Improving Satisfaction of Public Engagement for Mega Development Projects through Stakeholder Identification

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Summary

Purpose – Public engagement is becoming increasingly prevalent for mega development projects in Hong Kong. It is encouraged to collect different opinions from the society, integrate the ideas, establish consensus among multiple stakeholders, gain the final support from the society, and enhance the project performance from the public view. However, it is difficult to take into account of all of the needs and wants of multiple stakeholders by balancing the diversified power and interests in the engagement process. For example, environmental groups as an interest group may only concern about the environmental protection by eliminating proposed development; residents may want to accelerate the urban redevelopment simply for upgrading their living environment; the government with the legitimate power concentrates on the regulation and policy, etc.

Stakeholders are individuals or groups affecting or being potentially affected by the public engagement project which claim ownership, rights, or interests on the PE project. Different stakeholders possess diverse power and interests which are key elements for identifying stakeholders. Due to multi-disciplinary stakeholders involved in the public engagement projects, it is a challenging task for the organizer to identify representative stakeholders and determine how to satisfy their expectations. In order to improve the project performance in the society, main characteristics of the stakeholder (power and interest) are adopted to identify multiple representative stakeholders in public engagement projects. The paper thus aims to investigate the complicated relationships between stakeholder identification (power and interest) and final satisfaction of public engagement for construction projects in Hong Kong.

Design/methodology/approach – Based on extensive literature review on stakeholder management and public engagement, a questionnaire survey was designed to investigate the relationships between stakeholder identification (power and interest) and satisfaction on public engagement. Purposive sampling was adopted in which respondents were recruited only if (1) they had direct public engagement experience, such as focus group, workshop or public forum for mega development projects; and (2) they had affected or been affected by the public engagement projects at the time when they filled in the survey. In order to understand the complicated relationships between stakeholder identification and final satisfaction, reliability analysis and Pearson correlation analysis were adopted by using the software SPSS version 19.0. Reliability analysis was adopted to ensure the internal consistency of the identified factors, while Pearson correlation was used to measure the strength and direction of linear relationship among factors.
Findings – This paper has identified five types of stakeholder power (i.e., coercive, reward, legitimate, expert, and referent power), and two types of stakeholder interest (i.e., affected interest and affecting interest). Coercive, reward and legitimate power were classified as formal power, while expert and referent power were considered as informal power. All factors were reliable with the Cronbach’s alpha value greater than 0.6. The results of the Pearson correlation indicated that (1) coercive power had a positive significant relation with legitimate power, while reward power, legitimate power, expert power, and referent power were significantly interrelated; (2) affected interest significantly related to affecting interest; (3) legitimate power had a significant relationship to affected interest, and expert power related to affecting interest positively; and (4) public engagement satisfaction had a significant and positive relationship with reward and referent power as well as affecting interest, and negatively related to affected interest.

The organizers and project team of public engagement who possess high reward power are critical for the satisfaction by providing necessary support and deliver desirable project. Some stakeholders with high referent power, such as social workers and neighbourhood committee members exert positive impact on PE satisfaction through maintaining good relation with other stakeholders. Stakeholders who are directly influenced by the public engagement projects hold high affected interests. The failure to satisfy the affected interests might hinder the project implementation and decrease the satisfaction. The engagement of stakeholders with affecting interests could drive the public engagement to pay attention on social value and environmental impact. The fulfilment of the affecting interests can make the stakeholders more satisfied about the public engagement project.

Originality/value of paper – To enhance stakeholder satisfaction on public engagement projects, the initiator such as the government is recommended to delegate more decision making authority to the public and balance the power distribution in the public engagement activities. The governmental departments and project team are expected to be engaged directly in the public engagement process, in which reputable stakeholders (such as social workers, district council members, and community representatives) are encouraged to be involved. To achieve high satisfaction level, the organizers of public engagement are suggested to actively respond the needs of the affected stakeholders and gain common interest and goals which could satisfy all internal stakeholders (e.g., local residents, village representatives, local business organizations, etc.). Furthermore, the environmental impact and social responsibility that may affect the decision making are suggested to be emphasized and promoted through public engagement projects. In sum, the results are expected to improve the satisfaction of multiple stakeholders and benefit the public engagement development in construction projects not only in Hong Kong but also for other countries worldwide. As this study focused on public engagement mainly from a stakeholder perspective, further researches (such as large-scale surveys, focus groups and case study) on the public engagement process and behavioural components are strongly recommended to establish a comprehensive PE model.

Keywords: Interest; Mega development projects; Power; Public engagement; Stakeholder identification

1. Introduction

During the different stages of the construction projects, especially mega development projects, a vast number of stakeholders will be affected, both positively and negatively (Olander 2007). To fulfill different stakeholder expectation and needs, public engagement is often used to provide a platform for multi-stakeholders to exchange their views, identify mutual goals and negotiate different interests and power in decision-making and policy-forming activities (Rowe and Frewer 2005). It is becoming common practices to elicit public comments, such as the impact assessment in Finland (Peltonen and Sairinen 2010), the nuclear waste settlement in Sweden and the GM food project in Netherlands (Hagendijk and Irwin 2006).
Multiple stakeholders (including the governmental departments, construction professionals, non-governmental organizations (NGOs), the general public and so forth) are engaged in the public engagement projects (Leung and Olomolaiye 2010). The challenge for the organizer is to identify stakeholders based on different power and interests and determine how to satisfy stakeholder expectations (Rowe and Frewer 2005). However, it is still in its infancy to identify stakeholders in terms of power and interests and subsequently improve satisfaction on the public engagement. This study thus aims to investigate the complicated relationships among stakeholder power, interests, and satisfaction on public engagement projects. Based on the extensive literature review on stakeholder management and public engagement, a questionnaire survey was conducted to the participants of public engagement in mega development projects.

2. Stakeholder identification

Stakeholders are individuals or groups affecting or being potentially affected by the public engagement projects which claim ownership, rights or interests and bear some form of risks on the project (Freeman 1984; Mitchell et al. 1997). Stakeholders possess different power and interests which are used to identify stakeholders (Sirgy 2002). In terms of different stakeholder power and interests, stakeholders can be categorized as internal or external; primary or secondary; voluntarily or involuntarily involvement; and normative or derivative (Phillips 2003; Post et al. 2002).

2.1 Stakeholder power

The stakeholder can exercise power over other stakeholders to affect their vested interests, exert impact on decision making process of public engagement and get the outcomes they desire (Lukes 2005). In terms of its sources, power can be distinguished as formal power and informal power (Brass and Burkhardt 1993). Formal power, including reward power, coercive power and legitimate power, is based on structural power sources which stem from the legitimate authority and hierarchical position and exert positive and negative impact including reward and coercion (Peiro and Melia, 2003). The governmental departments and project team possess reward power by providing project funding, and delivering desirable project outputs (Newcome 2003). The government departments and the legislative council also have legitimate power from the administration system and coercive power by issuing regulations and ordinance. Sometimes, local communities and NGOs might impose pressure on the organizers and exert coercive power through criticizing the PE projects.

Informal power which includes expert power and referent power connects to personal competencies, experiences and influence (Olmstead 2000). Social workers and community representatives who are caring and admired persons normally hold referent power. Construction professionals from the project team and external professional institutions have expert power and contribute their specialized knowledge to the public engagement projects.

2.2 Stakeholder interest

Interests, in terms of demands, expectations, reasons, needs, and values, formulate the motivation to engage stakeholders in the public engagement projects actively (Leung 2001; Lukes 2005). The public engagement projects are recognized as an interest-balancing process to achieve consensus on decisions made by multi-stakeholders (Gregory and Keeney 1994).

Stakeholder interest can affect or be affected by the public engagement projects (Joerin et al. 2009). Those interests that are potentially influenced by public engagement projects refer to the affected interest on political influence, financial benefits, living environment and so forth (Cragg and Greenbaum 2002). Stakeholder interest can also affect public engagement projects and be categorized as affecting interest such as justice, corporate social responsibility, environmental impact and so on (Reichart 2003). In this study, we identify stakeholders involved in public engagement based on their power and interest on mega development projects (see Table 1).
Table 1  Stakeholder Identification Based on Different Stakeholder Power and Interest

<table>
<thead>
<tr>
<th>Power</th>
<th>Interest</th>
<th>Affected interest</th>
<th>Affecting interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal power</td>
<td>Coercive power</td>
<td>Legislation authorities, Political parties,</td>
<td>NGOs and the environmentalists</td>
</tr>
<tr>
<td></td>
<td></td>
<td>District council members</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Local communities, residents</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reward power</td>
<td>PE project team</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The government departments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Legitimate power</td>
<td>The government departments, the</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>legislative council and district council</td>
<td></td>
</tr>
<tr>
<td>Informal power</td>
<td>Expert power</td>
<td>PE project team</td>
<td>The professionals (such as architect,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>engineers, lawyers, etc.)</td>
</tr>
<tr>
<td></td>
<td>Referent power</td>
<td></td>
<td>Social workers, district council</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>members, NGOs, community representatives</td>
</tr>
</tbody>
</table>

3. Public Engagement satisfaction

Public engagement satisfaction refers to the stakeholder perception on the final outcomes focusing on the physical effectiveness and implementation of the project, including project decision produced by all stakeholders and productive output within the requirements of quantity, quality and timeliness (Rowe et al. 2008). Hence, satisfaction on the public engagement projects can be identified in terms of the project enhancement, the achievement of PE project objectives, and the future impact on other public engagement projects (Leung et al. 2004; McComas 2003).

It is inevitable about the asymmetrical distribution of stakeholder power and the tension between stakeholder interests in the public engagement process (Coff 1999). To achieve satisfaction, public engagement process is required to make the balance among different stakeholders which are identified in terms of stakeholder power and interest (Podsakoff and Schriesheim 1985). Hence, this study investigates the relationships between stakeholder power (i.e. coercive power, reward power, legitimate power, expert power, and referent power) and interest (i.e. affected interest and affecting interest) and satisfaction on the public engagement projects.

4. Research methodology

4.1 Survey design

To investigate the relationships between the stakeholder power and interests and the final satisfaction, a questionnaire was designed consisting of four parts: (1) background information, (2) stakeholder power, (3) stakeholder interest and (4) satisfaction on the public engagement projects. All the factors are summarized in Table 2. Purposive sampling (Adams and Schvaneveldt 1985) was adopted in which respondents were selected only if they had experience on participating in public engagement activities, such as focus groups, workshops or public forums and they had affected or been affected by the public engagement projects before they filled in the survey. All respondents meeting the inclusion criteria were asked to identify their most satisfactory public engagement project and fill in the questionnaire based on this experience. In total, 57 completed surveys were collected, representing a response rate of 14%.

Table 2  Factors of Stakeholder Management in the Public Engagement Process
In order to investigate the complicated relationships among stakeholder power, stakeholder interest, and satisfaction on public engagement projects, both reliability analysis and Pearson Correlation analysis were adopted with the software SPSS version 19.0. Reliability analysis was used to examine the internal consistency of the identified factors, while Pearson correlation was adopted to measure the strength and direction of linear relationship among factors.

5. Results

To test the internal consistency of factors, reliability analysis was conducted on stakeholder power, interest and PE satisfaction. All factors were reliable with the Cronbach’s alpha value greater and 0.6 (Hair et al. 1998). Those reliable factors were summed by arithmetic means together with corresponding coefficient alpha reliabilities, as shown in Table 3.

Table 3 Calculation and Reliability of Factors of Stakeholder Power, Interest and Satisfaction

<table>
<thead>
<tr>
<th>Major components</th>
<th>PE factors</th>
<th>Measurement items</th>
<th>Alpha (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stakeholder power</td>
<td>SP-1 Coercive power</td>
<td>(sp1+sp2+sp3)/3</td>
<td>0.881</td>
</tr>
<tr>
<td></td>
<td>SP-2 Reward power</td>
<td>(sp4+sp5+sp6)/3</td>
<td>0.660</td>
</tr>
<tr>
<td></td>
<td>SP-3 Legitimate power</td>
<td>(sp7+sp8+sp9)/3</td>
<td>0.721</td>
</tr>
<tr>
<td></td>
<td>SP-4 Expert power</td>
<td>(sp10+sp11+sp12)/3</td>
<td>0.639</td>
</tr>
<tr>
<td></td>
<td>SP-5 Referent power</td>
<td>(sp13+sp14+sp15)/3</td>
<td>0.637</td>
</tr>
<tr>
<td>2. Stakeholder interest</td>
<td>SI-1 Affected interest</td>
<td>(si1+si2+si3)/3</td>
<td>0.894</td>
</tr>
<tr>
<td></td>
<td>SI-2 Affecting interest</td>
<td>(si4+si5+si6+si7)/4</td>
<td>0.847</td>
</tr>
<tr>
<td>3. Public engagement satisfaction</td>
<td>Sat PE satisfaction</td>
<td>(sat1+sat2+sat3)/3</td>
<td>0.700</td>
</tr>
</tbody>
</table>

The relationships between various stakeholder power, interest, and satisfaction on public engagement projects were investigated by Pearson Correlation analysis (Table 4). The results of the Pearson correlation analysis indicates that (1) legitimate power (SP-3) positively related to coercive power (SP-1) and reward power (SP-2); (2) reward power (SP-2), legitimate power (SP-3), expert power (SP-4) and reference power (SP-5) were interrelated; (3) affected interest (SI-1)
related to legitimate power (SP-3) positively and affecting interest (SI-2) connected to reward power (SP-2) and expert power (SP-4); (4) affected interest (SI-1) related to affecting interest (SI-2) positively; and (5) satisfaction related to reward power (SP-2), referent power (SP-5) and affecting interest (SI-2) positively and connected to affected interest (SI-1) negatively.

Table 4 Correlations among Stakeholder Power, Interest and PE Satisfaction

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>SP1</th>
<th>SP2</th>
<th>SP3</th>
<th>SP4</th>
<th>SP5</th>
<th>SI1</th>
<th>SI2</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP-1 – Coercive power</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP-2 – Reward power</td>
<td>0.178</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP-3 – Legitimate power</td>
<td>0.353**</td>
<td>0.473*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP-4 – Expert power</td>
<td>-0.060</td>
<td>0.331*</td>
<td>0.182</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP-5 – Referent power</td>
<td>-0.017</td>
<td>0.413**</td>
<td>0.357**</td>
<td>0.321*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI-1 – Affected interest</td>
<td>0.127</td>
<td>0.066</td>
<td>0.316*</td>
<td>0.117</td>
<td>-0.214**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI-2 – Affecting interest</td>
<td>-0.205</td>
<td>0.268*</td>
<td>0.052</td>
<td>0.335*</td>
<td>0.091</td>
<td>0.532**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sat – PE satisfaction</td>
<td>-0.133</td>
<td>0.306*</td>
<td>-0.062</td>
<td>0.134</td>
<td>0.380**</td>
<td>0.348*</td>
<td>0.288*</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: * Correlation is significant at the 0.05 level (2-tailed); ** Correlation is significant at the 0.01 level (2-tailed);

6. Discussion

The complicated relationships between stakeholder power, interests and satisfaction on public engagement projects were illustrated based on the results of Pearson Correlation analysis (see Figure 2). The results indicated that reward power and referent power and stakeholder interest relate to final satisfaction directly. Other kinds of stakeholder power and interest might associate with final satisfaction indirectly.

Among all kinds of formal power, reward power relates to satisfaction on public engagement directly, and coercive power and legitimate power might influence final satisfaction via the effect of reward power. The initiator and organizers of public engagement (e.g., the government and project team) who possess high reward power tend to provide sufficient support, ensure successful project implementation and deliver the desirable project to other stakeholders (Bourne and Walker 2005). Final satisfaction will be improved with more support and favorable project outcomes (Rawwas et al. 1997).
Referent power as a major type of informal power has direct positive impact on satisfaction, aligning with other studies (Gassenheimer and Calantone 1994). It is easy for stakeholders with referent power (e.g., social workers, professors, committee members, etc.) to build trusting relationship with other stakeholders. Stakeholders who are caring and admired might understand the demands of the general public and improve cooperation with different parties. Their engagement can encourage others to participate actively in public engagement projects and enhance the level of satisfaction on final outcomes (Petts 2008).

Both affected interest and affecting interest relate to satisfaction on public engagement directly. Stakeholders possessing affected interest are those who are directly influenced by the public engagement projects, for example, political influences of different parties, the maximization of land compensation for local residents, the reduction of disturbance, less removal or relocation of local business, etc. It is extremely difficult to fulfill all affected interests. When public engagement fails to balance the affected interest and find out the common interest for all stakeholders, they may feel dissatisfied about the final outcomes (Carpini et al. 2004).

Stakeholders with affecting interest often pay attention on public engagement information, social value, and environmental impact and so on. NGOs are the typical stakeholders possessing affecting interest. They tend to concern for the interests of the whole society, make trade-offs among competing and conflicting stakeholder expectations and actively engage in the public engagement projects. With their engagement, the projects can be more inclusive and desirable (Jones et al., 2007).

7. Recommendations

Research on the complicated relationships among power, interest, and satisfaction is still rare in the public engagement for construction projects. The findings of this study strengthen that stakeholder identification influences final satisfaction significantly through different stakeholder power and interests. To apply stakeholder identification in the public engagement projects, several suggestions have been brought out. The initiator or organizer of public engagement projects is suggested to provide an equal and fair platform to avoid the imbalance distribution of power and interest (Sunshine and Tyler 2003). Stakeholders with high reward power, such as the governmental departments and project team members, should directly engage in the decision-making process in order to understand the public views and deliver the satisfied products. To use the referent power source and enhance final satisfaction, social workers, researchers in relevant fields and other reputable stakeholders are suggested to engage in public engagement projects.

The failure to fulfill affected interests might hinder the project implementation and reduce satisfaction. Hence, it is suggested to actively respond the needs of the affected stakeholders and gain common interest and goals which could satisfy all affected stakeholders (e.g., local residents, village representatives, local business organizations, different parties, etc.). To achieve high satisfaction level, the importance of environmental impact and social responsibility are suggested to be emphasized and promoted through public engagement projects.

This study researched on public engagement mainly from a stakeholder perspective. However, there are no standard criteria to identify stakeholders and determine the stakeholder sampling. In fact, too many stakeholders can create administrative and resources allocation problems as well as increase difficulty to achieve the common grounds. But too few stakeholders involved might cause some key stakeholders to be ignored, which could lead to the problems in a long run (Pomeroy and Douvere 2008). It is important to establish a systematic method to determine the number of stakeholders involved in the project. Considering of the complexity of the construction projects and diversity of stakeholder attributes, multi-criteria decision making techniques is expected to be used in the stakeholder identification and sampling methods. There are some other factors affecting the stakeholder satisfaction in the PE process (e.g., logical team process, participation, comm-
mitment), which were out of the current research scope. To establish a comprehensive model for public engagement projects, further researches (such as large-scale surveys, focus groups, and personal interviews) on the systematic PE process and the behavioral components are strongly suggested.

8. Conclusion

Stakeholder identification determines the success and failure of the public engagement projects. However, public engagement has been blamed for their inappropriate stakeholder identification and failure to balance stakeholder interests and power. In order to identify stakeholder representatives for the public engagement projects, this paper proposed to investigate the complicated relationships among stakeholder power, interests, and final satisfaction on public engagement projects. Based on the literature in the areas of stakeholder management and public engagement, this paper has identified five types of stakeholder power (i.e. coercive, reward, legitimate, expert, and referent power), two types of stakeholder interest (i.e. affected and affecting interest) and final satisfaction.

This study indicates the complicated interrelationship among stakeholder power, interests and satisfaction on public engagement projects. Reward and referent power and stakeholder interests (both affected and affecting interests) relate to final satisfaction directly, while other stakeholder power might connect to the satisfaction indirectly. To enhance stakeholder satisfaction on public engagement projects, it is recommended that the initiator provide equal platform for relevant stakeholders and balance the power distribution. The governmental departments and project team are expected to engage directly in the public engagement process in which reputable stakeholders (such as social workers, district council members, and community representatives) are encouraged to participate. The public engagement projects are suggested emphasizing on environmental impact and social responsibility in order to promote satisfaction level and actively respond the affected interests in order to find common interest of multiple stakeholders. To establish the comprehensive public engagement model, further researches including large-scale survey, focus group and case study are recommended.

ACKNOWLEDGEMENTS

The work described in this paper was fully supported by a grant from The Hong Kong Institute of Surveyors (Planning and Development Division, Project no.: NP022075-02).

REFERENCE


