force majeure clauses, they are often very different even with the same case. In those contracts, the force majeure clause stands alone and includes within it specific definitions of what force majeure is and sets out special separate tests for the impact of force majeure on the contract. Things are different in most contract forms and it is advisable to choose the best fitting contract form during procurement stage of a project.

### A. JCT Contracts

The force majeure provision is treated as one of the unexpected risk factors that may entitle the contractor to a time extension in JCT contracts. Force majeure is not a relevant subject under these contract forms, thus it does not entitle the contractors to seek additional money, but it can entitle the contract to be terminated if the effect of the force majeure is protracted. There is no definition at all in the JCT standard forms of what force majeure means, so the parties have to rely on the common-law meaning of force majeure. This also means that in the JCT forms, there's no separate test of causation set out within a specific force majeure clause. However, there is, of course, a test of causation set out in the forms as to what the contractor is obliged to prove if it wishes to claim an extension of time. If the claim is being made during the course of the live project, the contractor has to prove that the relevant event either has been or is likely to be a cause of critical delay to the project. And if the claim is being made after completion, he has to prove there actually was a cause of delay to the project completion date (JCT, 2016). So, it appears that under the JCT forms, the contractual test for causation for a force majeure event is the same as for all the other relevant events. And the required analysis is precisely the same as the usual one when considering claims for time under construction contracts and not the specific causation tests that are usually applied in the other authorities generated by the wording of those contracts.

### B. NEC Contracts

In the NEC standard forms, the force majeure clause is also part of the usual set of compensatory events that entitle the contractor to an extension of time. There is a slight stipulation in that the NEC does have a prevention clause, which is clause 19, but the definition in that clause of a force majeure event is repeated in the compensation event clause 60.1 with the additional provision that the event must not be one of the other compensation events. So the effect is the same, there is a separate definition of force majeure but it is treated as an ordinary compensation event. Under the NEC form, force majeure potentially gives rise to a claim for additional money and, again, it could give rise to a termination if the effect of the force majeure event is prolonged. This combination may mean that terminations are more likely under the NEC form because the employer may be wishing to avoid a large claim for prolongation costs. In the NEC forms, the force majeure event has to satisfy four tests which include that the event stopped the contractor completing the works or completing the works as per the accepted program, so that's essentially a delay requirement set out specially within the clause (NEC, 2017). In this sense, the NEC contracts differ from JCT contract forms. However, otherwise, again, the relevant compensation event is treated exactly the same as all the other compensation events in every way. And the test that the force majeure event stops the contractor completing the works as per the accepted program just sounds like a requirement that the event causes critical delay.

So, when we fit force majeure clauses in the JCT and the NEC forms in to their contractual context, we are undertaking a familiar analysis in relation to claims for time and money in causation terms.

### C. FIDIC Contracts

In the FIDIC standard forms, both the old and in the 2017 new edition, there is a standalone force majeure clause, although it has been renamed exceptional events in the 2017 edition. That clause has its own extension of time and money claim provisions but, again, provides essentially that if the event falls within the definition in the clause and causes delay or additional cost then the contractor has a claim (FIDIC, 2017). There is no suggestion in the FIDIC forms that there is a different or more causation tests than there usually would be for matters entitling the contractor to claim time or money. So in those cases, the situation under the construction standard forms is potentially very different to the causation tests in the contracts considered by the parties.

## FUTURE CONTRACT STRATEGIES

Construction contract provisions for risk allocation are essential to renegotiate or execute a new contract. However, when evaluating foreseeability of future occurrences, force majeure will provide less protection; it will need modifications to accommodate the impact of foreseeability of events. The time and cost claims that arise as a result of the adoption of new legislation to minimize the spread of the pandemic necessitate careful evaluation of the changes in law clause. To handle future disruptions, issues including health and safety, local resource engagement, and advanced contract management technologies are critical in the procurement process. In light of recent developments, the indemnity and insurance, notifications, suspension,

termination, and dispute resolution clauses of contracts may need to be reconsidered. Indemnification provisions may also offer protection to contractors and sub-contractors if third parties make claims against them for damages or impacts caused by sub-contractors or suppliers working for them even though it depends on the policy limit and exclusions.

The current pandemic issue has highlighted the necessity to examine contracts and assess the impact of the rapidly spreading occurrence on all construction sector stakeholders. Parties to a contract may be obligated to make the appropriate investments in smart working and digitalization that improve efficiency, and meet project criteria. Proactive digitization assists contract managers in being engaged in order to undertake large-scale data analysis from a centralized system in order to handle future comparable incidents. Smart job sites employing digitalization, artificial intelligence, machine learning, and language-based analytics are anticipated to be adopted across the industry, primarily in the areas of contracts, supply chain, construction surveillance, and inspections and monitoring.

### CONCLUSION

The construction industry has been harmed by the pandemic. Claims, supply chain interruptions, and labor shortages were among the most serious consequences. The contract manager must assess the possible impact of the pandemic on all parts of a project, look for ways to assist construction contractors in resuming and continuing work, lowering the overall cost of the project, and completing tasks on time. Despite the fact that the meaning of force majeure varies from one contract to the other, it is present in all of the contracts examined in this study even though it is mentioned in different languages. Before signing a contract for future similar events, the parties in the contract should evaluate their contract for force majeure provisions of events such as pandemics. To mitigate the risk of the pandemic, parties must assess their project performance as part of project continuity planning, as well as price variations, guarantees, and insurances. In the post-pandemic period, project lifecycle management and contract administration processes need to be examined on a regular basis in order to improve future contract performance. The contracting parties must agree on a training plan for digital technologies in order to handle projects in future similar events.

### RECOMMENDATIONS

Future contracts need to include provisions specifically addressing force majeure events and the possible impacts the events including COVID-19 and any reported circumstances to mitigate the impact of the event. The contract provisions should include:

- Changes in law or government actions such as quarantines, restrictions, and/or directive
- Material and/or equipment supply disruptions
- Illness of contractors or any of their subcontractors' labors and/or shortage of labor
- Contractors' contractual health and safety obligations fulfillment regarding pandemics

Express rights to suspend or terminate during the event when it becomes impossible, impracticable or inadvisable (due to health and safety concerns) to perform.

### REFERENCES

- [1] Bailey, J., Bouchardie, N., & Madalena, I. (2020). White & Case LLP. Retrieved July 14, 2020, from Publication and Events: <https://www.whitecase.com/coronavirus-hub>
- [2] Cherukur, R., Reshma, S., & Devi, V. (2020). Construction industry Before and After COVID-19. *Solid State Technology*, 63(2S), 3056-3062.
- [3] Dikmen, U., Akbiyikli, R., & Eaton, D. (2011). Insurance Issues and Design and Build Construction Contracts. The 6th Construction Management Congress, 25-27 November, (pp. 96-113). Bursa, Turkey.
- [4] Fawzy, S., & El-Adaway, I. (2012). Contract Administration Guidelines for Managing Conflicts, Claims, and Disputes under World Bank-Funded Projects. *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, 4(4), 101-110.
- [5] FIDIC. (2017). *Conditions of Contract for Construction: For Building and Engineering Works Designed by the Employer*. Geneva, Switzerland.
- [6] FIDIC. (2020). *COVID-19 Guidance Memorandum to Users of FIDIC Standard Forms of Works Contract*. Geneva, Switzerland.
- [7] Gamil, Y., & Alhagar, A. (2020). The Impact of pandemic Crisis on the Survival of Construction Industry: A Case of COVID-19. *Mediterranean Journal of Social Sciences*, 11(4), 122-128.
- [8] Hansen, S. (2020). Does the COVID-19 Outbreak Constitute a Force Majeure Event? A Pandemic Impact on Construction Contracts. *Journal of Civil Engineering Forum*, 6(2), 201-214.
- [9] Hatoum, B., & Nassereddine, H. (2020). Developing a Framework for the Implementation of Robotics in Construction Enterprises. *EG-ICE 2020 Workshop on Intelligent Computing in Engineering*, (pp. 453-462). Berlin, Germany.
- [10] Jamaludin, S., Azmir, N., Mohamad, A., & Zainal, N. (2020). COVID-19 exit strategy: Transitioning towards a new normal. *Annals of Medicine and Surgery*, 165-170.
- [11] JCT. (2016). *The Joint Contracts Tribunal: Standard Building Contract*. London, UK: Sweet & Maxwell.

- [12] Kabiru, J., & Yahaya, B. (2020). Can Covid-19 Considered as Force Majeure Event in the Nigeria Construction Industry? *International Journal of Scientific Engineering and Science*, 4(6), 34-39.
- [13] Laing, T. (2020). The economic impact of the Coronavirus 2019 (COVID-19): Implications on construction projects and risk management - A Review. *Extractive Industries and Society*, 7(2), 580-582.
- [14] Larasati, D., Ekawati, N., Triyadi, S., Muchlis, A., & Wardhani, A. (2021). Impact of the Pandemic COVID-19 on the Implementation of Construction Contracts. *Proceedings of the 20th Sustainable, Environment and Architecture*. IOP Publishing.
- [15] Naulleau, G., & Swetchine, N. (2020). *Managing Large Projects Through the COVID-19 Crisis*. ESCP Research Institute of Management.
- [16] NEC. (2017). *New Engineering Contract (NEC4): Engineering and Construction Contract (ECC)*. London, UK: Thomas Telford Ltd.
- [17] Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., et al. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal of Surgery*, 78, 185-193.
- [18] Ogunnusi, M., Hamma-adama, M., Salman, H., & Kouider, T. (2020). COVID-19 Pandemic: The Effects and Prospects in the Construction Industry. *International Journal of Real Estate Studies*, 14(S2), 120-128.
- [19] Osborne. (2020, March 16). Osborne Clarke. Retrieved August 28, 2021, from Insights: <https://www.osborneclarke.com/insights/covid-19-construction-industry-contract-say/>
- [20] Shaughnessy, W., Underwood, W., & Cazenave, C. (2020). COVID-19's Impact on Construction: Is there a remedy? -Time extension, force majeure, or more? *The National Law Review*. Retrieved August 26, 2021, from <https://www.natlawreview.com/article/covid-19-s-impact-construction-there-remedy-time-extension-force-majeure-or-more>.
- [21] WHO. (2020). Coronavirus disease (COVID-19) pandemic. Retrieved August 12, 2021, from World Health Organization: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>