

EMERGING ISSUES RELATED TO STAKEHOLDER MANAGEMENT IN PPP PROJECTS: AN AUSTRALIAN STUDY

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Abstract

Many countries around the world are in search of new means to engage the private sector in managing and financing infrastructure through Public Private Partnerships (PPPs). When considering Australian context Stakeholder Management (SM) related issues have been reported as one of the main reasons for failure in several instances. PPPs involve many stakeholders whose interests might not be in agreement leading to conflicting objectives. Therefore, this research aims to determine the current emerging issues related to SM in Australian PPPs. This study has investigated the emerging issues related SM through an extensive literature review. The identified issues were further validated using 19 semi structured interviews to establish a full list of SM related issues. Then the critical SM related issues were investigated through a questionnaire survey. The findings revealed twelve critical issues related to SM. The most critical issues were: responsibilities overlap between different Government agencies; political interests push PPP project decisions and incomprehensible project brief and reference design. Further the comparative study highlighted that most of these issues have become critical for the private sector side of the partnership. As such this study highlighted the necessity of a strong Government sector with a robust SM practice to PPP project success.

Keywords: Public-Private Partnerships, Stakeholder Management, Issues, Government.

1. INTRODUCTION

PPPs are a popular form of major project procurement for the delivery of building and infrastructure facilities. Service contracts, management contracts, lease contracts, build operate transfer and similar arrangements, concessions and joint ventures are some different formats of PPPs (Felsing, 2008). According to Grimsey and Lewis (2002), achieving value for money in the services delivered and allowing the private sector entities to meet their contractual obligations are the primary objectives of using PPPs in delivering public infrastructure. PPPs have become a popular method to procure infrastructure projects in Australia. The PPPs in connection with building and infrastructure procurement constituted around 5% of the new investments in Australia in 2009 (Chan et al., 2009).

However, Johnston (2010) highlighted many implementation issues in Australian PPPs. The Sydney Cross City Tunnel, the Southern Cross Station in Melbourne and the Southbank Technical College and School are some examples where the public has been disappointed which led to adverse publicity for the government and commercial losses for the private sector (Wilson et al., 2010). Johnston (2010), Hodge (2004), Siddiquee (2011), Johnston and Kouzmin (2010) and Regan et al. (2011) pointed out many issues in Australian PPPs. Some of these issues in border context can be viewed as: lack of disclosure and transparency of the PPP arrangements, not efficiently managing the long term nature, lack of collaboration between the public and the private parties, lack of trust towards the infrastructure development through PPPs, political forces pushes infrastructure projects and interests of the general public are not well addressed. These issues can be directly associated with ineffective Stakeholder Management (SM) practices. Similarly stakeholder opposition towards the PPPs has been reported as one of the main reasons for the failed PPP projects in global context (El-Gohary et al., 2006, Johnston and Kouzmin, 2010, Siemiatycki, 2009). Accordingly the three main reasons for such failure are primarily due to unsuccessful SM (El-Gohary et al., 2006) i.e lack of awareness in the concept of PPP, insufficient education about PPPs, and transparency issues. Smyth and Edkins (2007) found thirty relationships in a typical PPP project, and the findings indicated that although the project company is managing their internal relationships well the relationship between the project company and public client is very weak. All the above facts confirmed that there are significant SM related issues in PPPs needing further research. Chinyio and Akintoye (2008) confirmed the importance of SM in the modern forms of construction procurement such as partnering and private finance initiative. Accordingly many stakeholders are involved in this process whose interests are not always likely to be in agreement. According to a report published by World Bank, the first factor out of seven major points that are holding up private investment in infrastructure is the wider gap between the government and the private sector interests (De Schepper et al., 2014). However, according to De Schepper et al. (2014) these stakeholder issues do not merely emerge because of this gap but due to the concerns related to ineffective SM approaches. Despite the literature have suggested that proper SM is a key to attain PPP project success there is a lack in studies in this area. There is no study has been undertaken in Australia specifically addressing the stakeholder concerns in PPP projects although SM related issues can be treated as one of the main reasons for failure.

The objective of this paper is to address the aforementioned gap and contribute to the knowledge base of SM in PPP projects by presenting findings regarding the current emerging issues in the Australian PPP market. The findings of this paper are from a part of a larger research project which aimed at developing a SM framework for PPP projects. The next section will discuss some of the issues highlighted in the previous studies. Then it will explain the research methodology of the study followed by the research findings and the discussion of the findings. Finally some conclusions were drawn.

2. LESSONS FROM RECENT EXPERIENCE IN PPPS

Australia claimed to be one of the leading countries which uses PPPs for major economic and social infrastructure (Barratt, 2003). However, infrastructure privatization created many issues in social, political, economic, legal and environmental context. According to Johnston (2010), there are number of fundamental pitfalls that need to be addressed in Australian PPPs in sustaining the public interest. He explored many issues in Australia as; underbidding, over-optimistic forecasts, inadequate risk allocation, higher cost of private capital versus government finance, lack of transparency, lack of citizen's trust, not have achieved their intended promises, inappropriate organisational and business relations and political behaviour and conflict of interest. Siddiquee (2011) pointed out that a larger proportion of PPPs in Australia have failed due to inaccurate projections of revenue growth, patronage increase and consumer behaviour throughout the predetermined concession period. Also Ball (2011) pointed out that some of the Victorian transportation PPPs has left the private sector with painful losses. Although these privately managed assets are meant to provide value for money for all stakeholders, the potential value has not achieved due to many reasons. As such there is a need to further explore the issues.

Political agenda towards these infrastructure project decisions have created many issues from the start of several PPP projects in Australia. According to Siddiquee (2011), the Sydney Cross City Tunnel project was politically advantageous in a PPP structure and in reality the way it was structured didn't produce the best outcomes. Lack of information dissemination to the public is another critical issue identified in the wider PPP literature (Linder, 1999, Edwards and Shaoul, 2003). While general public tend to ask for more information of PPP projects, the Government had to maintain a balance of what information to be disclosed and what are commercially sensitive. This has become problematic in many cases and led to citizens' distrust towards these infrastructure developments. Serving the wider community is one of the main objectives of using PPPs in infrastructure development. However, Wilson et al. (2010) highlighted that the Sydney Cross City Tunnel, the Southern Cross Station in Melbourne and the Southbank Technical College and School are the examples where the interests of the general public are not well addressed. Johnston (2010) highlighted another critical issue as longer-term performance monitoring is lacking in the Australian PPPs which is often need to sustain the defence of the long-term operational viability or success of a PPP versus traditional procurement. Further Siddiquee (2011) pointed out that there is no sufficient staff capability for the PPP delivery. According to Kwak et al. (2009) this can lead to tensions between public and private partners and, if not remedied, it could lead to project failure. Another critical issue is the conflicts between the public and the private partners are not well managed. According to Johnston (2010), this may affect the core value of PPPs and potentially represent a major, but usually silent, pitfall within the model. While the research has confirmed the PPP procurement structure will provide superior time and cost efficiencies (Raisbeck et al., 2010, Chasey et al., 2012) many researchers pointed out cost and time overrun issues in Australian PPPs. Siddiquee (2011) asserted that a larger proportion of PPPs in Australia have failed due to inaccuracies related to the set toll prices and traffic forecasts. For example, both the Sydney Airport Railway Link and the Sydney Cross City Tunnel became unpopular among the general public due to their high toll prices (Zou et al., 2008). Table 1 summarises the above issues in PPPs explored by the previous studies. Most of the issues in Australia have been echoed by the authors in global context demanding urgent research efforts. Further there are many issues in a PPP project which can be indirectly related to SM. For example cost and time overruns related to PPPs has become one of the critical issues in PPP projects (Henjewe et al., 2014, Johnston, 2010, Siddiquee, 2011, Zou et al., 2008, Ball, 2011). Most of the causes for these time and cost overruns can be directly related to SM practices. Also the issues of concession period determination can be indirectly related to SM. Although the predictions of concession period is accurate if the general public didn't use that infrastructure due to ineffective public engagement can create issues.

In summary, the literature has implicated that SM is one of the critical factor for PPP project success. Nonetheless there are some considerable SM related issues in Australia and around the world. Therefore, it is important to further investigate the critical issues related to SM. And also the

perceptions of different stakeholder groups towards an effective SM for PPPs should be explored to develop a set of strategies for successful SM. As such the main aim of this study is to investigate the most critical SM related issues in Australia and to explore the impact of those issues to PPP project success. To achieve the above research objectives the following research methodology was adopted in this study.

Table 1: Summary of the issues in PPPs

| Issue | Johnston and Kouzmin (2010) | Siddiquee (2011) | Regan et al. (2011) | Johnston (2010) | Wilson et al. (2010) | De Schepper et al. (2014) | Kwak et al. (2009) | Henjeweale et al. (2014) | Jepsen and Eskerod, 2009) | (Koppenjan, 2005) | (Saengsupavanich et al., 2012) |
|--|-----------------------------|------------------|---------------------|-----------------|----------------------|---------------------------|--------------------|--------------------------|---------------------------|-------------------|--------------------------------|
| Political agenda towards PPP project decisions | x | x | | x | | x | x | | | | |
| Lack of information dissemination to the public | x | | x | x | | x | | x | | | |
| Interests of the general public are not addressed | | | | x | x | x | | x | | | x |
| Lack of longer-term performance monitoring | | | | x | x | | | | | | |
| Lack of staff capability in the PPP project delivery | | x | x | | | x | x | | | | |
| Conflicts are not well managed | x | x | x | | | x | | | | | |
| Difficulty in assessing the expectations of each stakeholder | | | | | | x | | | x | | |
| Lack of interaction with the stakeholders | | | | | | x | | | | x | |

3. RESEARCH METHODS

3.1 Data Collection & Analysis

The eight SM related issues explored by the literature review were discussed in the previous section. Subsequently semi structured in-depth interviews were adopted as means of further investigating the SM related issues in the Australian context. At present nineteen semi-structured interviews were conducted. Due to the involvement of multiple numbers of stakeholders in a PPP project, we stratified the sample into two professional groups to obtain the public and the private professional insights into the research questions. Respondents were selected randomly by contacting the Government Departments and the private companies that have dealt with a variety of Australian PPPs. Successively a questionnaire survey was conducted to further evaluate the criticality of the identified issues from the literature review and the interviews. The online survey tool ‘Qualtrics’ was used to distribute the survey. Random sampling was used. The sample was selected from the managers who were registered in the Australian Institute of Project Management (AIPM), the Australian Institute of Building (AIB) and LinkedIn business networking website and has involved with SM related tasks of a PPP project. In order to identify the relative significance of SM strategies for different stakeholders, Likert-style rating questions, using a five-point scale. Overall, 357 responses were received of which 341 were valid and used for further analysis.

The interview results were analysed using the content analysis via NVIVO software. The questionnaire data were analysed using the IBM statistical package SPSS22 soft-ware. Initially descriptive statistics such as mean and standard deviation were used. Statistical test of the mean for each issue was carried out to check whether the population would consider the issue to be critical. To test the null hypothesis $H_0: \mu \leq \mu_0$ against the alternative hypothesis $H_1: \mu > \mu_0$, where μ was the

population mean. The decision rule was to reject H_0 when the calculated t value was larger than $t_{(n-1,\alpha)}$ as shown in below equation.

$$\frac{\bar{X} - \mu_0}{S_x/\sqrt{n}} > t_{(n-1,\alpha)}$$

$t_{(n-1,\alpha)}$ - Follows a Student's t-distribution with $n-1$ degrees of freedom, \bar{X} - Sample mean, S_x - Sample standard deviation, n - sample size, μ_0 - Critical rating above which the attribute was considered as most significant

The responses were further tested for the null hypothesis (i.e. that means between groups do not differ significantly) using non-parametric tests suitable for small and unequal sample group sizes. As such the Mann-Whitney U-test can examine the level of agreement. The null hypothesis is that the mean significance of each factor is equal between any two groups. If the value of U exceeds its critical value at some significance level (0.05), there is evidence to reject the null hypothesis.

3.2 Analysis of the background of respondents

The interview participants were all senior managers involved in the bidding, construction and operational phases of PPP projects. All of the interviewees had more than five years' experience in any type of PPP project with some SM experiences. 10 Panel members represented the private sector, 5 the public sector where as 4 have involved in both the sectors. Considering the questionnaire survey 37% of the respondents had more than ten years of professional experience and 32% had more than 5 years of experience. Also nearly 50% of the respondents had the exposure for 2-5 number of PPP projects. Therefore, the respondents can be considered as well experienced in this field. There were representations covering both the private and public sector views. Figure 1 shows the sample structure for the interviews and the questionnaire survey respectively.

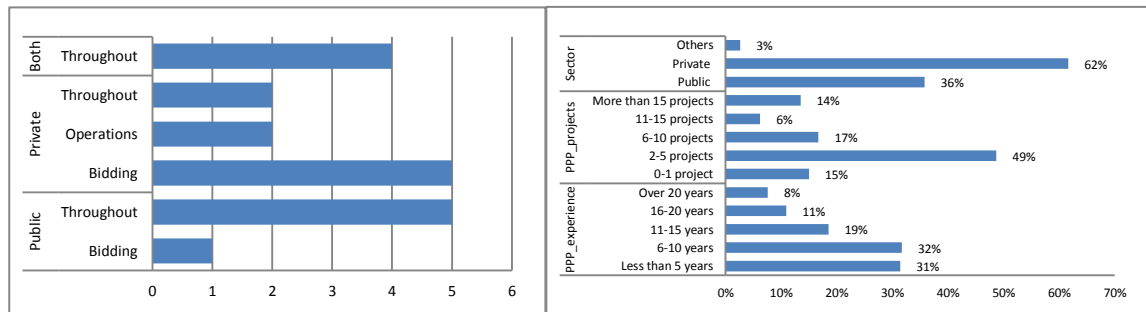


Figure 1a: Sample structure (interviews)

Figure 1b: Sample structure (survey)

Figure 1: Sample structure

4. RESEARCH FINDINGS

4.1 Interview results

Interviewees were asked to express their views on the SM related issues identified from the literature review. All the identified issues from the literature review were further confirmed via the interview findings. Further Issue_3, Issue_4, Issue_5 and Issue_7 were added into the SM related issues list developed. The following Table 2 summarises the SM related issues and how the interviewees agreed on each of the issues.

Table 2: Summary of the SM related issues (from the interview findings)

| Code | Issue | No of agreed interviewees | % agreed |
|----------|---|---------------------------|----------|
| Issue_1 | Difficulty in identifying stakeholders and their interests throughout the PPP life cycle at the bidding stage | 15 out of 19 | 79 |
| Issue_2 | Lack of early consultation with all stakeholders (by the Govt. agency) | 13 out of 19 | 68 |
| Issue_3 | Non-disclosure of the history behind PPP project to the private consortium (by the Govt. agency) | 16 out of 19 | 84 |
| Issue_4 | Responsibilities overlap between different Govt. agencies | 15 out of 19 | 79 |
| Issue_5 | Incomprehensible project brief and reference design leads to uncertainties | 16 out of 19 | 84 |
| Issue_6 | Political interests push PPP project decisions rather than social and economic | 19 out of 19 | 100 |
| Issue_7 | Financiers' nervousness due to changes in the Govt. | 14 out of 19 | 74 |
| Issue_8 | Lack of information dissemination to the public | 17 out of 19 | 89 |
| Issue_9 | Interest of the general public is not well addressed | 16 out of 19 | 84 |
| Issue_10 | Lack of monitoring in stakeholder needs and issues during operations | 18 out of 19 | 94 |
| Issue_11 | Lack of staff capability in the PPP project delivery | 15 out of 19 | 79 |
| Issue_12 | Not efficiently managing conflicts between the private and Govt. sectors | 17 out of 19 | 89 |

Following are some of the facts highlighted by the interviewees regarding the SM related issues explored from the interviews. The representatives from the private consortium highlighted they have to interact with multiple Departments with overlapping responsibilities when working on PPPs. And due to the complexities associated with the Govt. procedures, the different departments provide contradicting information. Further they highlighted that the project brief and the reference design prepared by the Govt. is not sufficiently comprehensive. As such the bidders have to do a lot of public engagement activities around this massive infrastructure. In that case the bidders have issues about the confidentiality of the proposals that they are going to submit. Also they mentioned the issue of financiers' nervousness due to changes in the Govt. In the current PPP procurement structure the bidding consortium is sponsored privately through a mixture of banking and private entities. These financiers need the visibility from the start to the end of the project. But according to the interviewees there is a lot of nervousness around these financiers due to the current conditions in Victoria (the fact that the Govt. could change at any point in time). Hence the SM with the financial side of the business has become very critical for PPP projects. Moreover the interviewees from the private sector mentioned that any infrastructure project in Australia usually does have a very long history before come into existence. The projects can't consider in isolation to the stakeholder issues related to the history behind. The important milestones of the long history should be handed into the private consortium during the bidding stage. However, in reality this is not the case. Interviewees from both the private and the Government sectors agreed as PPPs are 25/30 years contracts it is very challenging to forecast the stakeholders and their interests at the bidding stage. Accordingly one of the main reasons is due to the involvement of multiple numbers of stakeholders. Also due to the complexities associated with the relationships in a PPP structure. Therefore, the interviewees highlighted the dynamic nature of these projects where the stakeholders and their needs may change during the PPP life cycle. At the end of interview results analysis a full list of SM related issues were developed.

Also the participants candid their views on the respective capability of SM based on the sector involved in. Usually the private sector is better equipped to proactively manage the stakeholders is a project. However, the interviewees from the private sector argued that the Government can never ever transfer the risks associated with SM due the embedded unquantifiable social and public values. In reality the public sector is perceived to be keen on transferring out SM risks as much as possible. Therefore, the findings highlighted the importance of the Government sector commitment towards better management of stakeholders.

Secondly, the interview results reflected a clearest divide in SM for economic and social infrastructure projects. Although some studies have been undertaken in relation to economic infrastructure (Shan et

al., 2010, Wu and Zhang, 2013) and social infrastructure (Hellowell and Pollock, 2010, De Marco et al., 2012) discretely and no study has focused on SM aspects. Both the Government and the private sector participants viewed some differences in economic and social infrastructure projects from a SM point of view. Some of the issues have become critical for the social infrastructure whereas some for the economic infrastructure. The private sector representatives highlighted that as the payment for the service relationships are different, their interest towards the stakeholders are also different. In social infrastructure projects the private company has only one customer which is the Government. Therefore, lesser the customers better it is for the project company as they have less maintenance work. Therefore, less marketing activities are undertaken by the project company to promote the social infrastructure projects. But they highlighted that they have to undergo complex SM strategies during the operational phase with a number of operators. In contrast in economic infrastructure the project company has a thousand of customers. Thus the project company is undertaking a whole lot of strategies to attract more customers and to get the general public acceptance. When considering the Government sector perspective they viewed that the people seek for more information in economic infrastructure due the usage fee leading to more measures to improve the transparency. The following Table 3 summarizes the above differences.

Table 3: Differences in Social infrastructure vs. Economic infrastructure

| Mostly relevant sector | Statement | Social infrastructure | Economic infrastructure |
|------------------------|--|--|---|
| Both | General public awareness | Wouldn't even know it is a PPP | General public is always aware |
| | Resistance by the general public Payment for service relationship | Less resistance Between Private and Government | Huge resistance Between Private and General public |
| Project Company | SM during the initial stages | Simple SM | Complex SM |
| | SM during the operational stages | Complex SM | Simple SM |
| | Design after stakeholder engagement The role | Inputs from stakeholders drive the design No retail face with only one customer | Inputs from stakeholders drive the design rarely A retail face with thousands of customers |
| | Transparency of the project | Less concerned | More concerned |
| Gov. | | | |

4.2 Questionnaire survey analysis

Table 4 shows the mean response rating values ranging from 3.70 (Issue 4) down to 3.09 (Issue 9) for the 12 issues offered to respondents. No mean value scores fell into the 'extremely critical' (4.50) and 'not critical at all' (1.5) categories, which indicates that all of these 12 issue are critical for each group. Reliability analysis is conducted to test the internal consistency of the survey variable data. Cronbach's alphas are 0.733 for stakeholder analysis strategies and 0.777 for stakeholder engagement strategies. They are higher than the 0.70 of Nunnally et al. (1967) and Zhang's similar research (2006b) guidelines. The results of reliability tests show that the stakeholders agreed on most of the SM strategies in these categories. The strategies were ranked using the order of importance based of the main ratings and then the hypothesis was tested to identify the most critical SM strategies for PPPs. All the strategies identified except "Private consortium engages with all political parties during bidding" and "Populate PPP workshops with experts from overseas" were further confirmed as the t-value for all the issues were more that of $t_{(42;0.05)} = 1.6450$. Have a good understanding of each other's (Govt. and private consortium) objectives have become most critical strategy.

Then test results of pairwise comparisons between the public and the private sectors are summarized in Table 5, which indicates that there are some different opinions between the groups on "Issue 1", "Issue 2", "Issue 3", "Issue 5" and "Issue 12". All these issues have become critical for the private sector than for the public sector. Further another pairwise comparison was undertaken between the

issues related to economic and social infrastructure projects. Table 5 indicates that there are only few differences related to the criticality of the issues in economic and social infrastructure projects. The issues “Issue 5” and “Issue 11” have become critical to the social infrastructure than for the economic. “Issue 6” has become a critical issue in economic infrastructure projects.

Table 4: Survey results on SM related issues in PPPs

| Issue | Mean | S.D | Rank | T -value |
|----------|--------|--------|------|----------|
| Issue_4 | 3.7038 | 0.9535 | 1 | 13.6312 |
| Issue_6 | 3.6598 | 1.0383 | 2 | 11.7350 |
| Issue_5 | 3.4399 | 1.2248 | 3 | 7.8721 |
| Issue_12 | 3.4399 | 1.0319 | 4 | 7.1239 |
| Issue_2 | 3.4252 | 1.1106 | 5 | 7.0704 |
| Issue_7 | 3.4047 | 1.0490 | 6 | 6.6323 |
| Issue_11 | 3.2346 | 1.2500 | 7 | 3.4659 |
| Issue_10 | 3.1818 | 1.0386 | 8 | 3.2328 |
| Issue_1 | 3.1525 | 1.0319 | 9 | 2.7288 |
| Issue_8 | 3.1000 | 1.0543 | 10 | 1.7516 |
| Issue_3 | 3.0950 | 1.0571 | 11 | 1.7510 |
| Issue_9 | 3.0938 | 0.9896 | 12 | 1.6595 |

Table 5: Mann–Whitney U-test of survey results

| Issue | Asymp. Sig. (2-tailed) | |
|----------|------------------------|---------------------|
| | Public vs. private | Economic vs. Social |
| Issue_1 | 0.004 | 0.832 |
| Issue_2 | 0.049 | 0.324 |
| Issue_3 | 0.004 | 0.982 |
| Issue_4 | 0.343 | 0.643 |
| Issue_5 | 0.044 | 0.009 |
| Issue_6 | 0.723 | 0.029 |
| Issue_7 | 0.190 | 0.112 |
| Issue_8 | 0.233 | 0.222 |
| Issue_9 | 0.645 | 0.825 |
| Issue_10 | 0.236 | 0.075 |
| Issue_11 | 0.516 | 0.019 |
| Issue_12 | 0.011 | 0.085 |

5. DISCUSSION FURTHER RESEARCH DIRECTIONS

The interview results were further confirmed via survey results indicating that all the identified SM related issues have become critical for PPP project success. “Responsibilities overlap between different Govt. agencies” and “political interests push PPP project decisions rather than social and economic” have become the most critical issues based on the mean score ranking. Interview results also confirmed that “political interests push PPP project decisions rather than social and economic” is the most critical issue related to PPP projects. Further according to the interview results “lack of monitoring in stakeholder needs and issues during operations” and “not efficiently managing conflicts between the private and Govt. sectors” are the second most critical issues. Questionnaire survey also confirmed that these issues are critical with a mean score value of 3.18 and 3.44 respectively.

Although the Government and the private sector parties have common opinions on the criticality of some of the SM related issues in PPP projects, there are evident differences as well. As shown in Table 5 most of the issues have become critical for the private sector when compared with the public sector. All these four issues “Difficulty in identifying stakeholders and their interests throughout the PPP life cycle at the bidding stage”, “Lack of early consultation with all stakeholders”, “Non-disclosure of the history behind PPP project to the private consortium”, “Incomprehensible project brief and reference design leads to uncertainties” and “Not efficiently managing conflicts between the

private and Govt. sectors” are directly related to the activities associated with the Government sector. As such the results highlighted the importance of the Government sector role in SM for PPPs. Nevertheless in reality the Government is trying to transfer the total SM related risk to the private consortium. Chung et al. (2010) also confirmed this point in relation to risk management in PPP projects in Australia. As such the findings insisted the importance a strong Government with robust SM practices for successful PPP projects. Therefore there is a need to do more research in this area to develop a robust SM framework for PPP project success. Separate pairwise comparison was undertaken to analyse the differences on the criticality of the SM related issues in economic and social infrastructure projects. However, further research should be undertaken to investigate the differences in these two types of projects in terms of SM point of view.

6. CONCLUSIONS

Both the interview and the questionnaire survey results investigated 12 critical issues related to SM in PPPs. It is necessary to address the current emerging issues related to SM in the research agenda. The comparative study between the private and the Government sector highlighted some differences in the views on the criticality for some of the issues. And it was noted that most of the issues have become critical for the private sector side of the partnership enquiring improvements in the Government sector. As such, the findings insisted the importance of a strong Government sector in dealing with SM for PPPs. However in reality the Government is trying to transfer the total SM risk to the project company leading to many confusions and issues in the later stages. This study emphasised an urgent research interest to develop a set of strategies to improve the SM related to the Government sector side of the partnership also which can address the issues identified by this study. This study is part a larger research project which aimed at developing a systematic SM framework for PPPs.

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