

# The use of dispute review boards in construction projects: A comparison of Turkey, UK and US

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## Abstract

In construction projects, contracts that are prepared to define rights, authorisation and responsibilities of owner and contractor are significant legal documents during the project construction phase. No matter how carefully contracts are prepared, they may not include all the provisions concerning possible negative situations that may arise between parties during the project phase. Disputes, which can be defined as conflicts and disagreements between parties, can occur. In recent years, Alternative Dispute Resolution (ADR) has been developed in the global construction sector in order to reduce disputes and prevent litigation. One of the alternative solutions is the Dispute Review Board (DRB). DRBs prevent disputes, help to quickly resolve disputes and minimise dispute costs. This paper aims to discuss the potential use of the DRB in construction projects in Turkey by comparing DRB usage in the US and the UK. In this context, a field survey was conducted with DRB experts in the US and in the UK, where DRBs have wider applications; and also in Turkey where their application is limited. In light of the findings obtained from the field survey, positive and negative aspects of the use of DRBs is put forward. Furthermore, as DRB usage in the case of Turkey is rather limited, its possible applicability as a dispute resolution method is discussed.

## Keywords

Alternative Dispute Resolution (ADR), Construction industry, Construction project, Dispute resolution, Dispute Review Board (DRB).

## 1. Introduction

The aim of construction projects, which have complex structures and which employ different participants together, is to accomplish projects on time, at a desired quality and with current sources. In order to achieve this aim, the rights, authorization and responsibilities of the parties should be properly defined. Contracts, which are prepared to regulate relations between the parties, are important legal documents during the project construction phase. No matter how carefully contracts are prepared, they may not include all the provisions concerning possible negative situations between parties during the project phase. Disputes, which can be defined as the clash of ideas and disagreements between parties, can occur. Disputes, which remain unresolved, may prevent completion of the projects on time and at a determined cost and quality. In addition, disputes may result in project participants becoming inefficient and eventually lead to the failure of the project. Parties apply several methods to resolve these disputes.

The traditional method for resolving disputes is court decisions. However, court trials often take too much time which diminishes monetary demands of the parties. When the negative impacts of the disputes on projects are considered, the issues of early detections and resolutions gain importance. Thus, alternative methods of dispute resolution have recently been developed in the construction sector in order to reduce disputes and prevent litigation. One solution method is the Dispute Review Board (DRB) which is formed to prevent disputes, resolve disputes rapidly and reduce project costs while the project is ongoing. The DRB as an early dispute resolution mechanism has significant contributions in the successes of several large scale projects, particularly international construction projects.

This paper aims to discuss the applicability and implementation of DRBs, which help prevent disputes, resolve disputes quickly and minimise dispute costs, and their prospective benefits to the parties. In this context, a field survey was conducted with DRB experts

in the US and in the UK where DRBs have wider usage; and also in Turkey where DRBs have a limited application. Based on the findings of the field survey, positive and negative aspects of the use of DRBs is introduced. Furthermore, as the use of DRBs in the Turkey case is rather limited, its possible applications as a method is discussed.

## 2. Disputes and resolutions in the construction sector

Before defining the concept of dispute in the construction sector, it is essential to explore the concepts 'conflict' and 'claim'. Conflict is defined as "an expressed struggle between at least two interdependent parties who perceive incompatible goals, scarce resources, and interference from the other party in achieving their goals" (Willmot and Hocker, 1998). Conflicts between the parties may lead the parties to the claim process. Claim can be defined as "for the assertion of a right to money, property or remedy". (Powell-Smith and Stephenson, 1999); (Love et. al., 2008) or "a request for compensation for damages incurred by any party to a contract". (Semple et. al., 1994).

Although dispute and conflict have similar characteristics; they are not same. Conflict is an opposition status arising from the different opinions of the parties. On the other hand, dispute is the intervention of parties to resolve this opposition status. If conflict is not managed; it can easily turn into disputes. Disputes require resolution. Disputes can be managed: the process of dispute resolution lends itself to third party intervention (Fenn et al., 1997).

Studies so far indicated that unresolved claims between parties result in disputes. According to several researchers who have dealt with this issue, dispute is "a state of disagreements during the construction phase of the projects which stem from different interpretations and opinions by the parties on the use of contract articles." (Semple et. al. 1994); (Carmicheal, 2002); (Oladapo, Onabanjo, 2009). Encountered disputes affect the success of the project and cause cost and time overruns. Disputes can drag a success process to failure. At the same time, disputes may damage business relations between the

parties and ultimately their future careers.

## 2.1. Factors causing disputes in the construction sector

In the studies conducted (Love, Leiringer, 2006); (Diekmann, Nelson, 1985); (Semple et al. 1994); (Campbell, P., 1997); (Chan, Kumaraswamy, 1997); (Diekmann, Girard, 1995); (Harmon, 2003); (Chan, Suen, 2005); (Cheung, Yiu, 2006); (Love et al. 2008); (Abeynayake, 2008); (Olapado, Onabanjo, 2009); (Poh, 2005); (Olapado, Onabanjo, 2009); (Gad et al. 2010) the main cause of disputes between parties is considered as claims and factors causing claims are examined in detail. Although researchers obtain repetitive results, they are valuable for both their own countries and others as these studies were conducted in different countries by different researchers who used different samples.

In Turkey, there are a few recent studies concerning causes of disputes. (Tezcan, 2010); (Eken, 2005); (Çamcı, 2008); (Ateş, 2009); (Deniz, 2010); (İlter, 2010); (Arıcı, 2012). These studies are informative studies in understanding the concept of dispute and its causes from the perspective of the Turkish construction sector. (Soran, 2001); (Türk, 2005); (İlter, Dikbaş, 2009); (Firtina, 2011) analysed dispute resolutions that were applied in the Turkish construction sector. According to the findings of this study, the causes and resolutions of disputes are typically similar to their counterparts in other countries.

## 2.2. Dispute resolutions

“Formal Dispute Resolutions” and “Alternative Dispute Resolutions” are used in order to resolve disputes which occur in construction projects.

### 2.2.1. Formal Dispute Resolution includes *litigation* and *arbitration*.

**Litigation:** It is used when a dispute is not resolved by the parties and one of the parties applies to the court. According to Hughes and Murdoch (1992), if disputes stem from laws and regulations, there are more than two parties, using alternative ways are believed to cause confusion, and one of the par-

ties is totally sure about his claim and thinks that he is right, litigation can be regarded as a convenient option. As courts are dependent on the laws and regulations that are predefined by the state, trial process can get complicated and extended and cause cost overruns. Furthermore, it is thought that courts decide in accordance with their states’ general social, political, economic and cultural policies. This idea causes doubts on firms operating in the international market whether the courts are neutral or not. The limited knowledge and experience of judges, who take in charge at courts, about international trade, which is a very distinguished field, makes it difficult to resolve commercial disputes rapidly and fairly. According to several project parties who acknowledge that the way to the success in the future is connected to today’s good relations; litigation is not a convenient method for resolutions of construction disputes. The ‘win-lose’ understanding of the courts may increase disputes, damage relations and reduces work efficiency and mutual trust of the parties. (Harmon, 2003); (Soran, 2001); (Çamcı, 2008); (Eken, 2005).

**Arbitration:** It is the resolution of disputes after a litigation activity by the final decision of individuals who are called arbiters and authorized by the parties (Yeşilırmak, 2011). In the literature, although some studies classify arbitration as an alternative method of resolution, recent studies indicate that this method should be put in the litigation category. The arbitration procedure is in effect if there is an arbitration contract or clause between the parties. Arbitration contracts or clauses cover issues such as the scope or content of the disputes, selection of arbitrators, place of arbitration, official language of arbitration, the extent of arbitration’s sanction decision and covering the expenses. In this method, negotiations are confidential. The decision making process is quicker and of low cost compared to litigation (Tackaberry, 2003). Arbitration helps to cease hostilities and it causes relatively less damage to the relations between parties. The authorized arbitrator takes his time and evaluates the dispute comprehensively.

However, there are some disadvantages of arbitration; it also has a 'win-lose' understanding. Some decisions may take more time. In addition, the success of arbitration depends on the arbitrator's experience. Furthermore, if the parties do not collaborate to regulate procedures, the cost cannot be reduced and finally, both parties are liable to cover the expenses of arbitration costs and arbitrator fees by using their own budgets. (Tackaberry, 2003).

### 2.2.2. Alternative Dispute Resolutions (ADR)

They do not include any sort of litigation process. Disputes are solved through suggestions, recommendations and efforts of neutral person(s). The basic aim is to resolve disputes in a rapid and economical way. In the ADR, the "win-win" concept, which aims to satisfy both parties, is dominant. Therefore, relations between parties are not necessarily damaged but they may be prolonged in the future. These moderate methods provide creative and efficient resolutions. The ADR methods used to resolve disputes in the construction sector are defined and discussed below.

**Negotiation:** It is based on the exchange of ideas between parties via meetings when a dispute occurs. If the parties are not satisfied with the resolutions after negotiations, they may appeal to the court or demand assistance from a third person. That third person takes on the responsibility for mediation. Therefore, disputes are resolved through negotiations between parties before they get too serious. Negotiations also help to prevent relationship damage. Besides parties can negotiate while the project is ongoing. (Riecken, Ashcraft, 2002).

**Mediation:** It is based on the resolution of disputes by the help of a neutral third person (mediator) who is supposed to express his/her opinion and offer a solution. The mediator should be completely neutral and he should be free from any personal interests concerning the possible outcomes of the dispute. If the contract includes an article about mediation as a method of dispute resolution, then the parties may select the mediator at the initial

phase of the project. In the method of mediation, the parties should clearly state their and mediator's responsibilities. The parties do not have to accept the resolution offered by the mediator. The final decision is reached the approval of both parties. Mediation is a "win-win" process; it protects the trust between the parties, offers a quick resolution and helps the parties to reduce costs. (Gnaedinger, 1987); (Çamcı, 2008).

**Mediation - Arbitration:** In case the method of mediation fails, a mixed method of mediation-arbitration can be applied. (Gnaedinger, 1987). In mediation-arbitration, disputes are presented, then the parties take the ones that they found appropriate to arbitration. At the initial stage of this process, the parties generally make an agreement about the application of this method. The procedure of this method is not different from mediation or arbitration. Here the only difference is that the parties are in contact with two different neutral groups for mediation and arbitration. (Morgan, 2005).

**Expert determination:** An expert appointed by the parties to conduct research and evaluate the dispute between parties by using his/her own technical knowledge and experience. (Chan, Suen, 2005). This method is often used for disputes involving technical issues. Both parties can agree on the expert or he can be selected among previous mediators. The parties share technical issues and disputes with the expert. The expert is responsible for transmitting both parties' claims and ideas to each other. As the parties find out their claims and ideas, they can question each other's desires and claims. (Morgan, 2005). This method is based on the information shared by the parties. The bindingness of the resolution is shaped by both parties' desires. (Morgan, 2005). Cheung and Suen (2002) define the method of expert determination as a reliable and manageable process which is controlled by parties. It is also a flexible process depending on mutual agreement and experienced disputes between parties; there is little risk of delay in the process in which neutral persons that are selected by the parties provide binding

results. This brief and low cost method also helps to protect relations.

**Early neutral evaluation:** If the parties think that they are right, then they make no compromises for a moderate resolution which fits both parties. The parties authorize a neutral person to evaluate the dispute, without appealing to the court. The neutral person questions the parties in accordance with his previous knowledge about the issue and offers a non-binding evaluation that is similar to a probable court decision. So the parties can see the probable decision if they appealed to the court. (Morgan, 2005). This method is often used in complicated issues of dispute. The neutral person may encourage the parties to compromise. (Harmon, 2003). Similar to other ADR methods, this method is also not binding for the parties.

**Mini trial:** This is an essentially voluntary process with non-binding results for the parties. (Morgan, 2005). The parties present their arguments directly and unofficially to the representative of the other party who is in charge of making decisions. The process is rather short, if there is not any arbitrator or jury between the parties. This method enables both parties to make a decision in line with their special wishes and unlike litigation, it is a discreet and reliable method. (Henry, 1988). However, it is more costly than other ADRs. Therefore, it is more appropriate for use in large scale and complicated disputes. (Morgan, 2005).

**Dispute Review Board (DRB):** It is a dispute resolution body consisting of three independent individuals who are selected by the approval of both project parties. (Chern, 2008). The main feature that differentiates DRBs from other ADR methods is that DRBs are formed in the initial stage of the project and prior to any possible dispute. (Chapman, 1999). DRB members occasionally visit sites, follow work progress, detect potential disputes before they occur and resolve them quickly. As it prevents disputes before they occur, the DRB can also work as a dispute prevention mechanism. This method enables timely project completion, at the desired quality and budget. The positive relations between the parties

contribute in the project's efficiency. (Chern, 2009); (Griffiths, 2010); (Gorton et.al. 2001); (Menessa, 2010).

The first DRB was formed in Colorado (US) in 1975 for the Eisenhower Tunnel project (Harmon, 2003). Since the 1990s, The World Bank, FIDIC, ICC, ICE and DRBF have conducted researches about the DRB process and have published DRB procedures. Additionally, the FIDIC and the World Bank have adapted the DRB approach to their standard contract documents. The World Bank requires a three member DRB on any of its projects over 50 million dollars. On projects costing below 50 million dollars, it requires a DRB consisting of one to three individuals (Url-1). The World Bank's decision has brought a revision in FIDIC standard contract documents. Since 1996 there have been several publications on the way the DRB works; its procedures and development, the benefits of the DRB in dispute resolution and dispute prevention, its meetings, site visits and DRB usage in the international arena. (Matyas et. al., 1996); (Thompson, 1998); (Chapman, 1999); (Harmon, 2003); (Chern, 2008); (Koch, 2005). However, it was identified that there are no detailed studies in Turkey; only books, articles and theses on FIDIC, international contracts and dispute resolutions briefly mentioning DRBs as a topic. Accordingly, FIDIC (1999) and Bunni (2005) provided general information about new FIDIC regulations after 1999 and about DRBs and similar boards which took part in this new regulation.

After the owner and contractor decide to use a DRB on a project, they should first prepare a DRB specification and contract to be signed with DRB members. The most common method in selection of DRB members is Nomination by Each Party. In this method, each party authorizes one member. These two members are responsible for selecting the third member, who generally works as a board chairman. In the "top-down" method, parties first select the board chairman. The selected board chairman is responsible for selecting the other members of the board. (Harmon, 2003). Professional construction/engineering

associations such as The Dispute Review Board Foundation (DRBF), The Dispute Board Federation of Switzerland (DBF), The Institution of Civil Engineers (ICE), The London Court of International Arbitration (LCIA) have the lists consisting of prospective DRB members.

DRB members periodically visit the site during the project. The board follows developments and activities closely, warns the parties on time about upcoming disputes, directs meetings when a dispute is assigned to the board, completes board discussions and gives professional advice on time. (Thompson, 1998). The DRB's decision can be advisory or binding depending on the contract. (Harmon, 2003); (Matyas et al. 1996). According to Matyas et Al. (1996)'s research, the DRB's advice has been used during most of the disputes. By this means, disputes between the parties can be resolved peacefully.

The DRB cost includes board election, board members' travel and periodical site, visit expenses, extra travel expenses and board meeting expenses. (Levin, 1998). As previous studies indicated, the cost of a three-person DRB ranges between 0.05% and 0.3% of the total project cost. (Chapman, 1999). In comparison to litigation and arbitration costs, it is relatively low. (Harmon, 2003); (Thompson, 1998). The cost is shared equally by the project parties.

### **3. A field survey on DRB usage in construction projects**

In recent years, ADR methods have been increasingly used to prevent disputes in construction projects, particularly in the international ones. Among these methods, the use of DRB is highly recommended as it quickly resolves disputes, brings advantages in time and costs and creates positive relations between the parties.

#### **3.1. Aim of the field survey**

Although the use of DRBs is preferred in the global construction sector, it is a less used ADR method in many countries such as Turkey because it is not very well known. The main aim of this study is to discuss applicability of the DRB usage in construction projects, which prevents disputes, helps

to quickly resolve disputes and minimises dispute costs. In this context, a field survey was conducted with DRB experts in the US and in the UK where DRBs have wider applications; and also in Turkey where it has a limited application. In the light of research findings obtained from the field survey, positive and negative aspects of DRB usage is put forward. Furthermore, as DRB usage in the Turkey case is rather limited, its possible applications as a method is discussed.

#### **3.2. The preparation of the questionnaire**

In order to prepare the questionnaire, related literature and similar international case studies were examined (Matyas et al., 1996; Harmon, 2003; Campbell, 1997; Levin, 1998; Thompson, 1998; Chapman, 1999; Bunni, 2005; Chen, 2008; Chen, 2009; Griffiths, 2010). In the light of this information, a questionnaire form, which was aimed to examine DRB usage and its impacts, was drafted. This draft was pre-examined by two members of The Dispute Review Board Foundation (DRBF) who work as consultants on construction contracts, disputes and DRBs in the UK. It is discussed whether the aim of the study is achieved through the drafted groups of questions and answers to the questions. After consultations, necessary corrections in the questionnaire were made and a final version of the questionnaire was acquired.

The questionnaire consists of four parts and 44 questions. The first part consisting of 11 questions includes personal information of the participants. The second part includes 20 questions that helps to find out the importance and impacts of DRB by using a 5 scale Likert.

The third part covers 10 questions and attempts to identify desired characteristics of DRB members and the DRB process. The questions in the final part aim to determine issues that are encountered during the preparation of DRBs and working process.

#### **3.3. The method of the field survey**

In order to make the study achieve its goal, the questionnaire is conduct-

ed among the experts on disputes who worked on DRBs in the UK, the US and Turkey, and/or who have sufficient knowledge of DRBs.

In the UK, 16 DRB members whose names were published on The Institution of Civil Engineers (ICE)'s publication called "Dispute Resolution Service" and 54 members of The Dispute Resolution Board Foundation (DRBF) were considered for the target group. As 5 of the DRBF members were also included in ICE's list, 65 members were reached via telephone and e-mail. They were informed about the research and asked for a face-to-face interview. Only three members agreed to a face-to-face interview. Fourteen members agreed to complete the questionnaire online. Two additional professionals, who were not on the ICE and DRBF lists, but recommended by members for their DRB expertise participated in the field survey. Thus, the total number of participants in the UK was 19. Four of the participants were left out of the assessment as they did not answer a sufficient number of questions. Ultimately, 15 completed questionnaires were evaluated.

In the United States of America, 424 members of The Dispute Resolution Board Foundation (DRBF) were reached via e-mail. Thirty-nine of these members participated in the research, five of them were left out of the assessment as they did not answer a sufficient number of questions. Ultimately questionnaires completed by 35 participants, were evaluated.

In Turkey, all 3 members of the Dispute Resolution Board Foundation (DRBF) were contacted. They were informed about the research and asked

for face-to-face interviews. Only one member agreed on meeting; others agreed on filling the questionnaire via e-mail. As there is no other list consisting of experienced DRB professionals in Turkey, The Union of Chambers and Commodity Exchanges of Turkey's "Arbitration Board Arbitrator List", which consists of the names of solicitors that also work as arbitrators was used. The resumes of the individuals were examined. Fifteen individuals experienced in international disputes, were selected and contacted. Only one of them agreed to a face-to-face interview; three of them filled the questionnaire via e-mail. Thus, the total number of experts was eight; these experts, who have experience and knowledge of DRBs, were recommended by the participants who filled the earlier questionnaire.

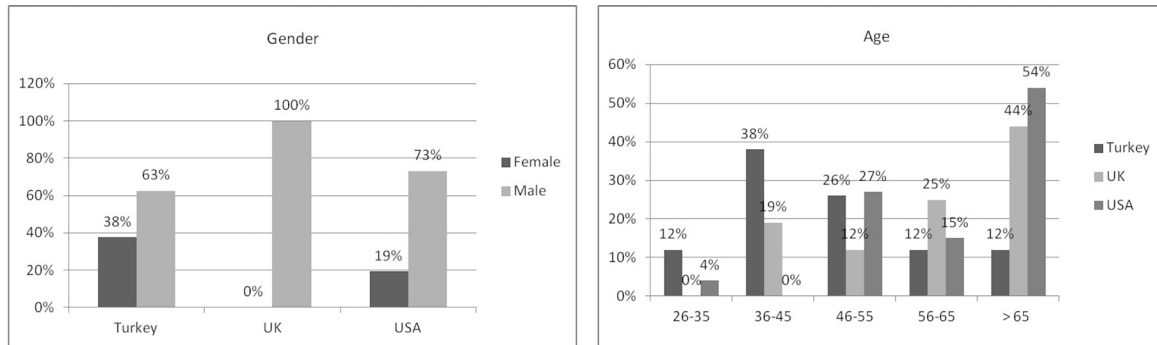
Table 1 shows participation status of the field survey and total number of questionnaires. There were some difficulties in contacting participants. For instance, because participants did not wish to spend time on face-to-face interviews due to their busy work schedule. Furthermore, the lack of lists in Turkey concerning individuals who have experience of DRB and rare DRB implementations in Turkey caused difficulties.

### 3.4. Field survey findings

**Participant Information:** This part presents answers about participants' professional backgrounds and experience levels concerning disputes in construction contracts. As it is seen on Figure 1, 100% of participants in the UK, 55% of them in the US and 63% of them in Turkey are male.

**Table 1.** Distribution of countries that participate the field survey.

	UK	US	Turkey	Total
Total number of individuals reached for the questionnaire	67	424	18	509
Number of individuals who filled the questionnaire on face-to-face interview	3	-	3	6
Number of individuals who filled the questionnaire via e-mail	16	39	5	60
Total number of individuals who filled the questionnaire	19	39	8	66
<b>Total number of questionnaires evaluated</b>	<b>15</b>	<b>34</b>	<b>8</b>	<b>57</b>



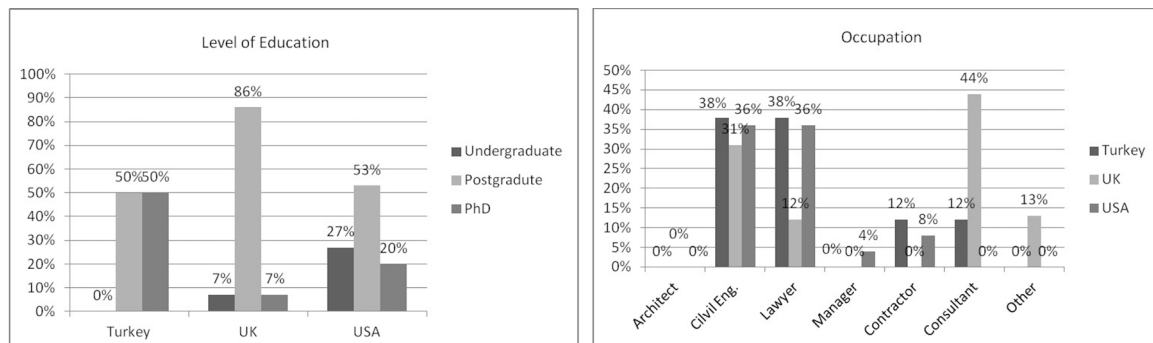
**Figure 1.** Gender and ages of participants.

The majority of participants in the UK and in the US were over 66 years old and holding a Master's degree in this field. The majority of participants in Turkey were between 36 and 45 and holding Master's and PhD degrees.

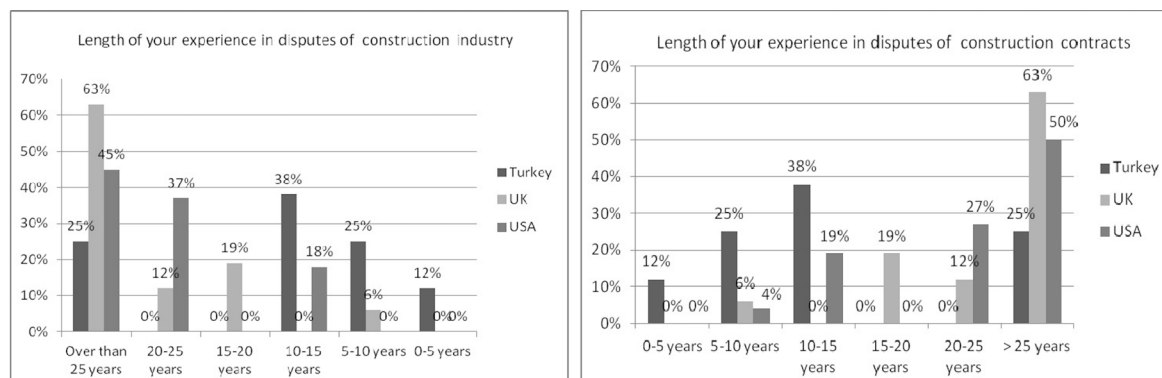
As indicated in Figure 2, most UK participants were consultants. In the US, the majority of them were lawyers and in Turkey they were mostly civil engineers and lawyers.

The work experience of participants was examined in order to understand their knowledge levels regarding disputes in construction contracts and DRBs. As seen in Figure 3, 63% of participants in the UK and 64% of participants in the US had more than 25 years of experience in the construction industry.

years of experience in the construction sector. In Turkey, 50% of participants had 10-15 years of experience. 63% of participants in the UK and 45% of participants in the US had 25 years of experience in disputes in construction contracts. In Turkey, 38% of participants had 10-15 years of experience concerning disputes in construction contracts. Besides, 75% of participants in the UK, 64% of participants in the US and 12% of participants in Turkey stated that they had previously worked on DRBs or similar boards. 87.5 % of participants in the UK, 73% of participants in the US and 38% of participants in Turkey indicated that DRBs were formed for project(s) that they



**Figure 2.** Education status and professions of participants.



**Figure 3.** Length of experience in the construction industry and construction.

had previously worked.

**DRB's significance and impacts:** The significance of the DRB, its advantages and disadvantages for the project and the parties were examined in accordance with the experiences of the individuals who participated in the field survey in Turkey, and the US. The significance of the DRB, its advantages and disadvantages were also determined in line with the previous studies in the literature and listed as 20 statements in the questionnaire. All statements were measured on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The mean of the responses was measured and the significance of the DRB, its advantages and disadvantages for the project and the parties in all three countries were presented in Table 2. The confidence intervals of the values were determined through the one-way analysis of the variance test (ANOVA).

When the data on Table 2 is displayed on a Radar diagram (Figure 4), it is seen that participants from different countries have almost the same opinion about the significance of the DRB, its advantages and disadvantages for the project and the parties. Only participants from Turkey agreed less on the statement "19.DRB's advices are always compatible with the contract's provisions" and participants from the US agreed less on the statement "14. The DRB cost is higher for small scale projects".

**DRB members and the DRB process:** In this stage of the field survey, desired characteristics of DRB members and the DRB process were analysed. The selection of DRB members and the board procedures were determined in accordance with similar studies in the literature. The questionnaire consists of statements is prepared. All statements were measured on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). The mean of the responses was measured. Table 3 presents how desired characteristics of DRB members and the DRB process vary according to different countries. The confidence intervals of the values were determined through the one-way analysis of the variance test (ANOVA).

When the data on Table 3 is dis-

played in a Radar diagram (Figure 5), it can be said that participants from all three countries share similar opinions about the selection of DRB members and the DRB process. Only participants from the UK agreed more on the statement "10.All DRB members must have studied law." Participants from Turkey agreed less on the same statement.

### 3.5. Evaluation of the findings

According to the findings obtained from the case study, most of the experts, working in the construction sector in Turkey, the UK and the US and specialised in disputes, have Master's and PhD degrees. The majority of the experts are male. These boards generally consist of lawyers in the UK, consultants in the US and civil engineers and lawyers in Turkey. The competence of these persons depend on the length of experience in the construction industry and disputes of construction contracts. Accordingly, it is remarkable that these experts are often over 66 years old in the UK and the US and between 36 and 45 years old in Turkey. This difference may stem from the fact that in England and the US, where DRBs are commonly used, being on the DRB lists requires a long term experience in the sector. It is seen that the parties trust the advice of experienced individuals in terms of disputes; and they give priority to these individuals when determining prospective members of the dispute boards. Turkey's age range (36-45) may stem from several reasons. First, there are no expert lists available; institutions have not published such lists yet. In addition, the DRB is a new approach that has been recently used for disputes in the Turkish construction sector. It can also be said that most individuals, who support the usage of such boards in Turkey, are between 36 and 45. Furthermore, it can be said that individuals who have enough experience, seem to have little information about these boards. As DRBs are not commonly used in Turkey, the researchers experienced difficulties in reaching participants during the field survey.

According to the responses to the questions which aimed to determine DRB's significance and impacts; Partic-

**Table 2.** *The significance of the DRB, its advantages and disadvantages for the project and the parties.*

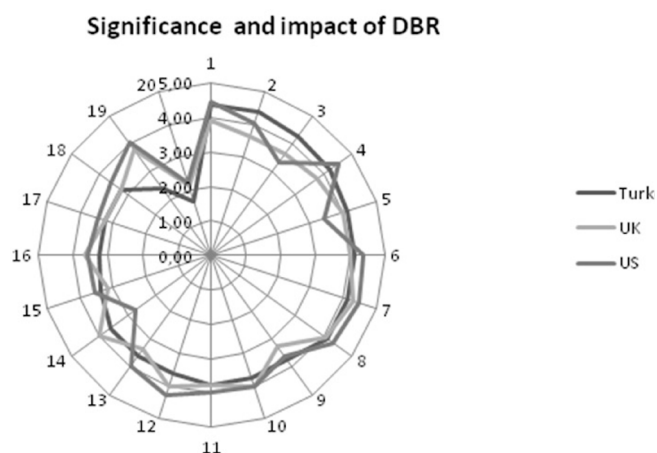
DRB's significance and impacts		Turkey	UK	US	F Value
1	DRB's existence on the initial stages of the project decreases the number of possible disputes.	4.37	3.92	4.44	3.319*
2	DRB increases mutual trust during the project.	4.37	3.61	4.04	2.126
3	Site visits help to predetermine and resolve possible disputes.	4.25	3.64	3.32	1.564
4	The cost of DRB is considerably lower in comparison to other dispute resolution methods.	4.25	3.78	4.52	4.153*
5	DRB determines potential disputes and reduces dispute related costs.	4.12	4.00	3.44	2.203
6	DRB resolves disputes quicker than other dispute resolution methods.	4.12	4.00	4.40	2.672*
7	DRB decreases applications to arbitration and courts.	4.12	4.30	4.50	1.019
8	DRB usage is a positive experience for large scale projects.	4.12	4.07	4.32	0.810
9	DRB prevents contractor's fake claims.	3.75	3.28	3.60	0.673
10	DRB's advice consists of valuable information about the validity of claims	3.75	4.00	4.00	1.400
11	DRB reduces tension between the parties during the project process.	3.75	3.76	3.96	1.004
12	DRB is an entirely neutral method.	3.62	4.00	4.28	4.130*
13	Resolving disputes via DRB increases job satisfaction.	3.62	3.38	3.96	3.966*
14	The DRB cost is higher for small scale projects.	3.62	4.00	2.72	6.909**
15	DRB minimises national and international political and economic impacts, which were experienced during the dispute process.	3.37	3.15	3.56	0.378
16	DRB's advice is always well-thought and fair.	3.25	3.66	3.60	0.840
17	DRB increases work efficiency of the contractor.	3.25	3.23	3.48	0.824
18	DRB increases work efficiency of the owner.	3.25	3.23	3.60	1.297
19	DRB's advice is always compatible with the contract's provisions.	2.37	3.78	4.04	3.917*
20	Resolving a dispute via DRB is a long process.	1.62	2.14	2.20	1.466

\* 95% significance level

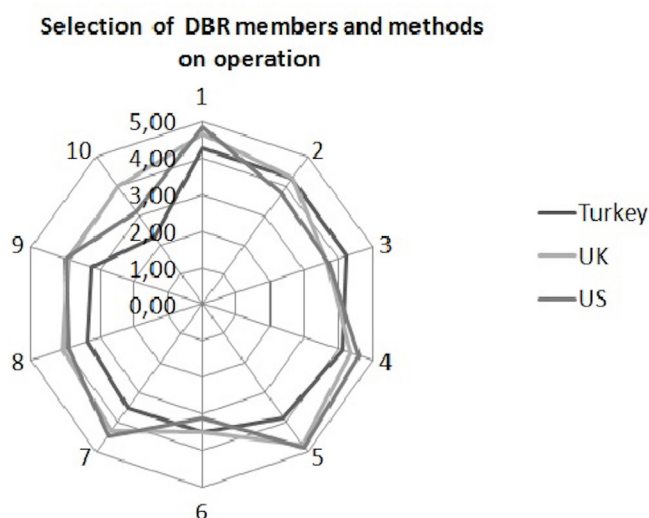
\*\* 99% significance level

ipants in the UK, Turkey and the US indicated that DRBs closely follow the project process from its initial stages, resolve problems between the parties

before they evolve into disputes and prevent probable disputes in the project. As DRBs are not only a method for dispute resolution but also used as



**Figure 4.** The significance of the DRB, its advantages and disadvantages for the project and the parties.



**Figure 5.** The selection of DRB members and DRB's way of work according to the countries.

a dispute avoidance method; they reduce project duration and provide cost gains. These findings are compatible with the previous literature.

The majority of participants in the UK and the US indicated that the DRB's advice is always compatible with contract provisions as they are always fair. In Turkey however, fewer participants agreed on this statement. This result indicates that Turkish participants have relatively less knowledge about DRBs. Therefore, they have lower confidence in DRB members, their decisions and the DRB system. Mistrust in DRB members can be regarded as a disincentive factor for the spread of DRB usage in Turkey.

All participants stated that DRB is more advantageous concerning duration and costs in comparison to other

methods such as litigation, arbitration or mediation. For this reason, they think that DRB reduces litigation and arbitration. According to participants, DRB usage in construction projects may minimise problems. Additionally participants indicated that because the DRB is a neutral method and DRB suggests a friendly approach for dispute resolution, DRB minimises international/national economic/political impacts during the dispute process.

Participants also indicated that DRB implementation is more convenient for large scale projects. Literature review confirms this statement as well. Participants in the UK and Turkey indicated that the DRB cost is higher in small scale projects, whereas some of participants in the US disagree with this statement. The reason for this difference can stem from the fact that the first place in the world where the DRB was used was the US. The World Bank requires DRB usage in particular projects, adapts the DRB approach to standard contracts and publishes DRB procedures. As DRBs are commonly used in projects, the awareness of DRB use is higher than other countries and therefore its cost cannot be high for small scale projects.

Participants from all three countries stated that DRBs increase mutual trust of parties and work efficiency, while reducing tensions and stress of the parties due to the DRB's advice which would form resolutions and eventually leads to successful projects.

According to the responses to the questions which aimed to determine the desired characteristics of DRB members: DRB members should be experienced in the construction sector and should have knowledge of contract law. Participants in the US and the UK think that members' knowledge of disputes is significant whereas Turkish participants find it less significant. Low age averages and length of experience in disputes seem to explain this particular findings. Furthermore, according to participants in the US and the UK, DRB members must have studied law whereas participants in Turkey stated that law education is not necessary. This finding is particularly interesting because most of the participants in

**Table 3.** *The selection of DRB members and the DRB process.*

DRB members and DRB process		Turkey	UK	US	F Value
1	DRB member should be experienced in the construction sector.	4.25	4.64	4.83	5.994**
2	In selection of DRB members, their knowledge of contract law should be taken into consideration.	4.25	4.28	3.75	2.911*
3	In selection of DRB members there can be disagreements between the parties (contractor and owner)	4.25	3.69	3.73	2.008
4	DRB members' neutrality increases trust of the parties in both DRB members and DRB system	4.12	4.35	4.62	3.064*
5	DRB members should not provide personal advice to owners or contractors during the project.	3.87	4.78	4.83	10.541**
6	In international projects, the nationalities of DRB members should be different from those of project participants.	3.50	3.50	3.12	0.905
7	In selection of DRB members, individuals' expertise in disputes should be taken into consideration.	3.50	4.30	4.45	0.679
8	DRB members should organize routine meetings.	3.37	4.07	3.91	2.543
9	DRB members' site visits and meetings are sufficient to provide a good understanding of the project process.	3.25	3.92	4.00	4.239*
10	All DRB members must have studied law.	2.28	4.00	3.12	5.927**

\* 95% significance level

\*\* 99% significance level

Turkey were lawyers. Their opinions were asked about this issue and they stated that DRB membership requires technical expertise and law education may not be sufficient. Besides all participants commented that the nationalities of DRB members should be different from the project participants. By supporting the DRB's neutrality, the party's trust towards DRB can be increased.

*According to the responses to the questions about the DRB's process;* According to participants from all three countries, organized meetings and site visits are sufficient to provide a full understanding of the project and its process. In addition, most of the UK and US participants and some of participants in Turkey stated that DRBs organize routine meetings after the projects are launched. Participants in Turkey pointed out that they do not want to conduct such meetings because of their costs to the parties. DRB's individual advice to the owner or contractor in the project process also varies in regard to the participant's country. Participants in the UK and in the US strongly agreed on this statement whereas few-

er participants in Turkey approved it; even 12% of them indicated that DRB members should give personal advice to the owner or contractor.

Both situations demonstrate that these boards are not totally compatible with their initial establishment aims in Turkey. In Turkey, DRBs closely follow the project from the initial stages, resolve problems before they evolve into disputes, prevent increases in time and cost and give personal advice to the owner and contractor. Therefore, it is found out that the DRB method has not been completely implemented in Turkey; and as a result this situation prevents the common usage of DRB in Turkey.

**Difficulties encountered during the DRB usage:** In the scope of the field survey, participants underlined these difficulties that they encountered during the preparation or working process of DRB.

Participants in the UK: *They stated that there are disagreements during the appointment of the third member by other two members who were previously authorized by the owner and the contractor, the owner is reluctant to imple-*

*ment a DRB due to its costs and therefore the owner constantly delays authorization of DRB members, the parties have concerns about the DRB's neutrality, at times the parties are reluctant to pay DRB members or to participate in their site visits. In addition they pointed out more difficulties that in order to provide just resolutions, DRB members are not able make decisions that are compatible with the contract provisions and they may make decisions that lie behind the scope of the actual dispute with cultural arrogance. The cultural arrogance impact can be evaluated as DRB members' persistence of their cultural norms while they are preparing advice.*

*Participants in Turkey: They indicated that there is a divergence between the parties about the selection of the DRB members, some owners reject the DRB's decisions as they think these decisions will limit their abilities in the long term, The DRB costs are found expensive, particularly by the owners. They also stated that DRB members' desire to visit the site regularly but these visits at times do not occur. This is also considered as a problem.*

*Participants in the US: They stated that there is a reluctance to form DRBs due to their costs and as the DRB is not founded on time, this causes several problems. The difference between the procedures of public authorities and DRB establishments is considered as a problem. In addition, the parties expect the DRB members, who they themselves have authorized, not to be neutral but to support their own sides. Further, as DRB members have a very heavy work schedule many scheduled meetings are not held. Another problem is that DRB members do not conform to contract provisions and execute contract law; instead they create their own rules of legislation. At times the DRB process is a long one. If a DRB member is not able to work efficiently, then the cancellation of the board requires mutual approval of the parties. Furthermore, DRB members can be reluctant to understand the positions of both parties; if all three members do not have the same opinion of a particular subject, then the resolution is difficult for the parties.*

*Participants from all three countries emphasized that the success of the*

*DRB system depends on the parties' trust the DRB members' independence and their objectivity. DRB members should not be an advocate of a particular party. They should be experienced in disputes concerning the types of contracts; however they should avoid providing opinions on how the work should be done in an optimised way even when the parties demand to benefit from their experiences. They should only provide advice compatible with the contract provisions.*

#### **4. Conclusion and recommendations**

This paper discussed and analysed the potential use of DRB in construction projects in Turkey by comparing DRB usage in the US and UK. In the paper, the usage of these boards, appropriate project types and their contribution to the projects were explored. A field survey was conducted in the UK and the US, where DRBs are frequently used, and in Turkey, where there is a limited application of DRBs. By the help of the field survey, the significance and impacts of the DRB process were examined.

According to the findings of the previous literature and this current research, the usage of DRBs in construction projects is a beneficial method in preventing and resolving disputes. DRB is mostly used in large scale projects and it has more advantages than other methods such as arbitration, litigation and mediation in terms of cost and time. DRBs also prevent the use of the above-mentioned methods. In addition, it can be said that DRBs reduce tension, minimise international/national economic/political impacts and promote mutual trust between the parties during the project process. Based on these outcomes, the DRB has notable contributions in the accomplishment of projects. However, it was identified that the selection of DRB members caused problems between the parties and the DRB costs were found expensive.

Although its contribution in the project's success; the lack of knowledge of DRBs, the lack of trust towards DRB members and several mistakes during the application are important factors hindering the spread of DRB

implementation. In this context, the parties should be aware of positive and negative dimensions of DRB and it is important to provide trust on the DRB system and members. Accordingly, public awareness of the use of DRBs should be increased. The parties, whose decisions are crucial for the launch of large scale and international projects, should be well informed about DRBs during the initial stages of projects.

In order to assure increased trust towards DRBs, DRB members' characteristics and their accumulation of knowledge is vital. Certain standards should be determined for potential DRB members on the national and international level. Relevant institutions and organizations should publish lists of individuals who meet these standards.

DRB's impact on the success of the project and its members' procedures during the project is closely connected to its manners and behaviours towards the parties. Therefore, standard procedures and forms, which are to be published by relevant institutions and organizations, are of vital importance with regard to the parties' trusts towards DRBs.

It is significant that relevant international and/or national institutions adapt the DRB approach to their standard contracts and develop applications which encourage DRB usage, as it is the case for FIDIC and the World Bank. Further studies should be conducted in order to put forward the DRB cost is low not only for large scale projects but also for the small scale ones. Thus, it is considered that implementation of DRBs and similar boards will increase leading to successful projects with fully satisfied parties.

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### **İnşaat projelerinde uyuşmazlık inceleme kurulları kullanımı: Türkiye, İngiltere ve Amerika karşılaştırması**

İnşaat sözleşmeleri, taraflar arasındaki ilişkileri düzenleyen hukuki belgeler olarak projenin gerçekleşme sürecinde büyük önem taşırlar. Ne kadar dikkatli hazırlanırsa hazırlansın, proje süreci boyunca taraflar arasında gerçekleşebilecek olumsuz durumlara karşı bütün hükümleri içermeyebilirler. Taraflar arasında uyuşmazlıklar meydana gelebilir. Çözümlemeyen uyuşmazlıklar projenin istenilen süre, maliyet ve kalitede tamamlanmasını engeller, proje katılımcılarının verimini düşürerek projenin başarısız olmasına sebep olabilir. Uyuşmazlıkların projeler üzerindeki olumsuz etkileri düşünüldüğünde, son yıllarda inşaat sektöründe uyuşmazlıkların erken tespit edilmesi, sayısının azaltılması ve mahkeme yargılamasına gidilmesinin önlenmesi için Alternatif Uyuşmazlık

Çözüm Yolları (ADR) üzerine çalışılmaktadır.

Uyuşmazlık; projelerin yapım aşamasında tarafların sözleşme maddelerinin yorumlanması ve uygulanması üzerine farklı görüşlere sahip olması nedeniyle ortaya çıkan anlaşamama durumudur. Uyuşmazlıkların yaşanması projenin başarısını etkiler, maliyet, süre artışına neden olur. Aynı zamanda uyuşmazlıklar, taraflar arasındaki iş ilişkisini zedeleyerek, gelecekteki iş hayatlarına zarar verebilir.

İnşaat projelerinde oluşan uyuşmazlıkların çözümü için kullanılan Mahkeme Yargılaması ve Tahkim, Resmi Uyuşmazlık Çözüm Yolları olarak tanımlanırken, Müzakere, Arabuluculuk, Arabuluculuk - Tahkim, Hakem-Bilirkişi, Tarafsız Ön Değerlendirme, Kısa Yargılama ve Uyuşmazlık İnceleme Kurulu (DRB), Alternatif Uyuşmazlık Çözüm Yolları - ADR olarak tanımlanır.

DRB'ü diğer ADR yöntemlerinden ayrılan en önemli özelliği, DRB'un projenin başlangıcında bir uyuşmazlık meydana gelmeden önce oluşturulmasıdır. DRB düzenli saha ziyaretleri gerçekleştirerek işin ilerlemesini izler, uyuşmazlıkları oluşmadan belirler, hızla çözülmesini sağlar. Uyuşmazlık meydana gelmeden önce çözdüğü için, uyuşmazlıkları önleme mekanizması olarak da görev yapmaktadır. Bu yaklaşım projelerin istenilen sürede, kalitede, maliyette bitirilmesini sağlar. Taraflar arasında yaratılan pozitif ilişkiler sayesinde projenin verimliliğini artırır.

DBR dünyada inşaat sektöründe kullanımı tercih edilmesine rağmen, Türkiye gibi pek çok ülkede az kullanılan bir ADR yöntemidir. Çalışmanın amacı, uyuşmazlıkların oluşmasını önleyen, oluşan uyuşmazlıkların hızlı bir şekilde çözüme kavuşturan, uyuşmazlık çözüm giderlerini minimuma indiren DRB'nun, inşaat projelerinde kullanımının uygunluğunu tartışmaktır. Bu amaçla DRB'un yaygın olarak kullanıldığı İngiltere (UK), Amerika (USA) ve sık kullanılmayan Türkiye inşaat sektörüne yönelik bir alan araştırması gerçekleştirilmiştir. Alan araştırmasının bulgularına göre DRB kullanımının olumlu ve olumsuz tarafları ortaya konulmuş, Türkiye örneğinde kullanımının henüz kısıtlı olduğu ülkeler için DBR nin uygulanabilirliği tartışılmıştır.

Alan araştırması sonucuna göre Türkiye, UK ve USA da uyuşmazlıklar konusunda çalışan uzmanların büyük çoğunluğu yüksek lisans ve doktora eğitimi almış, ağırlıklı olarak erkek çalışanlardır. Bu kişiler genellikle UK'da avukat, USA'da danışman, Türkiye'de ise inşaat mühendisi ve avukattır. UK ve USA'da 66 yaş ve üstü, Türkiye'de 36-45 yaş arasındadır. Bu farklılığın sebebi olarak UK ve USA'da DRB uzman listelerinde yer almak için sektörde uzun yıllar deneyim ve tecrübenin gerekli olması gösterilebilir. Türkiye'de yaş ortalamasının 36-45 arası olmasının sebebi olarak ise, DBR'un Türk inşaat projelerinde kullanılmaya başlanan yeni bir anlayış olduğu, uzun yıllar deneyim ve tecrübe sahip kişilerin bu kurullar hakkında daha az bilgiye sahip oldukları söylenebilir.

DRB'un önem ve etkilerini saptamayı hedefleyen sorulara verilen yanıtlara göre; UK, USA ve Türkiye'deki katılımcılar DRB'ların projeyi başından itibaren izleyerek taraflar arasındaki problemleri uyuşmazlık haline gelmeden çözdüğünü belirtmişlerdir. Bu yüzden DRB uyuşmazlık çözümünün yanı sıra uyuşmazlıkları önleyici bir yöntem olarak da kullanıldığı için projelerde süre, maliyet kazancını sağladığı söylenebilir. Bu bilgiler literatürde anlatılanları doğrulamaktadır.

UK ve USA'da katılımcılar, DRB tavsiyelerinin sözleşme hükümleriyle tutarlı, adil tavsiyeler olduğunu düşünmektedir. Türkiye'de ise bu şekilde düşünenlerin oranı düşüktür. Bu durum Türkiye'de DRB konusundaki bilgi eksikliğini, verilen karara güvenin az olduğunu göstermektedir. Bu düşünce Türkiye'de DRB kullanımının yaygınlaşmasını engelleyen bir faktör olarak değerlendirilebilir.

Tüm katılımcılar DRB'nin süre ve maliyet açısından yargı, tahkim gibi diğer yöntemlere göre daha avantajlı olduğunu düşünmektedir. Ayrıca katılımcılar DRB'nin tarafsız bir yöntem olması, uyuşmazlık çözümünde dostane bir yaklaşım sunması sebebiyle, proje sürecinde yaşanan ekonomik / politik etkileri en aza indirdiğini belirtmektedir.

Katılımcılar DRB'ın büyük ölçekli projelerde kullanımının uygun olduğu belirtmektedirler. Küçük ölçekli projelerde DRB maliyetinin yüksek olacağını görüşüne USA daki katılımcılar katılmamaktadırlar. Bu farkın sebebi olarak DRB kullanımının Dünya Bankası gibi kuruluşların belirli projelerde DRB kullanımını zorunlu tutulması, standart sözleşmeler ve prosedürler yayınlaması gösterilebilir.

DBR üyeleri inşaat sektöründe tecrübeli ve sözleşme hukuku bilgisine sahip olmalıdır. Uyuşmazlık konusundaki bilgileri UK ve USA katılımcıları için önemli iken, Türkiye katılımcıları tarafından daha az önemli bulunmuştur. Bu durumun Türkiye'de alan araştırmasına katılan kişilerin yaş ortalamalarının ve uyuşmazlıklar konusundaki deneyim sürelerinin düşük olmasından kaynaklandığı söylenebilir. UK ve USA katılımcıları DRB üyelerinin hukuk eğitimi almış olması

gerektiğini, Türkiye'deki katılımcılar ise DRB üyeliğinin teknik uzmanlık gerektiren bir konu olduğunu, sadece hukuk eğitimi almış kişilerin yetersiz kalacağını belirtmişlerdir.

DRB'un yaptıkları toplantıların ve saha ziyaretlerinin projeyi ve sürecini anlamak için yeterli olduğunu düşünmektedirler. UK ve USA'daki katılımcıların çoğu, Türkiye'deki katılımcıların düşük bir bölümü DRB'nin proje başlangıcından itibaren rutin aralıklarla toplantılar düzenlediğini, ancak her toplantının taraflara maliyet oluşturduğu için bu toplantıların gerçekleşmesinin istenmediğini belirtmişlerdir. UK ve USA'daki katılımcılar, DRB'nin proje sürecinde mal sahibi veya yükleniciye bireysel önerilerde bulunmaması gerektiğini Türkiye'deki katılımcılar ise bireysel önerilerde bulunması gerektiğini belirtmiştir.

DBR uygulamasında; Mal sahibi ve yüklenici tarafından görevlendirilmiş ilk iki üyenin üçüncü üyeyi ataması sırasında anlaşmazlıklar yaşandığını, mal sahibinin DRB'yi maliyetleri sebebiyle kullanma konusunda isteksiz olduğunu, tarafların DRB üyelerinin tarafsızlığı konusunda endişe duyduklarını, zaman zaman tarafların saha ziyaretlerine katılma konusunda isteksiz davrandıklarını, DRB üyelerinin adil çözümler sunmak adına sözleşme hükümleriyle tutarlı kararlar vermemesini yaşanan zorluklar olarak belirtil-

mektedir.

Literatürde anlatılanlar ve alan araştırması ile ortaya konulan bulgulara göre inşaat projelerinde DRB kullanımının; uyuşmazlıkların oluşmasını önleyen bir yöntem olduğu, daha çok büyük ölçekli projelerde kullanıldığı, tahkim, yargılama gibi yöntemlere göre maliyet ve süre açısından avantajlı olduğu ortaya konulmuştur. Proje başarısı üzerine etkisi kanıtlanmış olsa bile, DBR konusundaki bilgi eksikliği, DRB üyelerine olan güvensizlik ve uygulamada yapılan bazı hatalar DRB kullanımının yaygınlaşmasını engelleyen faktörlerdir. Bu durumda projeye sağlayacağı olumlu ve olumsuz özelliklerin farkında olunarak DRB sistemine ve DRB üyelerine güven duyulmasının sağlanması gerekmektedir. DRB'a olan güvenin artırılmasında, DRB üyeleri ve sahip olduğu bilgi birikimi çok önemlidir. Ulusal / uluslararası düzeyde DRB üyesi olabilecek kişiler için belirli standartlar oluşturmalıdır. İlgili kurum yada kuruluşlar bu standartlara uyan kişilerin isimlerinin yer aldığı listeler yayınlanmalıdır. DBR'un proje başarısı üzerindeki etkisi, DRB üyelerinin proje süreci boyunca uygulayacağı çalışma, taraflara olan tutum ve davranışları ile yakından ilişkili olduğu için, ulusal/uluslararası ilgili kurum ve kuruluşlarca yayınlanacak standart prosedürler ve formlar tarafların DRB ye güven duymaları açısından önemlidir.