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Analysis of Legal Issues and Solutions Regarding Contractual Disputes in Architectural Projects With an Approach to Disputes Between the Architect and the Structural Engineer

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Abstract

Architectural projects, as one of the most complex technical and artistic processes in the construction industry, are always subject to contractual disputes among various professionals, including the architect and the structural engineer. The multidimensional nature of these projects and the convergence of economic, aesthetic, and technical interests create the basis for conflicts in interpreting the provisions of the contracts and the limits of the parties' authority. This research aims to analyze the legal aspects of contractual disputes between the architect and the structural supervisor and to provide practical and legal solutions to reduce such disputes, using a descriptive-analytical method and document analysis. In this regard, while examining Iranian laws and regulations, including the Civil Code, the Executive Regulations of the Engineering and Building Control System, and arbitration procedures in construction contracts, weaknesses in contract preparation and implementation have been identified and analyzed. The findings show that the lack of transparency in defining the limits of responsibility, the lack of uniform contractual models, and the weakness of legal training for architects and supervisors are among the main factors that cause disputes. Finally, solutions such as drafting standard contracts, forming specialized arbitration committees, and strengthening professional legal training are suggested.

Keywords: Contractual disputes, Architectural projects, Professional liability, Engineering law, Technical arbitration, Structural supervisor.

1 | Introduction

Architectural projects, especially in medium- and large-scale projects, are the result of interaction and cooperation among specialists from different fields of knowledge. Among them, the architect plays a key role

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as the leading designer and coordinator of the building's aesthetic and functional aspects, and the structural engineer is responsible for technical and safety controls. However, differences in perspectives, conflicts of interest, overlapping duties, and the lack of a clear contractual system lead to professional disputes between these two groups.

In the Iranian legal system, although the Civil Code and the regulations of the engineering system determine the general framework of professional relations, interpretative ambiguities and the lack of unified legal procedures have often led to lengthy lawsuits before judicial authorities or engineering system commissions. Therefore, analytical review and provision of practical solutions for these types of disputes are effective not only in improving the quality of architectural projects, but also in reducing the legal and time costs of projects [1].

This article seeks to analyze the factors that lead to contractual disputes in architectural projects, using an interdisciplinary (legal-technical) approach, and, relying on legal documents and professional experiences, to provide a framework for the effective prevention and resolution of these conflicts.

2| Theoretical Foundations and Research Background

2.1| Legal Foundations of Contractual Relationships in Architectural Projects

In the Iranian legal system, the primary basis for contractual relations between project actors is the Civil Code and its related regulations. Article 10 of the Civil Code accepts the principle of freedom of contract, and the parties may include any legitimate obligation that does not conflict with mandatory law in the contract. In architectural projects, the contract between the architect and the client on the one hand, and the supervision contracts on the other, are also covered by this principle [2], [3].

However, due to the multifaceted nature of architectural projects and the intersection of technical and artistic tasks, it is insufficient to rely solely on general contract rules. Specific regulations, such as Section 2 of the National Building Regulations (Administrative Regulations), the Executive Regulations of the Engineering and Building Control Law of 1975, and the Civil Liability Law of 1939, have provided more specific frameworks for determining the limits of the professional liability of the architect and structural supervisor.

According to these regulations, the structural engineer is responsible for controlling the quality of materials, ensuring compliance with the plans, and complying with safety regulations, while the architect is responsible for the design, coordination of functional components, and ensuring the aesthetic and functional aspects of the building. However, in practice, the boundary between “technical supervision” and “design decision-making” is not always clear, and this is considered the primary source of disagreement [1], [4].

2.2| Research Background

In domestic studies, few interdisciplinary studies have examined contractual disputes in architectural projects.

O'Connor [5], in a study titled "Architectural services during construction," highlights the weakness of the legal system in clearly defining the respective roles and responsibilities of the supervisor and the architect.

Saeb et al. [6], in their article "A mechanism for dispute resolution in the Iranian construction industry," propose the development of standard form contracts within the Iranian architectural industry to reduce contractual ambiguities and professional disputes.

At the international level, authoritative documents such as the FIDIC and AIA contracts provide well-defined models for distinguishing the professional roles and obligations of architects and engineers, which can serve as adaptable references for the drafting of domestic contracts [7].

A review of the past shows that the weakness in the engineering law education system and the lack of specialized arbitration authority in architectural disputes are two central factors in the persistence of contractual conflicts.

3 | Methodology (Research Methodology)

3.1 | Type of Research

This research is descriptive-analytical and aims to identify and analyze the legal differences between architects and structural supervisors in architectural projects. The research approach is applied, meaning its findings can be used to prepare professional contracts and reform legal structures in the construction industry.

3.2 | Data Collection Method

The information required for the research was collected from two primary sources:

- I. Library and document resources: including civil laws, engineering regulations, national building regulations, domestic and international scientific articles, and legal procedures related to construction lawsuits.
- II. Semi-structured interviews: with 15 official judicial experts, architectural engineers, and structural inspectors in Tehran province, to examine real-life experiences in the field of contractual disputes.

3.3 | Data Analysis Method

Qualitative data from interviews and legal texts were analyzed using thematic analysis. In this process, primary themes such as “ambiguity in the contract”, “overlapping duties”, “lack of effective arbitration system”, and “weakness of legal education” were first extracted. Similar themes were then categorized into three principal axes [8], [9]:

- I. Legal structural factors.
- II. Technical and executive factors.
- III. Cultural and educational factors.

3.4 | Population and Statistical Sample

The study's statistical population included architects, structural inspectors, and engineering law experts in major cities in Iran (Tehran, Isfahan, Mashhad, and Shiraz). Given the qualitative nature of the research, a purposive sampling method was used to select individuals with direct experience with contractual disputes.

4 | Analysis of Findings

4.1 | Overall Analysis of Qualitative Data

Based on interviews with experts and a review of legal texts, it was determined that disputes between the architect and the structural engineer often arise on four principal axes [4], [10]:

- I. Ambiguity around authority and responsibilities.
- II. Interference in the technical decision-making process.
- III. Disagreement in the interpretation of the terms of the contract.
- IV. Lack of an effective system for resolving disputes.

Content analysis of the data showed that more than 70 % of disputes stem from weaknesses in contract drafting and inconsistencies between technical and legal requirements.

Table 1. The main factors of disagreement between the architect and structural engineer.

Row	The Cause of the Dispute	Percentage of Observed Frequency in Samples	Additional Explanation
1	Ambiguity in the description of services and responsibilities	35 %	Lack of clear separation between design and monitoring duties
2	Different interpretation of the contract	25 %	Weakness in drafting legal clauses and technical terms
3	Disagreement over the quality of execution	20 %	The difference in technical criteria between an architect and a supervisor
4	Deficits in interprofessional communication	12 %	Lack of regular coordination meetings
5	Weaknesses of the arbitration and dispute resolution system	8 %	Late referral to judicial authorities or the Engineering System Commission

4.2 | Legal Analysis of the Factors of the Dispute

In accordance with the principles contained in the Civil Code and the Engineering System Regulations, each of the above factors is rooted in specific legal weaknesses:

Contractual ambiguity: the lack of a clear definition of "shared responsibility" between the architect and the supervisor in the National Building Code leads to overlapping duties and conflicting decision-making.

Different interpretations of the contract: the use of non-legal or ambiguous terms in architectural contracts can lead to differing interpretations.

Differences in quality of execution: the lack of measurable indicators for design or material quality leaves room for subjective interpretation.

4.3 | Analysis of Proposed Solutions to Reduce Disputes

By examining experts' views and analyzing legal texts, a set of practical solutions for preventing or managing disputes between the architect and the structural supervisor was identified and listed in *Table 1*. *Fig. 1* illustrates the cycle of occurrence and management of contractual disputes between the architect and the structural engineer

Table 2. Suggested solutions to reduce contractual disputes.

Row	Suggested Solution	Solution Type	Explanation
1	Drafting architectural contracts	Legal-structural	Creating a single pattern with standard clauses
2	Formation of specialized arbitration committees in the Engineering System Organization	Institutional	Expedite the resolution of disputes before going to court
3	Requirement for technical coordination meetings between the architect and the supervisor	Executive	Reducing technical misunderstandings
4	Teaching engineering law in professional courses	Educational	Raising awareness of legal obligations
5	Using legal counsel in large contracts	Management	Reducing project legal risks

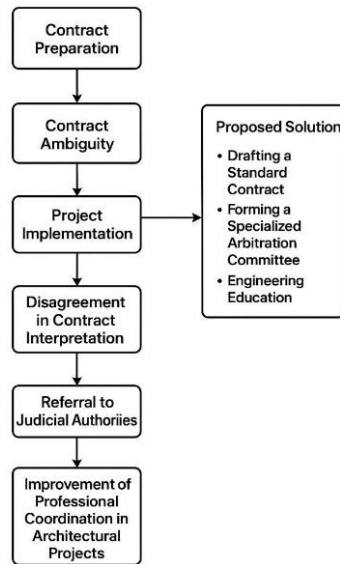


Fig. 1. The cycle of occurrence and management of contractual disputes between the architect and the structural supervisor.

4.4 | Summary of the Analysis

The results show that contractual disputes in architectural projects are rooted in legal loopholes and a lack of transparency in contract structure, rather than in personal conflict or technical weakness. Therefore, reforming contractual instruments and creating specialized arbitration mechanisms can significantly reduce disputes between the architect and the structural supervisor.

5 | Conclusion

The study showed that contractual disputes between architects and structural engineers in architectural projects are a multi-causal, multidimensional phenomenon rooted in legal, technical, and institutional factors. Among these factors, ambiguity in contract regulation and the lack of a clear definition of professional boundaries play the most significant role in the emergence of conflicts.

Based on data analysis, it can be concluded that:

- I. The Iranian legal system, in regulating the relationship between the architect and the structural inspector, is still far from global standards.
- II. Many legal disputes arise from the lack of specialized contracts in the fields of architecture and technical supervision.
- III. The lack of a specialized arbitration institution for engineering disputes delays hearings in public courts and erodes professional trust between the parties.
- IV. The lack of engineering law education among architects and supervising engineers leaves them insufficiently aware of their contractual obligations.

Conflict of Interest

The authors declare that they have no conflict of interest regarding the publication of this manuscript.

Data Availability

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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References

- [1] Zadeh, M. H., & Afrough, A. (2016). The Investigation of Builders and Building Supervisors' Responsibility in Iran Law. *Journal of politics & law*, 9, 154. <https://doi.org/10.5539/jpl.v9n2p154>
- [2] Mazurenko, S. V. (2022). Legal regulation of contractual relations in architectural activity. *Prykarpatskyi legal bulletin*, 2(43), 39–46. <https://doi.org/10.32837/pyuv.v0i2.1014>
- [3] Greenstreet, R., Chappell, D., & Dunn, M. (2012). *Legal and contractual procedures for architects*. Routledge. <https://www.taylorfrancis.com/books>
- [4] Manoharan, K., Dissanayake, P., Pathirana, C., Deegahawature, D., & Silva, R. (2024). Investigating and determining the crucial construction site supervisory competencies influencing the effectiveness of building construction project activities. *International journal of industrial engineering and operations management*, 6(1), 43–63. <https://doi.org/10.1108/IJIEOM-02-2023-0015>
- [5] O'Connor, H., & CAU-RJ, L. A. P. B. D. (2012). Architectural Services During Construction. *ResearchH journal*, 7. https://www.brikbases.org/sites/default/files/PWRJ_Vol0401.pdf#page=9
- [6] Saeb, A., Danuri, M. S. M., Mohamed, O., & Zakaria, N. (2021). A mechanism for dispute resolution in the Iranian construction industry. *Journal of construction in developing countries*, 26(1), 205–226. <https://doi.org/10.21315/jcdc2021.26.1.10>
- [7] Zoppis, E. (2018). The role of the engineer: A contractor's viewpoint. *FIDIC-ACEG regional infrastructure conference*, 1-9. http://www.aceg.ge/s/110Eugenio-Zoppis_the-Role-of-the-Engineer_ARTICLE.pdf
- [8] Salehijam, M. (2018). The value of systematic content analysis in legal research. *Tilburg law review*, 23(1–2), 34-42. <https://doi.org/10.5334/tlr.5>
- [9] Grant, S., Kline, J. J., & Quiggin, J. (2014). A matter of interpretation: Ambiguous contracts and liquidated damages. *Games and economic behavior*, 85, 180–187. <https://doi.org/10.1016/j.geb.2014.01.019>
- [10] Shafiei, S., & Mansouri Boroujeni, M. (2024). The Scope of the Supervising Engineer's Responsibilities and Duties in the Construction Safety: A Study of the Iranian Legal System. *Journal of structural and construction engineering*, 11(12), 43–61. <https://doi.org/10.22065/jsce.2024.434642.3324>