

# THE USE OF PROJECT GOVERNANCE MODES TO MINIMISE CONTRACTORS' OPPORTUNISTIC BEHAVIOUR

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## ABSTRACT

*The nature of the contractual relationship between the contractor and the client creates opportunities for opportunistic behaviour (OB) on the part of the contractor, which can result in project delays, cost overruns, and quality issues. Project governance (PG) is a set of processes, policies, and procedures that aim to ensure the effective management and control of projects. It was identified that PG helps to minimise different issues related to construction projects where different stakeholders are involved. The use of trust and formal control as PG modes in the global construction industry is well-established. However, there is a lack of research specifically focusing on the appropriate PG modes to minimise the effects of Contractors' Opportunistic Behaviour (COB) in the Sri Lankan construction industry. The purpose of this paper is to examine the use of PG modes to minimise COB. To address this research gap, a qualitative research approach was adopted in this study. A comprehensive literature review was conducted to gather knowledge and theories about PG modes and COB. Furthermore, case studies were conducted to investigate the synergy between the identified PG modes and COB management in the Sri Lankan context. These case studies involved real-world construction projects in Sri Lanka, where the researchers' collected data through interviews. By analysing the findings of the literature review and case studies, this study aims to provide insights into the suitable PG modes that can be used to minimise the effects of COB in the Sri Lankan construction industry. The findings suggest that PG modes can be effective in COB. The use of a hybrid mode, for example, can create a partnership-like relationship between the client and the contractor, which promotes cooperation and trust while having some contractual obligations. Similarly, the use of a formal control mode, which involves the use of detailed contracts, can help to clarify the rights and obligations of the parties involved and reduce the likelihood of OB. Overall, the paper highlights the importance of PG in managing contractual relationships and minimising OB. It provides practical recommendations for clients and other stakeholders on how to select and implement appropriate PG modes to ensure successful project outcomes.*

**Keywords:** Client; Construction Industry; Contractors' Opportunistic Behaviour (COB); Project Governance (PG).

## 1. INTRODUCTION

Construction activities involve uncertainty, exposure to high-risk and imperfect information, overcoming the need for quick decisions and an orientation towards conflict can be identified in the industry (Lau & Rowlinson, 2009). Despite the huge contribution

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to countries' economic development, construction projects are characterised by low productivity due to the complicated interaction between various parties involved in a project that eventually leads to the occurrence of delays in different construction operations where cost and time overruns occur (Hossain et al., 2019). Zhang and Qian (2017) mentioned that relationships between the owner and contractor have a major impact on project performance in the construction industry.

Opportunistic behaviour (OB) is identified as one of the common behavioural phenomena in social-economic activities (Brookes et al., 2015). OB could gently increase under the circumstances of an environment with dissimilar information (Liu et al., 2016). Contractors' opportunistic behaviour (COB) is outlined as the contractor practising private control, withholding or distorting data, withdrawing commitments or pledges, shirks obligations, and violate specific agreements, and stretching to get unilateral returns at the expense of the owner (Lu et al., 2016). Various parties have different tolerance limits for OB (Das & Kumar, 2009). Besides, Qian and Zhang (2018) explained that tolerance of OB explains, why owners with different administrative focuses have different tastes in governance modes to reduce the COB. Project governance (PG) is identified as an oversight function which is aligned with the organisation's governance model and encompasses the project life cycle (Alie, 2015). It is found that trust and formal control are two regular PG modes that can be utilised to execute governance in projects, which are widely viewed as reasonable techniques that can decrease OB to a certain level (Meng, 2015). There are number of gaps that are still not filled related to PG and there is a necessity to identify the use of PG to reduce the effect of COB to maximise the project performance and identify the factors that directly affect the COB.

## **2. LITERATURE SYNTHESIS**

### **2.1 THE OPPORTUNISM AND THE OPPORTUNISTIC BEHAVIOUR**

According to Loosemore and Lam (2004) when people live through unreliable times and subsequently, individuals are edgy and prepped for the risks that may occur and acting with caution in this manner it prompts opportunism within individuals. It is due to institutionalising caution, the precautionary principle imposes limitations, offering security but lowering expectations, restricting growth, forestalling experimentation, and changing the very premise of OB. Opportunistic behaviour is considered as an act or behaviour of partnership motivated by the maximisation of economic self-interest and occasioned the loss of the other partner which is very much like the opportunism definitions (Luo, 2006). The author classifies OB into strong form OB, which breaches contracts, and weak form OB, which violates ethics also mentioned as relational norms which are not written in contracts. Both forms of OB increase conflicts increase the difficulties of coordination (Luo, 2007) and may lead to impromptu termination of contracts and relationships (Das & Rahman, 2010). It is important to identify the effect on the construction industry by the COB.

### **2.2 CONTRACTORS' OPPORTUNISTIC BEHAVIOUR AND ITS EFFECTS ON THE CONSTRUCTION INDUSTRY**

OB in construction can result in production disruptions, disturbance to team orientation (Fong & Lung, 2007), and negatively changing economic outcomes (Nunlee, 2005). According to Das and Rahman (2010), contractor opportunism can be characterised as

the conduct of the contractor that is inspired to seek after personal matters at the expense of owners. Luo (2006) mentioned COB as the contractor's acts of exercising private control, concealing, or altering information, disengaging from commitments or promises, avoiding obligations, and breaches explicit or implicit agreements, trying to earn for themselves at the expense of the owner. Lu et al. (2016) identified that uncertain events happen outside the project and the complex nature of construction projects as the forerunners of opportunism. Losses that arise from OB are less than the cost of premature termination, thus the party specially the client may endure and acknowledge the other party's OB to maintain a strategic distance from a more noteworthy misfortune (Chang & Qian, 2015). Table 1 provides different effects on the construction industry identified by the researchers related to COB.

Table 1: Effects of opportunistic behaviour on the Construction Industry

Reference	Effects of opportunistic behaviour
(Chang & Chen, 2016)	<ul style="list-style-type: none"> <li>• Bid opportunistically by offering a low price to win.</li> <li>• Renegotiate for compensation during the execution phase.</li> </ul>
(Das & Teng, 2001)	<ul style="list-style-type: none"> <li>• Leads to not keeping promises and misinforming stakeholders.</li> </ul>
(Zhang & Qian, 2017)	<ul style="list-style-type: none"> <li>• Leading to the breaching of contractual clauses.</li> <li>• Shirking obligations.</li> <li>• Illegal subcontracting and collusion.</li> <li>• Conflict with relational norms.</li> <li>• Disengaging from commitments or promises.</li> <li>• Taking advantage of contractual loopholes.</li> <li>• Deliberately ignoring design errors in drawings and specifications to profit from payment recovery for re-work or alterations.</li> </ul>
(Pang et al., 2015)	<ul style="list-style-type: none"> <li>• Use renegotiation to amend clauses in the signed contract.</li> </ul>
(Arsecularatne & Sandanayake, 2021)	<ul style="list-style-type: none"> <li>• Leading to time and cost overruns.</li> <li>• Affecting the quality of the final output</li> <li>• Project objectives are not achieved.</li> <li>• Dissatisfaction occurs between parties.</li> <li>• Contractors will be blacklisted.</li> <li>• Claims will be increased.</li> <li>• Demotivate the clients in investing.</li> <li>• Affect all other stakeholders. C</li> <li>• Leads to mistrust between all parties</li> </ul>

Construction projects require various professionals and their skill sets and collaborative relationship among members in different professions (Li et al., 2019). Better project performance depends on the good relationships between parties (Lau & Rowlinson, 2011).

### 2.3 CRITICAL FACTORS AFFECTING PROJECT PERFORMANCE AND ITS RELATIONSHIP WITH CONTRACTORS' OPPORTUNISTIC BEHAVIOUR

Different ethical and moral challenges affect the construction industry, which includes questionable contractor claims, collusion, and lack of commitment by contractors. This directly affects the project performance, and contractor competitiveness and it sometimes leads to business failure (Ho, 2011). Phelps and Reddy (2009) considered not keeping promises, misinforming stakeholders can affect project performance negatively. The following are the key critical factors affecting the project performance.

### **2.3.1 Client Focus and Contractors' Focus**

The motivational direction of individuals or parties would indicate the interpretations of parties' goals, behaviours, and actions (Das & Kumar, 2011). In addition, the authors mentioned that the owners' motivational orientation refers to the perspective that an owner takes when entering into a contract, in terms of maximising success or minimising failure. A large portion of the organisational decisions is made by the individuals of the top management group that overwhelmingly has the ability and power to deal with the members of the organisation (Qian & Zhang, 2018).

Contractors mainly focused on achieving the least possible costs (Kalsaas et al., 2018). Haupt and Whiteman (2004) identified that the competitiveness of the industry has made contractors focus on maximising revenue and completing work within the briefest conceivable timeframes. Based on the client's focus or the contractors' focus, the contractor's behaviour will be changed.

### **2.3.2 Risk and Uncertainty, Contractual Complexity and Project Complexity**

Risks can be identified as negative and positive, but most contractors are concentrated on the risks that affect them negatively (Hartono et al., 2014). The potential losses related to risks may prompt the OB of contractors to mitigate or recover (Das & Teng, 2001). Construction projects, for the most part, depend on contracts to motivate and regulate the behaviours and practices of the participants (Turner, 2004). A contract, as a formal governance instrument, regulates each party's rights and duties, responsibilities, application of intellectual property and breaches, coordination between the parties, and mitigation methods for unforeseen events (Schepker et al., 2014). The construction industry has seen fast development in projects of increasing size and complexity (Luo et al., 2017). The project complexity is caused by internal and external environmental aspects, the stakeholders, the tendering procedure, and procurement law (Griffioen, 2017). Based on risk and uncertainty, contractual and project complexity, the contractor's behaviour will be changed.

## **2.4 BENEFITS OF MINIMISING CONTRACTORS' OPPORTUNISTIC BEHAVIOUR**

The factors that affect the COB namely are contractors' focus on revenue maximisation, external uncertainties, contractual complexity, and dynamic complexity (Arsecularatne & Sandanayake, 2021). Opportunism has major negative impacts on the relationship between the owner and contractors and the general procedure of a construction project (Lu et al., 2016). Furthermore, the authors mentioned that due to the major impacts of opportunism, researchers have concentrated on the most proficient method to limit it. It was identified that because of minimising COB, benefits such as narrowing the scope of OB (Anderson & Dekker, 2005; Arsecularatne & Sandanayake, 2021), legal and economic consequences taken into consideration by contractors (Arsecularatne & Sandanayake, 2021; Jap & Ganesan, 2000), increase contractors' sensitivity to their duties and responsibilities (Arsecularatne & Sandanayake, 2021; Lu et al., 2016) and parties might become flexible (Arsecularatne & Sandanayake, 2021; Yilmaz et al., 2005) can be achieved.

## **2.5 MINIMISING CONTRACTORS' OPPORTUNISTIC BEHAVIOUR USING PROJECT GOVERNANCE**

In the construction sector, one of the essential explanations for project failures is the unequal and hazy division of risks between client and contractor (Rahman & Kumaraswamy, 2002). Academics and practitioners attempt to discover powerful techniques to forestall COB in the last decades (Lu et al., 2015). The most common methods were project management, project alliance, and PG (Arsecularatne & Sandanayake, 2021).

PG aims to guarantee a steady and foreseeable delivery of projects with the management of parties' behaviour (Müller et al., 2013). Too and Weaver (2014) identified PG as a system that exists at an elevated level and gives oversight of, the project management system. Two main types of governance modes have been identified as important to inter-organisational relationships in the construction industry (Zhang et al., 2016). Trust and formal control (FC), as two typical PG modes, are highly considered as better methods that can control OB to a considerable amount (Meng, 2015). FC and trust can be said as contractual governance and relational governance (Lu et al., 2015).

It was identified that the COB harm construction projects, mainly related to the performance of the projects. Reducing COB would provide benefits such as transparent parties in a contract as well as parties becoming more flexible. Hence, PG can be utilised to reduce the impact of COB on the success of a project. The research of the literature suggests that there are not many materials available concerning using PG to reduce COB in Sri Lanka's construction industry. It is crucial to consider the impact of employing PG to reduce COB in the Sri Lankan construction industry.

## **3. RESEARCH METHODOLOGY**

Tan (as cited in Rodrigo & Perera, 2016) has identified research design as a technique for changing a research problem into a conclusion. This research design is surrounded by background study, comprehensive literature synthesis, data collection method and analysis of the data collected through data collection. Creswell (2014) mentioned three approaches to research quantitative, qualitative, and mixed methods. The author further mentioned qualitative approach incorporates gathering data and information through raising questions and strategies comprehensive of the researcher making interpretations of the data.

This study aimed to investigate the PG modes that can be used to minimise the effects of COB. Hence, to achieve that aim, investigating COB, factors leading to COB, different PG modes used in the Sri Lankan construction industry and the relationship between COB and the choice of PG mode by the client needed to be done. To suggest appropriate PG modes to the local environment, case studies were required to get in-depth opinions of industry practitioners who had experience in PG. However, because PG was a recent breakthrough, there were very few projects in Sri Lanka's building sector that used this idea. This resulted in a small sample size being available. Furthermore, a thorough analysis was required because the information and data collected were mostly based on the practitioners' opinions. Consequently, a qualitative method was required for the study. A thorough examination of the literature was done to examine OB, COB, PG, and customer preferences for PG approaches to reduce competitors' OB. The literature review was built using journal articles, books, conference proceedings, and unpublished

dissertations. The research's primary goal is to assess the applicability of PG modes to reduce COB in the Sri Lankan construction sector. The case study analysis was chosen because it was difficult to obtain literature on PG. There were four projects total, with two having a public client and the other two having a private client. Because the study is based on a qualitative methodology, semi-structured interviews were used to gather qualitative data. The data analysis method used was content analysis.

#### 4. RESEARCH FINDINGS AND ANALYSIS

Four construction projects for buildings were chosen as samples. Formal control mode was used to govern Cases A and B, trust was primarily used to govern Case C, and a combination of two modes was used to govern Case D. Two projects were owned by the public institute, while the other two were privately owned. Only Case C of the other three scenarios lacked a consultant for their chosen project. In order to determine the applicability of each mode to the Sri Lankan environment and to determine whether employing various PG models is practical and advantageous, cases of both types were chosen. Also, selecting between public and private projects results in a variety of viewpoints about the PG approach taken in each situation. A brief description of the four cases has been shown in Table 2 and Table 3 provides a brief description of the respondents.

Table 2: Details of selected cases

	Case A	Case B	Case C	Case D
<b>Nature of the project</b>	Building Construction	Building construction and renovation	Building Construction	Building construction including hotels and apartments
<b>Project duration</b>	9 months	6 months	2 Years	2 Years
<b>Tendering method</b>	Open tendering	Open tendering	Direct negotiation	Direct negotiation
<b>The standard form of contract</b>	SBD 2	SBD 2	SBD 2	FIDIC
<b>Governance mode used</b>	Formal Control	Formal Control	Both but mostly Trust	Combination of both Trust and Formal Control equally

Table 3: Details of respondents

Case	Respondent	Type of the organisation	Ownership of the organisation	Designation	Industry experience
<b>Case A</b>	Respondent (RA1)	1 Client	Public	Chief Manager Technical Services	30 years
	Respondent (RA2)	2 Consultant	Private	Chief Architect	12 Years
	Respondent (RA3)	3 Contractor	Private	Project Manager	10 Years
	Respondent (RA4)	4 Contractor	Private	Project Quantity Surveyor	8 Years
<b>Case B</b>	Respondent (RB1)	1 Client	Public	Assistant Director Construction	5 Years
	Respondent (RB2)	2 Consultant	Public	Chief Engineer	24 Years
	Respondent (RB3)	3 Contractor	Private	Chief Quantity Surveyor	9 Years
	Respondent (RB4)	4 Contractor	Private	Chief Quantity Surveyor	35 Years
<b>Case C</b>	Respondent (RC1)	1 Client	Private	Director Project Management	20 Years
	Respondent (RC2)	2 Client	Private	Senior Quantity Surveyor	8 Years

	Respondent (RC3)	3	Contractor	Private	Project Quantity Surveyor	3 Years
	Respondent (RC4)	4	Contractor	Private	Project Manager	11 Years
<b>Case D</b>	Respondent (RD1)	1	Client	Private	Director (CFO)	3 Years
	Respondent (RD2)	2	Consultant	Private	Director Operation	25 Years
	Respondent (RD3)	3	Contractor	Private	Project Manager	10 years
	Respondent (RD4)	4	Contractor	Private	Director Projects	14 Years

The researcher asked about the respondents' opinion on: (a) the meaning of PG and awareness of PG modes, (b) the use of PG help to minimise the COB, (c) the importance of minimising OB, (d) drawbacks of existing OB in construction projects, (e) relationship between COB and the client's choice on PG modes, (f) other factors affect when choosing a suitable PG mode and (g) suitable PG mode to construction projects in Sri Lanka. The answers given by 16 respondents in the 4 cases are given below.

#### 4.1 MEANING OF PROJECT GOVERNANCE AND AWARENESS OF PROJECT GOVERNANCE MODES

Respondents identified that PG is a process that can be used to manage and control a construction project to get an expected outcome from it within the expected time and cost. RB3 mentioned PG was a strategic process which will drive the project towards its expected outcome. RD1 said PG was making sure the project was performed as agreed initially within the binding law of the country. RD4 mentioned PG as an advanced step of project management, and it can use for successful project delivery of any construction project within the expected time and cost.

The professionals were questioned on their knowledge of the PG modes. All the respondents knew about the formal control mode. According to them, formal control is using the contract document to strictly govern and manage the project by the rules, procedures, and guidelines on it. RC3 had a view that formal control is an implemented framework for decision-making and setting definite processes and guidelines for the contractor to follow in the project for any decision to be made. Out of all RA4 and RB4 were not aware of the trust PG mode. According to the respondents' the trust mode was based on the mutual understating between parties and trust with the experience in the privately funded project. Out of sixteen respondents RA2, RC3, RD1 and RD2 mentioned intermediate mode where the contract will be used to control some aspects of the project and trust to control other aspects which will be more effective than other modes because they are used separately.

#### 4.2 USE OF PROJECT GOVERNANCE HELPS TO MINIMISE THE CONTRACTORS' OPPORTUNISTIC BEHAVIOUR

All the respondents except for RB3 and RD2 agreed that PG can minimise COB. RB3 mentioned that "lack of proper PG is only one factor/reason for a Contractor to go for OB, there are so many other reasons to be opportunistic such as low profitability, organisation culture, the capability of Engineer's staff, etc.". RD2 had a view that 'for some projects, it can minimise the OB due to the different methods incorporated in PG mode but for some projects sometimes PG cannot change any aspects because the chosen method is not correct for the project'.

RD4 had a similar view to RD2 and mentioned that proper PG can minimise COB, but it will depend on the factors such as the level of PG implication, procedures used for PG and ethics of the organisation. RA2 mentioned that PG provides a framework that helps to proper management of the construction project thus COB can be minimised. RA3 said that due to the PG owner does not rigidly follow the contract and reasonably solving the disputes considering the circumstances of the case, the contractor would not submit claims on every single loophole in the contract.

From the literature, it was identified that PG can alter the power of behavioural uncertainty (Ive & Chang, 2007), could move exposure to risk between parties (Smith et al., 2014) and could decrease the project's general risk exposure (Chang, 2015). Hence, it can be said that PG would be a useful mechanism to minimise COB in the construction industry.

### 4.3 IMPORTANCE OF MINIMISING OPPORTUNISTIC BEHAVIOUR

The importance of minimising OB identified through the literature synthesis and responses collected from interviews were also summarised in Table 4.

Table 4: Importance of minimising opportunistic behaviour

Importance of minimising contractors' opportunistic behaviour	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	A	A	A	A	B	B	B	B	C	C	C	C	D	D	D	D
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Reduce the violation of the contract	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Minimise the conflicts	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reduce the transaction cost by penalising	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reduce the losses incur	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Increase the chance of timely completion	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

RC3 mentioned that the contractor should not violate the contract and the thing that can be done was to stop the contractor from taking advantage of loopholes and uncertainties of the contract. RC3 had a view that the timely completion of the project cannot be achieved even though the OB is minimised because the decision-making process will take a long time thus the work had to be halted till a decision is made. RA4 identified that the OB of the contractor will not impact the penalising cost due to all legal actions taken by parties in a construction project not related to the OB thus it cannot reduce the cost related to the penalising cost. RD1 mentioned that contractors become opportunistic not to drag the project but complete the project within the allocated time. Apart from the literature findings professionals mentioned minimising OB will lead to a win-win situation for both parties and minimise the chance of reducing quality by the contractor.

### 4.4 DRAWBACKS OF EXISTING OPPORTUNISTIC BEHAVIOUR IN CONSTRUCTION PROJECTS

The professionals were requested to comment on the relevancy of the identified drawbacks of existing OB in construction through the literature synthesis. The drawbacks of existing OB identified through the literature synthesis and other reasons recognised through interviews are summarised in Table 5.



Table 5: Drawbacks of opportunistic behaviour

No	Drawbacks of opportunistic behaviour	Respondents
<i>Drawbacks Identified through Literature</i>		
1	Can increase distrust between parties	All respondents agreed except RA4
2	Increase conflicts over every detail when negotiating	All respondents agreed except RB3
3	Can prevent the development of a relationship between the parties	All respondents agreed
4	Increase project-related costs	All respondents agreed
5	This leads to delays in the project orientation	All respondents agreed except RD1
<i>Other Drawbacks Identified by Respondents</i>		
6	Quality issues arise	Proposed by RA2
7	The project becomes more complex	Proposed by RC3

RB3 said that when there are unfavourable details for the contractor then there will be conflicts when negotiating but not due to the COB. Respondent RD1 mentioned that with his experience contractors be opportunistic to complete the project sooner than dragging the project beyond the project duration. Thus, delays did not happen due to COB but for other reasons such as bad weather conditions and interference from the outside. According to the findings of both literature synthesis and data analysis, it can be said that COB could have a major impact on the outcome of the project, and it leads to dissatisfaction among other parties involved in the project.

#### 4.5 RELATIONSHIP BETWEEN CONTRACTORS' OPPORTUNISTIC BEHAVIOUR AND THE CLIENT'S CHOICE OF PROJECT GOVERNANCE MODES

It was identified that COB would have an impact when the client selects a PG mode. RC3 and RD4 mentioned that with the client's experience on previous projects related to the COB clients would choose a PG mode because if the methods used previously not helped to control the contractor's opportunism and lead to losses for the client most probably client would select a formal governance mode, not a trust-based mode. Respondents RA2, RB1 and RC1 all mentioned that clients would consider the outcome of the COB and based on that they would select the suitable PG mode. RA4 said when there are multiple barriers in the project which can lead to COB client would go for the formal control mode. RB2 said when the reliability of the contractor is questionable then the client should select formal control mode. RA3 mentioned that if the client had trust in the contractor's behaviour, then the client would select a trust-based mode of decision-making. RC2 mentioned how a client would think about the suitable mode by saying "The client will consider formal method when the design is completed and knows that they are going for open tendering where an unknown person will get the project and due to that they will be opportunistic. If they negotiate with someone, they know they can either go for trust or contract-based method because they know about them".

#### 4.6 OTHER FACTORS AFFECT WHEN CHOOSING A SUITABLE PROJECT GOVERNANCE MODE

Respondents were questioned about the factors which can affect when selection of a suitable PG mode by the client other than COB and the range of factors provided by them were mentioned in Table 6.

Table 6: Other factors affect choosing a PG mode.

Factors	Responses	Factors	Responses
Time	RA1, RA2, RA4, RC2, RC4, RD3	Chances for opportunistic behaviour within the project	RB2
Cost	RA1, RA2, RC1, RC2, RD3	Social and political factors	RB4
Quality	RA1, RA2, RC2, RD3	The method to tackle professional negligence	RB4
Transparency	RA1	Environmental factors	RB4
Trust	RA1, RC3	Client beliefs and expectations	RC1, RC3
Nature of the project	RA2, RA3, RA4, RB3, RD3	Level of completion of the design and specification	RC2
Stakeholders of the project	RA3, RA4	Level of variations that can happen	RC2
Complexity of project	RA4, RB3, RC1, RC2, RC3, RC4, RD1, RD3	Engineer's mode of administrating the Contracts	RC3
The focus of the client	RA4, RD4	Contractual requirements of the project	RC3
Consultant teams' experience	RA4, RC4	Financial capability of the client	RC4
Client knowledge about the industry and experience	RB1, RB2, RC3, RD1	Who the possible contractors	RD1
Experience of the contractor	RB1, RB2, RC1	Structure of the project	RD1
Past projects of the selected contractor	RB1	Cost of project governance	RD1, RD2
The volume of the work done	RB1	Availability of resources for the project governance	RD1
The reputation of the organisation	RB1	Contractor's performance	RD2, RD4
Number of parties involved in the project	RB2	Client's Performance	RD2, RD4
The capability of the Engineer	RB3	Contractors can do the project or not.	RD2
Historical facts related to the Contractor	RB3, RC1	Identify the method used in similar types of projects	RD2
Market condition	RB4, RC1	Goodwill of the organisations	RD4
Economic situation	RB4	Frequency of having jobs (projects) for the Contractor	RD4

Out of sixteen respondents, nine respondents identified project complexity's effect on the client's decision when selecting a suitable PG mode for a project. Time, cost, nature of the project, quality, stakeholders of the project, focus of the client, the experience of the contractor and financial capability of the client are the factors mentioned by more than two respondents. All the factors are relevant when choosing a PG mode. RA1 mentioned time, cost and quality are the main factors that will provide an on-time project for the client.

#### 4.7 SUITABLE PROJECT GOVERNANCE MODE FOR CONSTRUCTION PROJECTS IN SRI LANKA

Professionals identified that it would be beneficial to implement PG in the Sri Lankan construction industry. RA1 mentioned feasibility and benefits would depend on the effort put in by the parties. RC1 also had a similar view regarding feasibility where the respondent mentioned that it also depends on the ability of the client and contractor. RC3 also said that the feasibility would depend on the complexity of the project, the contractor, and the client. RB2 agreed that using PG in the Sri Lankan construction industry is beneficial as well as feasible. RD4 also said project stakeholders should have sound knowledge of the PG to get the fullest output of implementation. RA3 mentioned that it would be difficult to adopt PG in the publicly funded project. RC2 said that *"In Sri Lankan industry only a few contractors will get the idea of PG like contractors above C2"*

*and therefore it will not be used by small contractors thus feasibility cannot be achieved".* RB4 mentioned that implementing PG in mixed development projects would be hard but beneficial for other projects. RB1 mentioned that PG is beneficial because in the construction industry, lots of projects go beyond the time frame but using PG would make sure projects are completed within a time frame. RD1 also said a reason for thinking PG provide benefits to the construction industry and the reason was the industry is not organised properly in Sri Lanka, but PG would help with proper organising and management.

The study found that it is difficult to completely eradicate COB in the construction sector, which suggested that PG could not completely eradicate COB but might assist to minimise it to a larger extent. Professionals have recognised both the formal control mode and the mode that combines trust and formal control as being acceptable for the construction business.

## **5. CONCLUSIONS**

The constantly evolving nature of the construction sector, its level of competition, and the workplace environment that is influenced by both internal and external forces have compelled businesses to develop effective management techniques to meet the objectives of projects for clients. For the past several years, a structure called "project governance" has been used for building projects all over the world. It has to be implemented to more construction projects in the Sri Lankan context to deal with the changes in the sector. The background literature review indicates that there is a dearth of research on the application of PG to reduce COB in the Sri Lankan construction sector. The capacity of customers to manage the OB of the contractor and their choice of PG options were also proven to be less important to construction industry practitioners. In order to maximise project performance and minimise the impact of COB, it was necessary to analyse the usage of PG and identify the elements that directly influence this behaviour. The level of tolerance by a client to the COB has a greater influence on the owner's choice of governance modes to reduce OB. A party that has a lower tolerance level of OB may use FC, which can improve the consistency of other parties' behaviour. On the other hand, a party that has a higher tolerance level of OB would select a trust, which might be effective to build relationships among the parties.

This study revealed that formal control and a combination of trust and formal control as the most suitable PG modes for the Sri Lankan construction industry. Therefore, this research offers factors to consider when selecting a PG mode such as complexity, duration, and cost of the project. When a client selects a PG mode, the client would consider the complexity of the project, time duration of the project, cost of the project, nature of the project and quality expected from the final product other than the COB.

The research's findings will be useful to those working in the construction sector because they will help them improve project performance in Sri Lankan construction organisations by reducing COB in a way that will improve the satisfaction of all project stakeholders and improve the sector's corporate image. Following are a few suggestions for industry practitioners.

- Remove the factors that can lead to the COB from the project by methods that will not impact the overall outcome of the project.

- Employing the findings of this research as guidance to use as a management mechanism over project management and project alliance.

## 6. REFERENCES

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