



Difficulties in executing the Mandatory Building Inspection Scheme (MBIS) for existing private buildings in Hong Kong



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ABSTRACT

Hong Kong is a highly developed and densely populated city with a multitude of ageing buildings. To maintain the Hong Kong's ageing building stock properly and promote public safety in a sustainable manner, it is crucial to ensure that building owners will take up the responsibility for inspecting and repairing their own properties on a regular basis. The Mandatory Building Inspection Scheme (MBIS) has been regarded as an effective measure in resolving the neglected building maintenance problems. However, there will also be some major difficulties encountered during implementation. This paper aims to investigate the genuine difficulties in executing MBIS for old private buildings in Hong Kong, based on an industry-wide empirical questionnaire survey. The survey findings reflected that the most profound difficulties in implementing MBIS include: (1) Difficulty in co-ordinating the individual flat owners for carrying out building inspection and necessary repair and maintenance works; (2) Disagreements or disputes amongst individual flat owners, owners' corporation or property management company will hinder the implementation process; and (3) Lack of property owners' initiative or owners' co-operation. After determining the key difficulties of MBIS, the research study would be significant to generate valuable insights into developing effective recommendations or measures for alleviating the barriers to MBIS success in future execution.

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1. Introduction

The urban decay problem is becoming serious in Hong Kong. The condition of the building will be deteriorated with an increase in building age. For those buildings over 30 years old, they usually suffer from different building defects such as bulging or falling off of concrete with rusty steel reinforcement bars exposed, water leakage, structural or non-structural cracking, etc. If these defects cannot be identified at their early stages and rectified promptly, minor defects will be conducive to serious problems or disastrous consequences. In fact, those poorly maintained buildings are attributed to a series of causes such as the difficulties encountered when implementing maintenance works and the lack of a comprehensive and effective maintenance scheme (Leung & Yiu, 2004). Hence the building maintenance problems are becoming

further aggravated, and a long-term holistic measure should be launched by the government without any delay.

The Government of the Hong Kong Special Administrative Region (SAR) has launched a plethora of incentive schemes to encourage property owners to undertake proper building maintenance to their buildings. However, a sustainable strategy to address the issues of building ageing and neglect has not yet been executed. The government launched a two-stage public consultation in 2003 and 2005 respectively, regarding the legislative measures of building management and maintenance. The Mandatory Building Inspection Scheme (MBIS) is one of the proposed effective measures to resolve the problem of building neglect and deterioration in Hong Kong. The public consultation reflected that the scheme is generally accepted and supported by the community at large. Thus, an industry-wide empirical investigation of the key difficulties of MBIS is considered to be important and timely to identify any deficiencies of MBIS, and then to ensure its effective implementation. The objectives of this paper are to review the current situation of building repair and maintenance problems in Hong Kong, present the key findings of an empirical questionnaire survey on the major difficulties of MBIS; and compare the difficulties in implementing

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MBIS between various respondent groups. The research outcomes of this study could generate some useful insights, optimize the implementation procedures and facilitate a successful implementation of MBIS in Hong Kong.

2. Major problems besetting building repair and maintenance

In Hong Kong, most of the domestic buildings are high-rise buildings of framed reinforced concrete. Before the 1960s, these domestic buildings were normally below 6 storeys high. With the improvement of construction technology, domestic buildings of about 20 storeys have been built since the 1970s. Currently, high-rise buildings of more than 40 storeys have become very common in the Hong Kong property market. A small object falling from this height of the buildings, such as a mosaic tile or concrete debris from the external wall, may result in serious accidents and even fatal consequences (Leung & Yiu, 2004).

Ageing buildings do not necessarily pose a problem unless they have deteriorated because of inadequate care, repair and maintenance (Chan, 2004). The lack of a clearly established government policy on building management and maintenance, together with the inadequacy of building care among building owners, lead to the problems of building neglect (Yau, Ho, Chau, & Lau, 2009). Moreover, as a result of the multi-ownership arrangement of multi-storey buildings in Hong Kong, the maintenance works for the common parts such as entrance lobbies, access corridors and staircases are always hampered (Lai & Chan, 2004; Yau, Ho, & Chau, 2008). Fung (2008) advocated the primary reasons for building neglect as the initiatives of owners, owners' ignorance, financial difficulties and absence of property management corporations. Chan (2008) perceived that the majority of owners neglect their legal responsibilities and their building care culture is weak. Lau (2011) believed a significant problem to be a multitude of so-called "three no's" buildings in several old districts. The "three no's" include "no management", "no maintenance" and "no owners' corporation". Therefore, the problems with building repair and maintenance are further aggravated; and a long-term holistic and practical policy should be developed to mitigate the prevailing deteriorating situation.

The incentive towards the building owners to carry out proper maintenance to their buildings has been increased gradually (Housing, Planning and Lands Bureau, 2006). However, it should be noticed that the Building Management Ordinance (Chapter 344), Buildings Ordinance (Chapter 123), Deed of Mutual Covenant and Government Lease have stipulated that it is the duty of private building owners to maintain their buildings in a good and sustainable repair and condition (Chick, 2003). Thus, there should be a scheme in place to remind and ensure the owners to take up their responsibility for the upkeep of their buildings in the long run. Yau (2010) pointed out that the owner may also participate in building care with a view to better living environment and healthier lives. Fong (2008) pointed out that if the life of the building can be prolonged, it can save money incurred from repair and maintenance works in the long run.

Siu (1998) delivered a guidance paper on proposing a building safety inspection system for fire safety issues in existing buildings. Wright (1999) identified facade inspection regulations for six cities located in the United States including New York City, Boston, Chicago, Ohio, Detroit and Columbus in order to illustrate the significance of the facade inspection. They all share the same focus which is the items that are essential to safety of both occupants and the public. Other than the financial constraint, a lack of relevant knowledge and skills are also recognised as another common hindrance to building care actions (Kangwa & Olubodun, 2003). Therefore, the government should provide adequate technical and

supporting services such as consultation centres and briefing sessions to individual property owners when implementing MBIS. Furthermore, Chen and Webster (2005) advocated that co-ordination and negotiation process are both time-consuming and costly, therefore the owners should be properly convened and well co-ordinated during the execution of MBIS.

3. Prevailing status of building conditions in Hong Kong

The condition of the building will be deteriorated while the building age increases due to the fair construction quality and lack of proper building maintenance practices (Law, 2008). In addition, Chan and Morris (1997) also pointed out the construction speed of buildings was achieved at the expense of quality in late 1960s and early 1970s; it is consistent with the supposition of Leung and Yiu (2004) – the private buildings constructed in the 1959–1965 and 1971–1975 cohorts were vulnerable to premature deterioration of reinforced concrete because of the high chloride content of concrete used for their construction. Furthermore, Hui, Wong, and Wan (2008) believed that the hot and wet climate in Hong Kong is directly associated with the old age of the buildings, together with the less stringent statutory requirements and poor quality of construction materials and workmanship, play a role in the ageing trend.

For those buildings over 30 years old, the emergences of various building defects such as concrete spalling, water leakage, structural or non-structural cracking are commonly observed. Minor defects can generate enormous problems or even catastrophes. The outcomes of building deterioration will cause injuries or fatalities because of the sudden collapse of existing buildings or its structural elements. There are thousands of buildings in Hong Kong that are more than 50 years old. Some of the unfortunate building collapse incidents have recently instigated the alarming need for regular and proper building maintenance throughout the territory of Hong Kong.

Based on the study of Hong Kong 2030 (2001), it was estimated that the number of old buildings will have increased remarkably, particularly the buildings of 30 years old or above of which the number will almost become twice by 2016. According to the Housing, Planning and Lands Bureau (2006), there are about 39,000 private buildings in Hong Kong, and approximately 13,000 of which are over 30 years old. Furthermore, the number will surge to 22,000 within ten years' time by 2018, conducive to a trend of fast decaying building stock. With reference to the Buildings Department (2015), more than nine thousands of statutory orders/notices were issued by the Buildings Department to demolish, repair or investigate the defective buildings or its elements within the period from 2006 to 2014. The large number of statutory orders/notices revealed the serious situation of the dilapidated buildings in Hong Kong (Table 1). Thus, a long-term holistic mandatory building inspection scheme like MBIS needs to be promulgated and executed by the government with the purpose of improving the prevailing status of deteriorating building conditions and enhancing the overall building safety in Hong Kong as soon as possible.

4. Mandatory Building Inspection Scheme (MBIS)

In order to engage the whole community in putting into a practical and long-term measure to resolve the building neglect and deterioration problem, the Housing, Planning and Lands Bureau (HPLB) conducted a two-stage public consultation on Building Management and Maintenance and the Proposed Mandatory Building Inspection in 2003 and 2005, respectively (Development Bureau, 2010). The milestones of the development of MBIS are illustrated in Fig. 1.

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