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Determining Methods for Predicting Arbitration in Projects with Express Transportation Contracts to Improve Dispute Resolution and Contract Termination Methods (A Case Study of Tonekabon County)

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Abstract

One of the most important ways to prevent lawsuits in courts and get involved in administrative and legal tangles is to include an arbitration clause in commercial contracts. The parties to the contract can agree at the time of conclusion or even after the conclusion that in the event of a dispute over the interpretation or implementation of the contract's provisions, they will refer the matter to an arbitration institution instead of going to court. In many developed countries, arbitration has been institutionalized as a specialized and professional institution. In these countries, if the parties encounter a problem during the implementation of the contract, they refer their dispute to the arbitration specified in the contract or to an arbitrator agreed upon by the parties before taking any legal or judicial action. The arbitrator's opinions and decisions are also legally binding. According to Razi and Zahedi, arbitration is one of the methods of resolving disputes in commercial contracts that has advantages such as reducing the duration of the proceedings, saving costs, the possibility of selecting an arbitrator and maintaining the confidentiality of the dispute resolution process. In defining an "Arbitration agreement," it can be said that this agreement is a contract by which the parties undertake to submit their actual or potential disputes to a person or persons other than the official judicial authorities. Moradi defines arbitration as follows: Arbitration is a contract in which the parties, by mutual consent or by law in compulsory arbitration, submit their actual or potential dispute to non-governmental and non-judicial persons so that they can examine the matter and issue the appropriate decision without formal proceedings and within a certain period of time. Arbitration, as one of the methods of Alternative Dispute Resolution (ADR), basically originated from It is a contract formed based on the will and agreement of the parties and through the conclusion of an arbitration agreement.

Keywords: Arbitration provision for transportation contracts, Dispute resolution and termination, Express transportation, Determining methods.

1 | Introduction

Foreseeing an arbitration clause in commercial contracts is one of the most important ways to prevent lawsuits in courts and get involved in administrative and judicial twists and turns [1], [2]. The parties to the contract

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can agree at the time of conclusion or even afterward that in the event of a dispute in the interpretation or implementation of the contract's provisions, instead of going to court, they will refer the matter to an arbitration institution. In developed countries, arbitration is institutionalized and is considered an independent profession and specialty. Suppose the parties encounter a problem during the implementation of the contract before taking any legal action and referring to the judicial authorities. In that case, they refer their dispute to the agreed arbitrator or the arbitrator designated in the contract's text. The opinions and opinions of the arbitrator are also considered binding [1], [3].

Arbitration is one of the methods of resolving disputes in commercial contracts that has advantages such as reducing the duration of proceedings, reducing costs, the possibility of selecting an arbitrator, and the confidentiality of the proceedings. The definition of "Arbitration agreement" refers to a contract by which the parties undertake to submit their actual or potential disputes to persons other than official judicial authorities. According to the definition of Moradi [2], arbitration is a contract in which, by consent of the parties or by law (In compulsory arbitration), the actual or potential disputes between the parties are submitted to non-governmental and non-judicial natural or legal persons to hear the dispute and issue the appropriate decision without formal proceedings and within a certain period. Arbitration, as one of the methods of alternative dispute resolution (ADR), is mainly of contractual origin and is achieved by the written will and agreement of the parties through the conclusion of an agreement.

The specific characteristics of contracting contracts, including the need for rapid project implementation and the use of large amounts of human, financial, technical, and material resources, require disputes arising from these contracts to be resolved quickly and at the project implementation site. Otherwise, the project will incur extensive financial losses [4]. For this reason, arbitration is considered one of the most important dispute resolution mechanisms in government contracting contracts. This institution is particularly important because disputes can be resolved through arbitration more quickly, accurately, and reliably than public authorities. In Iran, Article 53 of the "General conditions of the agreement" also refers to arbitration and introduces the Supreme Technical Council as the competent authority for resolving disputes [5].

On the other hand, if the arbitration process in projects with transportation contracts is not carried out properly, it will not only not reduce the cost and time of dispute resolution, but it may also increase costs and delay the process. Therefore, given the issue's importance, this research identifies and examines methods for predicting arbitration in high-speed transportation projects to improve the dispute resolution process and contract termination (Case study: Tonekabon county).

Express delivery is a type of transportation service that delivers goods at a faster rate than regular transportation. Overnight, two-day, or expedited delivery are different forms of this type of service. The main goal of express delivery is to deliver goods faster at a higher cost [6]. In this type of transportation, trucks or other vehicles carrying goods move continuously to their destination without stopping to meet customer needs in the shortest possible time. Express delivery is a flexible supply chain strategy to reduce inventory holding costs and increase service levels. Other benefits include reducing the risk of inventory disruption and delivery time. While this type of transportation may be expensive for systems with high service levels, it is still preferred due to its risk-reduction capabilities [7]. The express transportation industry is now recognized as one of the fastest-growing sectors in the global economy, playing a significant role in countries' Gross Domestic Product (GDP) and job creation. It is of great importance for developing countries' logistics infrastructure and strengthening the global business environment [8]. Express transportation may include a wide range of goods, from documents and documents to electronic components, branded clothing, and pharmaceutical products. Most of these goods are lightweight and of high value, as the cost of transporting them via air cargo is higher than that of other methods.

Villamizar et al. [9] studied the environmental impact of express shipping e-commerce in inbound logistics operations: A case study in Mexico and found that express shipping increases both total CO₂ emissions and costs by 15% and 68%, respectively. Siqi Ma [10] studied express or free shipping options in online retail and found that increasing delivery time significantly increased customers' perceived uncertainty and perceived risk,

reducing satisfaction and negatively affecting purchase intention. Furthermore, free shipping reduced customers' perceived uncertainty when delivery time was long and concluded that delivery time, shipping costs, and purchase importance affected customer satisfaction and purchase intention. In a study on understanding and reducing uncertainty in online environments, Paolo et al. [11] stated that free and fast shipping is an alternative to long delivery times that can maintain customer satisfaction. Turner et al. [12], in their research on customer-contractor disputes in the United States of America, found that the most important factors leading to project execution disputes are contractors' financial problems and changes in customer orders. Cumming et al. [13] investigated the causes of conflicts and cost overruns between employers and contractors in construction projects in Nigeria. They found that the most important factors were lack of credit and non-payment for work performed, poor contract management, changing local conditions, shortage of materials, and incorrect planning. Raymond et al. [14], in their research on employer-contractor disputes in construction projects, the reasons for employer-contractor disputes include: Factors such as major changes in construction design, ineffective planning, restraint of progress, and changes in project scope that affect these relationships.

Customers expect products to be delivered quickly and efficiently in today's fast-paced world. Delays in shipping can be frustrating for customers, and it is the responsibility of business owners to respond appropriately. The main goal of express shipping is to reduce wasted time and ensure that the goods that need to be delivered to their destination are delivered on time. Express shipping can be used for any shipping requiring a specific time frame. There are currently many shipping companies that offer this service to their customers. Shipping can range from single packages to full loads. Express shipping can help increase customer satisfaction and loyalty and reduce shopping cart abandonment. Express shipping can increase the average order value. Business owners also have specific legal obligations regarding shipping delays. Failure to fulfill these obligations can lead to legal action, loss of customer trust, and damage to the business's reputation. Business owners must fulfill any contractual obligations related to shipping and delivery and fulfill the order within a reasonable time frame. If the business owner does not fulfill these obligations, the customer may have legal recourse to compensate for the damages. Therefore, the present study aims to understand the issue and determine and examine methods for predicting arbitration in projects with express shipping contracts in order to improve dispute resolution and contract termination methods.

2 | Research Methodology

The present research is qualitative in terms of methodology.

In this research, a qualitative research design was used to understand what the concept of arbitration estimation methods is in projects involving express transportation contracts, why and how it is used, and to explain in depth the effective components and types of their relationships in order to improve dispute resolution and contract termination methods. To improve dispute resolution and contract termination methods, an attempt was made to determine the methods of arbitration prediction in projects related to express transportation contracts, and a qualitative research method was chosen; interviews with experts and field studies were conducted.

2.1 | Paradigm Governing the Qualitative Phase

Understanding any phenomenon follows a specific philosophical and epistemological basis called the "Research paradigm". A paradigm refers to a general set of beliefs, values, methods, and philosophical and scientific rules common among one or more scientific community members [15]. These paradigms are divided into four categories according to their characteristics: a) positivism, b) interpretivism, c) critical theory, and d) post-structuralism [16]. Using an interpretive approach in which reality is evaluated based on human experience and interpretation, this research aims to identify methods for predicting arbitration in projects with open transportation contracts to improve dispute resolution and contract termination methods.

Wang [17] carefully compared quantitative and qualitative methods in a table format. Qualitative methods can be very useful in clarifying thought processes. Good research questions are not generated by statistical software, but by researchers who have a clear vision and insight into the data and observed trends. Good quantitative research often stems from strong qualitative thinking.

Table 1. Research paradigm, quantitative and qualitative methods.

Axes	Quantitative Approach	Qualitative Approach
Philosophical assumptions, ontology, epistemology	Stabilism, determinism Reductionism	Constructivism, perception Historical and social construction, multiple meanings
Valuing study/research strategies	Experimental observation and measurement, theory verification	Participatory knowledge claims, grounded theory, phenomenology, ethnography, case study, narrative-based research
The nature of the problem	Previously studied, existing body of literature, known variables, existing theories.	Exploratory research, unknown variables; importance of content, with possible lack of theoretical basis
Methods used	Closed questions, Predetermined approaches, Numerical data	Open questions, emerging approaches, textual, audio, and visual data
Research measures	Testing/confirming theories, identifying variables, relevant variables, using unbiased approaches, applying statistical procedures.	Gathering participant meaning, Paying attention to personal values, Studying participant content/context, Interpreting data

2.2 | How to quantify the votes of panel members by calculating CVR

The votes of panel members assigned to option E (Main) are measured by the content validity ratio, which is abbreviated as CVR. For this purpose, the following formula is used:

$$CVR = \frac{n_e - n/2}{n/2}. \quad (1)$$

n_e : is the number of panel members who considered that dimension or question "essential".

$n/2$: is the total number of panel members divided by two.

Table 2. Minimum CVR values for different numbers of panel members.

Number of panel members	Minimum acceptable CVR value
5	0.99
6	0.99
7	0.99
8	0.75
9	0.78
10	0.60
11	0.58
12	0.56
13	0.54
15	0.49
20	0.42

Sometimes, weighing the calculated CVRs for different cases may be necessary. Wang [18] states that ranking or weighting is incompatible with the content narrative analysis method because the content narrative method is based on logical considerations and empirical evidence.

Determining the average values of the panel members' judgments: At Lavish's suggestion, the following changes were made to the validity questionnaire to calculate the average values of the judgments assigned to each of the instrument components:

E: is replaced by the number 2 (Indicating necessity).

N: is replaced by the number 1 (Indicating necessity but not necessity).

U: is replaced by the value zero (Indicating unnecessary).

Only those items whose CVR and mean values correspond to the minimum agreed values remain in the final survey form. In exceptional cases, other traditional analysis methods may decide whether to retain the rejected items. As mentioned earlier, since this study used a 5-point Likert scale (Very low, low, moderate, high, very high) instead of the 3-point Lochte scale, it is necessary to convert the nominal rating criteria into the numerical Lochte rating criteria for interpreting the results. For this purpose, the following changes have been made:

Very low and low: were replaced by the number 2 (Considered equivalent to the necessity of the question).

Moderate: was replaced by 1 (Equivalent to the necessity but without the question).

Very high and very high: were replaced by zero (Equivalent to the necessity of the question).

Since the research had an analytical and exploratory structure, a questionnaire was used as a measurement tool. Coding interviews and qualitative content analysis results were also used in designing and compiling the survey and scanning the research literature. Qualitative content analysis aims to infer and reveal hidden patterns in interviews, observations, and written documents by analyzing concepts, terms, and relationships between these concepts. Sandelowski [19] considers content analysis to be one of the methods of analyzing qualitative studies by which data is summarized, described, and interpreted. According to Krippendorff [20] content analysis is essentially an objective, principled and quantitative research technique for interpreting and analyzing content, and the main idea of content analysis is to place the components of a text (in terms of selected units such as words, sentences, paragraphs, etc.) into predefined categories.

2.3 | How to Conduct the Research

After designing general questions and creating an interview protocol for the study, in-depth interviews were conducted with experts. At the end of each interview, the content was completely transcribed on paper, and the data was first coded to extract basic concepts. After reaching saturation, theoretical foundations and previous research were thoroughly examined by combining the researcher's experiences and experts' opinions to design the model. The identified damages were reported to the experts and after receiving their suggestions and opinions regarding the classification of categories and concepts, methods were developed to improve dispute resolution methods and predict arbitration in express transportation contract projects for contract termination. The steps of the present study are shown in *Fig. 1*.

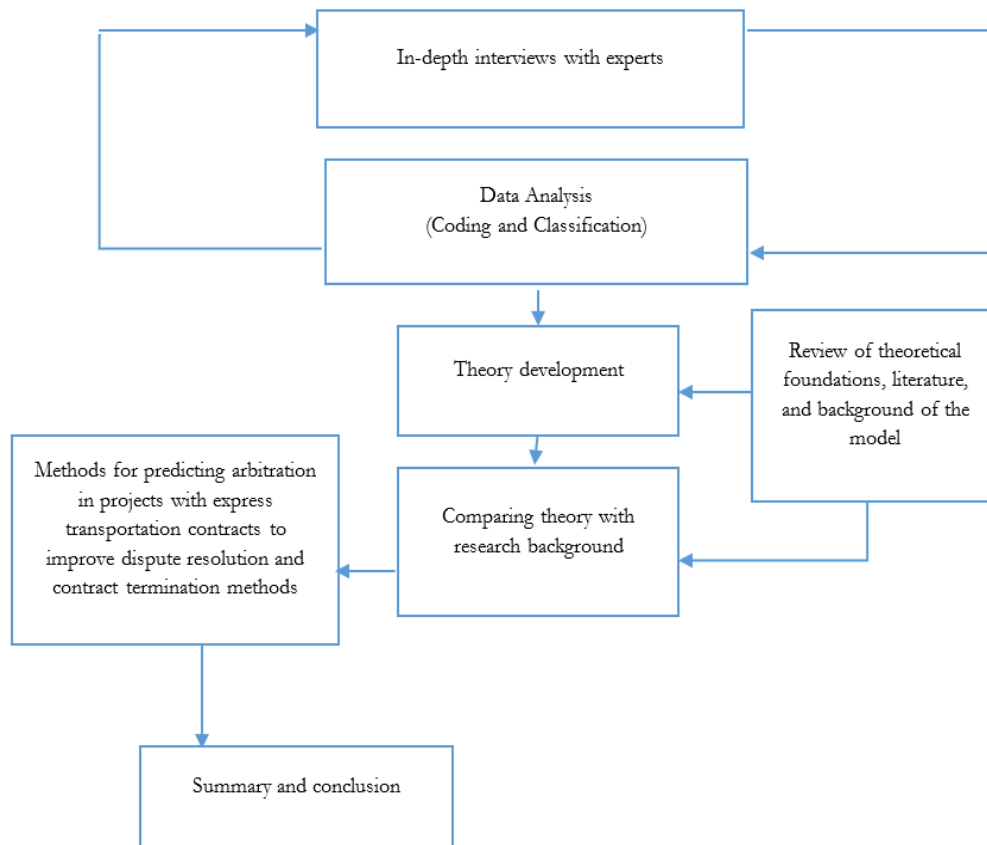


Fig. 1. Schematic of the research implementation process.

2.4 | Research Process

The main objective of this research is to improve dispute resolution and contract termination methods by determining methods for predicting arbitration in projects with high-speed transportation contracts. For this purpose, the harms of not paying attention to innate teachings in educating students were first identified. These factors can be identified in two ways:

- I. Systematic interviews with knowledgeable and opinionated individuals.
- II. Review of the results and factors determined in the research.

In summary, the implementation stages of this research are:

- I. Review of the literature on methods for predicting arbitration in projects related to high-speed transportation contracts, with the aim of improving dispute resolution and contract termination methods.
- II. Design of a conceptual research model.
- III. Selection of the population and statistical sample.
- IV. Interviews with stakeholders and experts (specialists).
- V. Analysis of interviews based on the research method.
- VI. Analysis of results.

3 | Findings

This research aims to improve dispute resolution and contract termination methods by determining methods for predicting arbitration in projects with express transportation contracts. First, the theoretical background, i.e., theories, was examined in this context, and the relevant concepts or models were examined with experts' opinions. This section explains how to code the interviews using a mixed approach, exploratory design, and

grounded theory method. After this stage, the results of the Delphi method are announced, the expert panel's consensus level is determined based on the Delphi method, and a conceptual research model based on grounded theory is drawn.

3.1 | Descriptive Findings

This section presents descriptive statistics and tables related to sample characteristics. Understanding sample characteristics is useful because it helps determine the general characteristics of the study population and its general characteristics for other researchers. In addition, this information allows the results to be generalized to other populations or used to design future research questions for other populations.

3.2 | Frequency Distribution of Respondents by Age

When the findings in *Table 3* are examined, it is observed that the largest share of participants (70%) are in the 28-36 age group, and the smallest share (30%) is in the over 36 age group.

Table 3. Frequency distribution of respondents by age.

Age	Abundance	Percentage
28 to 36	35	70 percent
36 and over	15	30 percent
Total	50	100

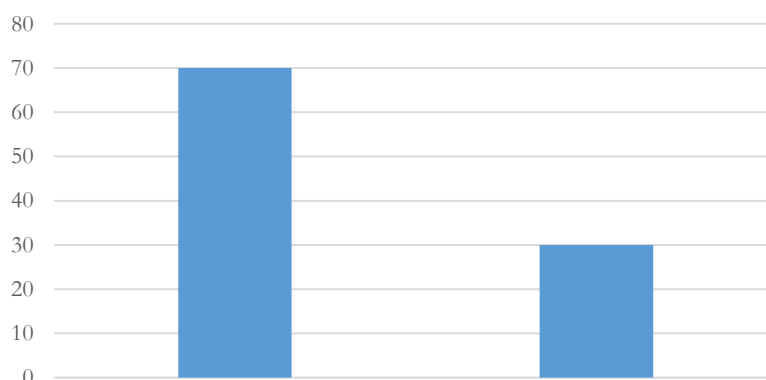


Fig. 2. Frequency chart of respondents by age.

3.3 | Frequency distribution of respondents by Education.

When the findings in *Table 4* are examined, it is observed that the largest portion of the participants (60%) have a bachelor's degree and the smallest portion (10%) have a diploma.

Table 4. Frequency Distribution of Respondents by Level of education.

Education	Abundance	Percentage
Higher Diploma	5	10%
Bachelor's Degree	30	60%
Master's Degree and Higher	15	30%
Plural	50	100

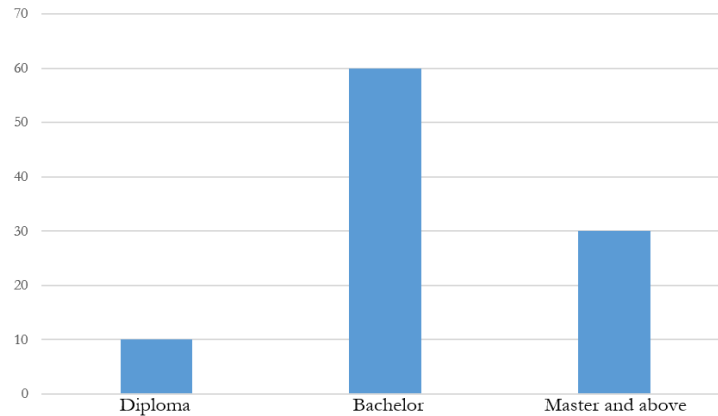


Fig. 3. Frequency chart of respondents by education.

3.4 | Frequency Distribution of Respondents by Teaching Experience

When examining the findings in *Table 5*, it is observed that the majority of participants (50%) have more than 10 years of educational experience, while the smallest group of participants (10%) have less than 5 years of teaching experience.

Table 5. Frequency distribution of respondents according to length of activity in education.

Duration of activity	Abundance	Percentage
More than 10 years	25	50%
5 to 10 years	15	30%
Less than 5 years	5	10%
Total	50	100

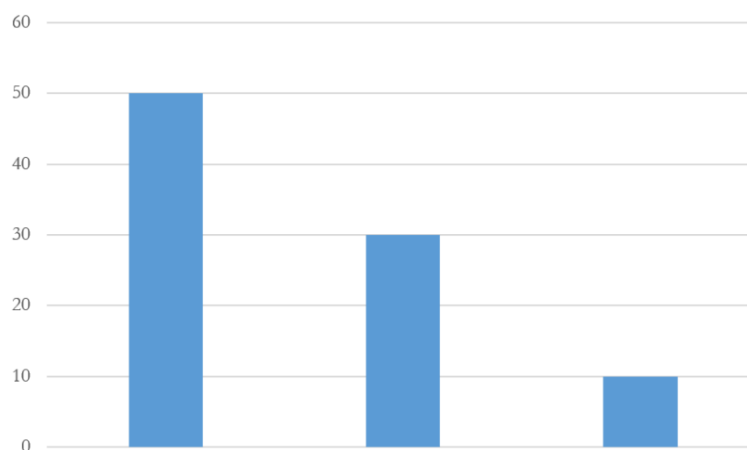


Fig. 4. Frequency chart of respondents by background.

3.5 | Inferential Findings

This section aims to improve dispute resolution and contract termination methods by determining the methods of arbitration in projects with open transportation contracts. The method used to achieve the above goal is data-driven theory, and among the existing approaches, the systematic type (Strauss and Corbin, 2008) has been used. This approach has a systematic model as a paradigmatic model and ultimately leads to the presentation of a limited theory. In this context, qualitative data analysis was conducted based on the guidelines provided by Strauss and Corbin, which included three main stages: Open coding, axial coding, and

selective coding. In this section, the results of the analyses conducted with this method are compiled in the form of concepts, subcategories, and main categories and within the framework of a systematic model that includes causal conditions, main phenomena, background conditions, intermediate conditions, strategies, and results. Finally, considering the relationships between these elements, a paradigmatic model is presented to determine the methods of predicting arbitration in projects with express transportation contracts and, as a result, to improve the methods of dispute resolution and contract termination. This model expresses the factors and components included in express transportation contracts to improve the methods of dispute resolution and contract termination.

3.6 | Data Analysis Methods

The research data were analyzed through a coding process based on the systematic design of data-driven theory [21]. Coding is an analytical process in which data are conceptualized and combined to form a theory. In this process, data analysis is not done separately from data collection and sampling. Analyzing previous data at each stage is a way to decide which data or sample to use in the next stage. In the data-driven theory method, coding represents a process in which data are analyzed, conceptualized, and connected in new ways. Coding is a fundamental process that allows the development of data-driven theories. In a systematic data-driven theory research design, data analysis steps are carried out through open coding, axial coding, and selective coding while providing a logical paradigm or visual representation of the developing theory [21].

3.7 | Open and Axial Coding

In the open and axial coding stages, the data were carefully examined, the main categories and their subcategories were identified, the dimensions and features were identified, and the pattern was examined. The main unit of analysis for open and axial coding was concepts. When analyzing the data in detail, concepts were created through the researcher's labeling, either directly from the participants' interview transcripts (living codes) or according to their common usage. The transcribed interview transcripts were systematically examined to find these categories' main categories, categories, features, and dimensions. Strauss and Corbin [21] defined the above terms as follows:

Concepts: the building blocks from which a theory is built.

Categories: higher-level classifications of concepts that constitute a phenomenon.

Subcategories: concepts related to a main category that explain and describe its characteristics.

Attributes: characteristics associated with each category, which further define and explain its dimensions and give it meaning.

Aspects are the boundaries of features representing the category and its coordinates along a continuous spectrum.

Following the guidelines provided by Strauss and Corbin [21], an attempt was made to extract open codes by dividing the interview text into message-containing elements in lines and paragraphs. After this stage, the categories were categorized into large conceptual categories. In the second stage, axial coding, the main category was gradually identified, and then the other categories were divided into five large clusters: causal conditions, strategies, contextual conditions, environmental conditions, and consequences. Finally, in the selective coding stage, the relationships between the observable categories and the paradigmatic model of data-driven theory were established. It should be noted that many open codes were obtained, but after each stage of data classification and review, repetitive concepts were eliminated, and similar concepts were combined. The data analysis was conducted more than ten times to reach theoretical saturation for the subcategories and their dimensions. The boundaries of each central category and other main categories were not clearly defined at the beginning of the analysis, and these categories were revised during the analysis.

Open and axial coding was stopped when:

- I. The interview records were reviewed several times, and a meaningful classification was reached.
- II. The subcategories and features were repetitive.
- III. New and important information was not found in the minutes; even if new information was obtained, it was according to the existing classification.

After several preliminary interviews, coding began. The interviews were reviewed at each stage, and an attempt was made to select titles appropriate to the themes in line with the research principles. While the number of codes extracted was initially 92, some were eliminated due to lack of relevance to the topic, and as a result of scanning, the number of codes reached 77. The following tables show the open coding method and the frequency of the relevant phrases in the interviews.

As seen below, each phrase (Exactly the same as the statements of the interviewees in question) has been assigned a code. A careful study was conducted to select the codes to explain the research topic. To the extent that the same phrase creates a single understanding and meaning in the minds of other researchers. To prevent the manipulation of research data, an attempt was made to convey the interviewees' sentences as expressed in the interview.

Table 6. Open coding of interview statements.

Row	Code	Abundance
1	Speed and Efficiency	11
2	Flexibility	31
3	Confidentiality	23
4	Specialty	33
5	Appointing an arbitrator or arbitration institution	29
6	Determining the rules governing arbitration	35
7	Determining the language of arbitration	27
8	Determining the place of arbitration	30
9	Choosing a reputable arbitration institution	11
10	International arbitration centers	38
11	National arbitration centers	22
12	Preparing arbitration regulations	12
13	Reducing legal risks	19
14	Increasing the confidence of the parties	13
15	Improving business relations	10
16	Consulting with a lawyer	39
17	Considering the complexity of the contract	9
18	Flexibility in the contract	26
19	Specific terms of the contract	10
20	Business relations of the parties	17
21	Specialization of the parties	9
22	Scope of the arbitrator's authority	33
23	Arbitration language	22
24	Laws governing arbitration	38
25	Development of arbitration infrastructure	22
26	Promoting arbitration culture	35
27	Harmonization with the legal system	30
28	Technological changes	37
29	Drafting comprehensive and transparent contracts	38
30	Selection of expert arbitrators	36
31	Use of reputable arbitration institutions	33

Table 6. Continued.

Row	Code	Abundance
32	Education and promotion of arbitration culture	41
33	Update of laws and regulations	39
34	Multiplicity of laws and regulations	39
35	Complex technical conditions	41
36	Rapid changes in the transportation industry	24
37	Different legal systems	26
38	Cultural differences	22
39	Language	27
40	Compulsion to arbitration	37
41	Enforcement of arbitration awards	32
42	Lack of independence of arbitrators	12
43	High arbitration costs	27
44	Long arbitration process	39
45	Difficulty in selecting a suitable arbitrator	13
46	Conflict of interest	24
47	Development of comprehensive and integrated laws and regulations	11
48	Establishment of specialized arbitration institutions	14
49	Facilitating enforcement of arbitration awards	28
50	International cooperation	11
51	Promoting arbitration culture	29
52	Development of comprehensive and transparent contracts	41
53	Selection of expert arbitrators	22
54	Use of new technologies	19
55	Risk management	36
56	Education and training	21
57	Use of technical experts	11
58	Development of technical rules and regulations	37
59	Choose a common language	24
60	Use of official translators	16
61	Respect for cultural differences	27
62	Increase the use of artificial intelligence and machine learning	35
63	Contract analysis	43
64	Predicting results	36
65	Process automation	21
66	Cost reduction	11
67	Speed increase	37
68	More accessibility	38
69	Transparency	36
70	Security	33
71	Specialized arbitrators	41
72	Dispute resolution based on the specific needs of the parties	39
73	Algorithm transparency	39
74	Accountability	41
75	Data privacy	24
76	Cybersecurity	26
77	Need for new regulation	22

Open and axial coding results are presented below as categories and subcategories. In this table, 5 categories, 9 main subcategories, and 77 concepts are obtained.

Table 7. Categories and subcategories obtained from qualitative analysis of interviews.

Dimension	Main Category	Subcategory
Axial	The importance of predicting arbitration	Speed and Efficiency Flexibility Privacy Specialization
Context	Methods for predicting arbitration in express transportation contracts	Inserting an arbitration clause into the contract Designating an arbitrator or arbitration institution Determining the rules governing arbitration Determining the language of arbitration Determining the place of arbitration Choosing an accredited arbitration institution International arbitration centers National arbitration centers
	Important points in predicting arbitration	Inserting an arbitration clause into the contract Consulting with a Lawyer Considering the Complexity of the Contract Flexibility in the Contract
	Benefits of providing for arbitration in express transportation contracts	Reducing Legal Risks Increasing the Confidence of the Parties Improving Business Relations
Interventionist	Factors affecting the improvement of arbitration prediction methods	Internal factors (related to the contract and the parties) Specific Terms of the Contract Business Relations of the Parties Specialization of the Parties Scope of Arbitrator's Powers Language of Arbitration Laws Governing Arbitration External factors Development of Arbitration Infrastructure Promoting Arbitration Culture Harmonization with the Legal System Technological Changes
Solution	Solutions to Improve Arbitration Prediction Methods	Drafting comprehensive and transparent contracts Selecting expert arbitrators Using reputable arbitration institutions Educating and promoting arbitration culture Updating laws and regulations
Causes	Challenges in Arbitration of Express Transportation Contracts	The Complexity of Express Shipping Contracts Cultural and Legal Differences Between Countries Limitations in Some Legal Systems Multiple laws and regulations Complex technical requirements Rapid changes in the transportation industry Different legal systems Cultural differences Language

Table 7. Continued.

Dimension	Main Category	Subcategory	
Causes	Challenges in Arbitration of Express Transportation Contracts	Arbitration Costs	Compulsion to arbitrate Enforcement of arbitral awards Lack of independence of arbitrators High arbitration costs
		The Complexity of Express Shipping Contracts	
		Cultural and Legal Differences Between Countries	Length of the arbitration process Difficulty in selecting the right arbitrator
		Legal and Institutional Solutions	Conflict of interest Drafting comprehensive and integrated laws and regulations Establishing specialized arbitration institutions Facilitating the enforcement of arbitration awards
Solution	Solutions to address challenges	Arbitration Insurance	International cooperation Promoting arbitration culture
		Operational Solutions	Drafting comprehensive and transparent contracts Selection of expert arbitrators Use of new technologies Risk management Education and training Use of technical experts Development of technical rules and regulations
Consequence	The Future of Arbitration of Express Shipping Contracts	Specific Solutions for the Challenges of Cultural and Legal Differences	Choosing a common language Use of official translators Respect for cultural differences
		Increasing use of artificial intelligence and machine learning	
		Contract analysis	
		Outcome prediction	
		Process Automation	
		Expansion of Online and Virtual Arbitration	Cost reduction Speed increase
		Widespread Use of Blockchain	More accessibility
		Personalization of Arbitration	
		More Attention to Ethics in Artificial Intelligence	Transparency Security
		Process Automation	Specialized arbitrators
Expansion of Online and Virtual Arbitration	Dispute resolution based on the specific needs of the parties		
Widespread Use of Blockchain	Algorithm transparency		
Personalization of Arbitration	Accountability		
More Attention to Ethics in Artificial Intelligence	Data privacy Cybersecurity Need for new regulation.		

3.8 | Theoretical Model

The relationships between the categories established in the data show that the emerging pattern is consistent with the main form of the paradigmatic model of Strauss and Corbin [20]. This means that causal conditions influence the main phenomenon and strategies. On the other hand, the strategies, influenced by the contextual and intervening conditions, shape the consequences of the phenomenon under study. The resulting model can be expressed as a narrative statement derived from the data that provides a concise and clear interpretation. The narrative statement is, in fact, the main brain of the selective coding and the researcher's theory in the study. Arbitration prediction methods in projects with express transportation contracts have been studied to improve dispute resolution methods and contract termination, leading to strategies influenced by causal conditions. In addition, these actions are shaped by the conditions underlying the contractual activities and influenced by intervening conditions.

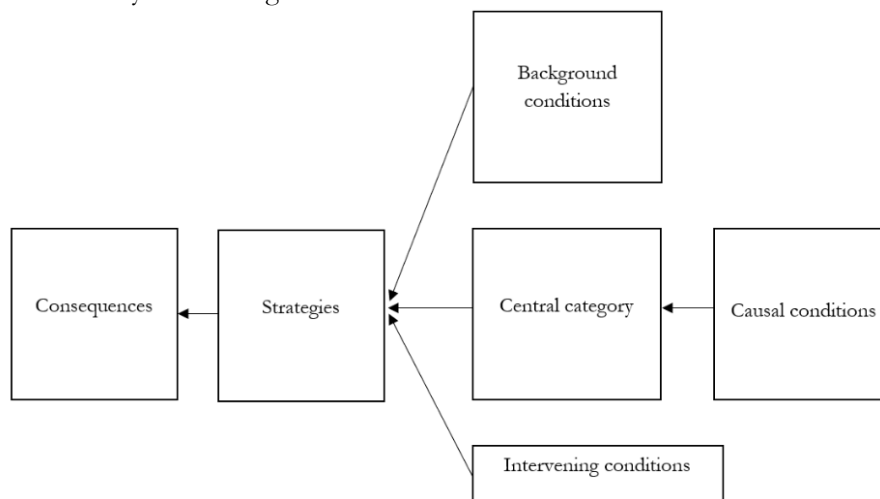


Fig. 5. Conceptual research model.

4 | Conclusion

Predicting arbitration in express transportation contracts is a powerful tool for managing and resolving potential disputes between contract parties. This method can avoid lengthy legal processes and high costs and quickly achieve a favorable result.

Why is it important to anticipate arbitration?

- I. Speed and efficiency: Arbitration is usually faster than judicial proceedings and significantly reduces the time required to resolve a dispute.
- II. Flexibility: Arbitration allows the parties to a contract to set their own rules and procedures for resolving the dispute, which can give them more control over the outcome.
- III. Confidentiality: Arbitration sessions are often held in confidence, which helps protect the parties' privacy and prevent the disclosure of sensitive business information.
- IV. Expertise: Arbitrators are usually legal professionals with experience in express shipping. They can more effectively analyze and resolve disputes.
- V. Choosing a reputable arbitration institution:
- VI. International arbitration centers: Centers such as the International Chamber of Commerce (ICC) and the London Centre for Arbitration (LCIA) have well-established procedures and experienced arbitrators.
- VII. National arbitration centers: Many countries have national arbitration centers whose services can be used.
- VIII. Drafting arbitration rules.
- IX. Drafting comprehensive arbitration rules can help clarify the arbitration process and prevent future disputes.

Benefits of providing for arbitration in express transportation contracts:

- I. Reducing legal risks: By providing for arbitration, the parties can reduce the legal risks arising from prolonged litigation and legal costs.
- II. Increasing the parties' confidence: A specific mechanism for resolving disputes assures the parties that if a dispute arises, they can resolve it quickly and effectively.
- III. Improving business relations: Resolving disputes amicably and based on agreement can help maintain long-term business relations.

Important points in providing for arbitration:

- I. Consult a lawyer: Before including an arbitration clause in a contract, it is best to consult a lawyer specializing in transportation contracts and arbitration.
- II. Pay attention to the contract's complexity: The complexity of the express transportation contract can affect the choice of arbitration method and its terms.
- III. Flexibility in the contract: The contract should be structured to allow for adaptation to different conditions and possible changes.

In conclusion, arbitration provisions in express transportation contracts are valuable tools for managing risk and improving business relationships. This method can resolve disputes more effectively and achieve business goals.

Factors affecting the improvement of arbitration provision methods in express transportation contracts

Improving arbitration provision methods in express transportation contracts requires considering factors and components. These factors can be divided into two general categories:

4.1 | Internal Factors (Related to the Contract and the Parties)

Specific terms of the contract: Each express transportation contract has unique characteristics. The complexity of the goods, the distance of transportation, the value of the goods, and the payment terms are among the factors that affect the choice of arbitration method and its success

Business relations of the parties: The history of cooperation between the parties, the level of mutual trust, and the importance of continuing cooperation are effective in choosing a dispute resolution method

Party expertise: The parties' awareness of the laws and regulations related to transportation and arbitration helps them to regulate the arbitration terms in a way that meets the interests of both parties

Arbitrator's scope of authority: Precisely specifying the arbitrator's authority in the contract prevents future disputes

Arbitration language: Choosing a language that the parties are fluent in helps improve communication and mutual understanding

Rules governing arbitration: Choosing appropriate rules, including international arbitration rules, helps ensure the proper and effective conduct of arbitration

4.2 | External Factors

Developing arbitration infrastructure: Establishing well-equipped arbitration centers, training expert arbitrators, and formulating arbitration rules and regulations help improve the quality of arbitration

Promoting arbitration culture: Increasing the awareness of the contracting parties about the benefits of arbitration and encouraging them to use this method helps expand arbitration in express transportation contracts

Harmonization with the legal system: Harmonizing arbitration rules and regulations with other relevant laws helps create a unified and efficient legal system

Technological changes: Using new technologies in the arbitration process helps make it faster and more efficient. Strategies to Improve Arbitration Anticipation

Drafting comprehensive and transparent contracts: Express transportation contracts should be drafted in a way that covers all aspects of potential disputes

Selecting expert arbitrators: Arbitrators should have sufficient expertise in the field of transportation and arbitration

Using reputable arbitration institutions: Referring to reputable and well-known arbitration institutions helps ensure the quality and speed of the arbitration process

Educating and promoting arbitration culture: Conducting training courses for the parties to the contract and lawyers helps increase their awareness of the benefits of arbitration and its various methods

Updating laws and regulations: Arbitration regulations should be regularly reviewed and updated to align with business and technological developments. In short, improving arbitration anticipation methods in express transportation contracts requires a comprehensive approach that considers both internal and external factors. Given the importance of these contracts in international trade, improving the arbitration process can help reduce costs, expedite dispute resolution, and increase the confidence of the parties.

4.3 | Challenges in Arbitration of Express Transportation Contracts

Despite its many advantages, arbitration of express transportation contracts also faces various challenges. These challenges can arise from the complex nature of transportation contracts, cultural and legal differences between countries, and the limitations of some legal systems. The following are some of the most important challenges in this area:

I. Complexity of express transportation contracts:

- *Multiplicity of laws and regulations: Express transportation contracts are affected by various laws and regulations, including domestic laws, international laws, and relevant conventions, which increases the complexity of dispute resolution.*
- *Complex technical terms: Many express transportation contracts contain complex technical terms that non-specialists can understand.*
- *Rapid changes in the transportation industry: The express transportation industry is changing rapidly, and these changes can affect the interpretation of contracts and the resolution of disputes.*

II. Cultural and legal differences between countries:

- *Different legal systems: Countries' legal systems (such as common law and civil law systems) can have significant differences in their approaches to resolving disputes and interpreting contracts.*
- *Cultural differences: Cultural differences can affect how parties interact in the arbitration process and their understanding of legal concepts.*
- *Language: Using different languages in contracts and arbitration can lead to misunderstandings and further complexity.*

III. Limitations in some legal systems:

- *Compulsion to arbitrate: In some legal systems, there may be limitations on forcing parties to arbitrate.*
- *Enforcement of arbitral awards: Enforcement of arbitral awards in some countries may face problems.*

- *Lack of independence of arbitrators: In some cases, arbitrators may be influenced by political or economic pressures and lose their independence.*

IV. Arbitration costs:

- *High arbitration costs: Arbitration costs, especially in complex cases, can be very high and unaffordable for some parties.*
- *Lengthy arbitration process: A lengthy arbitration process can increase its costs.*

V. Selection of arbitrator:

- *Difficulty in selecting the right arbitrator: Selecting the right arbitrator with sufficient expertise and impartiality can be challenging.*
- *Conflict of interest: There is a possibility of conflict of interest in arbitrators, which can affect their impartiality.*

4.4 | Solutions to Deal with Challenges

Drafting comprehensive and transparent contracts: by drafting comprehensive and transparent contracts, many ambiguities and disputes can be anticipated and resolved from the beginning.

Selection of expert arbitrators: selecting arbitrators who specialize in express transportation can help resolve disputes effectively.

Use of reputable arbitration institutions: reputable and well-known arbitration institutions help ensure the quality and speed of the arbitration process.

Development of arbitration infrastructure: the development of arbitration infrastructure, such as training arbitrators and developing appropriate rules and regulations, helps to improve the quality of arbitration.

Arbitration insurance: arbitration insurance can help reduce the financial risks arising from arbitration.

The benefits of arbitration in express transportation contracts can be fully realized by identifying and managing these challenges.

Authors' Contributions

M. A. N.: Methodology, Conceptualization, and Visualization, Software, Investigation, Formal Analysis, Writing-Original Draft. M. J. J.: Writing-Review & Editing, and Validation, Research Design, Data Curation, Validation, and Formal Analysis. The authors have read and agreed to the published version of the manuscript.

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References

- [1] Razi, A., & Zahedi, A. (2019). How to arbitrate and resolve disputes in private contracts. *National conference on futures studies, management and sustainable development*. Tehran, Iran. Civilica. (In Persian). <https://civilica.com/doc/987640>
- [2] Moradi, G. (2014). *Arbitration in contracts: Practical - application, benefits of arbitration*. Behnami. (In Persian). <https://b2n.ir/dg7716>
- [3] rashidi, O, Amini, E., & Eskini, R. (2020). Interpretation of the compulsory arbitration clause. *Private law research*, 9(32), 53-81. (In Persian). <https://doi.org/10.22054/jplr.2020.40179.2138>
- [4] Anissi, E. (2010). Dispute resolution in international contracting contracts with emphasis on the terms of construction contracts of the international federation of consulting engineers (FIDIC). [Thesis] <https://ganj.irandoc.ac.ir/#/articles/bdaed82ad5cb545a4f06732cd1f38681>
- [5] Emadzadeh, M. K., Masoud, Gh., Mobaraki, M. (2016). Legal dispute resolution through arbitration in administrative contracts in Iran. *Quarterly legal thinkers*, 4(10), 95-104. (In Persian). <http://www.noormags.ir/view/fa/articlepage/1135273>
- [6] Rachel, B. (2018). *What is expedited shipping? The complete guide*. <https://B2n.ir/pw2843>
- [7] Avci, M. G. (2019). Lateral transshipment and expedited shipping in disruption recovery: A mean-CVaR approach. *Computers & industrial engineering*, 130, 35–49. <https://doi.org/10.1016/j.cie.2019.02.013>
- [8] Wu, H. (2017). A commentary on the article on expedited shipments in the WTO trade facilitation agreement. *Global trade and customs journal*, 12(4), 141. <https://B2n.ir/kx4672>
- [9] Muñoz-Villamizar, A., Velázquez-Martínez, J. C., Haro, P., Ferrer, A., & Mariño, R. (2021). The environmental impact of fast shipping ecommerce in inbound logistics operations: A case study in Mexico. *Journal of cleaner production*, 283, 125400. <https://doi.org/10.1016/j.jclepro.2020.125400>
- [10] Ma, S. (2017). Fast or free shipping options in online and Omni-channel retail? The mediating role of uncertainty on satisfaction and purchase intentions. *The international journal of logistics management*, 28(4), 1099–1122. <https://doi.org/10.1108/IJLM-05-2016-0130>
- [11] Pavlou, P. A., Liang, H., & Xue, Y. (2007). Understanding and mitigating uncertainty in online exchange relationships: A principal-agent perspective. *MIS quarterly*, 31(1), 105–136. <https://doi.org/10.2307/25148783>
- [12] Turner, R., Ledwith, A., & Kelly, J. (2010). Project management in small to medium-sized enterprises: Matching processes to the nature of the firm. *International journal of project management*, 28(8), 744–755. <https://doi.org/10.1016/j.ijproman.2010.06.005>
- [13] Cumming, D., Johan, S., & Li, D. (2011). Exchange trading rules and stock market liquidity. *Journal of financial economics*, 99(3), 651–671. <https://doi.org/10.1016/j.jfineco.2010.10.001>
- [14] Raymond, C., Frantzeskaki, N., Kabisch, N., Berry, P., Breil, M., Nita, M., ... Calfapietra, C. (2017). A framework for assessing and implementing the co-benefits of nature-based solutions in urban areas. *Environmental science & policy*, 77, 15–24. <http://dx.doi.org/10.1016/j.envsci.2017.07.008>
- [15] Mohammadpour, A. (2009). Qualitative data analysis, procedures and models. *Ethnology journal*, 10, (In Persian). <https://ensani.ir/fa/article/131990>
- [16] Gaeni, A., & Hosseinzadeh, A. (2012). The trio paradigms of positivism, interpretativism and hermeneutics in management and organizational studies. *Strategy for culture*, 5(19), 103-138. (In Persian). http://www.jsfc.ir/article_43850.html
- [17] Wang, C. L., & Ahmed, P. K. (2007). Dynamic capabilities: A review and research agenda. *International journal of management reviews*, 9(1), 31–51. <https://doi.org/10.1111/j.1468-2370.2007.00201.x>
- [18] Chase, S. E. (2018). Narrative inquiry: Toward theoretical and methodological maturity. In *The sage handbook of qualitative research* (pp. 546–560). SAGE Publications. <https://b2n.ir/xh1193>
- [19] Sandelowski, M. (2007). Using qualitative metasummary to synthesize qualitative and quantitative descriptive findings. *Research in nursing & health*, 30(1), 99–111. <https://doi.org/10.1002/nur.20176>
- [20] Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*. Sage publications. <https://b2n.ir/ew4631>
- [21] Strauss, A. L., & Corbin, J. M. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage publications. <https://b2n.ir/qz1134>