Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
Revitalisation of industrial buildings in Hong Kong: New measures, new constraints?

Shi Xiana,*, Huiwei Chenb

a Urban Research Group, Department of Public Policy, City University of Hong Kong, Hong Kong, China
b Advanced Institute for Contemporary China Studies, Hong Kong Baptist University, Hong Kong, China

A R T I C L E   I N F O

Article history:
Received 25 September 2014
Received in revised form 19 January 2015
Accepted 24 February 2015
Available online 13 March 2015

Keywords:
Industrial building
Revitalisation
High-density
Policy evaluation
Hong Kong

A B S T R A C T

Like many post-industrial cities around the world, Hong Kong has been experiencing de-industrialisation since the 1980s, and revitalisation of multi-storey industrial buildings within a high-density development context is necessary. Focussing on recent progress in revitalisation of industrial buildings in Hong Kong, this research investigates the Government regulations and market responses. It is found that simply relieving the regulations and institutional constraints in revitalisation does not work, either for the policy aim in a narrow sense or for the local economy in a broad sense. New revitalisation measures by the Government have led to new constraints in revitalisation. It is necessary to address the policy lag. This paper presents an opening statement of discussing effectiveness of revitalisation policy in terms of urban competitiveness. It advocates some general principles and goals in making revitalisation policy, including industrial diversity, indigenously owned companies, social costs and quality of life.

© 2015 Elsevier Ltd. All rights reserved.

1. Introduction

Multi-storey industrial buildings, mostly in the form of flatted factories, are high-rise developments providing relatively low-cost factory units for small manufacturers to set up vertical assembly lines (Shelton, Karakiewicz, & Kvan, 2011). The term “flatted factories” is after the British expression for apartment. Mainly in response to land scarcity, flatted factories were originated in Hong Kong in the 1960s and some other districts also adopted this special arrangement such as Singapore (Lim, 2011). Dim Sum, a Hong Kong local meal in which items are served separately from steam baskets stacked in tower formations as a kind of vertical culinary zoning, is a vivid analogy in describing Hong Kong’s flatted factories as vertical and volumetric configuration (Shelton et al., 2011).

Against the backdrop of globalisation and a new round of economic restructuring worldwide, de-industrialisation has been witnessed in many cities since the 1960s with abandoned and underused factories and warehouses (Adams & Watkins, 2002; Andres & Grésillon, 2011; Marshall, 2004). Economic restructuring decades on has rendered most of these industrial buildings no longer for the intended uses and therefore transformations are needed. There are many concepts related to this process: urban re-development, regeneration, renewal, revitalisation, reconstruction, rehabilitation and so on (Kamo, 2000). These terms, similar in nature though, have subtleties in academia (Lees, 2003). While the public-sector-initiated urban renewal in the 1960s was primarily concerned with the large-scale redevelopment of overcrowded inner city slum area, urban regeneration in the 1980s encouraged the involvement of private sector so as to spur more economic growth (Parvin & Mostafa, 2010).

Enormous socio-economic changes have taken place during these processes, and there have been different perspectives of studies on revitalisation of industrial spaces, including economic restructuring (e.g. Kiss, 2007), evaluation of cultural and planning policy (e.g. Healey, 1992; Mommaas, 2004; Tang & Ho, 2014; Tang & Tang, 1999; Verma, 1993), gentrification and social sub-system (e.g. Gospodini, 2006), urban entrepreneurship (e.g. Hall & Hubbard, 1996), creative class and creative city (e.g. Florida, 2005; Scott, 2006), global cities (Friedmann, 2005), various stakeholders (Steinberg, 1996; Zheng, Shen, & Wang, 2014) and so on (Andres & Grésillon, 2011; Pratt, 2009). Sometimes, there are overlaps between these perspectives.
In Hong Kong, the development and fading of flatted industrial buildings is connected closely with the changing policy background and the area’s economic restructuring during the last six decades. From a modest beginning in the 1950s, the manufacturing sector grew rapidly in Hong Kong and it was the golden age of Hong Kong’s industries. Such prosperity continued during the 1960s, mainly owing to the incorporation of Hong Kong into the global manufacturing and market networks under the backdrop that spatial relocation of manufacturing production in the world economy took place and international subcontracting networks emerged (Chiu & Liu, 2009: 26–29). Increasing space requirement for manufacturing activities had led to prosperous construction of multi-storey industrial buildings. In the market, most of such industrial space was provided by the private sector (Tang & Tang, 1999). In the 1970s, the tertiary sector replaced the manufacturing industry, becoming the leading economic sector in Hong Kong. Labour-intensive manufacturing industries in Hong Kong began to lose competitive advantage because of the rising production costs, particularly the rising labour costs and land rent. With the opening up of Mainland China and its industrial investment welcomed policy since the 1978, manufacturing industries in Hong Kong have been relocating to the Pearl River Delta (PRD) region, mainly owing to the geographic proximity and social connection and more importantly, the lower cost of production. Such industrial relocation has contributed to the formation of new spatial division of labour between Hong Kong and the PRD region in the 1980s and the 1990s, conceptualised as the renowned “Store in front, factory behind” model (Eng, 1997; Sit & Yang, 1997).

After Hong Kong’s returning to China in 1997, the changing institutional configuration brought Hong Kong both opportunities and challenges. In the decade of 2000s, cross-border development and regional integration of Hong Kong and the PRD region experienced ups and downs. Hong Kong underwent economic recession and outbreak of Severe Acute Respiratory Syndrome (SARS) in the year of 2003 and in the same year China entered WTO. The PRD region was provided with expanding domestic and global market. The PRD region was no longer relied so heavily on Hong Kong and was on her way towards more self-contained development (R.C.K. Chan, 2011). In addition, the institutional environment in the PRD began to change with Guangdong provincial government and the Central Government emphasizing more on environmental concern and labour right protection (Liao & Chan, 2011). With the loss of competitive advantage in terms of costs of production, there was a new wave of industrial upgrade in the PRD region. The traditional “store in front, factory behind” model began to change with more and more “stores in front” relocated from Hong Kong to the PRD region and “factory behind” relocated from the PRD region to inland and other areas of lower cost of production (Liao & Chan, 2011; Yeh, 2006). During the same period, Hong Kong’s technology-based urban competitiveness building slowed down, and business-service competitiveness building approach began to take a leading role (Martinelli, Moulaert, & Novy, 2013). With CEPA and the imaginaries of “Pan-PRD” released in 2004, the cross-boundary development and regional integration was promoted significantly. Service sectors of Hong Kong were provided with expanding and easier-access domestic market in the Mainland (Chiu, 2006; Yeh & Xu, 2008). Later, the “Outline of the Plan for Reform and Development of the PRD Region (2008–2020)” was released in 2009 by the State Council to further promote cross-boundary cooperation by policies. However, industries in Hong Kong have been facing severer competition from her rivals including the old partner—the PRD region. The concern of “marginalization of Hong Kong” was raised not until the “Pan-PRD” imaginaries but since when Hong Kong has been losing her competitive advantage with the economic miracles happened cross the border (Martinelli et al., 2013). Hong Kong is no longer of costs-based competitive advantage. Targeting mainly at international financial services, trading and logistics, tourism, and professional and producer services, Hong Kong repositioned itself to become Asia’s world city (Kong, 2007).

As discussed, Hong Kong has been experiencing de-industrialisation during the last three decades since 1980s (see Fig. 1). With the demand for space for industrial use falling consistently in Hong Kong, many private flatted industrial buildings (Table 1) – the mainstream industrial space in Hong Kong – became vacant or under-utilised. It urged an exploration for other uses, giving rise to responses from private sector, public sector and the wider grassroots.

The government has been endeavoured to relax the regulations to allow for flexibility in using industrial buildings since the 1990s. However, the responses from the market were not encouraging and the conversion or redevelopment of old industrial buildings was slow. There were only 37 cases of lease modifications regarding to change the use of industrial buildings during 2001 and 2009. As pointed out by Lai, critics have charged that the Government is with “bureaucratic inflexibility and official inertia” in Hong Kong. Re-using old industrial space, releasing under-estimated land value and upgrading declaimed areas and economic activities are considered to be important for Hong Kong’s repositioning and rescaling strategy. It was under such background that a set of new measures to facilitate the revitalisation of industrial buildings were put forward by the Hong Kong Government in 2009 for re-building of Hong Kong’s urban competitiveness.

However, studies into revitalisation of industrial space in Hong Kong appear to be limited (Chan, Zhai, & Cheung, 2012; J. Chan, 2011; Stratton, 2003; Tang & Ho, 2014; Tang & Tang, 1999), particularly there is a lack of up to date studies after this recent round of revitalisation measures with big moves implemented since 2010. What is more important, regarding the role of government in revitalisation, Hong Kong following laissez-faire principles can be viewed as at one end of the spectrum, opposite to centrally planned economy. A case study of Hong Kong could provide evidence to better understand the problem and provide implications to revitalisation of industrial space in other areas that either adopting free-market economy or in-between the two ends. What are the intended and unintended consequences of the 2010 new package of revitalisation measures? How effective is the policy? Could government play a better role? The main aim of this paper is to address these issues.

The structure of this paper is as follows: it begins with a brief literature review, introducing the changing policy background and the development and fading of flatted industrial buildings in Hong Kong. This is followed by the changing policies in retrospect—how constraints on reviving industrial buildings are gradually relieved. Next, by examining the consequent market response and problems reflected, this study advocates jumping out of the picture and in quest of some general principles that better navigate the revitalisation to maintain urban competitiveness. And finally our findings are summarised and discussed. The work presented in this paper is supported by primary research and fieldwork based on on-site observation and semi-structured interviews conducted with key experts on industrial buildings in Hong Kong.

---

1 According to the Government (Rating and Valuation Department and Buildings Department), “private industrial buildings usually refer to private flatted factories, private industrial/office and godown buildings. Specialised factories such as those located in industrial estates, storage premises in container terminals and flatted factories built by the Housing Authority are not included”.

2 Lai, C. 2013. “The Bureaucratic Case against Living in Hong Kong Industrial Buildings”, accessed July 9, 2014 available at: http://cleanh2a.asia/blogs/bureaucratic-case-against-living-hk-industrial-buildings#.UsoyxidN8uh.
stakeholders (e.g. artists, local policy makers, planners, developers and academics) and secondary data gathered through official publications, government reports and bulletins and reports of NGOs.

2. Hong Kong: flatted industrial buildings and policy constraints gradually relieved in revitalisation

In Hong Kong, the total stock of industrial floor space in flatted factories, I–O buildings and storage buildings at the end of 2009 was 28.43 million m$^2$ and the number shrank to 21.3 million m$^2$ in 2012 (Rating and Valuation Department HKSAR, 2013). There are more than 1400 private industrial buildings, and most of them are located in Kowloon and New Town.

As discussed, the Government has been endeavoured to relax the regulations to allow for flexibility in using industrial buildings since the 1990s. Table 2 summarises how constraints on reviving industrial buildings are gradually relieved by the Government. And more important, it is necessary to figure out what the big moves are in the 2010 New Measures and why these measures are adopted to speed up revitalisation of industrial buildings in Hong Kong.

High-density developments of Hong Kong have contributed to high-rise development has also brought difficulties in reaching agreement in revitalising flatted industrial buildings. High-rise development has also brought difficulties in easing the constraints for more flexible uses. In multi-storey industrial buildings, limited access, complexities in fire safety, problems with natural lighting and ventilation lead to high technical requirements in revitalisation, particularly in wholesale conversion to meet Hong Kong’s design and planning requirements for more flexible uses. In 2013, there used to be a proposal to convert industrial buildings into transitional, but was voted down later by the Government by concluding it is not practicable. It is stated by the Government that even if it is technically feasible, the considerable costs required in conversion would undermine its viability (Development Bureau HK SAR, 2011). Currently, residential uses are still illegal in industrial buildings in Hong Kong (Fig. 3), and thus the lofts with working living mix-use those are very popular in Europe and in North America are not allowable in Hong Kong. Undeniable, fragmented ownership and technical difficulties related to Hong Kong’s high-density development contribute to a high threshold of capital in revitalisation of flatted industrial buildings.

To cope with these bottlenecks, big moves have been made with a new package of measures announced in 2009 and been put into practice in 2010 to promote revitalisation of industrial buildings. The Government has adopted a three-pronged approach to attract private sector to initiate redevelopment — "lowering the ownership threshold for redevelopment, allowing tailor-made lease modifications, giving owners the option to pay the land premium in instalments for five years" (Federation of Hong Kong Industrialists, 2009, p. 16). In addition, the land premiums for conversion will be waived upon satisfaction of certain conditions. The rationale behind these measures is to provide incentives, mainly in economic term, to encourage adaptive reuse of old industrial building, either redevelopment or conversion. In 2013 policy address, it continues the measures and further eases the restrictions on modifications to exterior walls. A wider range of commercial uses and social services are permitted in revitalised buildings. Another important initiative of the Government is to deal with a big "brownfields" in Hong Kong’s revitalisation of industrial buildings—the bottom-up non-compliant revitalisation by grassroots. According to the most recent survey conducted in 2009 by Planning Department (Planning Department HK SAR, 2010), industrial premises still engaged in industrial and related uses was not high—only about 39% in [OU(B)] zone and about 65% in "I" zone. Are the rest left vacant? Actually, the rest of the floor area is either occupied by none industrial uses or left vacant. Vacancy rates for various

---

3 In 2001, Hong Kong Government conducted revision on definition of “Industrial Use” (always permitted: “IT & Telecommunications”, “Research, Design & Development”, etc.) and introduce “Other Specified Use annotated “Business” [OU(B)]” for commercial/clean industrial uses requires no planning permission.

---

Table 1

| Stock of industrial buildings as at the end of 2012. |
|---------------------------------|---------|--------|--------|
| Flatted factories               | I–O buildings | Storage | Total |
| Stock as at end 2012 (gross floor area, million m$^2$) | 17.14 | 0.59 | 3.57 | 21.3 |

Source: Rating and Valuation Department, 2013.

---

Fig. 1. Changing industrial structure of Hong Kong 1980–2007.
Source: compiled by authors based on employment data from Census and Statistics Department, HKSAR (1980–2012).
categories of industrial premises were maintained at relatively low levels at or below 10.0% in 2009, and the number is descending year by year with a number ranging from 4.5% to 6.7% in 2012 (Table 3). The 2009 survey (Planning Department HKSAR, 2010: 19) suggests that industrial buildings in some areas such as Wong Chuk Hang and Kwun Tong is with a higher vacancy rates because some of them are in the vacating process to make way for redevelopment.

This means private flatted industrial buildings without revitalisation plan should have lower vacancy rates than the average figure. On the other hand, change in uses of private industrial buildings needs to be reported to the Government to apply for temporary waivers. Yet, there are only 441 temporary waivers granted by Lands Department for change in use of industrial buildings as at March 2009, coving only more than 1% of the existing stock of industrial premises. The gap behind these numbers reveals non-compliant uses are widespread. Therefore, there is big “brownfields” in Hong Kong’s revitalisation of industrial buildings. The term “brownfields” at first only refers to land previously occupied for industrial uses or some commercial uses that may be contaminated and has the potential to be reused again (Davis, 2002; De Sousa, 2003). Later this term is applied more broadly to describe spaces to be upgraded (Couch, Fraser, & Percy, 2008), and the concept is borrowed in this paper referring to spaces previously used for industrial purpose while currently for non-compliant uses and are to be upgraded.

3. Market responses: consequences of 2010 revitalisation measures

Then, what are the market responses? What are the intended and unintended consequences to these 2010 new revitalisation measures?

3.1. Positive impacts: economic incentives for revitalisation

As mentioned, during 2001 and 2009, there were only 37 cases of lease modifications regarding to change the use of industrial buildings, among which only three cases were wholesale conversion. After the new package of measures by the Government since 2010 to promote revitalisation of industrial buildings, there have been 46 wholesale conversion cases with special waivers executed and 5 redevelopment cases with lease modifications executed by the end of 2013, as shown the Development Bureau HKSAR’s specific website of “Optimising the Use of Industrial Buildings”. Both the number and the proportion of wholesale conversion have increased. In this regard, the policy has achieved its intended objective to some extent. Shown by Fig. 4, most of these cases are located at Kowloon Tong, Cheung Sha Wan and Kwai Tsing, and there is a trend that these revitalisation cases spatially spread out gradually year by year from the districts closer to centre with highest accessibility and better quality of built environment to more remote areas with greater development potential. This phenomenon is not new: it has been tested by experiences both from the West and the East (Andres & Grésillon, 2011). It is reported in a Wen Wei Po on January 25, 2010 that some developers in Hong Kong estimated that roughly 5 million could be saved every year if the application for conversion were granted and therefore the responses from the industry was overall positive (Law, 2010).

3.2. Unintended consequences – revitalisation of industrial buildings stuck fast by speculative activities in market

Nonetheless, compared with the total number of industrial buildings in Hong Kong above 1400, the 46 wholesale conversion cases and 5 redevelopment cases only takes up a quite small proportion. Moreover, there are short-term speculative activities among market responses that in fact have generated negative impacts and have undermined the effectiveness of the measures. A great deal of short-term speculation of private industrial buildings transpires since the release of new revitalisation measures in the 2009 Policy Address. The volume of transaction of confirmor cases of industrial buildings registered in Hong Kong has

| Year | Measures taken by the government |
|------|--------------------------------|
| 1989 | Approval of the 1st private sector initiated industrial-office redevelopment |
| 1990 | Publication of Town Planning Board Guidelines for industrial-office redevelopment within industrial zones |
| 1992 | Amendments of Town Planning Board Guidelines |
| 1993 | “Within the same building” → “within the same industrial area”, assume 75% office use in calculation of land premium |
| 1994 | Assume 100% office use in calculation of land premium |
| 1995 | Industrial uses and other uses ancillary to industrial operations “within the same industrial area” → no restriction on geographical location |
| 1997 | Commercial use (banks, restaurants, retail shops etc.) in the lower floors; Office use ≤ 50% floor area; showroom use ≤ 20% floor area; Parking Standards for Industrial--Office (I/O) Developments |
| 1998 | Review of the opportunity to rezone industrial land by the Government |
| 1999 | “Business” Zone Concept & Guidelines for Rezoning of Industrial Land by Planning Department |
| 2000 | 1999−2005 Review on definition of “Industrial Use” (always permitted; “IT & Telecommunications”, “Research, Design & Development”, etc.) Introduction of Other Specified Use annotated “Business” (Group E); “Comprehensive Development Area” and “Commercial” uses. |
| 2004 | Updated Area Assessments of Industrial Land in the Territory by Planning Department |
| 2005 | Guidelines on specific requirements for fire safety in applying for change of use of industrial premises to commercial uses |
| 2009 | Introduction of “Re revitalisation of Industrial Building” in 2009 Policy Address; Area Assessment 2009 of Industrial Land in Territory by Planning Department |
| 2010 | Implementation of the “re revitalisation measures” (redevelopment/wholesale conversion) |
| 2011 | Mid-term Review on Measures to Facilitate Redevelopment and Wholesale Conversion of Older Industrial Buildings |
| 2013 | Announcement about further refinements on revitalising industrial building in 2013 Policy Address |

Source: compiled by authors based on Government bulletins.

Fig. 2. Building ownership in “I” zones and in “OU(B)” zones at end of 2009. Source: Planning Department Hong Kong SAR, 2010.
increased dramatically since 2009 and declined slightly after the Government announced the Buyer Stamp Duty (BSD) and Special Stamp Duty (SSD) in 2012 and 2013 respectively (Fig. 5). Both the rental and prices index of private flatted factories has been increasing significantly, and particularly, the prices indices of flatted factories rose by more than 4 times during October 2009 and July 2013 (Fig. 6). The expectation of a rising prices after this new round of revitalisation measures further intensifies short-term speculation. Using the prices in 1999 as a benchmark, the rising of both the rental and prices of industrial buildings has been significantly, and particularly, the prices indices of flatted factories is even higher than all the other kinds of property including domestic, office and retail property. Although the government reorganised this problem and announced the Buyer Stamp Duty and Special Stamp Duty in 2012 and 2013 respectively to inhibit short-term speculative activities, both the rental and prices of private flatted factories decreased slightly and still remains quite high (Fig. 6).

The rising of both the rental and prices of industrial buildings results in negative impacts. Users occupying industrial buildings for industrial or non-industrial uses have become losers, especially low-income users including local artists who set up studios in industrial buildings, small business that use industrial buildings for genuine industrial uses or non-industrial uses and low-income groups who failed to live in public housing and live illegally in industrial buildings. Originally, cheap industrial spaces have served as nurturing grounds and the last shelters for these groups. High-density flatted industrial buildings concentrated in old industrial areas provide them with cheap rent or operation costs. The users can share cheap supply of production and usually enjoy convenient transportation with low living costs there. These industrial buildings nurture small business and shelter urban poor. However, the rising rental and prices of industrial buildings further narrowed down their living spaces. Some of them have been driven out from traffic-convenient location such as Kwun Tong in Kowloon to outer areas because of the vacating process to make way for revitalisation or because of unaffordable increasing rent in those areas (validated by data obtained from interviews with local artists conducted in March 2013, October 2013, and November 2013).

Moreover, the high rising of prices of flatted factories since the new revitalisation measures, the costs were extremely out of budget and the plan thus failed in January 2013. Another case is failure of the Hong Kong Government planned to relocate its offices in Mong Kok, Kowloon, to an industrial building. However, with the rapid and high rising of prices of flatted factories since the new revitalisation measures, the costs were extremely out of budget and the plan thus failed in January 2013. Another case is failure of the first redevelopment project of industrial building by the Urban Renewal Authority, the statutory body that established under the Urban Renewal Authority Ordinance to replace the Land Development Corporation to undertake, encourage, promote and facilitate the regeneration of the older urban areas of Hong Kong. The Urban Renewal Authority, but also the Water Supplies Department of Hong Kong, formally withdrew the project in June 2013. Not only the Urban Renewal Authority, but also the Water Supplies Department of the Government has become third parties affected by the new revitalisation measures. This is in conflict with the policy targets of the 2010 new revitalisation measures to make better use of vacant and underused industrial spaces.
Fig. 4. Wholesale conversion cases with special waivers executed and redevelopment cases with lease modifications executed from 2010 to the end of 2013. Source: map drawn by authors based on data compiled from the website of Land Department HKSAR, accessed July 9, 2014 [www.landsd.gov.hk/en/exc_mod/rcib_specialwaiver.htm](http://www.landsd.gov.hk/en/exc_mod/rcib_specialwaiver.htm) and [www.landsd.gov.hk/en/exc_mod/rcib_modification.htm](http://www.landsd.gov.hk/en/exc_mod/rcib_modification.htm).

Fig. 5. Volume of transaction of confirmor cases of industrial buildings registered in Hong Kong 1996–2013. Source: The Land Registry of Hong Kong SAR Government and Ricacorp Properties limited, accessed July 9, 2014 [http://www.ricacorp.com/cms/template.aspx?series=15&article=65023](http://www.ricacorp.com/cms/template.aspx?series=15&article=65023).
4. Policy effectiveness: in terms of revitalisation and from a perspective of urban competitiveness

4.1. Policy effectiveness in regard of promoting revitalisation of industrial buildings

As stated by the Government, this recent round of revitalisation policy is to “promote revitalisation of older industrial buildings through encouraging redevelopment and wholesale conversion of vacant or under-utilised industrial buildings”, and the policy target is to “provide readily available and suitable land and premises to meet Hong Kong’s economic and social needs, including the development of higher value-added economic activities, such as the six economic areas identified by the Task Force on Economic Challenges.” (Development Bureau HKSAR, 2009)

Does it work?

As discussed above, this recent round of revitalisation measures is not quite effective either in terms of the number of revitalising cases applied or in terms of revitalisation constraints relieved. Aiming at easing policy constraints to promote revitalisation, yet the policy induces booming short-term speculation and the rising prices on the contrary has led to new constraints in revitalisation. The living spaces of users are narrowed down and incentives of developers who genuinely intend to revitalise industrial buildings are frustrated. Some of the users are even among the six economic areas encouraged by the government.

4.2. Policy effectiveness – from a perspective of urban competitiveness

Reflected by the short-term speculation induced by new revitalisation measures in the case of Hong Kong, although Hong Kong always earns much praise for its positive non-intervention policies (Friedman & Friedman, 1990), there is fast and sensitive response by market even to policies aiming at further easing institutional constraints. These responses then change the policy background instantly, leading to policy lag and thus threaten policy effectiveness. Since the aim of revitalising industrial buildings in Hong Kong at the very beginning is for the re-building of urban competitiveness, it is necessary to discuss policy effectiveness from a perspective of urban competitiveness. Adopting a perspective of urban competitiveness and based on the experience of Hong Kong, we would like to generalise some key principles and goals that should be taken into account in revitalising industrial spaces. There are many factors determining urban competitiveness. For the case of Hong Kong, we would like to highlight four key words—industrial diversity, indigenously owned companies, social costs and quality of life.

Industrial development is a very important determinant of urban competitiveness. The all-in-one basket strategy is dangerous, and a city of relative higher industrial diversity could have larger resilience when encounter a crisis. The international competitiveness of the firms located in a place determines the competitiveness of that place partially (Rondinelli & Vastag, 1997: 347–366). Special attention should also be paid on the ownership and decision-making power of companies. A competitive city should be able to gain control over its future, choosing among alternative futures rather than passively accepting its lot (Kresl & Singh, 1999). Accordingly, the focus centres on the issue of ownership and decision-making power of companies. Begg (1999, 802) argues this point in detail stressing that “cities with a preponderance of indigenously owned companies will be more competitive than those where external control dominates”. Therefore, the key words “industrial diversity” and “indigenously owned companies” together describe the situation that a city of relative higher industrial diversity and more local companies will be less easily impacted by changes of macro environment. Yet, for Hong Kong with service industrial taking up more than 90% of its GDP, there is still much space for improvement in regard of this point (Lau, 2003; Tsang, 1999).

The concept and definitions of urban competitiveness have been evolving through time with different emphases. In early research, the concept and definitions of urban competitiveness emphasise...
the economic dimension (Begg, 1999; Kresl & Singh, 1999). Later, roles of other factors, such as innovation and knowledge, the Information Communication Technology sector, the physical environment, quality of life, and sustainability are given more attention when defining urban competitiveness (Cooke & Simmie, 2005; Malecki, 2002; Rogerson, 1999). To date, particular attention has been given to the city's sustainable development and improvement of quality of life of local residents as the ultimate goal of urban competitiveness. Likewise, revitalisation of industrial buildings should not overemphasise economic dimension and neglecting the consequent social costs. More important, improving quality of life of local residents as well as sustainable urban development should be set as one of the ultimate targets in revitalisation policy. Through revitalising industrial buildings, the Hong Kong government dedicates to better use of land resources and economic development. Yet, current revitalisation measures of industrial buildings over-emphasised economic dimension and neglect social costs. With more and more industrial buildings revitalised for office, hotel and commercial uses, low-income local artist, small business and urban poverty occupying industrial buildings are gradually driven out, but the poverty problem is not solved. What is more, this has intensified conflicts between users, developers and the Government. Currently, little evidence has been found that quality of life of local residents has been improved.

Therefore, Hong Kong's current revitalisation policy is not quite successful in regards of industrial diversity, indigenous owned companies, social costs and quality of life. And these four points as the principles and goals should be taken into account in making revitalisation policy. Moreover, this is not only applicable for Hong Kong, but for all the cities facing transformation and revitalisation of industrial spaces.

5. Concluding remarks

This paper fills into the gap of analysing recent progress in revitalisation of multi-storey private industrial buildings in Hong Kong and represents an opening statement of discussing effectiveness of revitalisation policy in terms of urban competitiveness. Besides, large brownfields in revitalisation of industrial buildings in Hong Kong is identified by this paper, which is seldom pointed out in previous studies. And there is value in analysing responses from the Government, developers and the wider grassroots, and in investigating the initiatives behind.

It is found that simply relieving the regulations and the institutional constraints in revitalisation does not work. Although the three-pronged approach adopted by the government since 2010 successfully provide some incentives for private sector to initiate revitalisation, its unintended negative consequences are also significant. Under policy aiming at further easing policy constraints to promote revitalisation, the profit-driven and policy-sensitive market makes private industrial buildings vehicles for speculation, which on the contrary has led to revitalisation of industrial buildings been stuck fast. Government authorities themselves are burdened by it. Reflecting by this case, even for Hong Kong adopting laissez-faire policies as an end of the spectrum, the market is still structural dependent on government intervention. Fast and sensitive market response would change the policy background instantly and lead to policy lag, even for those policies aiming at further easing institutional constraints.

Given that fundamentally, policies relieving constraints on reviving industrial buildings are for the re-building of urban competitiveness, jumping out of the picture of revitalisation is urged to cope with this problem. This paper presents an opening statement of discussing effectiveness of revitalisation policy in terms of urban competitiveness. It advocates some general principles and goals including industrial diversity, indigenous owned companies, social costs and quality of life been taken into account in making revitalisation policy for all the cities facing transformation and revitalisation of industrial spaces. In this regard, this research serves as an attempt for retheorisation of the policy effectiveness in revitalising industrial spaces.

Acknowledgements

We would like to thank all those who contributed to the interview. Thanks are also due to Ngai-ming Yip and the anonymous reviewers for their valuable comments and suggestions.

References

Adams, D., & Watkins, C. (2002). Greenfields, brownfields and housing development. Wiley.
Andres, L., & Gré Stillion, B. (2011). Cultural brownfields in European cities: a new mainstream object for cultural and urban policies. International Journal of Cultural Policy, 17(1), 40–62. http://dx.doi.org/10.1080/17439097.2011.592425.
Begg, I. (1999). Cities and competitiveness. Urban Studies, 36(5–6), 795–809. http://dx.doi.org/10.1080/0042098993222.
Chan, A., Zhai, B. Q., & Cheung, E. (2012). Evaluating the “revitalizing industrial buildings” scheme in Hong Kong, Australia: UNSW Paper presented at the 37th Annual Conference of Australasian Universities Building Educators Association (AUBEA).
Chan, J. (2011). Urban governance and the right to space: Urban regeneration of industrial buildings in Hong Kong (Master of Science in Urban Planning). The University of Hong Kong Hong Kong (b4673510).
Chiu, S. W., & Liu, D. (2009). Hong Kong: Becoming a Chinese global city. Routledge.
Chiu, Y. W. P. (2006). CEPA: A milestone in the economic integration between Hong Kong and Mainland China. (JCC, 15(47), 275–295. http://dx.doi.org/10.1080/10670560500534921.
Cooke, P., & Simmie, J. (2005). Knowledge, innovation and the competitiveness of cities. In N. Buck, I. Gordon, A. Harding, & I. Turok (Eds.), Changing cities: Rethinking urban competitiveness, cohesion, and governance (pp. 97–111). Palgrave Macmillan.
Couch, C., Fraser, C., & Percy, S. (2008). Urban regeneration in Europe. Wiley.
Davis, T. S. (2002). Brownfields: A comprehensive guide to redeveloping contaminated property. Section of Environment, Energy, and Resources, American Bar Association.
De Sousa, C. A. (2003). Turning brownfields into green space in the City of Toronto. Landscape and Urban Planning, 62(4), 181–198. http://dx.doi.org/10.1016/S0169-2046(02)00149-4.
Development Bureau HKSAR. (2009). Optimising the use of industrial buildings to meet Hong Kong’s changing economic and social needs. http://www.devb.gov.hk/industrialbuildings/filemanager/press_release_publication/eng/legco_brief_091015.pdf Accessed 09.07.14.
Development Bureau HKSAR. (2011). Mid-term review on measures to facilitate redevelopment and wholesale conversion of industrial buildings. http://www.devb.gov.hk/industrialbuildings/filemanager/press_release_publication/eng/legco_brief_eng_full.pdf Accessed 09.07.14.
Eng, J. (1997). The rise of manufacturing towns: externally driven industrialization and urban development in the Pearl River Delta of China. International Journal of Urban and Regional Research, 21(4), 554–568. http://dx.doi.org/10.1111/1468-2427.00101.
Federation of Hong Kong Industrialists. (2009). Revisiting old industrial buildings. Hong Kong Industrialist, 12.
Florida, R. L. (2005). Cities and the creative class. Routledge.
Friedman, M., & Friedman, R. D. (1990). Free to choose: A personal statement. Harcourt Brace Jovanovich.
Friedmann, J. (2005). Globalization and the emerging culture of planning. Routledge.
Friedmann, J. (2005). Globalization and the emerging culture of planning. Progress in Human Geography, 29(3), 234–255. http://dx.doi.org/10.1177/030913250500500534921.
Ghodsi, A. (2008). Portraying, classifying and understanding the emerging landscapes in the post-industrial city. Cities, 25(3), 311–330. http://dx.doi.org/10.1016/j.cities.2006.06.002.
Hall, T., & Hubbard, P. (1996). The entrepreneurial city: new urban geographies? Progress in Human Geography, 20(2), 153–174. http://dx.doi.org/10.1177/03091325960200201.
Healey, P. (1992). Rebuilding the city: Property-led urban regeneration. E. & FN Spon.
Karmo, T. (2000). Reinvesting Tokyo: Renewing city image, built environment, and governance system towards the 21st century. Paper presented at the International Conference on Re-inventing Global Cities, Hong Kong. Proceedings of the International Conference on Re-inventing Global Cities. Retrieved from http://hub.hkbu.edu.hk/bitstream/10722/547742/1/3101327.pdf on 9 Dec, 2014.
Kiss, E. (2007). The evolution of industrial areas in Budapest after 1989. In K. Stanilov (Ed.), The post-socialist city: Urban form and space transformations in Central and Eastern Europe after socialism. Springer Netherlands.

Lau, S.-K. (2003). Con

Law, K. (2010). One hundred industrial buildings awaiting for approval for conversion (in Chinese) Wen Wei Po, posted online on 25 Jan, 2010. Retrieved from http://paper.wenweipo.com/2010/01/25/Yo1001250002.htm on 9 Dec 2014.

Lee, L. (2003). Visions of urban Renaissance: the urban task force report and the urban white paper. In R. Imrie, & M. Raco (Eds.), Urban Renaissance?: New labour, community and urban policy. Policy Press.

Liao, H., & Chan, R. C. K. (2011). Industrial relocation of Hong Kong manufacturing firms: towards an expanding industrial space beyond the Pearl River Delta. GeoJournal, 76(6), 623–639. http://dx.doi.org/10.1007/s10708-009-9316-3.

Lim, J. (2011). History of flatted factories in Singapore. http://thelongwindingroad.wordpress.com/tag/history-of-flatted-factories-in-singapore/.

Malecki, E. J. (2002). Hard and soft networks for urban competitiveness. Urban Studies, 39(5–6), 929–945. http://dx.doi.org/10.1080/00420980220128381.

Marshall, R. (2004). Waterfronts in post-industrial cities. Taylor & Francis, Martinelli, F., Moulauter, F., & Novy, A. (2013). Urban and regional development trajectories in contemporary capitalism. Taylor & Francis.

Mommaas, H. (2004). Cultural clusters and the post-industrial city: towards the remapping of urban cultural policy. Urban Studies, 41(3), 507–532. http://dx.doi.org/10.1080/004209804200078663.

Parvin, A., & Mostafa, A. (2010). Sustainable re-invention of Khulna: Strategic spatial and physical planning implications. Paper presented at the 16th Annual International Sustainable Development Research Conference, Hong Kong. http://www.kadinst.hku.hk/sdconf10/Papers_PDF/p401.pdf.

Planning Department HKSAR. (2010). Report on area assessments 2009 of industrial land in the territory. Hong Kong.

Pratt, A. C. (2009). Urban regeneration: from the arts 'feel good' factor to the cultural economy: a case study of Hoxton, London. Urban Studies, 46(5–6), 1041–1061. http://dx.doi.org/10.1177/0042098009103854.

Rating and Valuation Department HKSAR. (2013). Hong Kong property review 2013. Hong Kong.

Rogerson, R. J. (1999). Quality of life and city competitiveness. Urban Studies, 36(5–6), 969–985. http://dx.doi.org/10.1080/00420989933303.

Rondinelli, D. A., & Vastag, G. (1997). Analyzing the international competitiveness of metropolitan areas: the MICAM model. Economic Development Quarterly, 11(4), 347–366. http://dx.doi.org/10.1177/08912449701100406.

Scott, A. J. (2006). Creative cities: conceptual issues and policy questions. Journal of Urban Affairs, 28(1), 1–17. http://dx.doi.org/10.1111/j.0735-2166.2006.00256.x.

Shelton, B., Karakiewicz, J., & Kvan, T. (2011). The making of Hong Kong: From vertical to volumetric. Routledge.

Sit, V. F. S., & Yang, C. (1997). Foreign-investment-induced exo-urbanisation in the Pearl River Delta, China. Urban Studies, 34(4), 647–677. http://dx.doi.org/10.1080/0042098970856961.

Steinberg, F. (1996). Conservation and rehabilitation of urban heritage in developing countries. Habitat International, 20(3), 463–475. http://dx.doi.org/10.1016/0197-3975(96)00012-4.

Stratton, M. (2003). Industrial buildings: Conservation and regeneration. Taylor & Francis.

Tang, B.S., & Ho, W. K. O. (2014). Cross-sectoral influence, planning policy, and industrial property market in a high-density city: a Hong Kong study 1978–2012. Environment and Planning A, 46(12), 2915–2931.

Tang, B.S., & Tang, R. M. H. (1999). Industrial property, market initiative and planning policy. Property Management, 17(2), 157–168. http://dx.doi.org/10.1108/02637479910261919.

Tsang, S. K. I. (1999). The Hong Kong economy: opportunities out of the crisis? Journal of Contemporary China, 8(20), 29–45. http://dx.doi.org/10.1080/106705698724334.

Verma, G. D. (1993). Inner city renewal: lessons from the Indian experience. Habitat International, 17(1), 117–132. http://dx.doi.org/10.1016/0197-3975(93)90049-I.

Yeh, A. G. O. (2006). Developing a competitive Pearl River Delta in South China under one country-two systems. Hong Kong University Press.

Yeh, A. G. O., & Xu, J. (2008). Regional cooperation in the Pan-Pearl River Delta: a formulaic aspiration or a new imagination? Built Environment (1978-), 34(4), 408–426. http://dx.doi.org/10.2307/23289850.

Zheng, H. W., Shen, G. Q., & Wang, H. (2014). A review of recent studies on sustainable urban renewal. Habitat International, 41, 272–279. http://dx.doi.org/10.1016/j.habitatint.2013.08.006.