

Primljen / Received: 4.8.2016.

Ispravljen / Corrected: 17.2.2017.

Prihvaćen / Accepted: 21.2.2017.

Dostupno online / Available online: 10.7.2017.

Comparison in terms of delays in the construction contracts used in Turkey

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Professional paper

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Developing countries offer a market opportunity for construction industry. Turkish construction market is one of the attractive ones, after Russia in the Middle East, because of quantitative and qualitative needs with regard to both structural and infrastructural projects. General Conditions of Construction Contracts (GCCC) are commonly used for public procurements in Turkey, while FIDIC Conditions of Contract for Construction are used less often. In this paper, GCCC is compared with FIDIC Conditions of Contract for Construction 1999, in terms of delays, in order to provide guidance to potential contractors.

Key words:

construction contracts, conditions of contracts, delay, FIDIC, public procurement, public procurement laws

Stručni rad

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Usporedba građevinskih ugovora u Turskoj s posebnim osvrtom na odredbe o kašnjenju

Zemlje u razvoju povoljno su tržište za građevinsku industriju. Turska je također jedno od atraktivnih građevinskih tržišta i u tom smislu slijedi Rusiju na Bliskom istoku zbog kvalitativnih i kvantitativnih potreba za izvođenjem građevina visokogradnje i infrastrukturnih projekata. U Turskoj se na projektima javne nabave uglavnom primjenjuju Opći uvjeti za ugovore o građenju (GCCC), a samo ponekad oni koje propisuje FIDIC. U radu se za potrebe potencijalnih izvođača uspoređuju odredbe o kašnjenju prikazane u GCCC-u i u FIDIC-ovim Uvjetima za ugovore o građenju iz 1999. godine.

Ključne riječi:

građevinski ugovori, ugovorni uvjeti, kašnjenje, FIDIC, javna nabava, zakoni o javnoj nabavi

Fachbericht

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Vergleich der Bauverträge in der Türkei mit besonderer Beachtung der Bestimmungen über Verzögerungen

Entwicklungsländer sind ein günstiger Markt für die Bauindustrie. Die Türkei ist auch einer der attraktiven Märkte für die Bauindustrie und diesem Sinne folgt sie Russland im Nahen Osten wegen der qualitativen und quantitativen Anforderungen an die Ausführung von Gebäuden des Hochbaus und von Infrastrukturprojekten. In der Türkei werden bei den Projekten der öffentlichen Vergabe hauptsächlich die Allgemeinen Bedingungen für Bauverträge (GCCC) angewendet, und nur manchmal die, welche FIDIC vorschreibt. In der Abhandlung werden für die Bedürfnisse potenzieller Auftragnehmer die Bestimmungen über Verzögerungen verglichen, die in den Bedingungen für Bauverträge aus dem Jahr 1999 von GCCC und FIDIC angeführt werden.

Schlüsselwörter:

Bauverträge, Vertragsbedingungen, Verzögerungen, FIDIC, öffentliche Vergabe, Gesetze über öffentliche Vergabeverfahren

1. Introduction

Construction industry is downsized in most parts of the world, except in developing economies. Construction industry constitutes 13.4 % of the world's production, with 7.5 trillion dollars, and it is supposed to reach 12.7 trillion dollars with 70 % increase in 2020. Construction industry expectations for 2020 indicate that construction industry will grow during this period, and developing markets and economies will play an important role in this development. Construction industry in the Central and Eastern Europe is expected to grow by 7.9 % until 2020. As the leading country, Russia's contribution to the construction industry is expected to reach 117 billion dollars, while Turkey's contribution is expected to attain 81 billion dollars. Infrastructure and superstructure needs, residential requirements, renovation of existing building stock in the context of urban transformation, infrastructure projects involving renewable energy projects, and the power lines passing through the country, lead to the emergence of many construction projects in Turkey [1].

In addition to private-sector construction activities, government supported public projects constitute a major part of construction projects in Turkey. Public institutions and organizations must procure construction work in accordance with the terms and conditions set out in the Public Procurement Law (PPL) 4734 [2], except for the internationally financed public procurement projects (World Bank projects in particular). Conditions and procedures regarding preparation of contracts for procurement in line with the PPL 4734 are set in the Public Procurement Contracts Law (PPCL) 4735 [3]. General Conditions applicable to construction projects based on the PPL 4734 and the PPCL 4735, are defined in the scope of General Conditions for Construction Contracts (GCCC) [4]. Some standard contract documents like FIDIC standard forms of contract, which are largely dependent on the project delivery method, must be used in internationally financed public procurement projects – and especially in projects financed by the World Bank.

Unfortunately, laws and regulations are revised quite frequently in Turkey. Thus, PPL 4734 was revised 37 times since the time it was first established in 2002. Similarly, PPCL 4735 was revised six times since 2002. Frequent changes in laws and regulations can be deterrent and discouraging to contractors, which can result in a lower number of bidders. Foreign contractors are especially affected by these changes [5, 6]. According to statistics released by the Public Procurement Authority, very few foreign contractors have taken part in public projects in Turkey (between 0.37 and 2.78 % of the total number of contractors in the last six years) [7].

According to a study made by Onur, İ. et al., this low number of bidders significantly and negatively affects the difference between the procurement price and the estimated cost, suggesting that a more competitive environment would considerably improve the outcome of government procurement procedures in Turkey. Opening such procedures to foreign participation ensures a more cost-effective procurement [8].

In order to increase competitiveness and reliability, legislation must be understandable and should not be changed frequently. The SWOT analysis, presented in the Turkish Construction Sector Report 2015 by the Turkey Construction Industry Employers Union, identifies problems in contract management and risk management as two of the weaknesses currently affecting this sector [9].

In a study of delays registered in public procurement projects based on PPL 4734, 435 construction projects were investigated between 2003 and 2005, and it was established that 20 % of the construction projects were completed after the scheduled time, and were also burdened with cost overruns [10]. A similar study focused on 471 public procurement projects realised between 2003-2011 in Turkey. It was established that 47.13 % of the projects were completed later than planned, with an average delay amounting to 20 % [11]. These studies reveal that, although many construction projects are being executed, there is an increase in delay on many public procurement projects based on PPL 4734.

Bidders are negatively affected by frequent revisions of PPL 4734 and PPCL 4735. Submittal of bids by qualified and experienced foreign contractors can improve both competitiveness and project quality by ensuring attainment of project goals in terms of duration and cost. Construction contracts are important documents that should be comprehensive enough not to cause any quality-related deficiencies in the project. In addition, construction contracts should clarify all the rights and responsibilities between the parties so as to avoid conflicts. Conditions of contracts define terms and conditions that a construction contract is based on. Clauses regarding delay, defined in conditions of contracts used for public procurement in Turkey, are in the focus of attention of this study. In this context, a comparison is made between FIDIC Conditions of Contract for Construction (First Edition 1999) and the actual General Conditions of Construction Contracts (GCCC) in Turkey, in terms of clauses related to delay, in order to expose the gaps that can cause risks for contractors.

2. Causes of delay on construction projects

In construction projects, many changes occur at the construction stage. These changes, often related to design issues, include design failures, omissions, unforeseen conditions or additional demands, and change requests by the owner or other stakeholders. Changes may cause variations in project duration, budget and/or quality, and may result in disputes between the parties, which in turn may lead to compensation payments.

A construction work is characterized by the set commencement and completion dates. These dates are specified in the time programme drafted by the contractor or project manager and approved by the employer. Departures from the start and finish dates of the activities specified in the time programme constitute the delays. If these delays are related to an activity on the critical path, they may affect the completion date of the project as well.

However, some delays do not have a significant impact on the construction process. Delays may be caused by the employer, contractor, third parties or by force majeure events. Delays are classified as acceptable or unacceptable depending on the party that caused them or whether they are foreseeable or not. If a delay is unforeseeable, then it is considered acceptable; if it is foreseeable, then it is considered unacceptable [12]. If acceptable delays are caused by force majeure events, the contractor has a right to an extension of time but cannot claim compensation; in the events not caused by the contractor but which put the contractor in a difficulty, such as additional requests from the employer, or delays in obtaining permits, controls or approvals, the contractor has a right to an extension of time as well as to compensation. Unacceptable delays occur when the contractor does not fulfil in a timely manner and in the ways stipulated the works it must undertake within the programme, within the risks previously accepted by the contractor. In that case, the contractor is obligated to pay the delay penalties (damages) specified in the contract. Whatever the reasons, delays cause changes in the project schedule and costs. Disputes generally arise over additional time requests and when determining which party should incur additional costs.

Delays on construction projects can be regarded as a quality failure because of resulting variations in project schedule and budget. Some studies on the causes of delay on construction projects can be found in relevant literature. Reasons for such delays must be investigated in the scope of political and socio-economical conditions of that period, both in the country and worldwide. On this basis, some studies investigate delay related problems separately for developed and developing countries [13-15]. Some of these studies on delays registered on public procurement projects in Turkey are summarized here as a guidance to the issue, and clauses related to delays on construction projects are investigated.

According to a study about reasons for delay in the public projects that were started between 1970-1980 in Turkey, most important factors include shortage of some resources (qualified manpower, technical personnel, construction materials, and equipment), financial difficulties, organizational deficiencies (limited administrative and financial autonomy of site managers, inefficient organizational structure of contractors, slow decision making mechanism, and bureaucratic obstacles in public organizations), and delays in design work (large quantities of extra work and frequent change orders) [16]. Most of these factors should be considered understandable in the light of circumstances prevailing at that time. In a recent research about possible delay factors on construction projects in Turkey, the following seven factor groups were identified as delay generators in Turkish construction sector: environmental factors, financial factors, labour-based factors, managerial factors, owner-based factors, project-based factors, and resource-based factors. As a second stage, validity of these factors in 17 developed and developing countries were examined according to research studies about time-

based overruns as presented in literature. Although design and material changes that are included in managerial factors are identified as the most important factors in Turkey, they are immediately followed by financial factors. However, owner-based factors are ranked as the first important delay group in 16 countries not including Turkey, while managerial causes of time extensions are considered as the second significant group. "Comparing Turkey with the studied 16 countries, it can be seen that two most common problems are labour-based factors and managerial factors" [14].

Delays on construction projects cause losses of revenue for the employers, due to the inability to run the new facilities, which comes in addition to high cost of investment and interest possibly incurred during construction. Construction delays cause losses for contractors due to higher overhead costs because of the longer construction time, higher material and labour costs due to price escalation, liquidated damages and penalties [17]. Construction delays generally result in disputes between the parties, which is why it is important to identify causes of construction delays and the party responsible for the damages. The first authority to refer to in the event of disputes is the contract itself. In almost every contract, there is one or more articles on actions to be taken in case of time overrun. Properly defined construction contract should include detailed clauses specifying compensation for delays. Deficient, conflicting and/or unclear delay clauses in construction contracts are likely to result in conflicts. Several standardized construction contracts have been established in order to: define construction process, define authority and responsibilities of the stakeholders, define allocation of risks, and standardize monitoring and control of the construction process.

3. Importance of construction contracts

Undoubtedly, an effective contract should be drafted and properly administered to ensure success of the project. For the contract to be sufficient in terms of scope, the following detailed information must be provided: scope of responsibilities of the employer, supervising authority, contractor, and sub-contractors, the start and end dates of the project, other important project-related dates, the responsible party and the submission date for the drawings, conditions for time extension, sanctions, legal responsibilities, particulars about how the supervision and approval mechanisms will operate, description of construction site, state of plants operating on the site (if any), programme for the employer's supply of materials and facilities (communication, transport, energy, storing site, etc.) (if any), advance payment and payment conditions, conditions under which additional work may be performed, delivery of project-related documents (such as design documents, protocols, test reports, etc.), and the resolution of disputes. In case of contracts with insufficient scope, the parties are allowed to act as they wish in the performance of their duties, which causes serious disputes, slows down the progress of works, brings about

delays or even suspension and, hence, results in important economic losses [18].

The use of advanced methods for managing the project and contract administration processes has become a necessity in the construction sector. This necessity has led to the creation of standard contracts in the construction industry. Such standard forms have the advantage that their record of use has proven them to be both equitable and workable, and many of the provisions have been tested in court. Standardization of contract forms has greatly contributed to the elimination of areas of disagreement between owners, architects-engineers, and contractors. In addition, they have withstood the test of time and experience, and have become a familiar tool to architects-engineers and contractors who clearly understand their meaning and implications. Contractors prefer contract documents whose arrangement, form and content are familiar to them [19]. Standard contract types prevent conceptual confusion caused by liberties taken in contract formatting, and ensure equal and fair sharing of risks allocated to the parties in accordance with the type of the contract. Such standard contracts also minimize possible disputes, provide ground for resolution of such disputes, and enable creation of a common contract literature [20]. Not only must construction contracts be in line with the legislation of the country, they must also be compliant with the international agreements ratified or international rules adopted by a country in case of international procurement [21]. In this respect, standard international construction contract forms have been created by various institutions. For example, standard forms are applied by the American Institute of Architects – AIA in the USA, the French Standardization Association (Association française de normalisation - AFNOR) in France, the German Construction contract Procedures (Vergabe-und Vertragsordnung für Bauleistungen - VOB) and the Institution of Civil engineers – ICE in Germany, the Security Industry Authority - SIA in Switzerland, the Austrian Standards Authority (Österreichisches Normungsinstitut Austrian Standards, ONORM) in Austria, the engineering Advancement Association of Japan (ENAA) in Japan, and the Public Procurement Contracts Law (PPCL) no. 4735 in Turkey. However, the FIDIC standard forms established by Fédération Internationale des Ingénieurs-Conseils in Switzerland rank among the standard forms that are most often used in international construction contracts [22].

4. Turkish general conditions for construction contracts

The Public Procurement Authority (PPA) was established in Turkey in 2002 based on PPL 4734 in order to execute public procurement procedures. Conditions and procedures regarding preparation of contracts for procurements under the PPL 4734 are set in the Public Procurement Contracts Law (PPCL) 4735. General Conditions applicable to construction projects based on the PPL 4734 and the PPCL 4735, are defined in General Conditions for Construction Contracts (GCCC) issued

by the PPA. The GCCC is the only general conditions document published in Turkey and it is to be used in conjunction with the Typical Construction Works Agreement published in the Official Gazette of the Republic of Turkey on 22nd January 2002 under No. 24648. The GCCC are related to construction works that are implemented following a tender process conducted in accordance with the PPL 4734, and are also applied for public procurement projects with turnkey lump-sum contracts or unit price contracts conducted in accordance with PPCL 4735.

The GCCC is formed of ten chapters consisting of 52 articles. The GCCC chapters are: 1. General Provisions, 2. Worksites, 3. Projects, 4. Construction Control Services, 5. Execution of the Work, 6. Use of Quarries, 7. Demolition and Excavation, 8. Staff Employed by the Contractor, 9. Progress Reports, Taking Over Procedures, 10. Contractual Relationships.

5. FIDIC conditions of contract for construction

Established in 1913 in Lausanne, Switzerland, the professional organization named the International Federation of Consulting Engineers - FIDIC (Fédération Internationale des Ingénieurs-Conseils) is charged with promoting and implementing the consulting engineer industry's strategic goals on behalf of Member Associations. FIDIC also publishes international standard forms of contracts for works and agreements, together with related materials such as standard prequalification forms. Only one association from each country can become a member of this federation, which today boasts members from 90 countries and possesses therefore the characteristics of an international professional organization [23]. In the creation of FIDIC contracts, the organization examined the extant accepted practices in construction contracts and tried to organize the rights and liabilities of the parties along these lines. FIDIC standard contracts are so detailed as to guide the parties by way of their provisions, should any unforeseeable events or circumstances arise in the relations between the parties, which provides a non-negligible facility and assistance for the parties especially in large projects. Various standard rules are used in relation to construction contracts in international commercial practices. The stipulations in FIDIC standard contracts, which can be considered as an example of these rules, are the rules that parties in international construction activities prefer the most and therefore are implemented most often. FIDIC rules are widely applied on international construction projects, which is a fact that should be underestimated. Persons involved in international commercial activities prefer to a large extent FIDIC standard contracts, but these are not only preferred by the parties. FIDIC standard contracts have also been adopted by many multinational credit agencies and the World Bank. When relevant agencies are providing credit lines, they require that the parties use the FIDIC standard contracts in the projects financed or tenders conducted by these institutions. This has contributed considerably to the expansion of the area in which FIDIC standard contracts are used [24].

Taking into account the differences in project delivery methods, responsibilities and design, FIDIC created and provided different documents for use by practitioners. Commonly used in international projects, Construction, Short Form, Plant and Design Build, EPC/Turn Key standard forms of contracts for works have been utilized as appropriate documents in construction projects. These standard forms of contracts are commonly named according to the colour of the book cover as the Red, Green, Yellow and Silver Books. Although Turkish contractors were initially introduced to FIDIC standards in the 1970s when they started to work abroad, their proper introduction to the standards took place in 1987 when the Association of Turkish Consulting Engineers and Architects - ATCEA joined the Federation [25].

FIDIC Conditions of Contract for Construction, Fourth Edition, 1987, have been translated into Turkish and are commonly used for international projects in Turkey. In this study, Conditions of Contract for Construction, First Edition, 1999, will be examined in terms of delay clauses.

As to their content, FIDIC Conditions of Contract for Construction First Edition 1999 comprise the following parts:

- General Conditions
- Guidance for the Preparation of Particular Conditions
- Forms of Letter of Tender, Contract Agreement and Dispute Adjudication Agreement

General Conditions consist of six parts, namely the contents, definitions, clauses, appendix (General Conditions of Dispute Adjudication Agreement), annex (procedural rules), and index of sub-clauses. General Conditions contain 20 clauses, each of them having the clearly defined and detailed sub-headings.

6. Comparison of FIDIC conditions of contract and GCCC in terms of delay

FIDIC Conditions of Contract for Construction Works have a distinctive classification system defining in full detail mutual responsibilities of the stakeholders and the construction process. General Conditions; Clause 8: "Commencement, Delays and Suspension" covers topics about the programme, delays and consequences in detail. Clause 8 classifies the issues such as the commencement of work, time for completion, programme, extension of time for completion, delays caused by authorities, rate of progress, delay damages, suspension of work and consequences of suspension.

Compared with FIDIC Conditions of Contract for Construction, the GCCC used in Turkey based on laws 4734 and 4735 has a different and more confused structure, due to frequent changes in legislation. General Conditions of Construction Contracts (GCCC) comprise ten chapters. Provisions on the programme, delays and consequences, as contained in General Conditions of Construction Contracts (GCCC), are diffused in various chapters, under different articles. While clauses on the programme, delays and consequences are for the most part treated in "Chapter 5

Execution of the Work", some are located in the second, third, fourth and ninth chapters.

FIDIC Conditions of Contract for Construction Works, General Conditions; Clause 8, "Commencement, Delays and Suspension" are almost similar to General conditions of construction contracts (GCCC) in Table.1, with regard to the articles concerning delays, extension of time, additional costs and compensation.

Both of the contract documents have clauses relating to the commencement of the project, project programme and inspections. Depending on the project procurement method and the type of the contract, variations may occur due to change requests but, in any type of contract, exceptionally adverse climatic conditions, unforeseeable shortages of the goods or the personnel, any delays originating from the employer or other authorities, are the common reasons for requesting extension of time. Most of these reasons are considered in FIDIC Clause 8.4, and in GCCC under Chapter 5, Articles 13, 14, 18, 27 and 30. Delays caused by authorities are defined in FIDIC Clause 8.5 in detail, but this issue is only briefly considered in GCCC under Chapter 5, Article 30. The contractor must conduct some procedures in order to be entitled to the extension of time for completion or/and any additional payment. Giving a timely claim notice to the Engineer and keeping records is an important responsibility for the Contractor to substantiate any claim. FIDIC defines these procedures under Sub-Clause 20.1, in conjunction with Clause 8.4. It is explained as follows: it is the duty of the Contractor to give notice to the Engineer, describing the event or circumstance giving rise to the claim, as soon as possible, and not later than 28 days after the Contractor has become aware of the event. Within 42 days after the Engineer receives the first notice, another additional explanatory claim report is sent to the Engineer by the Contractor to explain time extension and/or payment. Thirdly, within 28 days after the end of the effects of the events, the Contractor shall send its final claim. GCCC defines the Contractor's responsibility to give a notice to the Project Manager under Article 30 in a similar manner, but the time to provide such notice is limited to 20 days. If the employer is solely responsible for the delay, it is not obligatory to give the notice within 20 days. Both documents describe these time limits as very critical because, if not obeyed, the extension of time or additional payment for the claim may not be requested at a later time.

It can be seen from Table 1 that GCCC does not contain corresponding provisions for some of the clauses in FIDIC Conditions of Contract for Construction. GCCC does not require an equivalent supporting report as defined under FIDIC Conditions of Contract, "8.3 Programme". Especially, the Employer's and other authorities' responsibilities to the contractor do not find enough place in GCCC compared to FIDIC Conditions of Contract. In practice, employers' failure to provide payments or employers' suspension of work for any reason is a remarkable risk for the contractor with regard to completion of work within scheduled time. FIDIC Conditions of Contract, Clause 8.10, defines the situation in which the contractor has the right for the payment of the value of the plant or materials that have not

Table 1. Matching FIDIC Conditions of Contract for Construction Works; Clause 8, with the related GCCC clauses

FIDIC Conditions of Contract for Construction (1999)	GCCC - General Conditions for Construction Contracts in Turkey
8. Commencement, delays and suspension	
8.1 Commencement of work	C.2/A.6 Delivery of site to the contractor
8.2 Time for completion	C.3/A.13 Project implementation
a) Achieving the passing of the tests on completion	C.5/A.25 Inspection of works
b) Completing all work which is stated in the contract as being required for the works or section to be considered to be completed for the purposes of taking over under sub-clause 10.1	C.9/A.42 Temporary take-over
8.3 Programme	C.5/A.18 Programme
a) The order in which the contractor intends to carry out the works, including the timing of each stage of design (if any), contractor's documents, procurement, manufacture of plant, delivery to site, construction, erection and testing	C.5/A.20 Personnel and equipment for execution of the work
b) Each of these stages for work by each nominated subcontractor	C.5/A.21 Activities of sub-contractors and their responsibilities
c) The sequence and timing of inspections and tests specified in the contract	C.4/A.15 Inspection of works
A supporting report which includes: - A general description of the methods the contractor intends to adopt, and of the major stages in the execution of the works - Details showing the contractor's reasonable estimate of the number of each class of contractor's personnel and of each type of contractor's equipment, as required on the site for each major stage	
8.4 Extension of time for completion	C.5/A.30 Duration of work and time extension
a) A variation or other substantial change in the quantity of an item of work included in the contract	C.3/A. 13 Project implementation C.3/A. 14 Delay in project delivery
b) A clause of delay giving an entitlement to extension of time under a sub-clause of these conditions	C.5/A. 18 Programme
c) Exceptionally adverse climatic conditions	C.5/A.27 Damages other than the fault of the contractor
d) Unforeseeable shortages in the availability of goods caused by epidemic or governmental actions	C.5/A.27 Damages other than the fault of the contractor
e) Any delay, impediment or prevention caused by or attributable to the employer's personnel, or the employer's other contractors on the site	C.5/A.30 Duration of work and time extension
8.5 Delays caused by authorities	C.5/A.30 Duration of work and time extension
a) The contractor has followed the procedures laid down by the relevant legally constituted public authorities in the country	
b) These authorities delay or disrupt the contractor's work	
c) The delay or disruption will be considered as a cause of delay under subparagraph (b) of sub-clause 8.4	
8.6 Rate of progress	C.5/A.26 Maintenance and remedy responsibilities of the contractor
a) Actual progress is too slow to complete within the time for completion, and/or,	
b) Progress has fallen (or will fall) behind the current programme under sub-clause 8.3.	
8.7 Delay damages	C.5/A.30 Duration of work and time extension
8.8 Suspension of work	C.5/A.25 Faulty, defective, incomplete works (to a limited extent)
8.9 Consequences of suspension	
a) An extension of time for any such delay, if completion is or will be delayed, under sub-clause 8.4	
b) Payment of any such cost, which shall be included in the contract price	
8.10 Payment for plant and materials in event of suspension	
a) The work on plant or delivery of plant and/or materials has been suspended for more than 28 days	
b) The contractor has marked the plant and/or materials as the employer's property in accordance with the engineer's instructions	
8.11 Prolonged suspension	
8.12 Resumption of work	
	<i>Note: C: Chapter, A: Article</i>

been delivered to the site within 28 days. Clause 8.11 defines the time limits of suspension of work. Despite that, issues relating to the slowness of the program's progress, consequences of suspension, payment in the event of suspension, prolonged suspension and resumption of work, are not considered in GCCC. It can be said that contractors' rights with regard to employers is more protected by FIDIC compared to GCCC. The lack of these clauses in construction contracts may increase the risk of public project contractors undertaking GCCC-based projects in Turkey. However, some additional clauses focusing on the employer's obligations may be added to such contracts.

7. Conclusions

The aim in the highly risky and complex construction process is to complete the construction work within the specified time, cost and quality. This complicated and unique process comprising multi-phased and multi-disciplinary activities can only be realized by way of a successful construction management process and a well-prepared construction contract. Construction contracts are guidelines for the employer, contractor, all sub-contractors and even other authorized officials. Many possible conflicts or disputes can be either minimized or prevented by means of complete, detailed and fair contract documents. Contract documents must be guiding and should be managed in the right way in any defaults, disputes or unforeseeable events that might arise in this process. Delays and compensation for delays are among the most important subjects treated via contract administration. The issue of identifying the causes for delay and deciding which party should compensate the delay is one of the primary reasons for disputes between the parties. Contract administration comes into play at that point. It is possible to overcome this issue with the implementation of the articles related to delays and compensation for delays in a correct and complete contract.

After comparison of the GCCC provisions, which guide the procurement of public projects in the Turkish construction sector, with the FIDIC Conditions of Contract for Construction, which are widely used in international construction projects, it can be seen that the two conditions of contract documents share many common features, although there are also differences between the two.

According to a research in which FIDIC and GCCC were compared in terms of general distribution of liabilities and risks, the responsibilities and risks assumed by a construction firm working in Turkish public procurement (66.7 %), stand at a significantly higher level than those of a construction firm involved in the FIDIC Conditions of Contract-based international construction projects (46.4 %). It is stated that this result is the reason why Turkish construction firms prefer to work abroad rather than in Turkey [26]. Construction managers in Turkey recognize that the most important issue with the contracts is the unilateral feature of such contracts (allocating high level of risk to the contractor). GCCC documents protect the rights and interests of public authorities while not recognizing the rights of the other party, which contractors find to be very risky [26].

When GCCC provisions and FIDIC Conditions of Contract for Construction are compared in terms of delays, it can be seen that the content of both documents is similar with respect to the time periods defined for the commencement of the work, provisions stipulated and conditions that must be met for extension of time, and the liabilities of both parties. However, FIDIC terms and conditions are more detailed. As to force majeure, although similar events and circumstances are considered as force majeure events in both documents, it can be seen that the events and circumstances defined in FIDIC are also more detailed. Lack of the provisions on the suspension of work resulting from parties other than the contractor, and on the consequences of such suspension, constitutes risk for the contractors undertaking projects based on GCCC. Responsibilities to be assumed by the Employer and other authorities are insufficiently considered in GCCC. In general, GCCC mostly concentrates on the protection of public employer. If the contractor's risks are brought down to reasonable levels, responsibilities of the construction manager are laid out in the contract terms and conditions, and the conditions defined with regard to the construction process are better detailed in construction contracts based on GCCC provisions, then public projects can be conducted in a healthier manner and the losses incurred by contractors can be eliminated. Besides filling the gaps in GCCC, it is important not to make frequent revisions in order to increase interest and boost confidence in public procurement projects in Turkey.

REFERENCES

- [1] Candemir, B., Beyhan, B., Karaata, S.: Sustainability in Construction Industry: Green Buildings and Nanotechnology Strategies, TUSIAD-T/2012-10/533, IMSAD-R/2012-11/374, 2012, www.tusiad.org, www.imsad.org, 22.01.2016.
- [2] Public Procurement Law, No. 4734, date of acceptance: 04.01.2002, the Official Gazette of Republic of Turkey, date/No: 22.01.2002/24648.
- [3] Public Procurement Contracts Law, No. 4735, date of acceptance: 05.01.2002, the Official Gazette of Republic of Turkey, date/No: 22.01.2002/24648.
- [4] General Conditions for Construction Contracts, the Official Gazette of Republic of Turkey, Regulation for Tender of Service Procurement - Annex 8, date/No: 20.11.2002/24942

- [5] Kılıç Çaylı, D., Kılıç, İ.: The Reasons of Stroke to its Lowest Level of Contribution to Public Procurements for Foreign Contractors, May 2014, <http://www.dunya.com/yorum-inceleme>, 15.01.2016.
- [6] Kılıç Çaylı, D., Çaylı, İ.: Why Foreign Companies Contribute to Public Procurement Less, <http://www.dunya.com/yorum-inceleme>, 15.01.2016.
- [7] Public Procurement Authority Statistics: http://www.ihale.gov.tr/ihale_istatistikleri-45-1.html, 07.01.2016.
- [8] Onur, İ., Özcan, R., Taş, B.K.O.: Public Procurement Auctions and Competition in Turkey, *Review of Industrial Organization*, 40 (2012), pp. 207-223, <https://doi.org/10.1007/s11151-011-9299-3>
- [9] INTES 2015: Construction Sector Report, Construction Industry Employers' Union, http://www.intes.org.tr/content/insaat_subat_2015.pdf, 20.01.2016.
- [10] Turhan, N.: Reflections of Recent Changes in Public Tender System on Time and Cost of Construction Investments, Çukurova University, Science Institute, Master Thesis, Adana, pp. 29-47, 2006.
- [11] Bayram, S., Öcal, M.E., Laptalı Oral, E., Atış, C.D.: Evaluation of Public Procurement Projects in Turkey Based on Public Procurement Law 4734 From the Cost and Time Point of View, 3rd PYYK Project and Construction Management Congress, Antalya, pp. 94-104, 2014.
- [12] Akbıyıklı, R.: İnşaat Sözleşmeleri Esasları ve Uygulamaları (Practices and Principles of Construction Contracts), Birsen Yayınevi, İstanbul, 2009.
- [13] Toor, S., Ogunlana, S.O.: Problems Causing Delays in Major Construction Projects in Thailand, *Construction Management and Economics*, 26 (2008), pp. 395-408.
- [14] Kazaz, A., Ulubeyli, S., Tunçbilekli, N.A.: Causes of Delays in Construction Projects in Turkey, *Journal of Civil Engineering and Management*, 18 (2012) 3, pp. 426-435, <https://doi.org/10.3846/13923730.2012.698913>
- [15] Wang, W.C., Lin, C.L., Wang, S.H., Liu, J.J., Lee, M.T.: Application of Importance-Satisfaction Analysis and Influence-Relations Map to Evaluate Design Delay Factors, *Journal of Civil Engineering and Management*, 20 (2014) 4, pp. 497-510, <https://doi.org/10.3846/13923730.2013.801922>
- [16] Arditi, D., Tarım Akan, G., Gürdamar, S.: Reasons for delays in public projects in Turkey, *Construction Management and Economics*, 3 (1985) pp.171-181, <https://doi.org/10.1080/01446198500000013>
- [17] Marzouk, M., El-Dokhmasey, A., El-Said, M.: Assessing Construction engineering-Related Delays: Egyptian Perspective, *Journal of Professional Issues In Engineering Education and Practice*, July, pp. 315-326, 2008, [https://doi.org/10.1061/\(ASCE\)1052-3928\(2008\)134:3\(315\)](https://doi.org/10.1061/(ASCE)1052-3928(2008)134:3(315))
- [18] Özişik, A.G.: Proje Yönetim Teknikleri (Project Management Methods), Birsen Yayınevi, Ankara, 2007.
- [19] Clough, R.H., Sears, G.A., Sears, S.K.: *Construction Contracting: A Practical Guide to Company Management*, John Wiley & Sons Inc., USA, pp.145, 2005.
- [20] Sarioğlu, H.F.: FIDIC Standard Forms of Contract and a Case Study Under Contract of a Construction Project, Master Thesis, YÜ Science Institute, İstanbul, 1999.
- [21] Galipoğulları, N.: Uygulamalı Toplam İnşaat Yönetimi (Total Construction Management Practice), Birsen Yayınevi, İstanbul, 2007.
- [22] Kodakoğlu, M.: Arbitration Regarding the Disputes Arose out of Construction Contracts Drafted According to FIDIC Standard Rules, Master Thesis, Başkent University, Social Science Institute, Ankara, 2007.
- [23] FIDIC: Conditions of Contract for Construction – For Building and Engineering Works Designed by the Employer, First Edition 1999, Switzerland.
- [24] Birecikli, M.B.: Yapım İşlerinde Sözleşme Yönetimi (Contract Management in Construction), Birsen Yayınevi, İstanbul, 2012.
- [25] <http://fidic.org/organization/176>, 10.01.2016.
- [26] Uğur, L.O.: Quantitative Comparison of Responsibilities' and Risks' Distribution between Turkish General Conditions of Construction and FIDIC Red Book General Conditions, *e-Journal of New World Sciences Academy Engineering Sciences*, 1A0069, 5 (2010) 2, <http://www.newwsa.com>, 20.11.2015.