

CONCERNS OF THE SOCIETY ON NEW MEGA INFRASTRUCTURE AND CONSTRUCTION PROJECTS IN HONG KONG

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As a country's economy prospers, the government would invest considerably in infrastructure and construction facilities to sustain its economic growth and enhance the quality of life of citizens. While these social facilities would no doubt benefit the society by and large, they could damage the environment and affect the residents in the area during the construction and operation stages. The construction of the Guangzhou-Shenzhen-Hong Kong Express Rail Link has resulted in an unexpected resonance in Hong Kong – a place which is very used to mega infrastructure and construction developments. Those opposing to the scheme were not confined to the affected groups but they also included the professionals and the young generation. The concerns of the society appear to be more unpredictable than before. Should the government fail to identify and address the predominant concerns of the society before a social facility is proposed, the chance of project failure would increase and subsequently the mistrust between the government and the society would intensify. The aim of this paper is, therefore, to unveil the concerns of the society on new public infrastructure and construction (PIC) facilities. The paper begins by examining the major categories of social concerns as found in the literature. Those concerns which are relevant to today's society are identified through a series of interviews. The paper is finally concluded by some pragmatic recommendations for improvement in the current public engagement mechanism. The paper should help policy makers to attain the best socio-economic benefits when planning for new mega PIC projects in future.

Keywords: infrastructure and construction projects, public engagement, social concerns, socio-economic benefits.

INTRODUCTION

Hong Kong has been developing in an exponential rate since the 1970's as evident by the completion of numerous mega public infrastructure and construction (PIC) facilities. While construction activities can bring about immense economic benefits (Wells, 1986) and help create employment opportunities (Hillebrandt, 2000), many Hong Kong people would have no hesitation supporting those PIC schemes while the city was still undergoing a transformation process. However, as Hong Kong becomes a well-developed metropolis, more and more citizens become aware of the negative impacts brought by mega construction projects. In recent years, there were no shortage of examples such as the Guangzhou-Shenzhen-Hong Kong Express Rail Link, West Kowloon Cultural District, etc. where the society questioned the design solution or even challenged the necessity of building those projects. Some of these projects attracted criticism, protest and legal dispute. From the policy makers and decision-

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makers' perspective, these are totally undesirable as this could undermine the credibility of a government in a long-run.

Identifying the social concerns for PIC projects during the early planning and design stages is of particular importance as the government can develop technically and financially viable solutions to satisfy the demands of the society. Nevertheless, this is never an easy task given the diverse interests of different societal groups. The problem is aggravated when a country or city is experiencing any form of political or economic transformation as the attitude of citizens could swing radically. Although public engagement is usually conducted to solicit citizens' opinions before a PIC scheme is initiated, this is often conceived as a tool employed by government to seek the public's endorsement. It would be desirable if policy makers and decision-makers can gain a better understanding on the key concerns of the society and try to address them as far as possible before any mega PIC projects are pushed out for public engagement.

An extensive literature review reveals that little has been done on this area. Patterson (1984) argued that the social, economic and aesthetic problems shall be indentified to eliminate any possible negative reactions. Apart from that, the desire of the general public, environmental impacts, effects on cultural heritage, quality of life, and so on could also influence the project success. In this paper, the concerns of the society over PIC projects are highlighted. A series of interviews was conducted in Hong Kong to unveil the current practices and problems. Finally, recommendations are put forward to help improve the success of this type of schemes before a conclusion is drawn.

SOCIAL CONCERNS IN HONG KONG

In Hong Kong, the infrastructure projects and urban renewal schemes are the two predominant project categories of the city due to a surge in population and economic activities (Chief Executive, 2007) not to mention an expectation for a better quality of life (Development Bureau, 2011). While these projects strive to make Hong Kong a better place to live, it is reasonable to expect that the concerns of the general public would revolve around (i) green and clean environment; (ii) good aesthetics; (iii) efficient movement; (iv) a sense of space; (v) diversity of provide choice; (vi) a sense of place; (vii) good urban infrastructure; and (viii) an inclusive and caring society (Planning Department, 2006a).

According to a study conducted by the Planning Department of the Government of HKSAR namely Hong Kong 2030: Planning Vision and Strategy, a "green and clean environment" as demonstrated by good air quality, water quality and biodiversity is essential for the health and well-being of people. Regarding a "sense of space", it is a dynamic mix of psychology attributes and physical attributes, with the psychology attributes covering the need for and perception of comfort and privacy and the physical attributes being affected by the penetration of natural light, air ventilation, the neighbourhood and local environment. "Diversity to provide choice" is a planning decision in order to provide various living choices to different people, and inhabitants can choose to live in a densely populated urban area or a low density rural environment. The unique local characteristics, arts and cultural development, and conservation of heritage should help develop a "sense of place" as such features can increase the cultural awareness, enrich historical continuity, increase the cultural awareness and strengthen community bonds. On the other hand, community facilities, open space, efficient and green energy supply, and sewage and waste treatment systems are the examples of "good urban infrastructure", as they are fundamental to high living standard.

Sustainable development

The above elements are indeed highly related to the principles of sustainable development, as they cover the social, economic and environmental aspects of a living environment. Bruntland (1987) believed that sustainable development is an integration of economic, social and environmental development that can meet the present needs without compromising the next generation. Since 1999, the Government of HKSAR has been promoting sustainable development and considering it essential in “finding ways to increase prosperity and improve the quality of life while reducing overall pollution and waste; meeting our own needs and aspirations without doing damage to the prospects of future generations; and reducing the environmental burden we put on our neighbours and helping to preserve common resources” (Chief Executive, 1999).

According to the Urban Renewal Strategy (URS) released by the Development Bureau of the Government of HKSAR, sustainable development is one of the main objectives of urban renewal in the city. Consequently, the URS provides a list of key factors to be included in a social impact assessment (SIA), and these cover the socio-economic characteristics of the affected residents, housing preference of the affected residents, historical background of the area, as well as cultural and local characteristics of the area. The factors to be considered in SIA should reflect the public interests as they are consistent with the public views as identified in the URS review commencing in 2008. AWC (2009) confirmed that the specific concerns from the public as highlighted in the URS review are development density, urban design, environmental protection and public transport. Chan and Lee (2009) highlighted the urban design considerations for a sustaining built environment, and these include pollution control, preservation of historical structures and features, as well as building design in terms of appearance, density, height and mass.

Environmental protection

Nowadays, citizens in Hong Kong have a very high awareness on environmental protection. There is a common consensus that the environment and natural resources should be protected and conserved as much as possible. Of various environmental concerns, air pollution, provision of open spaces and development density are regarded as critical to the territory (Planning Department, 2003, 2006b). Recently, reclamation has become a controversial issue as the desire for preserving the harbour is extremely strong (PPRI, 2008). In fact, the Protection of Harbour Ordinance (PHO) has come into effective in 1997 which requires that "the harbour is to be protected and preserved as a special public asset and a natural heritage of Hong Kong people, and for that purpose there shall be a presumption against reclamation in the harbour" [section 3(1)], and "all public officers and public bodies shall have regard to the principle stated in sub-section (1) for guidance in the exercise of any powers vested in them" [section 3(2)].

Another new issue attracting the publics' concern is the wall effect as it could block the sunlight and natural ventilation, not to mention about the possibility of worsening the air quality, inducing a heat island effect, and blocking the landscape (Giridharan et al, 2004). In Hong Kong, a guideline has been released by Planning Department of the Government of HKSAR to help prevent the spread of the wall effect along the city's shoreline as it requires that "taller buildings should be located inland, with lower developments on the waterfront, to avoid dominating the harbour and increase permeability to the water body" and it also encourages that "waterfront buildings should be of appropriate scale and facade treatment to avoid creating an impermeable

"wall" along waterfronts " (Planning Department, 2006a). However, unlike the PHO it is a guideline rather than an ordinance implying that it is not a mandatory requirement to strictly adhere to the recommendations.

Cultural heritage

Many studies have shown that heritage conservation receives a low priority in Hong Kong due to a lack of comprehensive statutory control and effective heritage grading system (Wong, 1999; Ho, 2000). Nonetheless, there is an increasing public awareness of the importance of preserving historical structures and features as demonstrated by a strong opposition from the public for the demolition of the Star Ferry Pier and the Queen's Pier in view of their importance of bringing Hong Kong people a collective memory. This reaffirms that the community is not only concerned about preserving historical structures and features, but they are also keen on retaining the local characteristics.

From the government's perspective, cultural heritage is becoming more and more important too. In the Chief Executive's 1999 Policy Address, he envisaged that "it is important to rehabilitate and preserve unique buildings as this not only accords with our objective of sustainable development but also facilitates the retention of the inherent characteristics of different districts, and helps promote tourism" (Chief Executive, 1999). Today, the urban renewal policy would encourage more attention being paid on public voice by conducting public engagement activities during the planning stage of any projects (Wong, 1999).

KEY CONCERNS OF THE SOCIETY

A list of potential social concerns is identified by referring to the report published by the Planning Department (2006a,b), the Urban Design Guidelines for Hong Kong, the Urban Renewal Strategy (Development Bureau, 2011), and an article published by Chan and Lee (2009). Out of the fifty identified social concerns, some are of similar meaning and they are, therefore, condensed into fifteen elements as shown in Table 1.

The identified social concerns can be classified under five broad categories, namely: (i) cultural and heritage; (ii) efficiency of transportation; (iii) green and clean environment; (iv) economic development; and (v) others. The first three categories of concern represent the "social development", "environmental development" and "economic development" under the concept of sustainable development indicating that most of the social concerns are indeed in line with the concept of sustainable development.

Many research studies shown that a reduction in travelling time should be considered as an economic benefit, as greater economic growth and more jobs will be created if less time is spent on accessing to work in an urban area (Cox, 2009). It is also found that by reducing the traffic congestion and increasing the travel speed, the productivity of a region can also be improved (Hartgen and Fields, 2009). Yet, accessibility and travelling time have been grouped under "efficiency of transportation" rather than "economical development" as it is too general to include the transportation efficiency in the economic benefits. Majority of journeys take place in the traveller's own time instead of during the working hours making the amount of time rather difficult to be quantified (Department of Transport, 2009).

Table 1: Identified social concerns

Category	Factors
Cultural and heritage	<ul style="list-style-type: none"> ○ Collective memory ○ Preservation of historical features ○ Local characteristics
Efficiency of transportation	<ul style="list-style-type: none"> ○ Accessibility ○ Travelling time
Green and clean environment	<ul style="list-style-type: none"> ○ Air pollution ○ Wall effect ○ Protection of natural environment ○ Development density ○ Open space ○ Scale of reclamation
Economic development	<ul style="list-style-type: none"> ○ Economic benefits ○ Project cost ○ Compensation and relocation
Others	<ul style="list-style-type: none"> ○ Aesthetic ○ Use of land

INTERVIEWS

A series of semi-structured interviews was administered with eleven people coming from a diverse age, income and educational backgrounds including secondary student, university student, teacher, education director, nurse, health inspector, shopkeeper and housewife. They were selected as they are aware of the PIC development in Hong Kong and have an interest in public participation. In this study, the project initiators, construction professionals, and representatives from the pressure groups and affected groups were deliberately excluded to prevent any potential bias. While the small number of samples may not totally reflect the views of the majority in Hong Kong, the findings shall provide further information for subsequent studies focusing on other groups of participants in a PIC scheme.

During the interviews, eight questions were asked with the first two questions focusing on identifying the key concerns of the society on a PIC project and the importance of the five concerned categories. The third question aims at finding out their preferences of economic development, environmental protection and cultural preservation. More emphasis is placed on preservation of historical buildings and living environment in fourth and fifth questions respectively. Question six strives to examine how to determine the society is in supporting PIC projects. The awareness of public participation during the decision making process is covered by the last two questions.

Identification of social concerns

Balancing environmental protection, heritage preservation and economic development

The respondents agreed that there is a need to strike a balance between cultural preservation, environmental protection, and economic development when a PIC scheme is proposed. To strike a balance means that these three aspects share an equal importance. Most of the respondents believed that a development can be carried out in such a way that it can boost economic growth without damaging the environment and historical value. For example, they are willing to spend a reasonable amount of money

to adopt a scheme that will cause fewer environmental problems. Regarding the heritage preservation, the respondents agreed that we should preserve the buildings which are proven to be worth preserving as determined by professionals.

Higher awareness on environmental protection than heritage preservation

Most of the respondents pointed out that construction projects should not bring adverse impacts on the environment or on public health. This can be reflected by the highest points being given to “green and clean environment” in Question 2. The advantage of protecting the environment is obvious as the environmental capitals, including the air and water quality, have a large influence on our health. There is overwhelming support that the public's health should be placed at the highest priority. All the respondents agreed incorporating a regulation to control the building height or plot ratio despite the potential of a drop in land revenue as they realised that the money spent on dealing with the consequential environmental and health problems could be even higher than the money gained. Comparatively, the advantage of preserving historical buildings is intangible, and is not instantaneous (Wong, 1999), which may explain the divergent preferences of preserving historical buildings. Some respondents indicated that human cannot live without history and emphasised that Grade 1 historical buildings must be preserved while a few respondents showed their reservations in heritage conservation. As a result, the determination in protecting the environment is higher than that in preserving historical buildings among the respondents.

Discrepancy among the respondents

Divergent determination in carrying out construction projects

Regarding whether PIC projects should be conducted regardlessly, four respondents agreed to suspend any projects which could not satisfy the demands of the society while seven believed those projects should continue. Those who supported carrying on the projects pointed out that it is impossible to meet everyone's expectations, and therefore the project should follow the original plan if the projects can meet the interests of the majority. Furthermore, they argued that the pace of development would be affected if they were suspended whenever there is an opposition. In contrast, respondents who proposed suspending the projects pointed out that strong opposition from the public means that the public engagement had not been conducted satisfactorily. They believed that the government should correct the mistakes by consulting the public again in order to gain public acceptance of the project or else public discontentment would accumulate.

Difficulty in recognising the majority's views

Although there were divided views among the respondents, their decisions were made according to the same principle that the government should comply with the desire of majority. Unfortunately, it is always difficult to have a conclusive answer as to the preference of the majority since a large group of people in the society may be quiet or passive in raising their opinions (Lee, 1991). This problem cannot be resolved until the public are enthusiastic enough to attend the public engagement to express their views. Better education by the government is necessary to encourage and enrich the public knowledge to participate in the planning and design of PIC schemes (Lee, 1991).

Susceptible to mass media

Some of the respondents mentioned that they were neutral originally but later developed their own idea after reading the information provided by newspapers or the

television programmes. There is an impression that the news reported in mass media represents the majority's view. However, some of the news tends to bias on reporting those debateable issues in society. Meanwhile, only the pressure groups or the affected sectors are more eager to speak up, and their voice would dominate especially if the silent majority do not express their views. It is, therefore, difficult to judge what are the majority's views without conducting a comprehensive survey.

Attitudes towards decision-making

Lack of awareness in participating in the planning of construction projects

While the respondents appreciate the important of public engagement in a PIC scheme, most of them do not pay much attention to the engagement activities organised by the government. A few respondents, on one hand, criticised the poor publicity of public forum or citizen hearings, when asked whether they would join the public engagement activities if they knew about that, most of them hesitated or refused as they felt embarrassing speaking in formal occasions especially when they know little about urban planning and/or the technical aspects of a project.

Being confident in the professionals and the government

The respondents believed that the professionals have the ability to produce feasible proposal for PIC projects which can balance the economic, environmental and social aspects. Furthermore, they trusted that the grading mechanism of the historical buildings is trustworthy. The respondents understand that the views held by different stakeholders in the society could make it harder to make a decision. The government is expected to balance the interests of different stakeholders as it is supposed to be a neutral party which has no conflict of interest. The respondents respect the decisions made by the government if it (i) is open, fair and genuine in conducting the public engagement exercises before a decision is made; (ii) makes a decision on PIC scheme based on the interests of the majority; and (iii) and provides detailed explanation of the decision to the public. Majority of the respondents considered that they do not have sufficient knowledge or qualify to have the decision making authority. From their points of view, the most appropriate and practical way to make a policy decision is to allow the government to make such a decision after the public have expressed their opinions.

CONCLUSIONS

This paper has identified the possible concerns of citizens in a developed country over the development of mega public infrastructure and construction (PIC) projects by referring to the situation of Hong Kong. By examining the relevant reports and literature, a list of fifteen factors usually considered by citizens during the planning and designing for PIC schemes have been drawn up. These social concerns can be broadly classified into five categories, namely: (i) cultural and heritage; (ii) efficiency of transportation; (iii) green and clean environment; (iv) economic development; and (v) others. In order to maximise the chance of project success, the government should carefully study those factors and try to unveil the expectations of the citizens based on those concerns.

In view of the diverse interests of different groups within the society, it is necessary to balance the environmental, heritage and economic concerns as much as possible before a PIC project is initiated. To do that necessitates a thorough public engagement exercise be conducted. With a large cross-section of the society who would choose to keep silent, it is necessary to find out their preference to prevent a decision being

biased towards the pressure groups and/or the affected parties. After all, any PIC facilities are meant to improve the well-being of the society by-and-large. Better education is needed to make the community aware of the importance of public engagement during the decision making process. From the policy makers and decision-makers perspective, they should keep track on the interests of different groups of stakeholders in the society. This would help estimate the possible feedback from the society and hence identify pragmatic technical solutions and policies to address the concerns of the community beforehand. More importantly, a sincere communication between the government and the community is needed as lots of problems can be resolved by better understanding and mutual trust.

While the findings represented in this paper are based on the opinions of a small sample of stakeholders, the results should be verified to confirm their validity. Therefore, in the next stage of research a questionnaire survey will be administered with different groups of people including the project initiators, design team members, affected groups, interest groups, etc. This would help determine which are the most important social factors as conceived different groups of participants in a PIC project.

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