



Understanding the factors affecting inter-relationship of consultant and contractor in construction industry.

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Abstract: This study seeks to develop our understanding of the agency involved in construction industry. The goal is to identify the value-oriented reasons for Agencies to utilize specific influence strategies. The study argues that Agencies' expectations of project value creation explain the Agencies' influence strategies utilized. Social responsibility implementation in construction projects relies on the active involvements by multiple internal and external stakeholders. Stakeholder influences are an important driving force for resolving or alleviating the social and environmental problems in construction activities. The study is to be carried out to evaluate the interrelationship between the agencies like Architectural Agency, Structural Engineer, and Contractors. The goal of the study is to find out the factors influencing the work statics of the stakeholders and affecting their mutual as well as social responsibilities.

Index Terms - Social responsibility, Stakeholder influence, Construction management, Inter-relationship.

1. Introduction

There are growing calls in the project management (PM) community to pay attention to understanding the complex dynamics of the social relationships that exist in project teams. This reflects the fact that social and relational aspects of project teams have a high degree of influence on project performance and hence whether a client perceives a project as successful or not. In situations where the client sources a project from a contractor that is external to their organization, the social and relational aspects have an added layer of complexity. The project team comprises individuals that not only differ in their roles and responsibilities but also in their affiliation with different firms. This complexity makes it difficult to achieve control over outcomes that clients seek.

Due to their size and impact on society, infrastructure projects create interest in the eyes of various stakeholders. The concept of project value relates to projects being considered vehicles for the delivery of value throughout their lifecycle, instead of simply the completion of goal-centric tasks.

The customer value is created through various short-term and long-term costs and benefits and that the customer's purchasing strategy and the supplier's marketing strategy will affect the value created. However, in infrastructure projects there are also other stakeholders whose influence may be relevant to the creation of value.

Because traditional project management approaches overlook the emergent nature of project activity, the turn to social theories is a promising but unexplored alternative for extending our understanding of the actuality of projects. Governance scholars have mainly framed the interplay as either a substitutive or complementary one and, by doing so, have reduced it to two "mutually exclusive phenomena in terms of what they are, why they form, and how they are related". Such an understanding does not give space to disentangle the array of interrelated governing actions, puts innovative interaction between brackets, and ignores the possibility that governing activities reshape governance structures. The concept of co-creation of value redefines the long-established view of the roles of provider and client and their behavior.

In this work, we explore the phenomenon of advertising professional service value co-creation process by focusing on the dimension "clients" analyzed from the supplier perspective. In this sense, we find the theoretical framework described encounters some difficulties in practice because while an organization is responsible for its willingness to collaborate and therefore to co-create, it has little or no control on its clients' willingness to engage in co-creation or their effectiveness.

2. Objectives

1. To Identify different Agencies and related factors affecting to their inter relationship.
2. To evaluate most crucial factors those are conflicts between different agencies.
3. To prepare framework for improving relation between different agencies.

3. Data Collection

Questionnaire was designed based on the Inter-relationship attributes that influence on construction building industry identified from the literature review. The main purpose of the questionnaire was to identify the likelihood of occurrence and impact of each Inter-relationship attributes associated with the construction building industry. Subsequently, Pilot survey was carried out to validate the questionnaire. Validated questionnaire and expert survey was carried out to collect the primary data. The data will be collected from various registered Consultants and contractors

Total of 22 numbers attributes were identified by the means of literature study and pilot survey. This attributes were then transferred into questioners and survey was carried out .

4. Methodology

This chapter introduces the methodology which is applied in this project to completion of work. Data were gathered through a questionnaire. The questionnaire is divided into two main parts. Part I is related to general information for respondent. The Contractors and consultants they were further requested to answer questions pertaining to their experience in the construction industry and their opinions about the factors affecting on supply chain. Part II includes the list of the identified the factors affecting on their relationship in construction project.

4.1 Relative Importance Indices Method

Based on the collected data analysis will be made to find out the most suitable methodology that can be applied for factors affecting inter-relationship of consultant and the contractor. The collected data were analysed through the following statistical techniques and indices: Relative Importance Index technique: Relative Importance Index method helps to determine the relative importance of the various factors affecting inter-relationship. The five-point scale ranging from 1 (Very low) to 5 (Very highly) is adopted and it is transformed to relative importance indices (RII) for each factor as follows:

$$RII = \frac{5n_5+4n_4+3n_3+2n_2+n_1}{5(n_5+n_4+n_3+n_2+n_1)} * 100$$

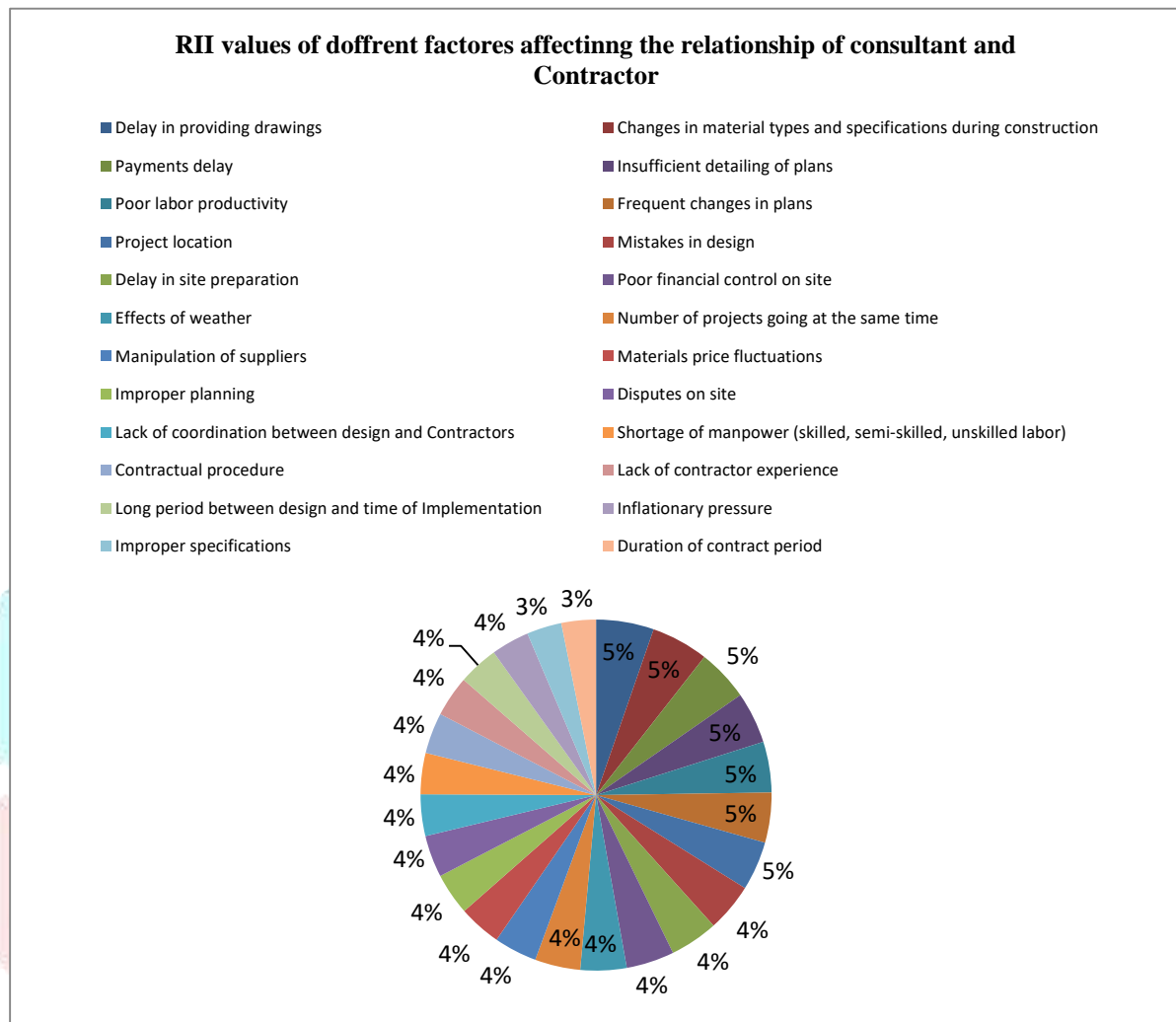
Where: n1, n2, n3, n4, and n5, = the number of respondents who selected: 1, for very low; 2, for low; 3, for moderate effect; 4, for highly, 5 for very highly; n is the weighting given to each factor by the respondents (ranging from 1 to 5), A is the highest weight (i.e. 5 in this case). The RII value had a range from 0 to 5 (0 not inclusive), Higher the value of RII, more important was the factors affecting on inter-relationship.

The RII was used to rank (R) the different factors affecting on inter-relationship. These rankings made it possible to cross-compare the relative importance of the factors as perceived by respondents (i.e. Contractors). Each individual factors' RII perceived by all respondents should be used to assess the general and overall rankings in order to give an overall picture of the inter-relationship.

Table 1- Overall Ranking by RII method

Sr,No.	Factors No.	Factors affecting relationship	RII
1	10	Number of projects going at the same time	0.68
2	4	Changes in material types and specifications during construction	0.66
3	1	Delay in mobilization	0.65
4	9	Inflationary pressure	0.62
5	17	Late design work	0.61
6	20	Social and cultural impacts	0.61
7	8	Frequent changes in design	0.61
8	22	Shortage of manpower (skilled, semi-	0.61
9	14	Payments delay	0.60
10	16	Manipulation of suppliers	0.60
11	6	Effects of weather	0.59
12	21	Unreasonable project time frame	0.59
13	19	Project location	0.58
14	18	Poor resource management	0.57
15	2	Government policies	0.55
16	7	Fluctuation of prices of materials	0.55
17	11	Mistakes in design	0.55
18	5	Disputes on site	0.54

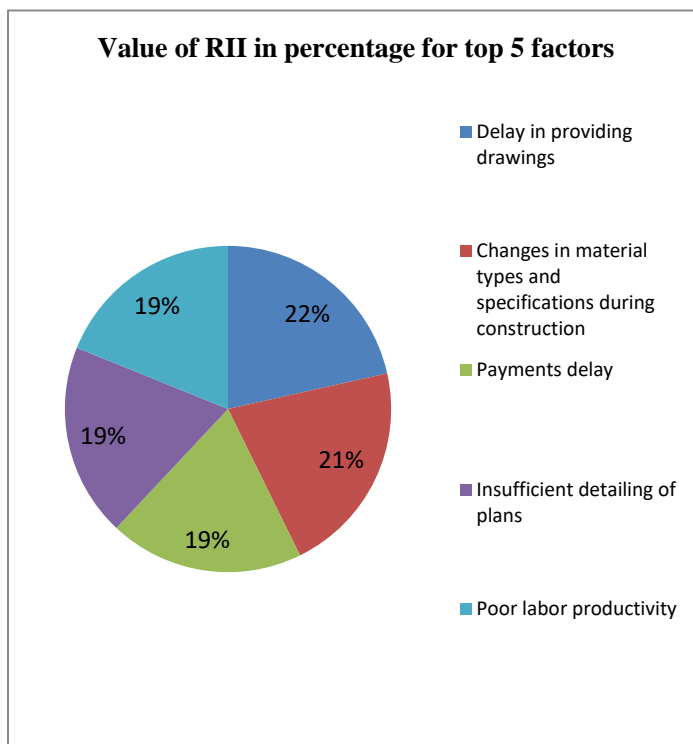
19	15	Materials price fluctuations	0.53
20	13	Long period between design and time of implementation	0.52
21	3	Improper planning	0.50
22	12	Number of competitors	0.50



Total 60 questionnaires were distributed out of which 40 questionnaires were found to be responded fairly. Out of which 20 were filled by consultants and 20 were filled by contractors

Table-2 Top 5 Factors affecting relationship by RII method

Sr.No.	Factors	RII
1	Number of projects going at the same time	0.68
2	Changes in material types and specifications during construction	0.66
3	Delay in mobilization	0.65
4	Inflationary pressure	0.62
5	Late design work	0.68



5. Result

From the above study we found that the top five factors affecting the inter-relationship of Consultant and Contractor are Delay in providing drawings, Changes in material types and specifications during construction, payment delay, insufficient detailing of plans, poor labour productivity

6. Conclusion

The study was carried out to make an attempt to find the most crucial factors affecting the relationship of the consultant and the contractor in the construction industry.

From the above study the top 5 most crucial factors that affect the relationship of the consultant and the contractor were found out by conducting the questionnaire survey having 22 factors for which feedbacks of 40 respondents were taken

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