



CCC 2018

Proceedings of the Creative Construction Conference (2018)
Edited by: Miroslaw J. Skibniewski & Miklos Hajdu
DOI 10.3311/CCC2018-087

Creative Construction Conference 2018, CCC 2018, 30 June - 3 July 2018, Ljubljana, Slovenia

Risk sharing in the construction work contracts

Magdalena Apollo^{a*}, Agata Siemaszko^a, Adam Kristowski^a

^aGdańsk University of Technology, Faculty of Civil and Environmental Engineering, Narutowicza 11/12 Str., 80-233 Gdańsk, Poland

Abstract

By signing a contract for construction works each of the parties assumes a specific scope of responsibility. In practice, there are numerous examples of contractual provisions that violate the parties' safety and the balance of fair and even distribution of risk. Asymmetry in risk allocation in construction contracts and its consequences is the most common cause of disputes between the parties. The article presents the issue of risk distribution and its consequences on the example of selected construction contracts provisions.

© 2018 The Authors. Published by Diamond Congress Ltd.

Peer-review under responsibility of the scientific committee of the Creative Construction Conference 2018.

Keywords: contractor; contract for construction works; investor; ordering party; risk;

1. Introduction

The preparation and implementation of a construction investment project is a complex activity covering a wide range of tasks of technical, legal [1,2,3] and economic nature. The implementation of a construction investment is also dependent on numerous administrative, civil and legal requirements [1]. The complex and specific nature of the construction investment process makes it necessary to precisely establish the relationship, rules of cooperation and commitments of the involved entities [4,5]. From point of view of risk sharing between the parties involved in the project, it becomes particularly important to appropriately define the content of a construction contract. The result of its conclusion is the acceptance of certain obligations and their consequences by each of the entities. The aim of the proportional distribution of risk is to ensure the strategic security of the parties [5].

2. Construction works contract

The contract for construction works, constituting an essential element of the construction investment process, is regulated in the provisions of art. 647-658 of the Civil Code (CC) [1]. By signing the contract for construction works, the investor obliges to perform the activities required by the applicable regulations related to the preparation of works, and the contractor - to hand over the facility agreed in the contract, built in accordance with the design and principles of technical knowledge. The construction contract is of mutual nature - each party is entitled to the performance and at the same time is obliged to provide it, if the provision of one of the parties of the contract is equivalent to that of the other [6]. The cooperation of participants in the construction investment process can be carried out in various ways. Relations between entities define the content and scope of the design work, geological works, geodetic and cartographic works, investor's supervision or author's supervision, investment substitution, construction works, subcontracting or partial subcontracting, supply of equipment, etc. [7]. The subject of this article are contracts for construction works in the "build" and "design and build" framework in public and non-public procurement.

According to art. 353¹ of the Civil Code [1]: "*Contracting parties may establish a legal relationship at their own discretion, as long as its content or purpose does not conflict with the nature of the relationship, the act or the rules of social coexistence.*" This principle gives the parties the freedom to decide on the conclusion of the contract and its content. Due to the fact that neither the Civil Code [1], nor any other legal act indicates exactly what provisions should be used in the text of the contract in order to achieve a proportionate and rational distribution of risk between entities, it is difficult to construct such provisions correctly. There are contracts that constitute an extensive violation of the principle of social coexistence and equality of parties through unequal distribution of risk [8,9].

The analysis of the content of selected construction contracts, allows to indicate the most common sources of disputes between the parties. These include [6,8]:

- the lack of correct definition of the contract parties, the scope of their rights and obligations, persons representing the parties, the subject of the contract, the scope of the parties' obligations and responsibility,
- the lack of provisions regarding the rules of performing additional and replacement works and their settlement,
- the lack of provisions regulating the introduction of changes to the project documentation at the stage of construction works implementation [10,11],
- the lack of precise arrangements regarding the calculation of contractual penalties for failure to meet the deadline (for delay),
- the excessive amount of contractual penalties on contractor's side,
- the lack of detailed specification of the due date of works and specific milestones,
- the failure to specify the scope of the necessary documentation and the manner of informing the contractor about the activities, requiring his notification or consent,
- the lack of precise specification of the form of settlement (flat rate, cost estimate),
- the lack of detailed regulations regarding the rights under the guarantee and warranty,
- imprecise provisions regarding the contractual parties' security, e.g. the right to withdraw or terminate the contract, compensation, guarantee deposits, etc.,
- the lack of detailed provisions regarding procedures to be followed, for example, for payment of remuneration, reporting defects, accepting works, etc.,
- inconsistency between the provisions of the contract and the provisions contained in its annexes [12].

The above reasons constitute a source of conflicts, sometimes also disputes, often resolved in court [8].

It is possible to indicate the following "groups" of contractual provisions, violating the law or aimed at avoiding it [13]:

1. Imposing on the contractor the obligation of a detailed verification of project documentation or PFU and reporting detected defects at the stage of submitting offers - transferring to the contractor the statutory obligation of the contracting authority. The contracting authority is responsible for the correct preparation of the tender procedure (including the correct project documentation or PFU), and the contractor at the tender stage is not obliged to thoroughly check the delivered project to detect its defects. It is obvious that at the stage of the tender, the contractor does not need to have specialist knowledge in the field of design – he/she must only be able to read the SIWZ correctly and prepare the offer in accordance with the requirements of the ordering party.
2. Transfer of responsibility for defects in the project documentation or PFU to the contractor of construction works after signing the contract. This may mean the need to redesign or improve some structural elements, and consequently extend the original scope of the contract after it is signed, without changing the original price. It is the responsibility of the ordering party to describe of the subject of the order so that the contractor has no doubts about the scope of the contractual obligation and can fulfill the order in accordance with the submitted offer.
3. Charging the contractor with the task of supplementing missing drawings and/or the project documentation required for the implementation of the contract subject. In accordance with applicable law, delivery of a complete and properly prepared project documentation is the responsibility of the ordering party.
4. Imposing on the contractor, at the project planning stage, the detailed examination of the area of the future construction (including checking geological and geotechnical conditions of the ground, geodesic foundations, geodetic inventory of underground and ground utilities and existing facilities). This information should be

provided by the ordering party. Such provision coming from the ordering party "informs" the contractor about investor's failure to comply with the obligation to properly prepare the tender procedure (including the incorrectly prepared documents). Consequently, it may indicate future obstacles in the execution of the contract.

5. Obliging the contractor to execute the orders of the investor's supervision or Engineer (in contracts executed under FIDIC conditions), going beyond the scope of the contract, not being the result of defective or illegally performed work, and/or obliging the contractor to perform works that were not included in the scope of the order and/or which the ordering party has not foreseen at the stage awarding the contract.

This allows to extend the scope of the contract after it has been signed. This type of demands is often based on the reference to the flat-rate nature of remuneration. It is a contractor's obligation to predict and include in the proposed price the size and costs of work unambiguously and comprehensively described by the ordering party. The contractor's remuneration concerns only the scope of the construction works contract. The agreed remuneration is binding for the parties only in the case of a proper description of the order subject (i.e. the scope including all requirements and circumstances that may affect the preparation of the offer). According to the Public Procurement Law (PPL), the scope of the contract is identical to the obligation included in the offer, and the content of the offer is consistent with the SIWZ (including, the description of the subject of the contract). At the stage of submitting the offer, the contractor has the right to assume that the scope of the ordered works is correct and complies with the regulations. This means that all contractual provisions transferring to the contractor the risk of carrying out works not covered by the description of the contract are contrary to the PPL and the rules of social coexistence. If during the construction works defects in the description of the contract subject are identified, the contractor should immediately notify the ordering party about the issue and request their cooperation to determine the method of completing the tasks. The contracting authority is obliged to know exactly its requirements at the tender stage and specify their scope in the project documentation (the "build" variant) or PFU (the "design and build" variant). The contractor signing the contract is obliged to perform, within the agreed remuneration, only the scope of works specified in the contracting documents.

6. Charging the contractor after signing the contract with obligations of the ordering party in the process of preparing and conducting the contract awarding procedure. These duties may concern:

- obtaining the right to use the property for construction purposes,
- performing soil and water tests,
- performing the greenery inventory,
- measurements of road traffic, noise, etc.,
- performing the inventory of objects if they are subject to reconstruction, demolition, etc.,
- obtaining consents, permits or agreements and technical conditions related to the connection of facilities to existing water, sewage, gas, electricity, roads networks, etc.

These activities concern the stage of preparing and conducting the procurement procedure, thus they cannot be transferred to the contractor after signing the contract.

7. Charging the contractor with responsibilities statutorily assigned to the contracting authority, concerning:

- applying to the authorities for a change of the building permit in case of significant changes to the project,
- obtaining the use permit,
- obtaining the consent of the land owners for the provision of land on which the investment will be implemented (transmission easement, e.g. electricity is established only for the benefit of the party who intends to build an electricity network),
- making changes to the projects provided by the contracting authority (the contractor cannot assume any responsibility for the design and the defects of the prepared documentation, because there is no binding contractual relationship based on which the contractor could claim compensation - the "design and build" framework is an exception).

8. Acceptance of the completed works by the ordering party being dependent on circumstances beyond the contractor's control or unrelated to the construction process. One of the basic obligations of the contracting authority is the acceptance of works (object). The acceptance by the ordering party confirms the fulfillment of the obligation and constitutes the basis for the contractor to demand remuneration.



9. Making the payment of the contractor's remuneration dependent on the completion of tasks by entities that are not parties to the contract.
10. Equating of the deadline of work completion with the date of signing the fault-free final acceptance protocol. The acceptance activity is not an element of construction works and according to the provisions of the order, the acceptance is the investor's responsibility. With the exception when the defects prevent the proper use of the object (of agreed scope) or significantly reduce its value (significant defects). Only the significant defects justify the refusal to accept the works or withdraw from the contract and impact the payment claim for the performed work. Other defects (so-called insignificant) mean completion of the obligation in an improper manner in terms of quality. In this case, the investor may demand removal of the defects within a specified time or adequate reduction of the contractor's remuneration. Detected negligible defects should be removed in accordance with the provisions of the order. The investor's right does not affect their obligation for works acceptance and remuneration payment for the object erected in accordance with the design and principles of technical knowledge.
11. Equating the date of works completion with obtaining a permit to using the facility. The application for a permit for the use of the object is within the scope of the investor's statutory obligations. It is possible only after completion and acceptance of executed works. The contractor has no control over the date when the investor reports the object to as ready to use.

3. Allocation of risk in the construction works contracts - examples

In public procurement, the division of risk between the parties of the contract is the responsibility of the procuring entity to draw up the contract for construction works. In case of large non-public orders, usually the investor also edits the content of the future contract. At the stage of preparing a construction project, usually the contracting entities/investors do not have complete information about the future investment [14]. In order to minimize the effects of unforeseen circumstances and potential risks (e.g. the increase in costs), appropriate provisions in the contracts constitute a form of "risk management" [15,16].

In practice, two groups of provisions appear in the construction contracts. These are:

- entries that constitute an unjustified restriction of the contractor's rights,
- entries that constitute an unjustified extension of the contractor's obligations.

The result of the above provisions constitute a transfer of a large share of the risk to the contractor of construction works and a significant breach of their strategic security [17,18].

Referring to the above classification, the authors present selected examples of provisions included in contracts for construction works in public and non-public procurement (table 1, table 2).

Table 1. Examples of entries that constitute an unjustified restriction of the contractor's rights.

Example	Entry
Example 1	<i>"The Contractor declares that he/she has familiarized himself with the Project, Construction Permit and other annexes to the Contract and does not raise any objections to them. The Contractor confirms that the documentation in question is complete in terms of substance, form and enables timely performance of all obligations arising from the content of the Contract".</i>
Example 2	<i>"The Contractor accepts that he/she will not be entitled to any claims and will waive all possible claims against the Ordering Party for any mistakes, inaccuracies, discrepancies or defects in the Design Documentation, including any claim for payment of any increased costs or payments in addition to a contract price or an extension of time to complete as a result of such mistakes, inaccuracies, discrepancies or other defects in the Design Documentation".</i>
Example 3	<i>"In the event of termination of the contract for reasons attributable to the Contractor, the Investor shall not be obliged to pay for the delivered but unmounted devices that are part of the facility's equipment".</i>
Example 4	<i>"The Contractor declares that he/she will not take part in other construction projects, the implementation of which could adversely affect the quality and/or timeliness of obligations performance indicated in the content of this Agreement."</i>

Table 2. Examples of provisions constituting an unjustified extension of the contractor's obligations.

Example	Entry
Example 1	<i>"The Contractor undertakes to perform for the agreed flat-rate remuneration in the amount of (...) of the full scope of works covered by the project documentation, as well as all works not covered by this documentation, which need to be performed in the course of the works."</i>
Example 2	<i>"The Contractor is responsible for the proper planning of the implementation of works and their organization, as well as the coordination of work carried out by Subcontractors indicated by the Investor to carry out selected scope of work related to the investment under separate Contracts".</i>
Example 3	<i>"The Contractor shall pay to the Ordering Party contractual penalties for delay in relation to the intermediate dates specified in the Material and Financial Timetable, for each commenced day of delay in relation to the intermediate term, in the amount of 0.05% of the gross remuneration for the performance of the Contract".</i>
Example 4	<i>"Optimization of documentation, received by the Contractor, shall consist of: (...) preparation of Replacement Documentation in the scope of inconsistent (technically impossible to implement solutions) between individual volumes of Project Documentation (...), preparation of Replacement Documentation in the case of occurrence discrepancy between the existing state and included in the Design Documentation (...)"</i>
Example 5	<i>"The Contractor is obliged to obtain the rights to have the areas available to which the Investor does not have such a right (...), as well as obtain all other Permits required to conduct the Works".</i>
Example 6	<i>"The Contracting authority may request a change in the performance of the subject of the contract, it may consist of performing additional work or omitting some of the work or parts thereof. The amount of remuneration may therefore change".</i>

The above examples of contractual provisions are a form of risk transfer to contractor resulting from improper, unreliable and unprofessional preparation of a construction project by the contracting authority/investor.

4. The social dimension of the asymmetry of the risk distribution in the construction works contracts

When analyzing the content of construction contracts in public procurement, attention should also be paid to the social dimension of the disproportionate risk sharing. From the point of view of the effective spending of public funds, the excessive limitation of contracting parties' own responsibility be the violation of the public interest. According to PPL [2] correctly defined conditions of the procedure should allow for the conclusion of the most economically advantageous contract, ensuring the maximization of effects in relation to the incurred expenditures.

Sometimes the reaction of contractors to an extensive inequality of parties, i.e. deprivation of their rights, results in a significant increase of prices of the submitted offers. In other cases, the contractor's lack of experience in assessing the long-term effects of asymmetrical risk sharing results in the loss of their stability and security. As a consequence it is the cause of conflicts, litigation and an obstacle to the proper implementation of the contract subject [4]. Usually the major disruptions in the implementation of the investment result in a significant increase in costs and an extension of the project completion date.

It is possible to indicate examples of actions undertaken by contractors because of a signed contract for construction works that is a threat to their strategic security caused primarily by the need to bear large additional costs when:

- the contractor requests termination of the contract (e.g. where the parties have agreed a lump sum form of settlement and significant risk occurred, the effects of which have not been included in the offer price),
- the contractor declares bankruptcy (e.g. in the case when a significant risk occurred, and its effects exceed the financial capacity of the contractor),
- the contractor incurs higher costs than assumed, and when the work is completed, he takes his claims to court.

The social dimension of the above situations is very clear. Each of the cases in effect generates an additional expense on the part of the ordering party. In the event of termination of the contract or declaration of bankruptcy by the contractor, the contracting entity must make an inventory of the works already completed and carry out procurement procedures again, in the case of a lawsuit - contracting entity may have to bear significant additional costs.

5. Conclusions

A rational and fair division of risk between parties of a construction contract should be preceded by comprehensive identification, analysis and quantification of possible risks and their consequences. It allows for optimal and effective risk identification and determination of the real price for the project implementation. When preparing a model contract for construction works, many investors are convinced that the application of the appropriate provision results in an effective transfer to the contractor the consequences of unforeseen circumstances. However, it should be borne in mind that in some cases such action is ineffective. To ensure the parties' safety within the contract, the risk should be assigned to the entity that is able to manage it better (control, eliminate, limit) and has a real impact on it. It is possible to achieve due to a properly constructed content of the construction contract, close cooperation of the parties and consistent compliance with the provisions defined therein.

References

- [1] Ustawa z dnia 23 kwietnia 1964 r. Kodeks cywilny (Dz.U. nr 16 poz. 93). 1964.
- [2] Obwieszczenie Marszałka Sejmu Rzeczypospolitej Polskiej z dn. 20 lipca 2017 r. w sprawie ogłoszenia jednolitego tekstu ustawy - Prawo zamówień publicznych, Dz. U. 2107, poz. 1579
- [3] Ustawa z dnia 7 lipca 1994 r. Prawo budowlane (Dz.U. nr 89 poz. 414, z późn. zm). 1994.
- [4] B. Grzyl, Ryzyko wykonawcy robót budowlanych w zamówieniach publicznych, Inż. Bud., no 11, pp. 644–646, 2014.
- [5] B. Grzyl and M. Apollo, Zarządzanie ryzykiem jako element wspomagania działań logistycznych w przedsiębiorstwie budowlanym, Logistyka, no 6, 2011.
- [6] W. Merkwa, Granice swobody umów w zamówieniach publicznych. Zamówienia publiczne. Doradca 197, 2013.
- [7] B. Grzyl, Nieprawidłowości w umowach na roboty budowlane w obszarze zamówień publicznych, Inż. Bud., no 5, pp. 269–272, 2014.
- [8] Z. J. Boczek, Komentarz do realizacji inwestycji budowlanych (robót budowlanych) w inwestycjach komercyjnych i zamówieniach publicznych w tym z wykorzystaniem Warunków Kontraktowych FIDIC. Euroinstytut Europejski Instytut Ekonomiki Rynków, 2015.
- [9] M. Apollo and J. Brzezicka, Sources of investment risk in urban regeneration projects, Czas. Tech., no 1–B, 2014.

- [10] M. Kurpińska and T. Ferenc, Application of lightweight cement composite with foamed glass aggregate in shell structures, w *Shell Structures: Theory and Applications*, Vol. 4, CRC Press/Balkema, 2018, pp. 549–552.
- [11] M. Kurpińska and T. Ferenc, Effect of porosity on physical properties of lightweight cement composite with foamed glass aggregate, presented on II International Conference of Computational Methods in Engineering Science (CMES'17), 2017, pp. 1–5.
- [12] J. Judycki, J. Alenowicz, B. Dołżycki and M. Pszczoła, Nieład i brak spójności w polskiej terminologii nawierzchni podatnych i półsztywnych, *Drogownictwo*, no 11, pp. 351–358, 2012.
- [13] Z. J. Boczek, Realizacja inwestycji budowlanych w systemie zamówień publicznych oraz procedur Fidic. European Institute Publisher *European Market Economics*, 2015.
- [14] E. Plebankiewicz, Construction contractor prequalification from Polish clients' perspective, *J. Civ. Eng. Manag.*, no 16.1, pp. 57–64, 2010.
- [15] M. Apollo and M. W. Kembłowski, Modelowanie ryzyka inwestycyjnego przy użyciu OOBN, *Mater. Bud.*, no 6, pp. 48–49, 2016.
- [16] P. Tworek, Ryzyko wykonawców przedsięwzięć inwestycyjnych. Akademia Ekonomiczna w Katowicach, 2010.
- [17] M. O'Reilly, *Civil engineering construction contracts*. Thomas Telford, 1999.
- [18] M. W. Kembłowski, B. Grzyl and A. Siemaszko, Game Theory Analysis of Bidding for a Construction Contract, *IOP Conf. Ser. Mater. Sci. Eng.*, Vol. 245, no 6, 2017.