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Assessment of Response Strategy in Mega Construction Projects

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ABSTRACT

Mega Construction Projects (MCPs) that are executed unavoidably face several of organizational challenges and pressures. Due to the stakeholder pressures in the execution of MCPs, organizations may adopt various strategic responses. **Purpose** – The objective of this paper is to investigate the common response strategies (RSs) applied in MCPs in the State of Qatar. In addition to, overcoming the construction problems and enhance the performance during the construction stage. **Design/methodology/approach** – A questionnaire survey is carried out among the most important firms in construction industry in Qatar. Three steps are used to finalize and evaluate the questionnaire before proceeding with the full survey, validity, pre-testing and pilot study. The Quantitative data analysis is conducted by using the Statistical Package for Social Science (SPSS) software. **Findings** – Results define and demonstrate five different types of RSs. They are ranging from passive to active strategies determined by project organization. The RSs include: adaptation strategy, avoidance strategy, compromising strategy, dismissal strategy, and influence strategy. **Originality/value** – This paper contributes to the body of knowledge through identifying and evaluating the RSs in MCPs. That could potentially improve project team more efficiently and effectively.
Keywords: Construction Industry; Mega Projects; Response Strategies; Stakeholder Management

Paper type: Research paper, this research forms part of a broader Ph.D. study.

1 INTRODUCTION

Recently, Qatar has been booming in development, and the Qatar market is considered a rapidly growing market. Like all countries around the world, the construction industry is considered the most efficient contributor in the development. The comprehensive vision for the development of the State of Qatar, Qatar National Vision 2030, was adopted, as comprehensive development is the main objective of achieving progress and prosperity for citizens. The construction industry in Qatar is facing massive challenges due to the huge construction development required for the World Cup 2022 and to achieve Qatar vision 2030. As such, many mega construction projects to be accomplished to improve the country's infrastructure which comprised numerous international companies and multinational professionals. The rapid development of Qatar MCPs in all zones, raised the question

of stakeholder management (SM) and response strategy in the development of MCPs. Moreover, the nature, scale, and complexity of these projects, besides funding, have resulted in many individuals, institutions, and firms engaged in MCPs development. Whereas, Cleland (1986) introduced the perspective of strategic SM and the concept of stakeholders in the domain of project management. Furthermore, the construction industry globally has a poor record of SM during the past decades (Olander and Landin 2005). In this paper, the author focusses specifically on MCPs that comprise numerous participants and are executed in the state of Qatar. Through reviewing the records of MCPs, the most unexpected risks in MCPs executed under difficult environments are identified as: conflicts and incidents related to stakeholder.

2 LITERATURE REVIEW

2.1 Mega-Projects

MPs definition from different views comprises size, complexity, cost, and time (Othman 2013). They can, also, be defined as large-scale, complex undertaken that commonly cost one billion US Dollar or more, need many years for developing and building, involve multiple stakeholders, are transformational and impact millions of people (Flyvbjerg 2014). El-Sabek and McCabe (2017) agreed with Flyvbjerg's definition of mega-projects, whereas Canadian oil and gas construction projects are considered mega when they exceed 300 million Canadian Dollar (Rankin et al., 2008). Moreover, from a contractual context, mega-projects are associated with endemic disputes and large numbers of claims of significant magnitude (Dettman et al. 2010). Also, MPs are highly large-scale investment projects, commonly valuing more than 0.5 Billion Euro (Travaglini and Dunović 2016). Nevertheless, the implementation of an international MPs in the region with its colossal size, complicated scope, technical aspects, and an international team not familiar with local regulations and culture can drive to failures (El-Sabek and McCabe 2017).

Furthermore, MPs are a completely different type of project in their aspiration level, lead times, complexity, and stakeholder engagement. Indeed, it is their scale and extreme complexity in both technical and human terms that characterize MPs from traditional projects (Marrewijk, 2007 and Flyvbjerg, 2014). Besides, MPs are distinguished by a high degree of uncertainty, because of a mix of public institutions and sub-contractors, which increases their complexity level (Marrewijk, 2007).

2.2 Stakeholder Definitions

The PMBOK (2018) defines a stakeholder as an individual, groups, or organizations that may affect, be affected through, or perceive themselves to be affected by a decision, activity, or outcome of a project. The stakeholder literature presented different conceptual and definitions of stakeholders ranging from wide to narrow views. Freeman (1984) Proposed a classic definition of stakeholders that it is any group and individuals who can affect or is affected through the fulfilment of an organization's objective. However, this definition is wide in the meaning that it does not specify the relationship between stakeholders and the firm. Also, it does not take a situation whether the claims of the stakeholders are legitimate or not. In general, the most common definitions of project stakeholders broadly, as any individual or group who can affect or is affected by the project.

2.3 Stakeholders Categories

The PMBOK (2018) categorized stakeholders into two categories: (i) Internal project stakeholders generally include the project sponsor, project team, support staff, and internal customers for the project. Other internal stakeholders include top management, other functional managers, and other project managers because organizations have limited resources. (ii) External project stakeholders include the project's customers (if they are external to the organization), competitors, suppliers, and other external groups that are potentially involved in the project or affected by it, such

as government officials and concerned citizens. The project management scientists have categorized stakeholders differently. Most outstanding in the literature are categorizations established on stakeholders' involvement in the project and the nature of their relationship with the project, the nature of stakeholders' claim and their attitude towards the project, the role of stakeholder's in the project, and the degree of anticipating of stakeholders' behavior (Aaltonen 2010; Cova et al. 2002 and Moodley et al. 2008)

The primary stakeholder groups are those stakeholders or individuals who are considered as a base to the presence of the organization, and often most of them have some formal contract with the organization as owners, employees, customers, and suppliers. Secondary stakeholders are the group that plays an essential part in giving credibility and acceptance to the organization for its activities and include: communities, governments, and competition (Ayuso et al. 2006; Podnar and Jancic 2006). Stakeholders are commonly classified by a broad range of attributes, such as interest, attitude, impact, influence, power, urgency, risk, and satisfaction (Mitchell et al. 1997). Miller and Olleros (2001) stated that successful projects display exceptional SM and maybe follow the process of stakeholder identification, classification, analysis, and management strategy formularization.

2.4 Stakeholder Engagement's Levels

SM is categorized into four levels: collaborate, involve, inform, and consult (Chinyio and Olomolaiye 2010). ***Informing*** includes providing the stakeholders with practical, real, and topical information to help for understanding problems and suggest solutions (Karlsen 2002). ***Consult*** is the method to keep stakeholders informed about the project by obtaining stakeholders' feedback on analysis, alternatives, and decisions (Chinyio and Olomolaiye 2010). ***Involve*** includes working fair and directs with the stakeholders during the process for ensuring that stakeholder attentions and ambitions are understood and considered continuously. Stakeholders with a high level of impact, especially need to be involved in all activities in the project (Chinyio and Olomolaiye 2010). ***Collaborate*** includes partnering with the stakeholders in all of the decisions side, including the evolution of alternative approaches as the key stakeholders have a high level of impact on project success (Savage et al. 1991).

2.5 Stakeholder Management Strategies

Jawahar and McLaughlin (2001) stated that the used strategy by the organization to deal with each stakeholder is dependent on the importance of a given stakeholder to the organization compared with other stakeholders. Whereas, the understanding of the strategic actions of project stakeholders and factors impacting them in the field of project management is undeveloped (Aaltonen 2010). Aaltonen and Sivonen (2009) selected four different case projects that had involved external stakeholder related challenges and that had been implemented in emerging markets. They identified and described five different types of response strategies, varying from passive to active approaches enacted by focal project companies. As the power and legitimacy of stakeholders' claims increase, focal companies tend to involve more actively and enact more active strategies. Moreover, MPs may respond to the demands, pressures, and claims for stakeholders that have the power to promote their claim and that are interested in the project in many ways. Furthermore, Oliver (1991) determined various strategies that institutions have established as a response coming from institutional environment pressures. He provides categorization of five different types of response strategies: compromise, acquiesce, avoid, defy, and manipulate. Despite this, there is still many investigations needed to build a broad understanding of project SM strategy.

3 RESEARCH METHODOLOGY AND DATA COLLECTION

In order to achieve the study's goal, a survey was carried out to gather information among the most representative firms in Qatar, which play an essential role in the local economy and construction

sector. The methodology starts with defining the problem, aim and objective of the study followed by an extensive literature review, start a questionnaire based on quantitative approach and analysis using scoring rate from 1 (very low) to 5 (Very High). The questionnaire established in a digital form using online SurveyMonkey. The quantitative approach is used in this research to collect and understand the opinion and perception of construction professionals towards RSs in MCPs. The data collected from the questionnaire are analyzed using popular statistical analysis software, the Statistical Package for Social Science IBM (SPSS). The questionnaire survey involved the engineers at different levels and types of experience. The sample was randomly selected from different stakeholder including: governmental, semi-governmental, and municipalities; Client/Owner/ Engineer; consultants (supervision and design) and contractors/sub-contractors. The questionnaire was sent to 400 people in different types of organizations and 235 (60% response rate) responses were received which is a satisfactory number of responses (Heravi, 2014).

After designing the questionnaire, pre-testing and pilot study were considered to refine and evaluate it. The questionnaire pre-testing was done by sending the questionnaire to five construction experts and requesting their review and comments. Pre-testing is used to determine the effectiveness of the questionnaire concerning strength, formatting, wording, and order to assure that the questionnaire is clear, simple, and easy to respond. Then, a pilot study is performed to collect data from certain groups of respondents (30 individuals). The pilot study is necessary to improve the validity and efficiency of the experiment before the actual data collection starts (Naoum, 2007).

4 RESULTS AND DISCUSSIONS

The analysis is conducted for 235 responses. Figure (1) provides a distribution of the respondents for each party. The majority represents supervision (consultant/designer/management) 43.4% and 33.1% contractor which mainly reflect the construction stage. The high percentage of this category reflects an excellent indicator that ensures the quality of the information obtained.

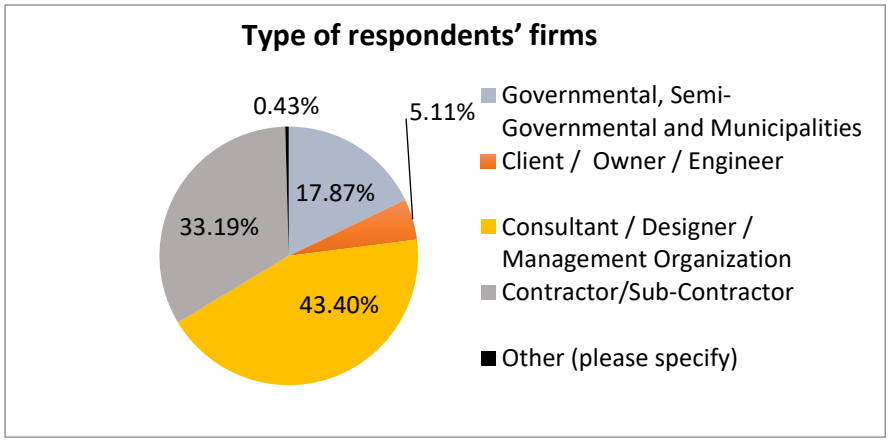

Figure 1: Type of respondents' affiliation

According to Figure (2), more than 70% of the respondents are from the top management and senior levels, who have managerial and technical skills, which have key positions that support the quality of obtained information. Since this research focuses on SM, the results of this section confirm that appropriate people were approached.

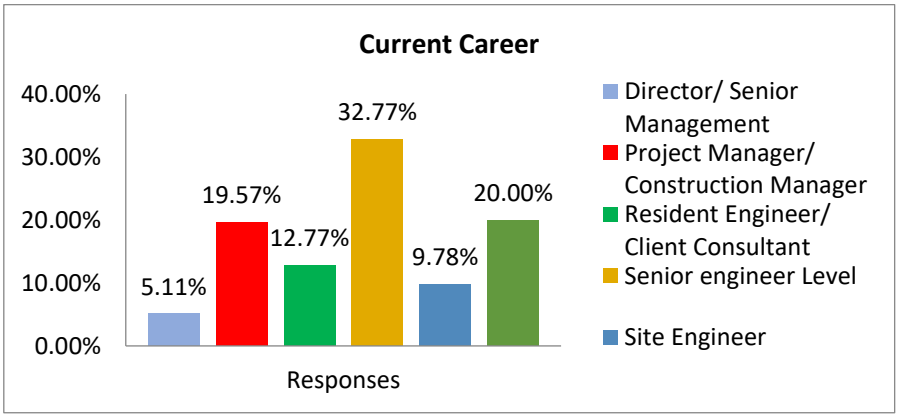

Figure 2: Respondents' roles

As shown in Figure (3) more than 15 years' experience in the construction industry of the participants had a good percentage (28%). They act as the leaders and decision-makers of the projects in their organizations. Also, 50.0% of the respondents have key positions, the highest amount of deep experience increases the level of accuracy of evaluation. It was good for the contributed respondent of juniors to sustain the desired development of the construction project. The variety of experiences will enrich the research with different knowledge and information. As shown in Figure (4), more than 88.0% of questionnaires collected from public/government client organizations. This high percentage reflects the state of construction in Qatar and reflects an accurate assessment of the current situation in the construction market in Qatar. Moreover, this reflects the high development proceed in this time for constructions projects in Qatar.

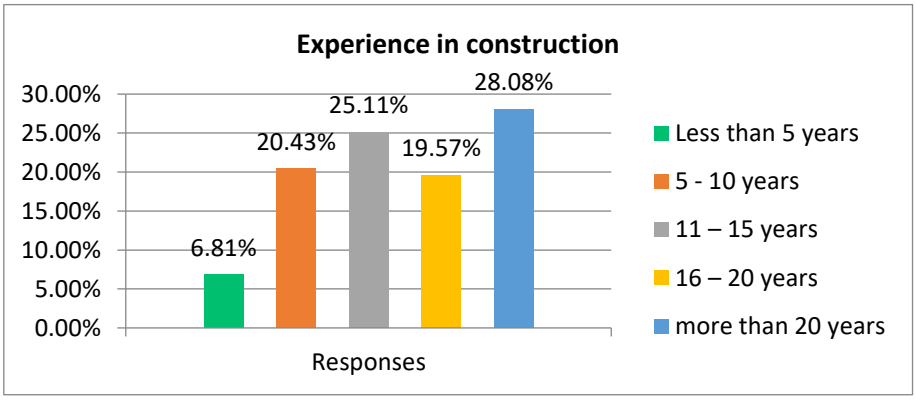

Figure 3: Years of experience

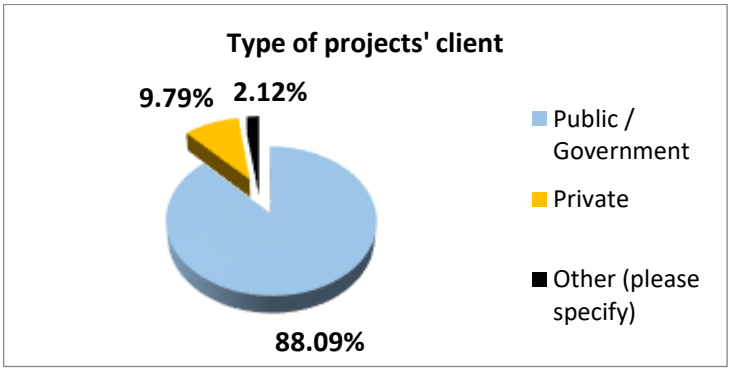

Figure 4: Distribution of client's type

4.1 Type of response strategy to deal with the stakeholder claims

The respondents were asked about their opinions regarding the types of effective response strategy to deal with the stakeholder claims in the construction industry in MPs.

Table 1 Effective response strategy to deal with the stakeholder

Strategy Type	Mean	Std. Error	Std. Deviation	*RII%	*RII%
Adaptation strategy	3.9510	.07898	.94443	79.02	3
Avoidance strategy	3.4056	.09936	1.18819	68.11	4
Compromising strategy	4.1958	.06452	.77149	83.92	1
Dismissal strategy	2.9441	.11086	1.32567	58.46	5
Influence strategy	4.0559	.06259	.74848	81.26	2

*RII: is the relative importance index

Table (1) shows that the compromising strategy was ranked in the first positions, in this set with RII equals (83.92%). The respondents chose a compromise strategy to deal with the main stakeholder demands. That is the most preferred strategy in construction projects because project managers use it in negotiating with the stakeholders, listening to their claims and requirements, and presenting possibilities and areas for discussions. This strategy can be considered a lose-lose but useful, where finding a middle ground that satisfies all parties to some degree. Also, in this strategy, no one is delighted with the solution; both parties must abandon something vital to them. That is a lose-lose situation.

The influence strategy was ranked in the second position (RII equals 81.26%). That indicates that the project managers can use this type of strategy with the key stakeholders to try to affect their claims in conjunction with the project objective. It requires others to undergo the point of view of one side or another. this is not recommended unless very necessary. Generally, this technique involves pushing one opinion at the expense of another. It is a win-lose situation.

The adaptation strategy was in the third position in this set with RII equals 79.02%. This technique emphasizes agreement rather than differences of opinion. Whereas the project manager can realize that it is better to accept the demand when it is possible and does not have a significant change in the project, this is useful for achieving the project's objectives.

Avoidance/withdrawing strategy is in the fourth position with RII equals 68.11%. This strategy type could be adopted when the demand of the stakeholders' claim is above the capacity of the project. Furthermore, the project manager is trying to adopt this strategy by preventing and covering him/herself from the claims and transferring the responsibility of the claims to another one in the project. Avoiding or withdrawing from the conflict or possible conflict and allowing the concerned parties to solve the conflict on their own. This strategy is not recommended unless it is a very dangerous situation (Lose/Lose).

Dismissal strategy is ranked in the last position (RII = 58.46%). Most of the respondents disagreed with this strategy. That means that the project managers should transact with stakeholder's matters suitably and properly.

5 CONCLUSION

MCPs are unique due to the enormous stakeholder's relationship networks in the project, with crucial impacts on society and the environment. This study provided an overview of the response strategy dealing with the stakeholder claims in MCPs in Qatar. The compromising strategy is ranked in the first position as a critical factor. Such result reflects the full agreement of respondents regarding the importance of implementing the strategy based on compromise. Moreover, the respondents considered this approach was useful, and the project managers prefer to use compromising strategies to deal with the primary stakeholder needs. Because they can use this strategy for negotiating with the stakeholders, listening to their requirements related to the project, displaying possibilities, domain

for dialogue, making satisfaction, and offering compensation. Otherwise, the respondents not accepting the use of a dismissal strategy. Additionally, this study mentions that companies may respond to stakeholder pressures in various ways, ranging from passive adaptation strategies to active influence strategies, and it contributes to some understanding of the current challenges for MCPs. Furthermore, this study's results will be valuable for all concerned project stakeholders when considering future execution plans, assist the improvement of researches to overcome the construction obstacles as much as possible to increase the execution level. Moreover, this paper makes a significant contribution by providing a view for implementing a response strategy in MCPs that motivates decision-makers and project players to adopt a compromising strategy in their projects. Although, this paper contributes to a better understanding of the response strategy of MCPs for dealing with project SM challenges; confirming its wide-scale validity to deal with challenges of SM and related response strategy of MCPs requires further research, as clarified by participates.

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