



Available online at www.sciencedirect.com

ScienceDirect





Contemporary Issues in Business, Management and Education 2013

Causes of conflicts in a construction industry: a communicational approach

Sigitas Mitkus^{a*}, Tomas Mitkus^a

 $^aVilnius\ Gediminas\ technical\ university\ (VGTU),\ Saul{\'e}tekio\ al.\ 11,\ LT-10223\ Vilnius,\ Lithuania$

Abstract

The article analyses the causes of conflicts arising between client and contractors in the construction industry. An analysis of articles on this topic has revealed that most of contemporary authors refer to externally visible signs of conflicts as to the causes thereof. The authors of the present article look at the conflict in construction in a different light – from the aspect of communication. A construction contract agreement which regulates the relationships between the client and the contractor is also viewed as a product of communication. The authors hypothesize that the main cause of conflicts in the construction industry is unsuccessful communication between the client and the contractor. The hypothesis has been confirmed by the conducted research studies. In addition, unfair behavior of the parties to a construction contract agreement and psychological defense mechanisms have been also identified as likely causes of conflicts in the construction industry.

© 2014 The Authors. Published by Elsevier Ltd. Open access under CC BY-NC-ND license. Selection and peer-review under responsibility of the Contemporary Issues in Business, Management and Education conference.

Keywords: dispute; construction industry; conflict; contract; communication.

1. Introduction

Successful implementation of a construction project usually requires huge funds. In fact, the construction sector in Europe is the major client for a number of people and one of the largest generators of domestic product in European countries (Brauers & et al. 2012).

^{*} Corresponding author. Tel.:+370-699-466-25. *E-mail address*: sigitas.mitkus@vgtu.lt

Construction conflicts affect the interests of many stakeholders in connection with big investments; they reduce profits and are therefore very expensive and unprofitable (Awakul & Ogunlana, 2002). However, the stakeholders become increasingly dissatisfied with the legal methods of construction conflict resolution (Stipanowich & Matthews, 1997). As a result, the existing confrontational culture often determines a reduction in labour efficiency and an increase in production costs (Ng *et al.* 2002). Finally, Yiu and Cheung (2006) stated that, in the construction industry, conflicts sometimes seem inevitable due to high differences in interests among the participants of construction projects.

The authors of the article do not believe it is possible or worthwhile trying to find a magic formula enabling elimination of (all) causes of conflicts. According to Refe, Acharya and Lee (2006), conflicts do not exist in the ideal world of construction, but the ideal world of constructions does not exist itself. Yiu and Cheung (2006) felicitously add that in the construction industry conflicts sometimes seem inevitable due to high differences in interests among the participants of construction projects. Due to an inherent nature of conflicts in construction projects, it is very difficult to maintain the atmosphere of co-operation during the process of construction (Fenn et al. 1997). Similarly, Gudiene, Banaitis & Banaitiene (2013) argue that there is no standard used in the construction industry to define a successful project. Therefore, each project is unique. On the other hand, the course of the project and the existing circumstances can be differently interpreted by each and any construction project management team.

Many articles on conflicts and disagreements in the construction industry exclusively deal with the circumstances characterising a conflict and tend to ignore the causes thereof or erroneously present relevant circumstances as causes. The authors of the article hypothesise that the true cause of construction-related conflicts is unsuccessful communication between/among the participants in a construction project. The aim of this article was to test the hypothesis and it has been confirmed by the conducted research. It should be noted that the authors of the article present quite an innovative attitude to the causes of conflicts and disagreements; or, at least there have been no analysis of construction-related conflicts from this aspect in the scientific literature. This can be explained by the fact that most of authors analysing conflicts in the construction industry are experts either in construction production or administration. They clearly see the external characteristics of conflicts, but without expertise in law or communication they are not able to see the communication or legal aspect of this phenomenon. On the other hand, representatives of communication and law who have no expertise in the specifics of construction projects often bypass the issue of conflicts in the construction industry. In authors' view, these circumstances created a situation where construction-related conflicts are not analysed as a problem of communication. This article namely examines conflicts in the construction industry and identifies the true causes thereof.

In this article, construction is understood as a process with the following key players: client, contractor, sub-contractor, designer, construction technical supervisor. However, the analysis is focused on conflicts between the parties directly participating in the construction process, i.e., between the client and the customer. By analogy, research results may apply to the relations between the contractor and the subcontractor as they are in essence similar to those between the client and the contractor. It should be noted that the authors refrain from the analysis of the relations (conflicts) between/among other participants of construction projects such as executives, workers and other staff members of the contractor and the client, public administration entities, designers, experts, etc.

The meaning of, and the conceptual distinction between, the terms *conflict* and *dispute* often lacks clarity. The meaning of these terms has been graphically revealed by Acharya and Lee (2006) (see Fig. 1). Fenn *et al.* (1997) has drawn a parallel between a conflict and disease which exists wherever it is conflict of interest, irrespective of whether or not claims have been submitted. A claim means a request by one party to another party for certain acts, usually compensation for losses. A conflict can be managed, the requests of a claim can be regulated and a dispute, which in this case means litigation, can be avoided. Of course, alternative dispute resolution (ADR) is also possible.

A dispute must be resolved; it cannot be managed. Disputes are usually resolved by third parties (courts, arbiters). Many authors dealing with construction processes contend in one way or another that the relationship between/among the parties to a construction project are harsh and very often mature to conflicts and litigation (Tazelaar & Snijders, 2010).



Fig. 1. Risk, conflict, claim and dispute continuum model. Acharya and Lee (2006)

The concept of a *dispute pyramid* as a useful tool to analyse dispute resolution was first introduced and schematised by Sarat (1984) (see Fig. 2). Tazelaar and Snijders (2010) explored contractor – subcontractor relations in the Netherlands. Data for the Sarat's (1984) pyramid was obtained from 448 transactions.

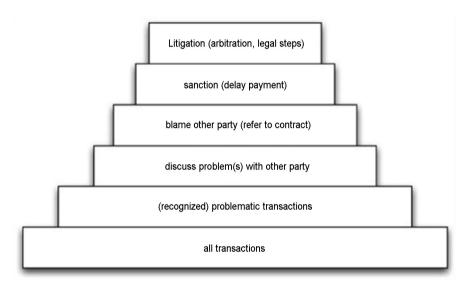


Fig. 2. Sarat's pyramid of conflict (1984)

2. Review of the causes of conflicts as used in the literature

Acharya and Lee (2006) have investigated the key factors of conflicts in the Korean construction industry. Acharya and Lee (2006) divided the causes of conflicts into 5 groups by the conflict initiator (Fig. 3).

Acharya and Lee (2006) have found out six critical construction conflicting factors in Korea.

These critical causes of conflicts are described by Acharya and Lee (2006) as follows:

- Differing site condition
- Local people obstruction
- Difference in change order evaluation

- · Errors and omission in design
- Excessive quantity of works
- Double meaning in specification

It is a common case in construction that the contractor is regularly looking for cheaper building materials and trying to obtain client and designers consent to replace the materials in the construction design in order to reduce the cost price of construction works. This circumstance was identified by Acharya and Lee (2006) as the cause of conflicts in construction projects.

Owner	Confusing requirements of owner	Lack of space in construction site	
	Excessive change orders	Financial failure of owner	
	Supremacy of owner/consultant	Unbalanced risks	
	Project scope definition not clear	Owner furnished material	
	Site access delays	Delay in decision by owner	
	Late handover of construction site	Delay in running bill payment	
	Owner-furnished equipment		
Consultant	Errors and omission in design	Specification related	
	Excessive extra work	Defective design	
	Differing site condition	Excessive quantity variations	
Contractor	Financial failure of contractor	Subcontractor inefficiency	
	Excessive change orders	Non-payment to subcontractor	
	Incompetent contractor	Mentality of contractor	
	Major defects in maintenance	Defective construction (quality)	
	Local people interruptions/protests		
Third party	Change in government codes	Market Inflation	
	Labor disputes/union strikes	Public disorder	
	Adverse weather/acts of god	Third party delays	
Other	Conflicts in document	Environmental hazards	
	Change order negotiation	Excessive correspondence	
	Issue of security of construction site	Inadequate administration of project participants	
	Lack of communication	Material testing technique	
	Accident/safety	Difference in construction technique	
	Interpretation of escalation/de-escalation	Acceleration or suspension of work	
	Necessity of environment improvement	Negligence or negative attitudes of project participants	

Fig. 3. Common construction conflicting factors (risks). Acharya and Lee (2006)

The causes of conflicts and disputes mentioned in different literature sources have been systematised by Lowe, *et al.* (2010), and expended by the authors. The results of this research are presented in Table 1.

Table 1. Literature and the sources of disputes

Research			Sources of dispute	
Blake Dawson Waldron	1.	Changes of conditions	5.	Law
(2006)	2.	Interpretation	6.	Access to construction site
	3.	Workplace conditions	7.	Access to materials
	4.	Communications		
Cheung & Yiu (2006)	1.	Management	3.	People
	2.	Communication	4.	Contract documents
Yiu & Cheung (2007)	1.	Delay	2.	Unrealistic expectations
Killian (2003)	1.	Change Orders	3.	Pre-Construction
	2.	Pre-Award Design	4.	Quality Assurance
Mitropoulos & Howell	1.	Uncertainty	3.	Opportunistic behavior
(2001)	2.	Contractual problems		
Kumaraswamy (1997)	1.	Changes of conditions	6.	Management
	2.	Changes of scope	7.	Delay
	3.	Design	8.	Communications
	4.	Unpredictability	9.	Unrealistic expectations
	5.	Contract documents		
Colin et al. (1996)	1.	Payment	4.	Negligence
	2.	Performance	5.	Quality
	3.	Delay	6.	Administration
Sykes (1996)	1.	Misunderstanding	2.	Unpredictability
Bristow & Vasilopoulos	1.	Unrealistic expectations	4.	Lack of team spirit
(1995)	2.	Contract documents	5.	Changes
	3.	Communications		
Diekmann et al. (1994)	1.	People	3.	Product
	2.	Process		
Heath et al. (1994)	1.	Change of scope	4.	Distribution
	2.	Change in conditions	5.	Acceleration
	3.	Delay	6.	Termination
Rhys-Jones (1994)	1.	Management	6.	Tendering pressures
	2.	Culture	7.	Law
	3.	Communication	8.	Unrealistic expectations
	4.	Design	9.	Contracts
	5.	Economics	10	. Workmanship
Sample <i>et al.</i> (1994)	1.	Acceleration	3.	Whether
	2.	Access	4.	Changes
Watts & Scrivener (1992)	1.	Change	3.	Delay
	2.	Law		-
Hawitt (1991)	1.	Change of scope	4.	Delay
	2.	Change of condition	5.	Disruption
	3.	Acceleration	6.	termination

3. Analysis of the causes of conflicts in construction as described in the literature

The causes of conflicts in the construction industry identified in the reviewed literature raise certain doubts as to justification thereof. To identify the causes of conflicts in construction authors basically use one key research method, i.e., questionnaire of construction participants, and express their subjective opinions on the given issue. Disregard of psychological and communication aspects also put findings of these authors into question, not mentioning that their respondents were not experts in psychology (it is not common for psychologists to be involved in construction processes).

It is hypothesised that the causes of conflicts referred to in the literature and in this article above are not the true and original causes. Without going into more detail about each cause of conflicts indicated by the above-quoted authors, all the aforementioned causes of construction conflicts can be classified into the following groups:

- 1) Obviously wrong causes
- 2) Potentially right but unclearly formulated causes
- 3) True causes of conflicts

Obviously wrong causes. These include the following causes of construction-related conflicts quoted in the literature: imprecise specification of works, change of construction conditions, changes in the scope of works, conditions on a construction site, change of equipment, improper choice of workers, etc. All these causes represent factual circumstances objectively inherent in construction.

The circumstances above occur in many construction projects. Construction conditions (climate, soil, legal, etc.) often change, the client often modifies design solutions for constructions in progress, construction phases are delayed for different reasons, etc. Yet, these circumstances not always mature into conflicts. This leads to the conclusion that the aforementioned circumstances are not the true and original causes of conflicts which will follow in this article below.

Potentially right but unclearly formulated causes. Some of the circumstances referred to in the literature might be identified as the true causes of conflicts if they are clearly formulated. These should include, for instance, poor management, influence of lawyers, insufficiency of initial (and timely) information. The quoted literature sources do not specify how in particular the indicated causes can mature into conflicts. However, it is probable that in some cases they can lead, whether directly or indirectly, to a construction conflict. For example, there are no details provided as to specific practices of managers and/or lawyers that predetermine conflicts, etc.

True causes of conflicts. According to the authors of this article, some causes quoted in the literature can be qualified as the true causes of conflicts. These include poor communication (presence of noise in communication). Further in this article the authors provide the arguments corroborating the hypothesis that namely problems in communication are the true and most frequent causes of conflicts in construction projects.

4. Construction contract agreement as a product of communication process

In the context of construction conflicts, it should be noted that the parties to a construction contract agreement are bound by the contract. Their activities and relationships are regulated by the contract and law. It is namely the contractual and legislative regulatory environment where conflicts rise in performance of construction projects.

Article 6.162(1) of the Civil Code of the Republic of Lithuania says that a contract is concluded either by the proposal (offer) and the assent (acceptance). In case of negotiated contracts, the process of concluding a contract is much more complicated and involves multiple exchange of proposals (offers) between the parties. Client and Contractor receives an offer, but instead of accepting it, sends back a modified version of the offer. This process is schematised in Fig. 4.

Without going into more detail in this article (Mitkus 2013), the information in the diagram is sufficient to conclude that the content of a contract (a totality of the rules of conduct for the parties) is defined in the process of communication.

Accordingly, the conduct of the parties to a construction process is regulated by the rules of conduct conducted by the parties themselves in the process of communication. Such a conclusion is obviously supported by the case-law of the Republic of Lithuania. The Supreme Court of Lithuania (2007) has stated that:

The essence of a contract is an agreement reached between the parties, i.e., a consensus, coincidence of their will. Article 6.162(1) of the Civil Code of the Republic of Lithuania reads that a contract is concluded either by the proposal (offer) and the assent (acceptance) or by any other actions of the parties that are sufficient to show their agreement. Therefore, there is a common rule that an agreement is reached by exchange of an offer and acceptance between the parties.

<..>

Within the meaning of Article 6.159 of the Civil Code, an agreement of the parties is sufficient for the contract to be valid. The form of a contract is important only in cases set in the agreement or when prescribed by the law.

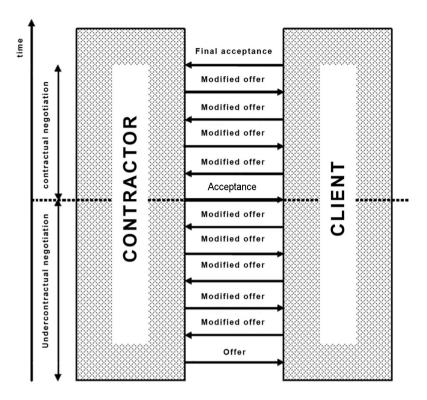


Fig. 4. Negotiation model for contract between the contractor and the client. Mitkus (2010)

The fact of the content of a contract, i.e., the rules of conducts of the parties, being determined by the agreement reached between the parties in the process of communication rather than by formal written provisions (e.g., a document signed by the parties) is also evidenced by the rules of interpretation of contracts laid down in Article 6.193 of the Civil Code (2000).

Special attention should be paid to the provision in Article 6.193(1) of the Civil Code reading that, in interpreting a contract, it shall be necessary to primarily seek for the real intentions of the parties rather than for the literal meaning of the words in the contract. In addition, attention should be paid to the provision in Article 6.193(4) stipulating that in the event of doubt over conditions of a contract, they shall be interpreted, to a certain extent, against the contracting party that has suggested improper (unclear) contractual provision (formulation) in the process of communication, i.e., the party primarily responsible for the unsatisfactory result of the communication process.

5. Identification of the cases of conflicts in construction projects

As it was found out (hypothesised) above, the causes of conflicts in the construction industry quoted in the literature are not the true causes. Such a conclusion (hypothesis) was drawn taking into account that the circumstances identified as the causes of conflicts exist in numerous construction projects and not always mature into conflicts. In order to substantiate this hypothesis, it is necessary to identify the true cause(s) of conflicts in the construction industry.

As it was found out above, the conduct of the parties to a construction project is regulated by their mutual communication product, i.e., construction contract agreement. It means that the parties shall agree in a contract (result of the communication process) on the rules of their conduct in case of various events and/or occurrence of various unexpected circumstances.

Let us analyse one of the alleged causes of conflicts given by an above-quoted author — construction site conditions. Let us suppose that in the process of a construction project the level of underground water is found to be excessively high meaning that a number of additional works will be necessary: pumping of water out of the foundation pit, installation of drainage systems and additional waterproofing, etc. Should these circumstances be qualified as the causes of conflict? Definitely not. No conflict should arise if the parties properly agree on the allocation of risks. All relevant costs should be borne by the party who has assumed the risk for such circumstances to occur. For instance, if the contract stipulates that the contractor undertakes to erect a building for the agreed price irrespective of construction site conditions, all and any costs related to the emergence of the mentioned circumstances should be carried by the contractor.

In the given case, a conflict will rise only if the parties have failed to agree or vaguely formulated the provisions regulating the coverage of additional costs by the parties. It is quite a common case in practice: the contractor believes the client is responsible for compensation of additional costs, while the client is of the opinion that the contractor is obliged to perform the additional works at his own cost and expense. It means that the conflict should be sourced not from the site conditions as it is indicated in the cited literature, but from poor communication between the contractual parties (unclear agreement of contractual terms and conditions).

We would arrive at exactly the same situation if we analyse other causes referred to in the quoted literature as the causes of conflicts in construction projects. Let us take quality-related conflicts. It is not the quality of performance that causes a conflict in practice. If the requirements for the quality of works are clearly and duly agreed by the parties to the contract, the contractor responsible for the substandard performance should eliminate defects or reduce the price for the works. However, in practice conflicts usually occur as a result of the parties' failure to agree whether the works performed are of good or substandard quality. It means that the parties have failed to agree on the quality requirements applicable to constructions works in the process of communication and now they apply different criteria to judge on the workmanship. Accordingly, the true cause of the conflict is the poor communication process rather than the poor workmanship.

Now let us look at delays in performance. In this case, again, conflicts originate not from delays but from the attitude of the parties to consequences to be caused by delays. Sanctions applicable to a party responsible for delays (including termination of the contract) should be duly agreed in a contract. If the rules of conduct (application of sanctions) are properly (clearly) agreed in the process of communication, there is no room for conflicts. In the given case conflicts arise where the rules of conduct upon delays in performance are not clearly set, i.e., the cause of conflicts is an unsuccessful communication process.

If we analyse other alleged causes of conflicts in construction projects referred to in the literature, we would arrive at the same result, i.e., the true causes of conflicts would be unsuccessful communication processes. It should be further noted that improper communication may lead to conflicts not only upon entering into construction contracts, but also during the fulfilment thereof. Due to the limited scope of the article, effects of communication noise on contract performance shall not be analysed in this article.

There has been no research conducted to find out the share of conflicts in construction projects caused by unsuccessful communication processes. However, basing on practical experience, this cause may account for more than 90 per cent of total conflicts in the construction industry (Mitkus, 2013).

In addition to the aforementioned main cause of conflicts in construction projects, the following causes can be identified:

- Unfair behaviour
- Effects of psychological defences

Unfair behaviour. The current legal framework in the Republic of Lithuania has many gaps, allowing for abuses by unfair participants of construction projects. Even clearly defined contractual provisions can be deliberately misinterpreted by the unfair party. In addition, there are instances of false presentation of facts and other similar abuses. The following example of unfair behaviour, which is identified as the cause of conflict, is quite typical in the conditions of economic downturns. The client becomes short of money to pay the contractor for the construction works done. Instead of recognising this fact, the client starts sending unreasonable claims to the contractor, arguing that payments are delayed due to, for instance, poor workmanship, late performance, incorrect materials used, etc.

Then the client continues to make use of imperfections in the legal system by entering into litigation proceedings that last for several years, using the money he had to pay to the contractor (it is quite common that the client is not able to take a loan from a bank due to financial difficulties of the client). Falsification of documents, discontinuation of works after receipt of payment, hiding, etc. are other instances of unfair behaviour of the parties.

Effects of psychological defences. Having reviewed judicial conflicts between clients and contractors, the authors of the article have also identified such cases when one of the parties ingenuously denies and/or opsposes obvious facts. For example, the contractor denies the likelihood of defects to have appeared due to poor workmanship. Court order to compensate for damages would actually ruin the contractor's undertaking and he cannot accept it. This is difficult psychologically. According to the authors, in the given case we can see negation as a psychological defence mechanism which is sought to protect the self-respect and self-esteem of the person. Ketola (2006) argues that psychological defences protect the self-esteem and moral integrity of the person even at the expense of sacrificing the morality of actions. Therefore, it is necessary to take into account that it can be subconscious efforts of the party (individual person or corporation) responsible for the conflict to protect themselves from anxiety caused by internal and external environmental pressures (Brown, 1997; Brown and Starkey, 2000; De Board, 1978). Accordingly, the effects of psychological defences can be identified as the cause of conflict in this context. There certainly are more psychological defences that could be identified as the cause of conflicts. However, they are not analysed in this article due to its scope limitations.

6. Conclusions

Disputes between the parties to construction projects are of great concern to the industry. Both the study of construction industry disputes, and the causes of those disputes, is essential. Having analysed publications addressing disputes in construction projects, the authors arrived at the conclusion in this article that externally visible circumstances of conflict are usually identified in the contemporary scientific literature as the causes of conflicts. In this article, a construction contract agreement is analysed as a product of communication between the parties to a construction contract agreement. The research has revealed that a contract allowing a room for being differently (subjectively) interpreted by the parties constitutes the main cause of conflicts in construction projects. It means that the most frequent cause of construction conflicts is unsuccessful communication between the parties to a construction contract agreement. Due attention to the drawing up of construction contract agreements would create strong immunity against pandemic conflicts and disputes. Other causes of conflicts in the construction industry identified in this article include unfair behaviour of construction participants and psychological defence mechanisms.

References

Acharya, N. K., & Lee, Y. D. (2006). Conflicting factors in construction projects: Korean perspective. Construction and Architectural Management, 13 (6), 543–566. http://dx.doi.org/10.1108/09699980610712364

Acharya, N. K., Lee, Y. D., & Kim, J. K. (2006 A). Critical construction conflicting factors identification using analytical hierarchy process, KSCE Journal of Civil Engineering (Korean Society of Civil Engineers), 10 (3), 165–174. http://dx.doi.org/10.1007/BF02824057

Awakul, P., & Ogunlana, S. O. (2002). The effect of attitudinal differences on interface conflicts in large scale construction projects: a case study, Construction Management and Economics, 20 (4), 365–377. http://dx.doi.org/10.1080/01446190210133456

Brauers, W. K. M., Zavadskas, E. K., Kildienė, S., Kaklauskas, A. (2012). Multiple criteria decision support system for assessment of projects managers in construction, *International Journal of Information Technology & Decision Making*, 11 (2), 246–258.

Bristow, D., & Vasilopoulos, R. (1995). The new CCDC 2: facilitating dispute resolution of construction projects, *Construction Law Journal*, 11 (2), 95–117.

Brown, A. D. (1997). Narcissism Identity and Legitimacy, Academy of Management Review, 22 (3), 643-686.

Brown, A. D., & Starkey, K. (2000). Organizational Identity and Learning: A Psychodynamic Perspective. *The Academy of Management Review*, 25 (1), 102–120.

Cheung, S. O., & Yiu, T. W. (2006). Are construction disputes inevitable?, *IEEE Transactions on Engineering Management*, 53 (3), 456–470. http://dx.doi.org/10.1109/TEM.2006.877445

Civil Code of the Republic of Lithuania (2000). Valstybės Žinios. No. 74-2262.

Colin, J., Langford, D., & Kennedy, P. (1996). The relationship between construction procurement strategies and construction contract conflicts, Proceedings of the CIB W-92 Procurement Symposium, North Meets West, 14–16 January, Durban, South Africa.

De Board, R. (1978). The Psychodynamics of Organizations. Tavistock, London.

Diekmann, J. E., Girard, M. J. & Abdul-Hadi, N. (1994). Dispute Potential Index: A Study into the Predictability of Contract Disputes, Construction Industry Institute, Boulder, CO.

Fenn, P., Lowe, D., Speck, C. (1997). Conflict and dispute in construction. Construction Management and Economic, 15 (6), 513-528. http://dx.doi.org/10.1080/014461997372719

Fisk, E. R. (2000), Construction Project Administration, 6th ed., Prentice-Hall, Upper Saddle River, NJ.

Gudiene, N., Banaitis, A., & Banaitiene, N. (2013). Evaluation of critical success factors for construction projects – an empirical study in Lithuania, *International journal of strategic property management*, 17 (1), 21–31.

Heath, B., Hills, B. & Berry, M. (1994). The Origin of Conflict within the Construction Process, CIB Publication 171, First Plenary Meeting of TG-15, The Netherlands.

Hewitt, J. (1991). Winning Construction Disputes: Strategic Planning for Major Litigation, Ernst and Young, London.

Ketola, T. (2006). Corporate Psychological Defences: An Oil Spill Case. Journal of Business Ethics, 65, 149–161. http://dx.doi.org/10.1007/s10551-005-4175-4

Killian, J. (2003). A forensic analysis of construction litigation, US Naval Facilities Engineering Command, unpublished Master's thesis, Texas University at Austin, Austin, TX.

Kumaraswamy, M. (1997). Conflicts, claims and disputes, Engineering, Construction and Architectural Management, 4 (2), 95–111. http://dx.doi.org/10.1108/eb021042

Lowe, P., Davis, P., Ellis, J., & Cheung, S. O. (2010). Dispute causation: identification of pathogenic influences in construction. *Engineering*, *Construction and Architectural Management*, 17 (4), 404–423. http://dx.doi.org/10.1108/0969981011056592

Meidutė, I., & Paliulis, N. K. (2011). Feasibility study of public-private partnership, *International Journal of Strategic management*, 15 (3), 257–274

Mitkus, S. (2008). Formalism in contractual business relations in the context of transformation: The case of Lithuania. *Transformations in business & economics*, 7, 49–66.

Mitkus, S. (2010). Construction contract: theory and practice. Vilnius. 48 p.

Mitropoulos, P., & Howell, G. (2001). Model for understanding preventing and resolving project disputes, ASCE Journal of Construction, Engineering and Management, 127 (3), 223–231. tp://dx.doi.org/10.1061/(ASCE)0733-9364(2001)127:3(223)

Ng, S. T., Rose, T. M., Mak, M., Chen, S. E., (2002). Problematic issues associated with project partnering-the contractor perspective. International Journal of Project Management, 20 (6), 437–449. http://dx.doi.org/10.1016/S0263-7863(01)00025-4

Rhys-Jones, S. (1994). How constructive is construction law? Construction Law Journal, 10 (1), 28-38

Sarat, A. (1984). The litigation explosion, access to justice, and court reform: examining the critical assumptions. *Rutgers Law Review 37*, 319–336.

Semple, C., Hartman, F., & Jergeas, G. (1994). Construction claims and disputes: causes and cost/time overruns, ASCE Journal of Construction, Engineering and Management, 120 (4), 785–795. http://dx.doi.org/10.1061/(ASCE)0733-9364(1994)120:4(785)

Stipanowich, T. J., & Matthews, W. L., (1997). At the cutting edge: conflict avoidance and resolution in the US construction industry, Construction Management and Economics, 15 (6), 505–512. http://dx.doi.org/10.1080/014461997372700

Supreme Court of the Republic of Lithuania (2007). Civil case No. 3K-7-216/2007

Sykes, J. (1996). Claims and disputes in construction, Construction Law Journal, 12 (1), 3-13.

Tazelaar, F. & Snijders, C. (2010). Dispute resolution and litigation in the construction industry. Evidence on conflicts and conflict resolution in The Netherlands and Germany. *Journal of Purchasing and Supply Management*, 16 (4), 221–229. http://dx.doi.org/10.1016/j.pursup.2010.08.003

Waldron, B. D. (2006). Scope for Improvement: A Survey of Pressure Points in Australian Construction and infrastructure Projects. A Report Prepared for the Australian Constructors Association, Blake Dawson Waldron, Sydney.

Watts, V. M. & Scrivener, J. C. (1992). Review of Australian building disputes settled by litigation, in Fenn, P. and Gameson, R. (Eds), Construction Conflict Management and Resolution, E & FN Spon, London, 209–218.

Yiu, K. T. W., Cheung, S. O. (2006). A catastrophe model of construction conflict behaviour. Building and environment, 41, 438–447. http://dx.doi.org/10.1016/j.buildenv.2005.01.007

Yiu, K. T. W., & Cheung, S. O. (2007). Behavioral transition: a framework for construction conflict-tension relationships, IEEE Transactions on Engineering Management, 54 (3), 498–505. http://dx.doi.org/10.1109/TEM.2007.900784