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Evaluation of Alliancing, Partnering and Traditional Contracting in relation to Construction Project Conflicts

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Abstract

Construction Projects are complex in their nature, which makes them very much prone to conflicts. These conflicts, which mainly arise due to contractual reasons, affect the projects in many ways, including delays, cost overruns and poor quality. Recently, the partnering and Alliancing arrangements have been gaining fame. This paper identifies the major contractual factors causing conflicts in the Construction Projects, and then by using a questionnaire based survey for a random sample of 103 construction project stakeholders (Clients, Consultants and Contractors) compares Alliancing, Partnering and Traditional Contracting for each factor. It is observed that majority of professionals are in support of Partnering and Alliancing as compared to the Traditional Contracting. Moreover, Contractors are supporters of Risk Sharing in the Projects, so they are more in favor of Alliancing, while Clients and Consultants share their view, and support Partnering instead.

Key Words: Construction; Conflicts; Partnering; Alliancing

1. Introduction

Construction projects are very complex in nature. The complicated and lengthy procedures involved in a construction project promote the occurrence of conflicts [1]. Construction is construction. It does not matter how advanced technology, detailed scheduling, careful contract management, state of the art testing and modern computer based means are used, the very nature of the construction activity ensures adversarial relationships between major parties of the project [2]. Construction is a very fragmented and multidisciplinary industry, which also paves the way for disputes amongst the parties [3]. The contractual issues are the reason of 95 % of all disputes in construction projects [2]. Traditional contracting methods do not provide sufficient provisions for addressing the future events that will affect project relationships, nor can they. In a field as uncertain and complex as construction, these events cannot be perceived or quantified with accuracy. Therefore contracts are supposed to be flexible in order to adapt for future circumstances and address uncertainties as they arise[4]. Relational Contracting equips the contracts with requisite flexibility and team building strength, to actively deal with issues and requirements before and after the formation of contract [5]. Relational Contracting presses upon the current relationships of the parties for the project's success and encourages combined planning. It believes that the Contracts must be based on relationships rather than transactions of discrete nature [4]. There are a number of different arrangements currently being utilized in construction industry to encourage the collaboration and relationship building in the construction industries around the world, of which Partnering and alliancing are two key forms [6].

The aim of the paper is to come up with an evaluation of Traditional Contracting, Partnering and Alliancing with reference to construction industry conflicts based on the feedback from the main industry stakeholders

1.1 Causes of Conflicts in Construction Projects

Conflicts are indigenous to construction industry. Conflicts are very distractive, and they take the focus of the team away from the task. They also cause complications in the communication amongst

entities. The negligence or mismanagement of disputes may result in project delays, undermined team spirit, increased costs and deteriorated working relationships [7]. London and McGeorge (2008) [8] in their literature review for dispute avoidance and resolution, summarized the factors that cause conflicts and claims in construction projects given by different authors.

Table 1 Summary of Factors Contributing Towards Disputes

Author(s)	Factors contributing to disputes
Blake Dawson Waldron (2006)	Main causes of conflicts are: 1. Scope Variation 2. Interpretation of Contract 3. Extension of time 4. Conditions on the site 5. Delayed and low quality information 6. Approvals 7. Access to the site 8. Design quality 9. Resource availability
Cheung and Yui (2006)	Three main reasons of disputes: 1. Conflict – Communication gaps, personalities, cultures etc. 2. Triggering events – Time limitations, payment complications etc. 3. Provisions in the contract
Killian (2003)	• Defective drawings • Poor contract management • Communication between the parties • Poor site administration • Estimation errors
Mitropoulos and Howell (2001)	Conflict causing factors: 1. Uncertainty in a Project 2. Contractual issues 3. Opportunistic attitude
Colin et al. (1996)	Six main conflict areas: 1. Payments 2. Performances 3. Delays 4. Negligence 5. Quality 6. Administration
Sykes (1996)	Major groups of disputes: 1. Misunderstandings 2. Unpredictability
Bristow and Vasilopoulos (1995)	1. Unrealistic expectations by parties 2. Ambiguous contract documents 3. Poor communications between project participants; 4. Lack of team spirit 5. Failure of participants to deal promptly with changes and unexpected outcomes
Rhys Jones (1994)	Ten factors in the development of disputes: 1. Management issues 2. unfriendly attitudes 3. Lack of robust communication 4. Lack of detailed design 5. Economic factors 6. Weak tendering criteria 7. Lawyers' influence 8. Client's expectations 9. Poor contract making 10. Defective/weak workmanship

(Adopted from London and McGeorge, 2008)

The participation of different parties in a project is governed by a contract which defines the exchange of construction materials and services for money. The standard documents of the contract are formulated under the guidance of Industrial regulations and codes. Apparently, the documents through clarifications and definitions, are supposed to implement standard practices. But, it is an established fact that there are shortcomings and limitations, and a perfect set of documents does not exist [9]. Conflicts in construction mainly occur due to unrealistic client's expectations, variations, determinations, extension of time and payment procedures. Contractual disputes are due to misinterpretations, various levels of clarifications, and different definitions of various contractual terms [10]

Inappropriate and incomplete contract documents are often a major reason of conflicts amongst the parties. Jobs are not done accordingly because of wrong estimates, faulty drawings, and incomplete scope definitions. Proper information flow is not enforced. This leads to Unrealistic client's expectation, incomplete technical provisions, delayed works and much more [11].

According to Edwin and Henry (2005) [12] concluded that most the issues causing conflicts are contractual in nature including payment, variation,

extension of time, project scope definition, risk allocation, technical specification, poor communication, availability of information, adversarial approach in handling disputes, jurisdictional problems and unclear contractual terms.

1.2 Relational Contracting

The concept of Relational Contracting came to surface in the 1960s. Traditional contracting methods do not provide sufficient provisions for addressing the future events that will affect project relationships, nor can they. In a field as uncertain and complex as construction, these events cannot be perceived or quantified with accuracy. For this reason, contracts are required to be flexible to cater for future circumstances and address uncertainties accordingly. There are primarily two kinds of contracting engagements; 'transactional' which is product-oriented and 'relational' which is process-oriented. The latter is more consistent with the flow and value generation production theories. This was substantiated by further discussion of two salient aspects of contracting- 'risk' and '(aversion to) collaboration'. There are three fallacies related to risk which render conventional contracting insufficient when it comes to contracting organizations grappling with global competition and still trying to maintain profit margins and deploying cost-effective, time-saving and quality-improving methods . Relational Contracting equips the contracts with requisite flexibility and team building strength, to actively deal with issues and requirements before and after the formation of contract. Relational Contracting presses upon the current relationships of the parties for the project's success and encourages combined planning. It believes that the Contracts must be based on relationships rather than transactions of discrete nature [13].

The construction industry has always been a victim of lack of communication, trust and cooperation. Thus, the adversarial relationships in construction are only natural. As a matter of fact, there are various parties involved in a construction project at various levels (Clients, Contractors, Engineers, Architects, and Suppliers etc.) and complicated relationships exist between them. If not managed properly, these relationships can negatively affect the quality and progress of the project. Realizing these facts, in the last decade, relational contracting has been utilized in its various forms within the construction industries of countries like United States, United Kingdom, Hong Kong and Australia [14]. There are a number of different arrangements currently being utilized in construction industry to encourage the collaboration and relationship building in the construction industries around the world, of which Partnering and alliancing are two key forms [15]

1.3 Partnering and Alliancing

Partnering is a procedure of constructing a moral agreement amongst the members of project team, which binds them to work in benefit of the project as well as the team members. It is an arrangement to deal amicably with issues and a win-win decision making to best achieve the project goals [16]. Partnering has the ability to deal with the adversarial terms that are so common in the construction industry. The arrangement provides us with following opportunities [17]:

- Reduction in costs and increase in productivity.
- Improved quality through the focus on learning and continuous improvement.
- Improvement in quality through continuous learning.
- Greater Client satisfaction.
- Better stability
- Efficient utilization of resources

The process of Partnering has four main parts: The decision, initial workshop, interim workshop and final workshop [18].

Alliancing can be taken as a refined form of partnering which is fused in the contract. There are a number of definitions for the term available. Of these definitions, some are very general in nature, like U. S. Trade Center defines partnering as a relationship amongst two parties with common goals and financial targets. On the other hand, some researchers believe that Alliancing is a collaborative setup between groups to achieve the overall goals of the project. The Australian Construction Association defined Alliancing as a type of Relational contracting including planning for robust delivery and devising techniques for optimum project results and benefits for all the parties. In Alliancing parties have a joint as

compared to a shared commitment. They agree to a level of contribution and target profits, and then put it at risk. If one alliancing partner shows weak performance, all other partners are at risk of losing their profits and even sharing the loss [16].

The main distinction between partnering and alliancing is that partnering is not a formal contract. It runs parallel to the contract, and has no contractual power in itself. Thus, it is only a relationship management technique. On the other hand Alliancing is a proper contract and controls the delivery process in addition to relationships. Alliance requires more intensified resources, as it has complex selection methods, and more information flow requisites. Similarly, Partnering has more similar requirements as compared to the traditional contract [19]

2. Material and Methods

This research focuses on two areas. First: the identification and categorization of Contractual factors causing conflicts, and second: the evaluation of suitability of different contractual forms in reducing the effects of these factors to prevent conflicts.

2.1 Identification of Contractual Factors Causing Conflicts

A detailed literature review was conducted to identify all the possible contractual factors which become a reason of conflict on construction projects. Only the root causes were short listed, and the repeating factors or the factors which were a ramification of the root factors were neglected. This led us to a list of 9 main contractual factors, which were used for further analysis.

2.2 Instruments and Tools

A questionnaire was developed to harvest the views of industry professionals on the topic. The questionnaire was divided into three parts. The first part included the personal information of the respondents. The second part asked the respondents to give their agreement level for each factor on the 5 point Likert Scale with following values

The third section of the questionnaire, finally, inquired about the suitability of different contractual forms for each factor. The respondents were asked to select the most suitable contract type (from Alliancing, Partnering and Traditional Contracting) for each factor in order to prevent a conflict.

Table 2 Contractual Factors Causing Conflicts

No.	Factor	Description
1	Unclear Conditions	It is observed that some of the clauses in the contract are vague, leading to a number of interpretations. The parties try to mold them in their favor
2	Unfair Risk Allocation	This results in putting undue pressure on one party and completely relaxing the other.
3	Controversial Determinations	The Engineer's determination is required countless times during a project, and it is believed that the Engineer is biased (at least in the contractor's view) towards the client in decision making.
4	Cumbersome Procedures	There are very lengthy and cumbersome procedures in traditional approach resulting in very slow information flow and delayed work and payments.
5	Incomplete Form	The contracts normally are incomplete in their build, and cannot cover all the aspects of the project.
6	Poor Definition of Responsibilities	Not clearly writing down 'who does what' always creates trouble.
7	Inappropriate Build	Every project has unique and complex requirements, and the standard contract formats are unable to fit in all scenarios
8	Incomplete Scope Definition	Because of the incomplete scope definition, the project fails to fulfill the client's criteria.
9.	Communication Gap	Many conflicts are there only because the parties do not sit together and meet very frequently to discuss the issues of the project.

Statistical Packages for Social Sciences (SPSS, v. 20) was used for analysis of data, while graphs were developed on Microsoft Excel.

Table 3 Agreement Levels and their Values

Agreement Level	Value
Strongly Disagree	-2
Disagree	-1
Neutral	0
Agree	1
Strongly Agree	2

2.3 Participants

The research was kept limited to Pakistani Construction Industry only. The three main stakeholders of Construction Projects, i-e Clients, Contractors and Consultants were equally targeted by sending 50 questionnaires each through e-mail and post. The return was as follows:.

Table 4 Professional Category Wise Trend of Responses

Category	Sent	Returned	Return Rate
Client	50	23	46 %
Consultant	50	38	76 %
Contractor	50	42	84 %
Total	**150**	**103**	**68.7 %**

The professional experience of respondents ranges from 2 Years to 45 Years, located in all the major urban areas of Pakistan.

3. Method

The factors are categorized by taking the mean of agreement levels. The frequencies of most suitable contract type given by clients, contractors and consultants were noted for each factor, and one way ANOVA(f-test) with Post Hoc (Games Howell) was used to find any significant difference in answers given by different types of professionals.

4. Results and Discussion

Table 5 shows the means and standard deviations of agreement levels given by respondents in their feedbacks. The list is arranged from highest to lowest value accordingly.

The table shows that on average there is an agreement on all the factors that they are reasons of conflict in Construction Projects. 'Unclear Conditions' of the contract is the most conflict causing factor while 'Poor Definition of Responsibilities' is the least. Figures 2 to 10 show the trends of replies given by clients, consultants and contractors for the most suitable type of contract for each factor in the form of bar charts

Table 5 Factors Rearranged According to their Agreement Score

No.	Factor	Mean Agreement Value	Std. Deviation
1.	Unclear Conditions	1.3592	0.75218
2.	Inappropriate Build	1.1165	0.84367
3.	Unfair Risk Allocation	1.0874	0.97122
4.	Communication Gap	1.068	1.04095
5.	Cumbersome Procedures	0.9612	1.09296
6.	Incomplete Form	0.9223	0.95681
7.	Controversial Determinations	0.8641	0.97063
8.	Incomplete Scope Definition	0.7961	0.91136
9.	Poor Definition of Responsibilities	0.6893	1.08492

It can be easily observed that majority of the participants are in favor of Relational contracting as compared to Traditional contracting for all the factors, as a whole and also on individual group level. Contractors are majorly in favor of Alliancing for all the factors, except 'Communication Gap' where they support Partnering instead. Majority of Clients and Consultants think Partnering is the right form of Contract for all the factors. Clients have the highest support for sticking to the traditional setup as compared to Consultants and Contractors.

Table 6 shows the result of one way ANOVA performed on the three groups for each factor, while Table 7 shows the results of Post Hoc tests performed for multiple comparisons. The significant results are highlighted and shown with a * in the table.

The test results show that the difference of opinion between Clients and Contractors is not significant for even a single factor. Clients and Contractors show a significant difference of opinion

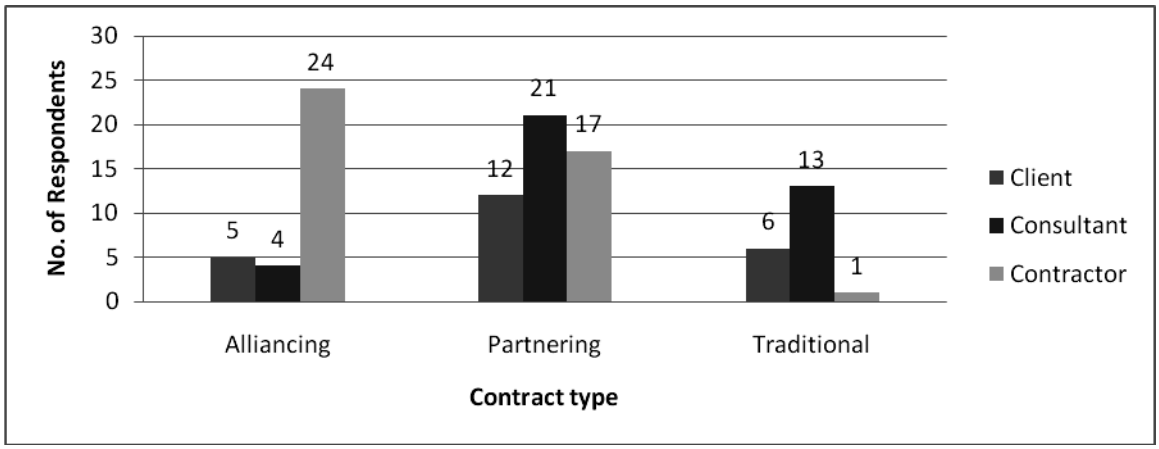

Fig. 1 Result for Responses on Most Suitable Contract for Unclear Conditions

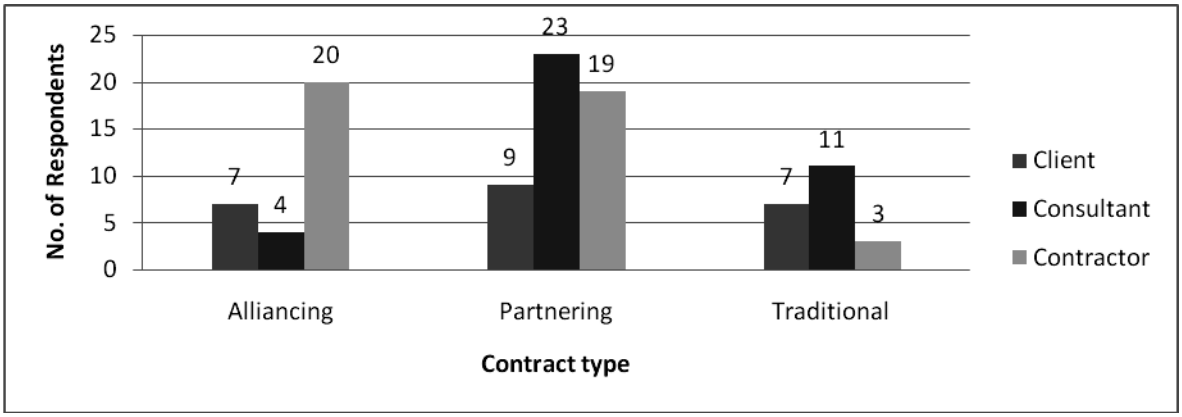

Fig. 2 Result for responses on Most Suitable Contract for Inappropriate Build

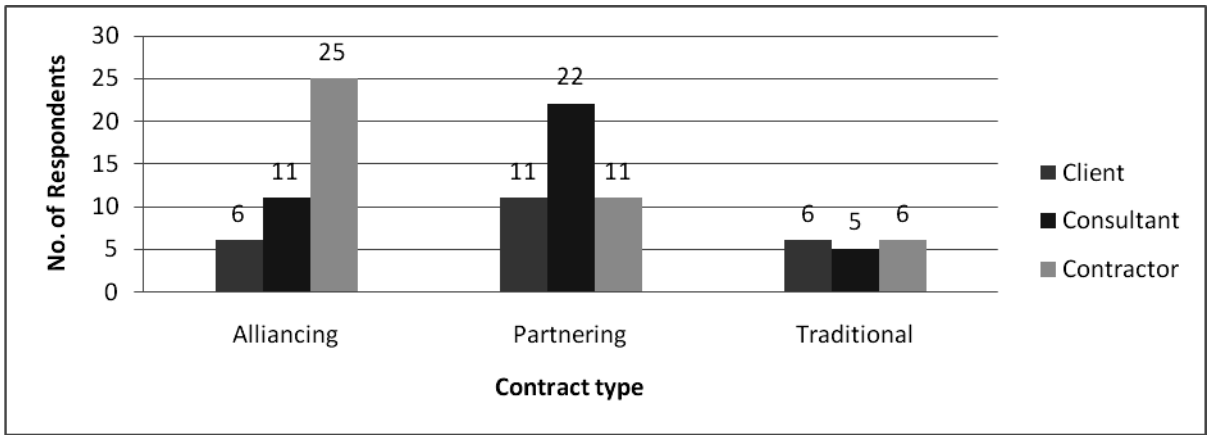

Fig. 3 Result for Responses on Most Suitable Contract for Unfair Risk Allocation

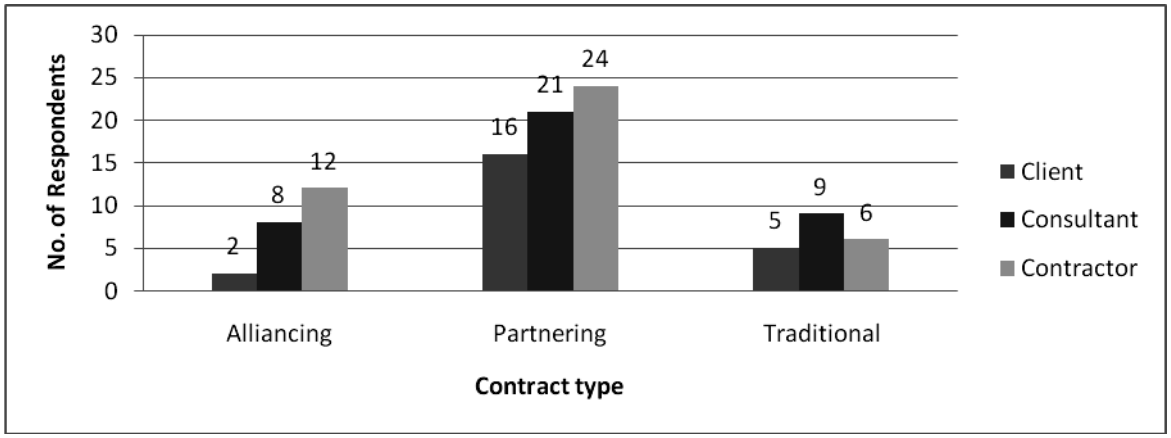

Fig. 4 Result for Responses on Most Suitable Contract for Communication Gap

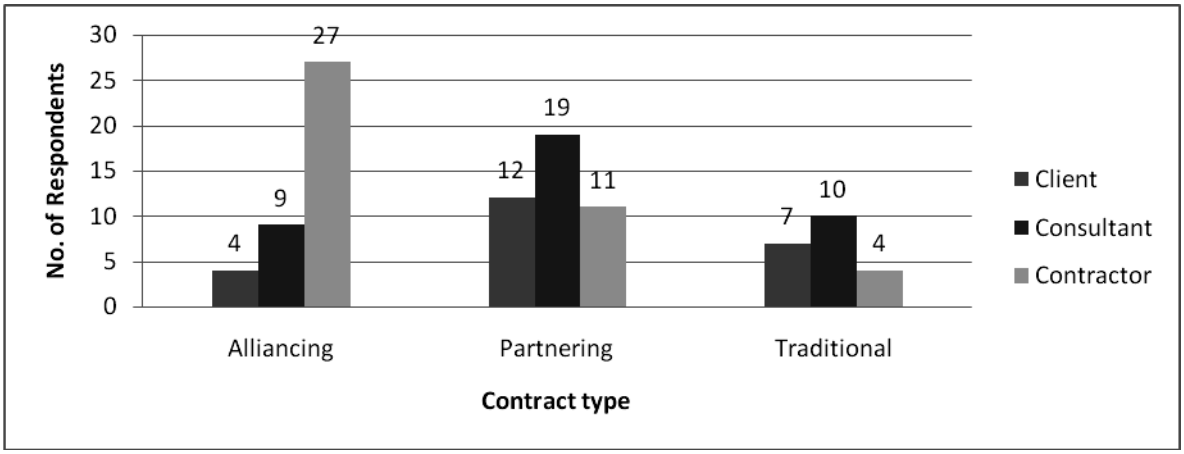

Fig. 5 Result for Responses on Most Suitable Contract for Cumbersome Procedures

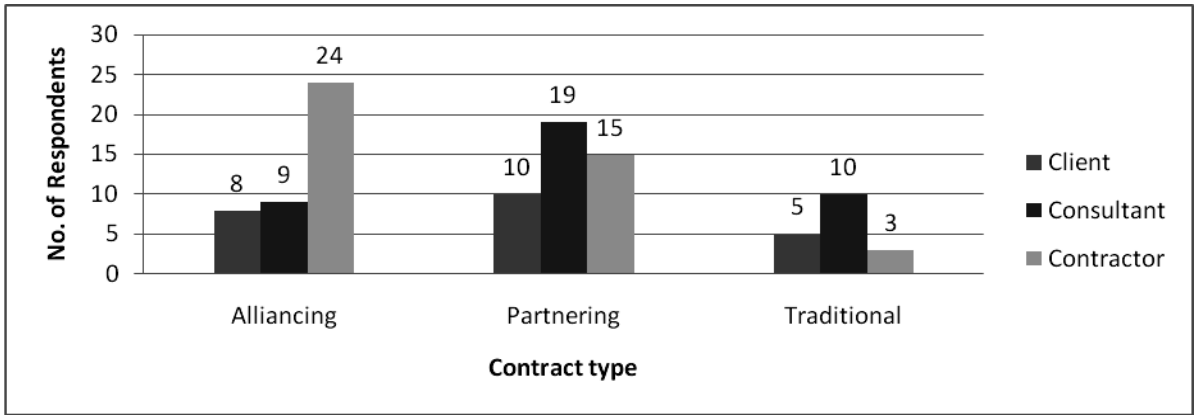

Fig. 6 Result for Responses on Most Suitable Contract for Incomplete Form

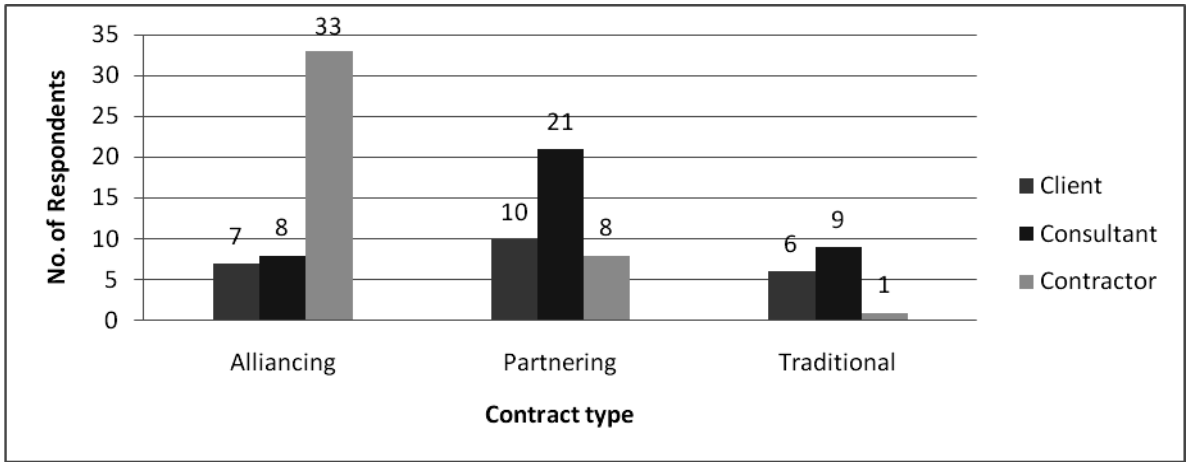

Fig. 7 Result for Responses on Most Suitable Contract for Controversial Determinations

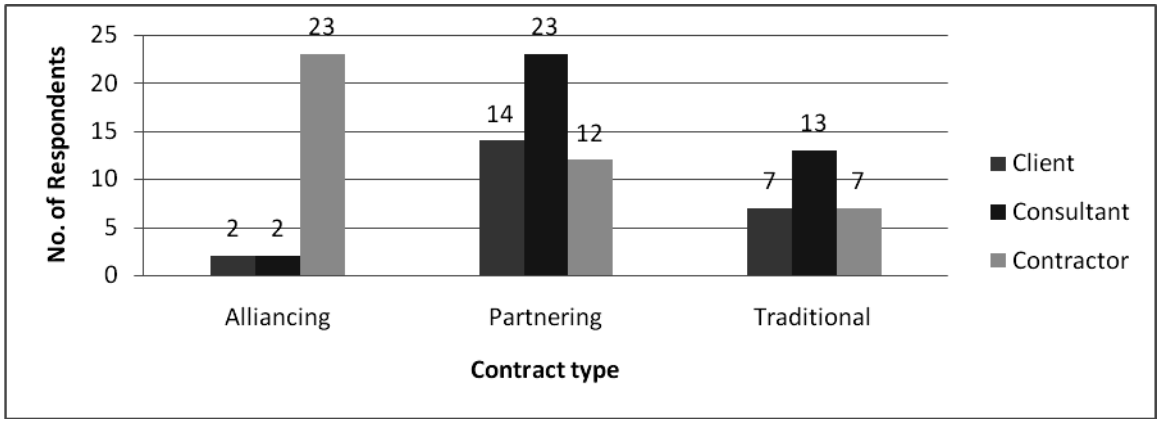

Fig. 8 Result for Responses on Most Suitable Contract for Incomplete Scope Definition

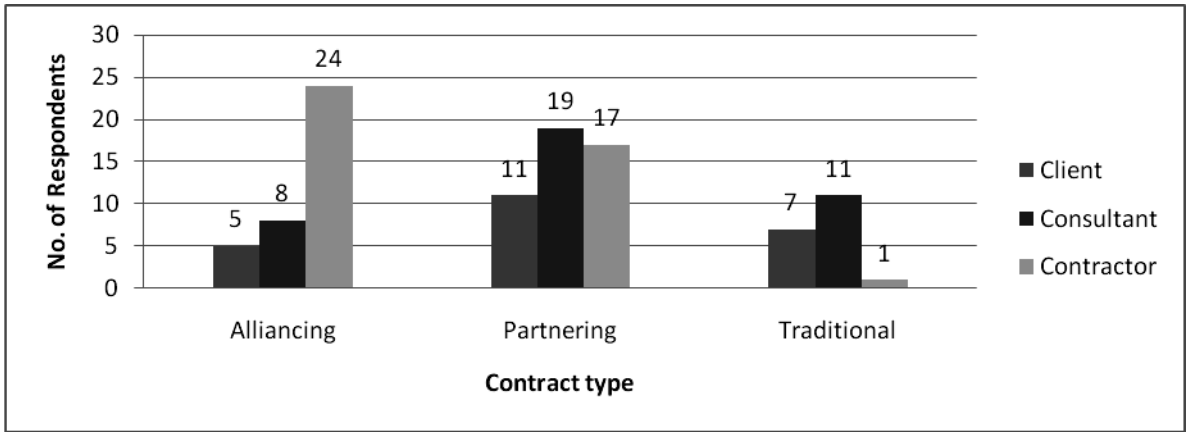

Fig. 9 Result for Responses on Most Suitable Contract for Poor Definition of Responsibilities

Table 6 ANOVA Test for Factors

		Sum of Squares	df	Mean Square	F	Sig.
Unclear Conditions	Between Groups	15.854	2	7.927	19.089	.000
	Within Groups	41.525	100	.415		
	Total	57.379	102			
Inappropriate build	Between Groups	7.200	2	3.600	8.213	.000
	Within Groups	43.830	100	.438		
	Total	51.029	102			
Unfair Risk Allocation	Between Groups	3.475	2	1.737	3.513	.034
	Within Groups	49.457	100	.495		
	Total	52.932	102			
Communication Gap	Between Groups	1.236	2	.618	1.517	.224
	Within Groups	40.725	100	.407		
	Total	41.961	102			
Cumbersome Procedures	Between Groups	10.903	2	5.451	11.059	.000
	Within Groups	49.291	100	.493		
	Total	60.194	102			
Incomplete Form	Between Groups	7.027	2	3.514	6.877	.002
	Within Groups	51.089	100	.511		
	Total	58.117	102			
Controversial Determinations	Between Groups	14.509	2	7.254	15.927	.000
	Within Groups	45.549	100	.455		
	Total	60.058	102			
Incomplete Scope Definition	Between Groups	15.926	2	7.963	17.467	.000
	Within Groups	45.588	100	.456		
	Total	61.515	102			
Poor Definition of Responsibilities	Between Groups	9.860	2	4.930	10.491	.000
	Within Groups	46.994	100	.470		
	Total	56.854	102			

Table 7 Post Hoc Tests

Multiple Comparisons

Games-Howell

Dependent Variable	(I) Categoryx	(J) Categoryx	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Unclear Conditions	Client	Consultant	-.11556	.19376	.823	-.5870	.3558
		Contractor	**.72153***	.18302	.001	.2732	1.1698
	Consultant	Client	.11556	.19376	.823	-.3558	.5870
		Contractor	**.83709***	.13584	.000	.5121	1.1621
	Contractor	Client	**-.72153***	.18302	.001	-1.1698	-.2732
		Consultant	**-.83709***	.13584	.000	-1.1621	-.5121
Inappropriate build	Client	Consultant	-.18421	.19344	.611	-.6562	.2878
		Contractor	.40476	.19243	.103	-.0650	.8745
	Consultant	Client	.18421	.19344	.611	-.2878	.6562
		Contractor	**.58897***	.13825	.000	.2586	.9193
	Contractor	Client	-.40476	.19243	.103	-.8745	.0650
		Consultant	**-.58897***	.13825	.000	-.9193	-.2586
Unfair Risk Allocation	Client	Consultant	.15789	.18553	.674	-.2931	.6089
		Contractor	.45238	.19164	.058	-.0119	.9167
	Consultant	Client	-.15789	.18553	.674	-.6089	.2931
		Contractor	.29449	.15400	.142	-.0735	.6625
	Contractor	Client	-.45238	.19164	.058	-.9167	.0119
		Consultant	-.29449	.15400	.142	-.6625	.0735
Communication Gap	Client	Consultant	.10412	.15853	.789	-.2779	.4862
		Contractor	.27329	.15171	.179	-.0927	.6393
	Consultant	Client	-.10412	.15853	.789	-.4862	.2779
		Contractor	.16917	.14842	.493	-.1856	.5239
	Contractor	Client	-.27329	.15171	.179	-.6393	.0927
		Consultant	-.16917	.14842	.493	-.5239	.1856
Cumbersome Procedures	Client	Consultant	.19108	.19245	.585	-.2752	.6573
		Contractor	**.76501***	.18502	.000	.3155	1.2146
	Consultant	Client	-.19108	.19245	.585	-.6573	.2752
		Contractor	**.57393***	.15551	.001	.2022	.9457
	Contractor	Client	**-.76501***	.18502	.000	-1.2146	-.3155
		Consultant	**-.57393***	.15551	.001	-.9457	-.2022
Incomplete Form	Client	Consultant	-.16590	.20516	.700	-.6633	.3315
		Contractor	.41304	.19211	.093	-.0557	.8817
	Consultant	Client	.16590	.20516	.700	-.3315	.6633
		Contractor	**.57895***	.15604	.001	.2056	.9523
	Contractor	Client	-.41304	.19211	.093	-.8817	.0557
		Consultant	**-.57895***	.15604	.001	-.9523	-.2056
Controversial Determinations	Client	Consultant	-.06979	.20481	.938	-.5653	.4257
		Contractor	**.71843***	.17661	.001	.2843	1.1525
	Consultant	Client	.06979	.20481	.938	-.4257	.5653
		Contractor	**.78822***	.14807	.000	.4324	1.1440
	Contractor	Client	-.71843*	.17661	.001	-1.1525	-.2843
		Consultant	**-.78822***	.14807	.000	-1.1440	-.4324
Incomplete Scope Definition	Client	Consultant	-.20481	.16656	.442	-.6088	.1992
		Contractor	**.65735***	.17765	.002	.2286	1.0861
	Consultant	Client	.20481	.16656	.442	-.1992	.6088
		Contractor	**.86216***	.15123	.000	.5007	1.2236
	Contractor	Client	**-.65735***	.17765	.002	-1.0861	-.2286
		Consultant	**-.86216***	.15123	.000	-1.2236	-.5007
Poor Definition of Responsibilities	Client	Consultant	.00801	.21124	.999	-.5059	.5220
		Contractor	**.63458***	.19616	.008	.1528	1.1164
	Consultant	Client	-.00801	.21124	.999	-.5220	.5059
		Contractor	**.62657***	.14335	.000	.2833	.9699
	Contractor	Client	**-.63458***	.19616	.008	-1.1164	-.1528
		Consultant	**-.62657***	.14335	.000	-.9699	-.2833

for 5 factors, while Consultants and Contractors show it for 7 factors out of 9. According to the results there is no significant difference of opinion between any of the groups for the factors of "Communication Gap" and "Unfair Risk Allocation".

5. Conclusion

This paper significantly traces the views of the main construction project stakeholders about relational contracting. There is an agreement amongst the clients, contractors and consultants that the contractual factors short listed from literature are really the reasons behind conflicts in construction projects. Majority of the participants from all the groups prefer relational setups, instead of traditional setups, for preventing conflicts in case of all the factors. Contractors are very much in favor of Risk-Sharing, while Consultants and Clients are hesitant to share risks with contractors.

6. Limitations and Future Directions

This research is limited to the construction industry of Pakistan, which is a developing industry, and has its own norms and attitudes. Thus, the research can't be generalized. There is a need to collect extensive data from all over the world for similar analysis to better understand the variation of views for Partnering and Alliancing with geographical shift.

It was observed in this research that Clients and Contractors have a common mind set for relational contracting, which is different from that of the Contractors'. There is a need to discover thepsychological and technical causes behind this behavior.

The scope of this research was limited to the comparison of three main groups: Contractors, Consultants and Clients. The sample size was too small to further level-down the analysis. Thus, there is a need to conduct a research large enough to reach the micro levels of analysis.

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