

Insurance Issues and Design and Build Construction Contracts

Rıfat Akbıyıklı¹, S. Ümit Dikmen², David Eaton³

Abstract

One of the primary functions of a construction contract is to allocate certain risks to one or other of the parties. One of the parties is liable to the other if a particular kind of loss or damage occurs placing all the risk of that loss or damage on the other party. Some risks have enormous size in financial terms and the party to whom a risk is allocated may want to cover it by means of insurance. According to many construction contracts the contractor shall upon and subject to the conditions carry out and complete the Works in compliance with the Contract Documents, using materials and workmanship of the quality and standards therein specified. This paper will examine the insurance issues in Design and Build (D & B) construction projects constructed in accordance with FIDIC Red Book, I.C.E. (Institution of Civil Engineers) Conditions of Contract and JCT (Joint Contracts Tribunal) 05 Design and Build Contract DB and explain what Force Majeure is within the context of Construction Contracts.

Keywords: Construction, Contract, Force Majeure, Insurance, Risk

¹ Sakarya University, Department of Civil Engineering, Esentepe Campus, Adapazarı – Sakarya, Tel: 0264 2955740, E-mail: rakbiyikli@sakarya.edu.tr

² İstanbul Kültür University, Faculty of Engineering and Architecture, Department of Civil Engineering, Atakoy Campus, Bakırköy 34156, İstanbul, Turkey, E-mail: u.dikmen@iku.edu.tr

³ School of the Built Environment, 4th Floor Maxwell Building, University of Salford Salford, Greater Manchester, M5 4WT, United Kingdom, Tel: +44(0)161 295 5222 E-mail: d.eaton@salford.ac.uk

Sigorta Meseleleri ve Tasarla – Yap İnşaat Sözleşmeleri

Rıfat Akbıyıklı¹, S. Ümit Dikmen², David Eaton³

Özet

Bir inşaat sözleşmesinin esas amaçlarından biri sözleşme taraflarından biri veya diğerine belirli riskleri tahsis etmesidir. Taraflardan biri diğerine herhangi bir kayıp veya zarar oluşması halinde bu risk ve zararları diğer tarafa yüklemektedir. Bazı riskler finansal olarak çok büyük bir değere sahip olup kendisine risk yüklenen taraf bu riskleri sigorta aracılığı ile karşılamak isteyecektir. Çeşitli inşaat sözleşmelerine göre müteahhit, sözleşme şartları uyarınca ve sözleşme dokümanlarında belirtilen malzeme ve işgücünü kullanarak ve belirlenen kalite standartları çerçevesinde işleri yapmak ve tamamlamak mecburiyetindedir. Bu araştırma FIDIC Kırmızı Kitap, I.C.E. (Institution of Civil Engineers) Sözleşme Şartları ve JCT (Joint Contracts Tribunal) Tasarla-Yap Sözleşmesi 2005 versiyonu çerçevesinde sigorta meselelerini incelemek ve İnşaat Sözleşmeleri çerçevesinde Mücbir Sebep konusunu izah etmektedir.

İnşaat sigortası karmaşık bir konudur. Sigorta meselesi pek çok tarafı koruma altına almasının yanı sıra çeşitli tipteki kaza ve kayıpları da kapsamı içine alması gerekmektedir. Yapılan işlerin niteliği ve içerdikleri riskler müteahhidin sigorta maliyetlerini direkt olarak etkilemektedir (Hinze, 2001). İnşaat sigortası herhangi bir inşaat projesinde, sabit bir ödeme uygulamasıyla muhtemel taleplere karşı inşaat projesindeki tarafların çıkarlarının korunması uygulamasıdır. Esas fonksiyonu, işverenlerin, yüklenicilerin, alt-yüklenicilerin ve inşaat projesi içerisindeki diğer tarafların işlerdeki belli risklerini sigortacıya transfer etmek suretiyle beklenmedik olaylarda sigortalayanın finansman temin etmesidir. İnşaat sigortası, tabii afetler ve diğer risklerden kaynaklanan kayıpların sigortalayanlar tarafından paylaşılması ile projelerin başarıya ulaşmasındaki garanti rolünü artarak oynamaktadır.

Sigorta risk transferidir. Sigorta efektif bir risk yönetim yerine geçmemektedir. Sigorta sadece ölçülebilir ve bilinen risklerle ilgilenmekte ve kayıpların tesirlerini dağıtma amacını gütmektedir. Sigorta belirsizliğin kendisiyle ilgilenmez ve kayıpları da önleyemez. Sigorta kapsam ve teminatına bağlı olarak inşaat sigorta poliçeleri iki gruba ayrılır (Hinze, 2001). Bunlar:

¹ Sakarya University, Department of Civil Engineering, Esentepe Campus, Adapazarı – Sakarya, Tel: 0264 2955740, E-mail: rakbiyikli@sakarya.edu.tr

² İstanbul Kültür University, Faculty of Engineering and Architecture, Department of Civil Engineering, Atakoy Campus, Bakırköy 34156, İstanbul, Turkey, E-mail: u.dikmen@iku.edu.tr

³ School of the Built Environment, 4th Floor Maxwell Building, University of Salford Salford, Greater Manchester, M5 4WT, United Kingdom, Tel: +44(0)161 295 5222 E-mail: d.eaton@salford.ac.uk

- (a) “oluş (vuku) esaslı” sigorta poliçeleri (talebin gerçek dosyalanmasına bakılmaksızın poliçe periyodu içerisinde oluşan taleplerin teminatı kapsamı)
- (b) “talep esaslı” sigorta poliçeleri (poliçenin geçerli olduğu dönem içerisinde dosyalanmış olan taleplere karşı koruma sağlar).

Sigorta bir risk transferi mekanizması olup sigortalanmış taraf belirli bir sigorta primi maliyeti karşılığında belirsizlik durumundan kesinlik durumuna geçmektedir. Müteahhitler inşaat projelerinde sadece sigorta poliçelerine itimat etmemeli ve inşaat risklerinin olası kötü sonuçlarına karşı risk yönetim sistemleri geliştirip kullanmalıdırlar.

Anahtar Kelimeler: Yapım, Sözleşme, Mücbir Sebep, Sigorta, Risk

Introduction

Construction insurance is a complex issue. It entails protection for or coverage of various parties and types of injury or damage. The nature of the tasks undertaken and the risks involved directly affect the cost of insurance to the contractor (Hinze, 2001).

Construction insurance is a practice of exchanging a contingent claim for a fixed payment to protect the interests of parties involved in a construction project. Construction insurance is a major method of managing risks in the construction industry. Its primary function is to transfer certain risks from clients, contractors, subcontractors and other parties involved in the construction project to insurers to provide contingent funding in time of difficulty. *Construction insurance* plays an increasingly important role in guaranteeing the success of projects, with insurers sharing losses resulting from natural disasters and other contingencies.

Insurance transfers risk. Insurance is not a substitute for effective risk management. Insurance is only intended to deal with measurable or known risks and serves to spread the impact of loss. It cannot deal with uncertainty itself and cannot prevent loss. Depending on the insurance coverage it is differentiated between two coverage policies in construction insurance (Hinze, 2001 p.269). These are:

- (a) “occurrence - based” insurance policies (provide coverage for claims that arise during the policy period, regardless of when the claim is actually filed),
- (b) “claims – based” insurance policies (provides protection only for claims that are filed during the period when the policy is in effect and they provide less extensive coverage).

Construction Contracts and Insurance

The primary purposes of construction contracts are to clarify responsibilities (including performance and payment obligations) and to allocate risk (Westersund and Casgrain, 2008). It is in regard to the latter purpose that the concept of force majeure plays an important role. One of the primary functions of a construction contract is to allocate certain construction risks to one or other of the parties in the contract. One of the parties is liable to the other if a particular kind of loss or damage occurs placing all the risk of that loss or damage on the other party. Some risks have enormous size in financial terms and the party to whom a risk is allocated may want to cover it by means of insurance. The owners will only be protected if the Contractor has either liability insurance or a guarantee of performance (Murdoch and Hughes, 2000).

It is essential to understand that all insurance policies in the construction industry, including the professional indemnity insurances of consultants, fall into one of the two categories, liability insurance policy and loss insurance policy. The project under study has both the above mentioned insurance categories and an additional "joint names policy" which indemnify the Employer both against liability and against third parties. Most construction projects have a Construction All Risk (CAR) insurance in joint names to insure both the contractor and the employer against all the risks in the project including "Act of God" or "Force Majeure" risks.

Force majeure clauses exist to exclude liability where unforeseen events beyond a party's control prevent the performance of its contractual obligations. Though the traditional rationale for force majeure clauses involved "unanticipated events" and "impossibility" of performance, more recent practice has been to use force majeure provisions as a broader risk allocation tool. Force majeure clauses may be used to anticipate those risks that are uninsurable, or that render performance merely inconvenient or uneconomical as opposed to impossible (Westersund and Casgrain, 2008).

Force majeure does not involve complete and permanent impossibility of performance. The contract may be capable of ongoing performance in other respects, and then in all respects once the event of force majeure is over.

Construction insurance is very significant in terms of its coverage. It is very comprehensive and is specifically designed to cover every aspect of construction process, to make the business process flexible. Construction insurance covers four major areas of business insurance:

1. Public liability insurance: Public liability insurance is a general insurance to be possessed by any business which involves interaction with the customers or people in general. Public liability insurance as part of construction insurance helps the businesses in case any damage to third party property or individuals is caused by employees or the tools used in construction.

2. Employers liability insurance: As the construction industry involves lot of risks, any worker can get injured or die at any point of time, due to the faulty equipment or negligence of supervisors or co-workers. Employers are responsible for the health and safety of their employees at construction site. Moreover, the employees will have every right to sue the owner and claim for compensation. In case of such unexpected events, the employer or the owner can benefit from the construction liability insurance, as the insurance company pays the medical costs or the compensation associated with the claims.

3. Contractors all risks insurance: Contractors all risks insurance is customised for construction businesses. It provides assistance for contract works of new houses, theft of materials or tools, damage to the materials or tools due to unexpected events, sudden stoppage of on-going works of new houses, owned or hired plants, etc. This insurance acts as a perfect help for the most commonly incurred accidents in the construction process.

4. Personal accident insurance: This insurance is specifically designed for managers, sole proprietors or business partners. This is useful in the cases, where the person injured can't blame any other person for the injury caused to him. This is helpful in providing assistance during the period for which the injured person cannot get income.

Standard Forms of Engineering and Construction Contracts

The construction environment is always prone to delays due to pressures imposed by the requirements of Employers in respect of timing, material and cost which inevitably creates an environment in which mistakes can be made. In this very turbulent environment it is important for contractors and professionals to make sure insofar as they can that the risks to which they are exposed are insured properly and adequately.

According to Bolton (1998) adequate insurance is the main part of the solution. Insurance cover alone cannot be looked in isolation from other contractual arrangements. Contractors should know what insurance they have and the extent of the cover provided. In the construction business the commercial reality is that employers will not accept clauses in a contract which limit the extent of a contractor's liability for financial losses. Therefore it is important in such a situation that the contractor is aware of any extent of liability for which he may become responsible.

Abrahamson (1996) state that insurance is for the benefit of the contractor because his liability to indemnify under clauses 20, 22 and 24 (see Table 1) remains whether or not he is insured, and for the benefit of the employer to avoid the danger of having to try to enforce a right of indemnity against an insolvent contractor. Abrahamson (1996, p.95) furthermore argues that a policy called "Contractors' All Risk" (CAR) does not in the insurance world mean that all risks are covered, and the policy must be considered carefully. It is common to see policies issued to contractors which do not comply with these clauses. Exclusions from cover constantly give trouble. According to Uff (2000),

the nature of a contract of insurance is that the insurer undertakes to make payments to or for the benefit of the assured on the happening of some event. Insurance is affected through an agent or broker. A broker's duty is limited to issuing and receiving proposals. In law, the broker is the agent of the assured. An insurance contract is said to be *ubberimae fidei*, which is based upon utmost good faith (Uff, 2000). Thus, the assured must make full disclosure of every material fact known to him. The duty of disclosure continues after filling in the proposal form, up to the making of the contract. There are a variety of provisions and practices in construction work resulting in a variety of policies applying to different aspects of the work, covering different parties and providing different cover (Uff, 2000 p.201). Some of these insurance requirements are compulsory being required by conditions of contract (CoC), while others are discretionary and taken out for the protection of individual parties. When a loss occurs, the disputes between the parties turns into a dispute between those who have insured the parties against their loss or liability.

A typical construction project will consider insurance on:

- Material Damage.
- Third Party Liability.
- Materials in Transit
- Damage to Constructional Plant
- Non-negligent Indemnity
- Consequential Loss.

Insurance covers not usually included but obtainable:

- Employer's Liability/Workmen's Compensation
- Motor
- Professional Indemnity (for Architects, consulting engineers etc.)
- Inherent Defects
- Contract Performance Guarantee Bond.

Therefore, whether insurance can be used as a solution depends on:

- The insurability of the risk.
- The adequate and tailored policy.
- The comparison of the insurance premium and the potential loss of risks.
- The trust and confidence of insurers about their solvency and claim service.
- No other alternative risk transfer solutions available.

FIDIC: Conditions of Contract for Works of Civil Engineering Construction, 1992	I.C.E. (Institution of Civil Engineers) Conditions of Contract (in works of civil engineering construction), 7th Rev. Ed. 1999^(*)	JCT (Joint Contracts Tribunal) 05 Design and Build Contract DB: Revision 2,2009
1. Clause 21: Insurance of	1. Clause 20: Contractor	1. Clause 6.1: Indemnity

<p>Works and Contractor's Equipment The Works: Contractor insures in joint names of Contractual Employer (together with materials and plant intended for incorporation) for full replacement cost + 15%. 15% uplift to cover incidental costs, professional fees, removing debris. Insurance is valid from the start of work until Taking-over Certificate and for Contractor during Defects Liability Period. The Contractor's Equipment: Contractor insures for a sum sufficient to provide for their replacement at the site. 2. Clause 22: Damage to persons and property Contractor to indemnify Employer in respect of death or injury, loss of or damage to any property (other than the Works) subject to certain exceptions (including act on neglect of Employer). 3. Clause 23: Third Party Insurance (including Employer's property) Contractor to insure in joint names against death or injury, and loss and damage to property (except where caused by exceptions, including act or neglect of Employer). 4. Clause 24: Accident or Injury to Workmen</p>	<p>Responsible for the Works Make the contractor generally responsible for the works with exceptions (the "Excepted Risks") which include the engineer's design. (The contractor's design responsibility may therefore not be limited to reasonable skill). Here the "Works" mean both the "permanent works" – works to be constructed and completed in accordance with the contract and "temporary works" – all works of every kind required in or about the construction and completion of Works. 2. Clause 20.1: Contractor's responsibility for the care of Works, materials, plant and equipment: The contractor subject to Clause 20.2 shall take full responsibility for the care of Works and materials, plant and equipment from the Works Commencement Date until the date of issue of a Certificate of Substantial Completion for the whole of Works. After this the responsibility for the said care shall pass to the Employer. 3. Clause 20.2: The Excepted Risks for which the Contractor is not liable are loss or damage to the extent that is due to: (a) any fault defect error or omission in the design of</p>	<p>Clause Requires the contractor to indemnify the employer for injury on site. 2. Clause 6.2: Indemnity Clause Requires the contractor to indemnify the employer for injury or damage to property. 3. Clause 6.3: Works excluded from indemnity clause This clause confirms that the works are excluded from clause 6.2 up to the date of practical completion. 4. Clause 6.4: Employers and public liability insurance Contractor is required to take out Employers and public liability insurance 5. Clause 6.5: Joint names insurance Obligation on Contractor to take out joint names insurance 6. Clause 6.6: Excepted risks Excepted risks for the purpose of the above clauses. 7. Clause 6.7: Contracts works insurance There are variations depending upon the type of build and who is obliged to insure. 8. Clause 6.8: Definitions 9. Clause 6.9: Recognition of each sub-contractor as an insured Obligation on the party</p>
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<p>Contractor (or Sub-contractor) insure against liability to workmen while employed.</p> <p>5. Clause 25: Evidence of Insurance Contractor to provide evidence that Policies have been put in place before work starts, and to provide policies themselves within 12 weeks. In the event of failure to insure (at any stage) Employer may do so and recover premiums as debts. If either party fails to comply with conditions imposed by the policies, each shall indemnify the other against all losses and claims arising from such failure.</p>	<p>the Works, (b) war, hostilities (whether war be declared or not), invasion, act of foreign enemies, (c) rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war, within the Country, (d) riot, commotion or disorder within the Country by persons other than the Contractor's Personnel and other employees of the Contractor and Subcontractors, and munitions of war, explosive materials, ionising radiation or contamination by radio-activity, within the Country, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity.</p> <p>4. Clause 21: The Contractor to insure the Works and his materials and plant against loss, from any cause other than the Excepted Risks This insurance is to cover the contractor's liability under Clause 20 and is required to be in the joint names of Employer and Contractor. It is important for the Employer to be aware that the Works are not insured against damage caused by any fault in the Engineer's design.</p> <p>5. Clause 22: Liability for Third Party Claims Apportions liability for third</p>	<p>who insures to provide for recognition of each sub-contractor as an insured or include a waiver.</p> <p>10. Clause 6.10: Terrorism cover during the course of works Allows the employer to determine the employment in the event that Terrorism cover is withdrawn during the course of the works.</p> <p>11. Schedule 3 Option A Contractor is obliged to take out joint names cover for new build all risks insurance</p> <p>12. Schedule 3 Option B Joint names insurance where the employer elects to insure in joint names</p> <p>13. Schedule 3 Option C.1 Requires a joint names policy for specified perils in relation to existing structure and contents</p> <p>14. Schedule 3 Option C.2 Requires a joint names policy for works on existing structures and includes all risk insurance</p> <p>15. Clause 6.11 and 6.12 Requirement for Contractor to take out professional indemnity insurance for Contractor designed works. (Even when this is taken out, the insurance is only going to cover design liability and it should not be taken as being insurance for the entire contractor's liability. The risk of a contractor</p>
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	<p>party claims which arise out of or in consequence of the Work.</p> <p>6. Clause 23: Requires the Contractor to ensure his own liability</p> <p>7. Clause 24: Deals with injuries to workmen.</p> <p>8. Clause 25: Gives the Employer the right to affect any insurance which the Contractor fails to take out.</p>	<p>becoming insolvent is still a significant issue, and can be dealt with through performance bonds and credit insurance).</p>
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Table 1: Contracts and Insurance Clauses

[^(*) ICE's part ownership of the contract has now been transferred to the Association for Consultancy and Engineering (ACE) and the Civil Engineering Contractors Association (CECA) and the contracts have been withdrawn from sale, 66 years since they were first published. The ICE Conditions of Contract will be rebranded as the Infrastructure Conditions of Contract (ICC) as of 1 August 2011].

Most standard forms of engineering and construction contracts require the contractor to affect a range of insurances and to extend such cover to subcontractors. Some require that, in addition, contractors affect specific insurances.

A summary of insurance clauses in FIDIC (1992), I.C.E. (1999) and JCT (2009) Rev.2 is listed in Table 1 below.

Risk Transfer and Insurance Mechanism

Uncertainty surrounds many issues in construction projects. Managing uncertainty involves managing risks. Risk management systems are designed to deal with risk. The different perspectives of risk lead to distinct definitions of risk management. Normally, risk management focuses on managing the adverse consequences of risk. As Flanagan and Norman (1993) stated: "risk management is a discipline for living with the possibility that future events may cause adverse effects." Risk management can be described as a structured process in which decisions are made to reduce the likelihood and/or impact of risk occurrence (Broome, 2002, Bunni, 2003).

Risk management involves managing risks with both negative and positive outcomes. Risk management is a continuous process where the sources of uncertainties are systematically identified, their impact assessed and qualified, and their effect and

likelihood managed to produce an acceptable balance between the risks and opportunities (Dawson, 1997, Williams et al., 1998).

From the legal viewpoint, insurance allocates the risks to which the project is exposed, between the parties. From an insurance aspect, risk forms the basis of insurability and premium calculation (Bunni, 2003). Dickson (1983) highlighted insurance as a risk transfer mechanism that the insured transfer from a state of uncertainty to a state of certainty at the certain cost of the insurance premium. It is a cost-smoothing mechanism, in which contractors exchange a regular known annual premium for an unknown potential loss.

“Insurable risks” are defined by FIDIC (1986 & 1992) and CII (1993) together as follows:

An insurable risk must be measurable in quantitative terms and in such a way that the theories of probability and the law of inertia of large numbers may be used. “Insurable risk” means a risk, which can be covered by insurance. For a risk to be acceptable by an insurer, it has to be a “pure risk” which means it has the downside of the effect only (opportunity for loss only), speculative risks are not covered by traditional insurance. Moreover, it has to be sudden and accidental, with statistics available for insurers to simulate past events and generate a creditable premium.

The “deducible” is usually one of the most sensible things in placing insurance. The reasons for deductibles are twofold: firstly to eliminate small claims, where administration costs often can exceed the claim itself; and secondly, to ensure that the insured will comply with their obligation to avoid claims by taking all reasonable precautions to prevent loss or damage (Howard, 1997). Thus, it encourages a better risk management especially in risk reduction.

Wang et al. (2004) regarded insurance as an effective mitigation measure to the risks whether they are at country, market or project level. For example, political insurance was recommended to mitigate risks of changes in law, justice enforcement, expropriation and political instability; design liability insurance for improper design; third party insurance to compensate the general public and staff. However, not all risks can be transferred to insurance. Traditionally, risk assessment checklists have offered a framework for identification of insurable risks (Williams et al., 1998). Both insurance survey and risk analysis questionnaires can help identify insurable risks.

“Contractors’ All Risks” (CAR) insurance can cover physical damage to materials to be used for the project - whether in transit, in storage or forming part of contract works. Even if a risk is insurable, many factors related to the insurance policy need to be considered including: adequate limit; cost/premium; insurance period; negotiation and flexibility of an insurance policy; limitations and exclusions of the insurance policy; sharing risks with insurers (deductible); ability and honour of insurer to indemnify the damage to the insured (security); insurance gaps and overlaps.

Force Majeure Clauses and Insurance of Force Majeure Risks

According to Wright (2003), the purpose of a “force majeure” clause in a construction contract serves two purposes:

1. It allocates risks,
2. It provides notice to the parties of events that may suspend or excuse performance.

The risks in the performance of a contract are so numerous that they often cannot reasonably be considered at contract execution. Thus in the light of these various and numerous risks, parties often agree to a broad, general force major clause. The risk of a damage occurrence in the construction industry is particularly high. This predominantly results from the specific nature of construction works as well as from the conditions in which the construction production is executed. In the construction industry, it is the risk consequences that are of particular significance, those in the form of unexpected prime cost increase including labour, construction plant and equipment and the materials used for the construction. Within the framework of risk management Halman & Van der Weijden (2008) differentiates between four steps:

- Risk strategy (purpose, approach, tasks, tools)
- Risk assessment (quantity, quality, priority)
- Risk analysis (consequences, options, decision making)
- Risk handling (reduce, accept, avoid, transfer)

The authors consider risks in a construction project as (a) risks inherent in the job to be executed and (b) risk the contractor is being forced to assume by the construction contract. Insurance is used as a protection instrument against risk. Construction All Risk (CAR) insurance covers the replacement or repair value of the damaged structure as well as building materials and certain other property stored on site (Hickman, 2002). Through the insurance agreements, the contractor partially, (due to exclusions), dispose of risk that in case of a damage occurrence is taken over by the insurer, which results directly from the terms and conditions included in the agreement. CAR policy pertains to the facilities constructed and erected by means of construction method.

What is “force majeure”?

Force majeure is a legal concept that derives from Roman law (*vis maior cui resisti non potest*) and is present in many civil law systems. Under French law, for example, a party may be excused from performance of a contractual obligation by an unforeseeable and irresistible external event that makes performance of that obligation impossible. Common law doctrines of frustration of contract and impracticability are analogous (but not identical) to force majeure.

The principle of force majeure is included in the UNIDROIT Principles of International Commercial Contracts, Article 7.1.7(1) of which provides:

“Non-performance by a party is excused if that party proves that the non-performance was due to an impediment beyond its control and that it could not reasonably be expected to have taken the impediment into account at the time of the conclusion of the contract or to have avoided or overcome it or its consequences”.

Force majeure shall include, without limitation: Acts of God; insurrection; riots; war; and any unforeseen circumstances and acts beyond the control of such Party which render the performance of its obligations impossible.

Alternatively, parties may conclude a contract that is based upon a model form that includes a force majeure clause (ICC, 2003). In the construction sector, certain widely used forms of contract published by the Fédération Internationale des Ingénieurs-Conseils (FIDIC) (FIDIC, 1999) define “Force Majeure” as “an exceptional event or circumstance:

- (a) which is beyond a Party’s control,
- (b) which such Party could not reasonably have provided against before entering into the Contract,
- (c) which, having arisen, such Party could not reasonably have avoided or overcome, and
- (d) which is not substantially attributable to the other Party.”

The contract’s definition of force majeure and the scope of the excuse from performance that it offers must be carefully analyzed. In addition, parties generally have an obligation to mitigate the effects of force majeure. For example, Sub-Clause 19.3 of the FIDIC forms stipulates:

“Each Party shall at all times use all reasonable endeavours to minimise any delay in the performance of the Contract as a result of Force Majeure”.

The consequences of force majeure depend upon the relevant circumstances and the applicable contractual provisions. Often, force majeure will delay the performance of an obligation. In that event, the party whose performance has been delayed may be entitled to an extension of time for performance. The contract may specify the extension to which a party is entitled (e.g., one day of extension for each day that performance is delayed), which may or may not yield an equitable result for either party. Alternatively, it may be left to the parties agree upon the extension, if any, that is appropriate. In the case of a construction contract, the contractor may be entitled only to an extension of the time for performance if the “critical path” schedule is affected. To the extent that the effects of force majeure are absorbed by the float in the schedule, the contractor may not be entitled to an extension at all (Keane & Caletka, 2008). The FIDIC forms provide that a contractor who incurs additional costs as a result of force majeure is entitled to the

reimbursement of certain costs, in accordance with the contract's claim procedure. The contractor is not entitled to claim reimbursement for costs arising from "natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity." In addition, apart from costs arising from "war, hostilities ... invasion, [and] act of foreign enemies," the costs that are eligible for reimbursement under this provision must have been incurred in the country where the permanent works are being executed. See Sub-Clause 19.4(b) of the Red, Yellow, and Silver Books.

The contractor will be obliged, *inter alia*, to prove that the costs for which it claims compensation arose from the force majeure events and not some other cause.

There is no certainty, of course, that a company's counterparty will accept a notice of force majeure. The counterparty may contest the existence of force majeure conditions and assert that the company's non-performance or delay in performing a particular obligation constitutes a breach of contract. In some instances, the counterparty may make a call upon the performance security that the party invoking force majeure had provided. A prudent contractor will have arranged insurance coverage against the improper calling of performance securities (Bunni., N. (2005).

The occurrence of force majeure conditions thus increases the likelihood of disputes between contract partners. It is not surprising that a party will attempt to shift the burden of delays and additional costs arising from the turmoil to another party. This situation highlights the importance of the dispute resolution provisions of the relevant contract.

The doctrine of force majeure tries to find a balance between the obligation to perform a signed contract and the liberation of the debtor to perform in cases of unexpected and impossible events. Although the various national law systems deal as well with the doctrine of force majeure, the main importance of force majeure is found in international contracts. Unexpected or unforeseen events are much more frequent in international business than in national contracts. It is part of the nature of international contracts that they are concluded and executed in less stable political, economic, and juridical surroundings than national contracts.

The force majeure clause, which deals normally with circumstances which are beyond the influence of the parties and which makes the performance of the contract temporarily or permanently impossible.

A flow-chart for a force majeure event (an extraordinary event) is shown in Figures 1 and 2.

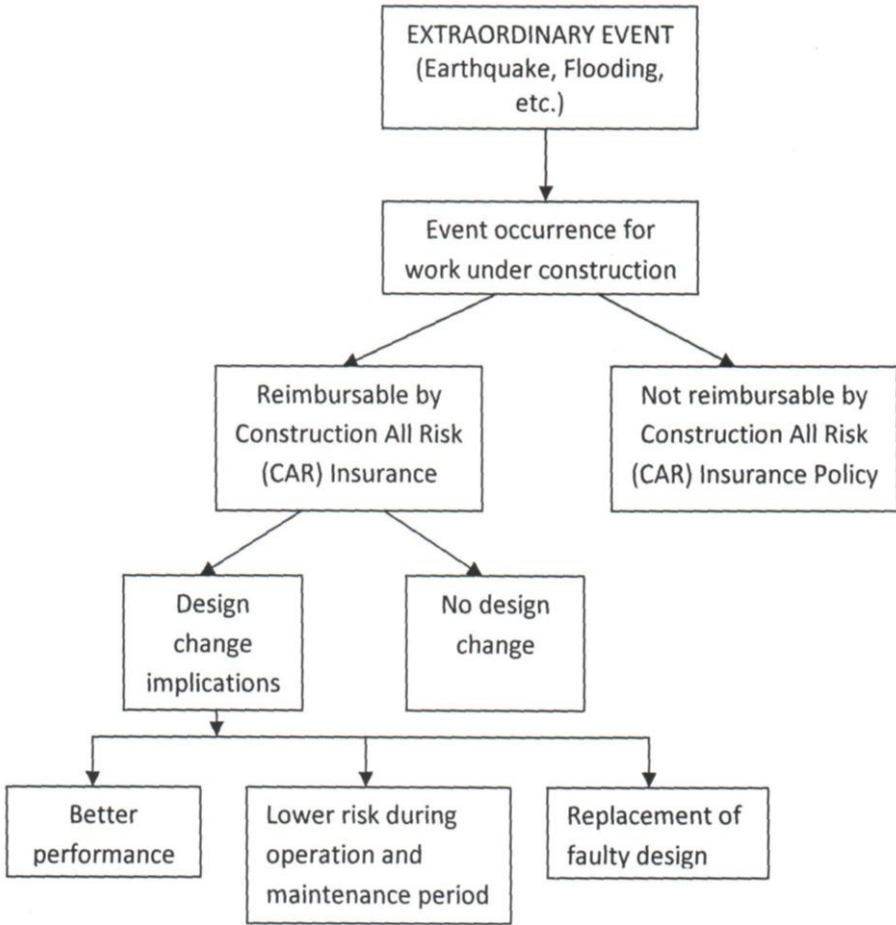


Figure 1. Flow-chart of an Extraordinary Event and Insurance

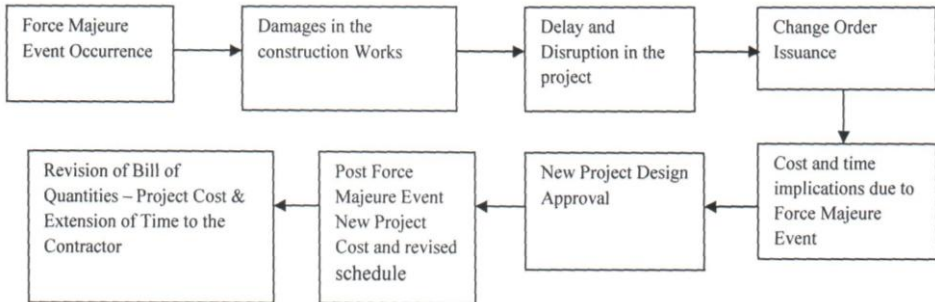


Figure 2. Force Majeure Event and Its Consequences

Article 7 of the UNIDROIT Principles of International Commercial Contracts concerns force majeure. According to this Article, the non-performance of a party is excused if the non-performance is caused by an impediment beyond the influence of the party and it could not be expected from the non-performing party to foresee the impediment at the conclusion of the contract, or it could not be expected by the non-performing party to avoid the impediment or its consequences. The non-performing party must inform the other party about the impediment and its influence on the capacity to perform the contract. If the other party is not informed in due time, the non-performing party is liable for the damages resulting from this delay. The Article of the UNIDROIT Principles regarding force majeure does not void the right of a party to claim the cancellation of the contract or to hold back his own performance or, finally, to ask interests for an overdue payment.

Contractual Force Majeure and Frustration Relation

The practical utility of force majeure clauses becomes clear when contrasted with the common law doctrine of contractual frustration. Force majeure clauses and the doctrine of frustration are similar in that they deal with occurrences beyond the control of parties to an agreement. Frustration requires that the entire subject matter or underlying rationale for the contract be destroyed. It normally operates to permanently relieve parties from all of their contractual obligations, including those to perform and to pay, and essentially leaves the pieces of a contract to fall where they may. Force majeure clauses, on the other hand, permit a much greater degree of flexibility. The occurrences giving rise to relief can be defined with greater certainty and the entire rationale or subject matter of the contract need not be destroyed in order for force majeure to operate. (Westersund and Casgrain, 2008).

A force majeure clause can respond to unpreventable occurrences while still maintaining certain contractual obligations, such as those relating to payment, and temporarily suspending certain others, such as the delivery of product. Force majeure clauses can also prescribe differing consequences depending on the nature or type of force majeure event. Whereas the doctrine of frustration is a blunt instrument that permanently ends all contractual obligations, a carefully crafted force majeure clause is capable of responding to the same events in a more predictable and equitable manner, while maintaining the contractual relationship between the parties. (Westersund and Casgrain, 2008).

Wright (2003) stresses that a clause generally requires four elements for an event to qualify as a force majeure:

- (1) the event must be external;
- (2) it must render the performance radically different from that originally contemplated;

- (3) it must have been unforeseeable (objective standard) or at least unforeseen (subjective standard);
- (4) its occurrence must be beyond the control of the party concerned.

Conclusions

This paper is based on a deep literature review to examine the insurance issues in Design and Build (D & B) construction projects constructed in accordance with FIDIC Red Book, I.C.E. (Institution of Civil Engineers) Conditions of Contract and JCT (Joint Contracts Tribunal) 05 Design and Build Contract DB. It also explained what Force Majeure is within the context of Construction Contracts.

A force majeure is an uncontrollable, unavoidable event that makes a party's performance impossible. In daily use, force majeure is often used synonymously with acts of God or forces of nature. On a construction project, a force majeure event is, whatever the contract says that it is. Not all uncontrollable conditions or events that make performance impossible are contractual force majeure events. If a construction contract limits force majeure to acts of God, then the event must be exclusively non-human and without human intervention. But this is not always the case. There are also so-called "man-made" events such as strikes, civil unrest, terrorism, inability to obtain resources, actions of governing authorities, enactment of governmental regulations, etc.

The studied contracts require that a force majeure event must be not only beyond control of the party seeking protection, but also be foreseeable. Foreseeability is determined at the time of entering the contract. The contractors have to assume the risk of performance and under all circumstances and insure the works as explained in the paper. A force majeure clause in a contract provides an excuse only so long as the impact of the force majeure prevents performance. A force major clause does not allow the affected party to terminate the contract if the force majeure is of a specified duration. Force majeure clause in construction contracts only provides relief in the form of an extension of time without penalty or without assessment of liquidated damages for a period equal to the force majeure. Those clauses seldom provide any compensation for the costs to demobilize and remobilize, to repair work, for the escalation of material and labour prices. The contractors, in order to compensate the losses have Construction All Risk (CAR) insurances to get compensated their losses. Construction insurance plays an important role in guaranteeing the success of projects, with insurers sharing losses resulting from natural disasters and other contingencies. Insurance transfers risk. Insurance is not a substitute for effective risk management. Insurance is only intended to deal with measurable or known risks and serves to spread the impact of loss.

Insurance is a risk transfer mechanism that the insured transfer from a state of uncertainty to a state of certainty at the certain cost of the insurance premium. The contractors must not rely only upon insurance policies in their construction projects but design and use risk management systems to deal with and manage the adverse consequences of construction risks.

References

- Abrahamson, M.W. (1996), *Engineering Law and the I.C.E. Contracts*, 4th edition,, E&FN Spon, London, UK.
- Bolton, J. (1998), *Proving and Defending Claims Under the FIDIC Conditions of Contract*, Hawksmere Seminar, December, Hawksmere plc, London.
- Broome, J. (2002) *Procurement routes for partnering: a practical guide*, Thomas Telford,
- Bunni, N. (2005), *The FIDIC Forms of Contract*, 3rd ed., p.284, Blackwell
- Bunni, N. G. (2003) *Risk and insurance in construction*, Spon, London.
- CII (1993) *Allocation of insurance-related risks and costs on construction projects*, Construction Industry Institute, Austin.
- Dawson, P. J. (1997) *A hierarchical approach to the management of construction project risk*, University of Nottingham, Nottingham.
- Dickson, G. C. A. (1983) *An experimental study of attitudes towards risk in insurance purchasing*, Glasgow College of Technology, Glasgow.
- FIDIC (1986) *Construction insurance and law*, FIDIC by Rhys Jones Consultants, London, UK, London.
- FIDIC (1992) *The Conditions of Contract for Works of Civil Engineering Construction* 4th edition, Part 1, Reprint, Lausanne, Switzerland.
- FIDIC (1999), “Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer” (1st ed. 1999) (the “Red Book”); the “Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Plant, and for Building and Engineering Works, Designed by the Contractor” (1st ed. 1999) (the “Yellow Book”); and the “Conditions of Contract for EPC/Turnkey Projects” (1st ed. 1999) (the “Silver Book”). Clause 19, Lausanne, Switzerland.
- Flanagan, R. and Norman, G. (1993) *Risk management and construction*, Blackwell Scientific, Oxford.
- Halman, J.I.M. & Van der Weijden, P.M. (2008), “In search for best practices in risk management” in: *Managing risks in projects*. Edited by Kähkönen, K., Artto, K.A, Taylor & Francis Group, Abingdon, Oxon, pp.33.
- Hickman, A.R. (2002), “Design – Build Risk and Insurance”, International Risk Management Institute, Inc., Dallas, USA.
- Hinze, J. (2001), *Construction Contracts*, 2nd Ed., McGraw-Hill, New York, USA.
- Howard, P. (1997), *Engineering insurance and reinsurance. An introduction*, Swiss Treceno.
- ICC (2003), “ICC Force Majeure Clause 2003 –ICC Hardship Clause 2003” ICC Publication No. 650, 2003 Edition, International Chamber of Commerce, ICC Publishing S.A., 38 Cours Albert 1er, 75008 Paris, France.

- I.C.E. (1999), (Institution of Civil Engineers) Conditions of Contract (in works of civil engineering construction), 7th Rev. Ed. September, Thomas Telford Publishing, London.
- JCT (2009), (Joint Contracts Tribunal) 05 Design and Build Contract DB: Revision 2, ISBN: 978 1 847 03941 5, Sweet & Maxwell, London.
- Keane, P.K. and Caletka, A.F. (2008), "Who owns the float?" Delay Analysis in Construction Contracts, § 5.2.5, Wiley-Blackwell, London.
- Murdoch, J. and Hughes, W. (2001), *Construction Contracts – Law and Management*, 3rd edition, Reprint, E & FN Spon, London.
- Uff, J. (2000), *Construction Law – Law and Practice relating to the Construction Industry*, Sweet & Maxwell, 7th Ed. (Reprint), England, UK.
- UNIDROIT (2004), Unidroit Principles of International Commercial Contracts, ISBN: 88 - 86449 - 34 - 8, Force Majeure (Non- Performance) Chapter 7, International Institute for the Unification of Private Law (UNIDROIT), Rome, Italy.
- Wang, S., Dulaimi, M. F. and Aguria, M. Y. (2004) Risk management framework for construction projects in developing countries. *Construction Management and Economics*, 22(3), 237-252.
- Westersund, L.A. & Casgrain, F.M. (2008), *Force Majeure Clauses in Construction Contracts*, FMC, March, Alberta, Canada. Available at:http://www.fmc-law.com/upload/en/publications/2008/Westersund%20Lowell_v%202%20FORCE%20MAJEURE%20CLAUSES%20AND%20CONSTRUCTION%20CONTRACTS.pdf
- Williams, C. A., Smith, M. L. and Peter, C. Y. (1998) *Risk management and insurance*, Irwin/McGraw-Hill, Boston, Mass.
- Wright, W.C. (2003), *Force Majeure Clauses and the Insurability of Force Majeure Risks*, Construction Law, Vol. 16, Fall.