Chapter 6 Dual Land Regime, Income Inequalities and Multifaceted Socio-Economic and Spatial Segregation in Hong Kong



Mee Kam Ng, Yuk Tai Lau, Huiwei Chen, and Sylvia He

Abstract Hong Kong has a dual land regime in the urban and rural territories. The urban areas on both sides of Victoria Harbour (8.8% of land, excluding Country Parks on Hong Kong Island) and new towns (about 15.3% of land) house over 90% of the city's population (about 7.5 million) with an extremely high population density of about 26,000 per km². After deducting Country Parks and Special Areas (about 40% of land), the rest of the rural New Territories (traditional settlements leased by the British Government in 1898 for 99 years) constitutes about 35% of land, but houses 5.5% of all residents with a substantially lower population density of about 1,000 per km². China's Open Door Policy since 1978 has led to economic restructuring in Hong Kong, changing its occupational structure, intensifying income inequality, and leading to socio-economic and spatial segregation. Whilst the affluent classes continue to concentrate in traditionally central locations in urban areas, or in luxurious residential enclaves in rural New Territories, the less well-off tend to be marginalised and live in remote new towns or rural New Territories. The latter is also a result of a skewed power relationship between the government and the property sector in directing spatial development that breeds a hegemonic (dis)course and regime of urban-biased and property-dominant development, sustaining the government's coffer through a high land price policy.

Keywords Dual land regime · Income inequalities · Multifaceted socio-economic segregation · Spatial segregation · Hong kong

M. K. Ng (\boxtimes) · Y. T. Lau · S. He

Department of Geography and Resource Management, The Chinese University of Hong Kong,

Hong Kong, China

e-mail: meekng@cuhk.edu.hk

Y. T. Lau

e-mail: ytlau@cuhk.edu.hk

S. He

e-mail: sylviahe@cuhk.edu.hk

H. Chen

Guangdong University of Technology, Guangdong, China

e-mail: huiwei.chen@gmail.com

© The Author(s) 2021

113

6.1 Introduction

This chapter illustrates and explains the situation and the underlying causes of socio-economic and spatial segregation in Hong Kong, beginning with a brief introduction of the city's dual land regime, housing structure and welfare system. It then highlights the relationship between welfare provision, economic restructuring and income polarisation since the 1980s when Hong Kong metamorphosed from a manufacturing city to a global financial centre due to China's Open Door Policy. Based on the spatial patterns of residential segregation of different socio-economic classes, we conclude that in addition to income polarisation and ever-rising house prices, the urban-biased and property-dominant mode of (re)development has led to socio-economic and spatial segregation in Hong Kong. Also, this situation is expected to perpetuate in the foreseeable future if the dual land regime is not changed.

6.2 Context

6.2.1 Dual Land Regime

Hong Kong was a British colony from 1842 to 1997. The city was handed over to Chinese rule as a Special Administrative Region in July 1997. Currently, about 7.5 million inhabitants dwell within an area of 1,106 km² (CSD 2019) (Fig. 6.1). After

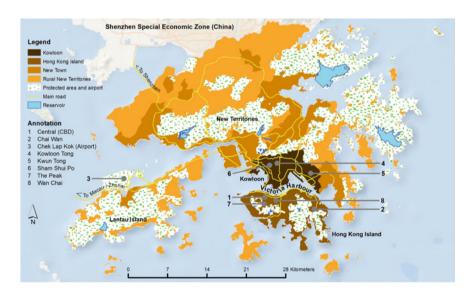


Fig. 6.1 The map of Hong Kong, with locations of place names mentioned in this chapter planning data reproduced with permission of the director of planning. © Hong Kong

excluding Country Parks and Special Areas (as 'Protected areas' that occupy 443 km² or 40% of Hong Kong's total land area) within which urban development is strictly prohibited, the actual territorial population density is about 11,000 per km².

However, there is a dual land regime in Hong Kong as reflected in different population densities between the urbanised areas (Hong Kong Island, Kowloon and new towns, that is, about 24.1% of land area) with an average population density of about 26,000 per km², and the rural New Territories (with village-type settlements, brownfield sites, agricultural land and green belts, etc.) occupying 35% of the land with a population density of about 1,000 per km². Such a striking difference in population density has to do with the city's colonial history. Colonial Hong Kong started with the ceded territories of Hong Kong Island and Kowloon Peninsula in the mid-nineteenth century, forming the existing densely populated urban areas. Unlike Hong Kong Island and Kowloon Peninsula, the New Territories where the existence of indigenous villagers predated the colonists, were only leased to Britain in 1898 for 99 years.

Urban development activities in the New Territories were minimal before the urban riots in 1966 and 1967. After the riots, in order to pacify the restless population, the colonial government started to build public housing through developing new towns in the 1970s (Glaser et al. 1991). Developed from market towns or along the coast by land reclamation, the nine new towns now form pockets of densely populated urbanised zones in the New Territories. The vast 'rural' area in the rest (about 35%) of the New Territories accommodate only around 5.5% or 412,500 of Hong Kong's 7.5 million population (CSD 2017a). Contrary to the urban areas and new towns, urban planning was not extended to the rural New Territories until 1991, seven years after a court case that allowed farmland to be converted into storage sites (Lai and Ho 2002). Consequently, massive brownfield sites with a diversity of land uses emerged, including most notably open storage. They serve the opening and rapid industrialising economy across the border in mainland China (Chau and Lai 2004).

To accommodate population growth and economic development, the Hong Kong government has relied on massive land reclamation within and beyond Victoria Harbour and incessant redevelopment of old and low-rise tenement buildings to make way for high-rise residential apartments (Ng 1998; Adams and Hastings 2001). This urban-biased (re)development strategy has boosted land values and the emergence of gated private housing estates (Wong et al. 2011) that are unaffordable for most Hong Kong residents. As house prices in Hong Kong rank the top among other world cities (Gurran and Bramley 2017), many less well-off residents have to rely on public housing (mostly located in Kowloon and new towns) or move to smaller dwellings or remote locations.

6.2.2 Housing System

Public housing accommodates a significant proportion of households in Hong Kong (Fig. 6.2) (Forrest and Yip 2014; Valença 2015). The proportion of households living in public housing (i.e. public rental housing units and subsidised sale flats in Fig. 6.2) only declined slightly from 46.2% in 2001 to 45.7% in 2016 (CSD 2012 and 2017a). Yet, the focus of public housing provision has shifted from rental housing to assisted home ownership. Since its inception in the 1950s, public rental housing can be regarded as a major welfare provision (Ronald and Doling 2010), contributing much to poverty alleviation (Guo et al. 2018). Currently, about 30% of households in Hong Kong live in public rental housing units (CSD 2017a). Another pillar of Hong Kong's public housing system is the Home Ownership Scheme (HOS; corresponding to 'subsidised sale flats' in Fig. 6.2), established in the late 1970s to assist low- and middle-income households to achieve home ownership (Lee et al. 2014). In 2016, about 15% of households in Hong Kong lived in HOS dwellings (CSD 2017a). Public housing is thus crucial for satisfying the housing needs of the middle and lower classes in Hong Kong (Lau and Murie 2017).

The percentage of households living in owner-occupied units decreased slightly from 2001 to 2016 (CSD 2002 and 2017a), implying more households have entered the private rental market. In 2016, about 450,000 households (about 1.3 million people) rented private dwellings (CSD 2018a), of which about 92,000 households

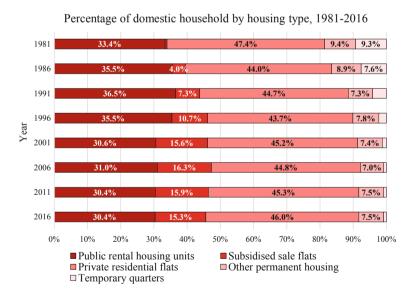


Fig. 6.2 The evolution of housing structure in Hong Kong, 1981–2016 (Reproduced from CSD 1993, 2007, 2012, 2017a)

(around 210,000 people) lived in subdivided units (CSD 2018b). Given population growth due to immigration from China, stagnant income levels and skyrocketing house prices, the population living in subdivided units with harsh conditions is expected to increase. Meanwhile, the city's house price to income ratio of 20.9 is one of the highest in the developed world (compared with Singapore: 4.6; New York City: 5.5 and Greater London: 8.3) (Bertaud 2018; Ng 2018). As house prices keep increasing, property ownership leads to a widening wealth gap in Hong Kong. For the indigenous population in rural New Territories, the colonial government introduced the 'Small House Policy' in 1972 to satisfy their housing needs in the course of new town development. Under this policy, adult male indigenous inhabitants are entitled with rights to build a village house of 700 ft² (approx. 65 m²) up to three stories in approved villages in the New Territories (Hayes 2007).

6.2.3 Welfare System and Inequality

Despite the extensive provision of public housing, Hong Kong has never been a welfare state. The government spending in Hong Kong has been capped to around 18% of GDP, much lower than in the USA (37.8%), Britain (41.6%) or Japan (38.7%) (Miller et al. 2019). Education is the largest component of recurrent government expenditure, amounting to about 17.3% of total government spending in the 2016/17 fiscal year (HKSAR Government 2017a). In September 2009, the 9-year free education system was extended to 12 years, allowing school-age children to receive, respectively, 6 years of free primary and secondary education (HKSAR Government 2008). In addition, subsidised tertiary education is provided by eight universities financed by public funds (HKSAR Government 2018b). Health care also constitutes 17% of the government's total spending. The public sector provides around 74% of inpatient and specialist medical services expenditure. In late 2016, there were around 28,000 beds in all public hospitals and institutions under the management of the statutory Hospital Authority (HKSAR Government 2017a). The bed-population ratio in public hospitals is about 3.8 per 1,000, which is comparable to the aggregate ratio of public and private hospital beds in Britain (2.8 in 2013), USA (2.9 in 2012), Japan (13.3 in 2013) and Singapore (3.2 in 2014) (HKSAR Government 2016).

As of 2019, Hong Kong has no public pension system. Retirement security provision has been delegated to the private sector via the Mandatory Provident Fund (MPF) scheme, in operation since 2000. The MPF scheme requires the working population and employers to contribute an aggregate sum of 10% of individuals' total monthly salary to pension schemes offered by the private sector (Sawada 2004; Lee et al. 2014). Since the MPF contributions are tied to salaries, the non-working population is not covered by the MPF scheme. Nevertheless, several cash transfer policies from the public sector exist in the city.

An important cash transfer is the Comprehensive Social Security Assistance (CSSA), which is means-tested for the economically vulnerable to support their basic needs (SWD 2018a). Between 2001 and 2016, more than half of all CSSA

recipients were elderly people. There are also two cash benefits for the elderly: Old Age Allowance (OAA) and Old Age Living Allowance (OALA). The former is a non-means-tested allowance given to the elderly aged 70 or above (Lee et al. 2014). The latter, introduced in 2013, is means-tested for poor elderly people aged 65 or above with monthly income and assets lower than a defined level (SWD 2018b).

Cash transfers and subsidies are also available in transport. To facilitate community participation and social inclusion of the elderly and the disabled population, a scheme was launched in June 2012 to cover major transport modes, and the beneficiaries only need to spend HK\$2.0 (US\$0.25) for each trip whilst the fare differentials are subsidised by the government (TD 2018). In January 2019, the government introduced the Public Transport Fare Subsidy Scheme. If the monthly transport-related expenditures of commuters exceed HK\$400 (US\$51.3), the exceeded expenses are entitled to a cash rebate equivalent to 25% of travelling expenditure with a monthly maximum of HK\$300 (US\$38.5). This scheme aims particularly at lessening the transport burden of long-haul commuters in new towns and rural New Territories (HKSAR Government 2018a).

The Gini Index offers a clear indication of income inequality in Hong Kong. Notwithstanding the enhancement of welfare provision over recent decades, the index soared from 0.451 in 1981, surpassed the 0.5 mark in 1996 and then gradually climbed to 0.539 in 2016 (HKSAR Government 2017b), the largest inequality among all developed economies (Central Intelligence Agency 2019). Such upward trend suggests that occupational polarisation due to economic restructuring has brought about income polarisation in Hong Kong.

6.3 Census Data and Spatial Units

In this chapter, data obtained from the 2001 and 2011 Population Census and the 2016 By-census are used for the segregation analysis. Each dataset consists of data with nine occupational groups, categorised according to the International Standard Classification of Occupation (ISCO) published by International Labour Organisation (ILO). The ISCO-08 version is applied in the 2011 Census and the 2016 By-census, whilst ISCO-88 is applied in the 2001 Census (CSD 2017b). The nine occupational groups are further classified into three large socio-economic status (SES) groups based on their income:

Top SES (income) group (TOP)

- Managers and Administrators (MAN)
- Professionals (PRO)

Middle SES (income) group (MID)

- Associate Professionals (APR)
- Clerical Support Workers (CLE)
- Craft and Related Workers (CRA)

Bottom SES (income) group (BOT)

- Service and Sales Workers (SER)
- Plant and Machine Operators (MAC)
- Elementary Occupations (ELE)
- Skilled Agricultural and Fishery Workers; and Occupations not Classifiable (data are combined with 'Elementary Occupations' in the analysis).

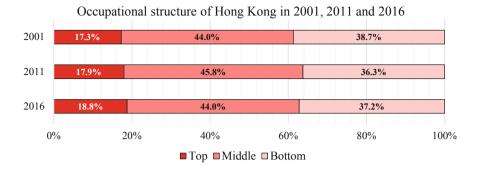
In 2016, the average gross median monthly income of the top SES group was HK\$39,500 (US\$5,064), whilst the corresponding figures of the middle SES group and the bottom SES group were HK\$16,750 (US\$2,147) and HK\$10,750 (US\$1,378), respectively, compared with the city's overall median of HK\$15,000 (US\$1,923) (CSD 2017b). The spatial (or neighbourhood) unit used for the analyses is Large Street Block Group (LSBG). LSBG is the smallest spatial unit that contains sufficient relevant census data available for public access, and each LSBG consists of a street block cluster. In all three snapshot years, the average area and population of urban LSBGs were 0.18km² and 2,162, whereas rural LSBGs were 2.2km² and 934, respectively.

6.4 Spatial Patterns of Occupational and Income Disparities

6.4.1 Changing Occupational Structure and Growing Income Disparity

Hong Kong's economy has undergone tertiarisation since the 1980s after the implementation of the Open Door Policy in mainland China. The enlargement of the tertiary sector took place in tandem with the shrinkage of the secondary sector. By the early 2000s, the tertiary sector had become the mainstay of Hong Kong's economy. From 2001 to 2016, the proportion of the working population (excluding foreign domestic helpers) classified as managers and administrators as well as professionals (i.e. high paid tertiary workers) grew from 17.3 to 18.8%, whilst the corresponding figure of services and sales workers as well as elementary occupations (i.e. low-income tertiary workers) rose from 30.9 to 32.5% (Fig. 6.3). Between 2001 and 2016, the average gross median monthly income of high paid tertiary workers increased by 41.1% from US\$3,590 to US\$5,064, outstripping significantly that of low-income tertiary workers with the corresponding growth (i.e. 31.9%) from US\$924 to US\$1,218. Although the implementation of Statutory Minimum Wage since 2011 has probably led to the income increases of the latter occupational groups (CSD 2007 and 2017a), the figures still show widening income disparities between the high-income and low-income tertiary workers over time.

Whilst 98% of business units in Hong Kong are Small and Medium Enterprises (SMEs), they provide only 45% of employment (LegCo 2018). The profitability



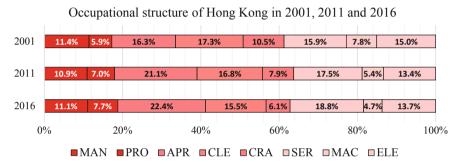


Fig. 6.3 Occupational structure of Hong Kong, 2001–2016 (Reproduced from the datasets of 2001 and 2011 Population Census and 2016 By-census, CSD) *Please refer to Sect. 6.3 for the abbreviations of occupational groups

gap between SMEs and non-SMEs, as shown by the difference in profit ratios, had widened from 2.7 in 2011 to 6.7 in 2016 (LegCo 2018). This may also reflect the widening income gap between SME and non-SME employees. Occupational and income disparities have worsened the issue of housing affordability in Hong Kong, whilst the urban-biased and property-dominant (re)development strategy has led to escalating house prices. Since 2000, property prices and rental values have been tripled and doubled, respectively (see Fig. 6.4). This has led to increasing levels of spatial segregation, which can be illustrated by two quantitative approaches: Index of Dissimilarity (IoD) measuring the evenness of distribution of various occupational groups, and Location Quotient (LQ) serving to investigate the patterns of spatial concentration of selected occupational groups.

6.4.2 Socio-Economic Segregation

Tables 6.1 and 6.2 display the IoD between various occupational groups in specified years. Generally, socio-economic segregation increased in Hong Kong between 2001

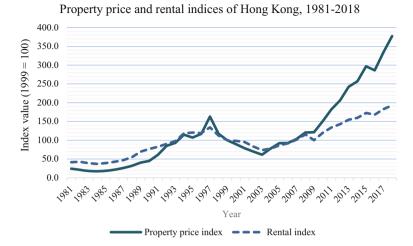


Fig. 6.4 Property price and rental indices of Hong Kong, 1981–2018 (Reproduced from Rating and Valuation Department 2019a, b.

Table 6.1 Index of Dissimilarity (multiplied by 100) between the occupational groups in Hong Kong in 2001, 2011 and 2016

	MAN	PRO	APR	CLE	CRA	SER	MAC	ELE				MAN	PRO	APR	CLE	CRA	SER	MAC	ELE
2001		20	32	48	61	56	61	65		MAN				307					
	19		27	43	57	51	57	62		PRO		17		P Discount					
	32	26		23	39	33	39	45		APR		27	23						
	45aa	aaa41	20		23	19	23	29	Ξ	CLE	16	39	35	18					
	60	55	36	21		17	19	19	20	CRA	20	56	54	37	26				
	52	48	29	17	17		21	20		SER		49	46	30	20	17			
	60	56	37	22	14	20		22		MAC		55	53	36	25	20	21		
	62	57	41	26	16	19	19			ELE		59	56	41	29	17	18	21	

Table 6.2 Index of Dissimilarity (multiplied by 100) between the Top, Middle and Bottom groups in Hong Kong in 2001, 2011 and 2016

	2001	2011	2016
TOP-MID	40	38	31
TOP-BOT	55	57	50
MID-BOT	20	24	24

and 2011, but then slightly decreased until 2016. The economy was very bad in the first decade of the millennium due to economic depression induced by the Asian financial crisis in 1997 and epidemic outbreak such as bird's flu and SARS in the early 2000s, triggering the acceleration of 'neoliberal' policies. When the economy gradually improved, the government implemented more social policies and hence segregation was slightly attenuated. Nevertheless, the figures between top and bottom SES groups in all three years stand much higher from the rest. This numerical pattern

reveals apparent segregation between top and bottom SES working population as well as the persistence of self-segregation of the top SES workforce.

6.4.3 Residential Locations of Top and Bottom SES Workforce

Figure 6.5 shows the distribution of neighbourhoods with top SES working population in 2001 and 2016. In this figure, all neighbourhoods are categorised into five quintiles (Q1-Q5), each of which accommodates about 20% of Hong Kong's top SES working population. Seemingly, quite a number of neighbourhoods with large top SES working populations (Q1–Q3) were initially concentrated in the formally ceded territories of Hong Kong Island and Kowloon. As time passed, more neighbourhoods in new towns had a large top SES working population. This may contribute to a slim drop in the extent of segregation. Owing to the compact urban environment of Hong Kong, neighbourhoods with the largest top SES working population (categorised as Q1) are usually located in high-density residential areas, some of which are coastal areas with beautiful sea views or recently redeveloped districts. Additionally, these neighbourhoods often consist of middle-class private housing estates and gated residential areas with detached houses. It should, however, be noted that traditionally wealthy residential areas such as southern Hong Kong Island and Kowloon Tong are not featured in the maps because these districts are of much lower density and hence they accommodate a smaller number of top SES workers.

There is a huge wealth gap even within the top SES working population, and the prohibitively high house prices in wealthy residential areas in Hong Kong mean that these areas are only accessible to a very small percentage of the top SES group. The rest of the top SES workforce thus mostly live in more densely populated middle-class residential areas in which Q1 neighbourhoods are located.

The LQ analysis offers us another perspective to examine residential locations of various SES groups. An LQ value greater and smaller than 1.0 indicates a higher and lower share of an occupational group within a neighbourhood than the city's overall share, respectively, whilst a value of 1.0 implies an equal share of an occupational group compared to the city as a whole. Figures 6.6 and 6.7 depict the spatial distribution of residence of top SES and bottom SES working population, respectively. According to Fig. 6.6, the residential distribution of top SES working population in 2001 is clustered around The Peak, southern coast of Hong Kong Island and Kowloon Tong. These are areas where luxurious residences and detached houses dominate. Meanwhile, fewer neighbourhoods in the New Territories had their LQ exceeding 1.0. The distribution of the top group became more even in 2016 as some neighbourhoods in the New Territories experienced LQ increases due to large-scale low-density gated residential developments, whilst the LQ decreased in conventional wealthy residential areas as a result of the reduction of top SES workers who might move to the newly completed gated communities in the New Territories. Whilst still

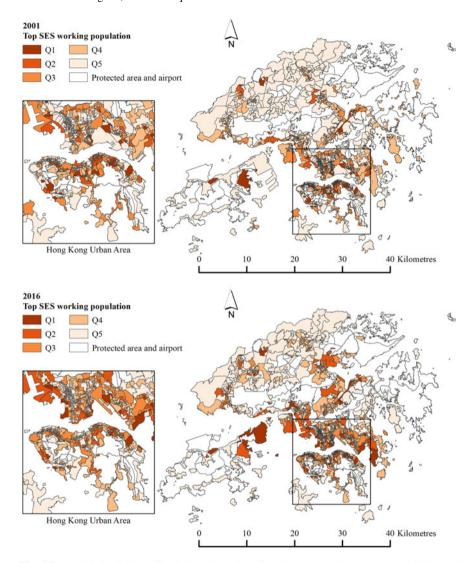


Fig. 6.5 Spatial distribution of residential location of top SES group in Hong Kong, in 2001 and 2016. Planning data reproduced with permission of the director of planning. © Hong Kong

evident, self-segregation of top SES working population has become less pronounced in the study period as the decrease in top SES workers in conventional wealthy areas was largely replaced by middle SES workers after 2011. This might be a result of the retirement of the top SES workers with off-springs still in their middle career.

The residential distribution of bottom SES workers (Fig. 6.7) was comparatively even throughout the study period. However, some spatial clusters were still visible in urban areas where public housing and old tenement buildings dominated such as

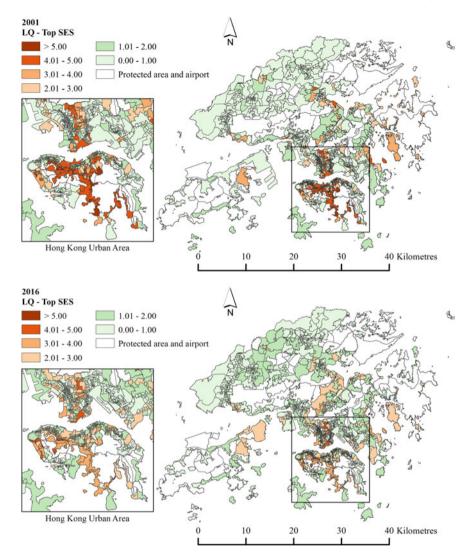
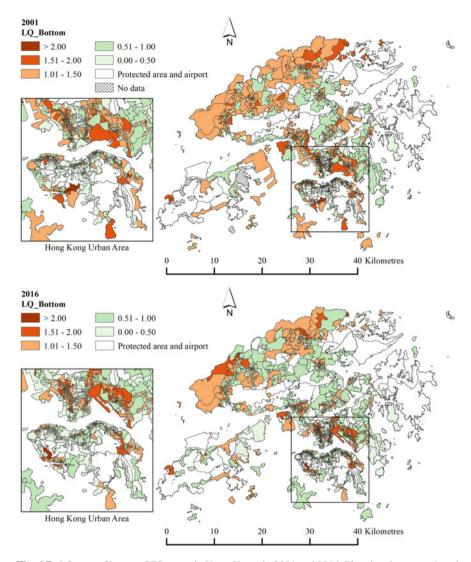


Fig. 6.6 LQ map of top SES group in Hong Kong, in 2001 and 2016. Planning data reproduced with permission of the director of planning. © Hong Kong

Chai Wan on Hong Kong Island, Sham Shui Po and Kwun Tong in Kowloon as well as new towns farther away from urban areas. Notwithstanding the existence of the above clusters, the spatial concentration of bottom SES group was less marked than that of top SES group.

Additionally, some neighbourhoods in urban areas had significant LQ fluctuations in top and bottom SES working population. For example, some neighbourhoods in Wan Chai, a rapidly gentrifying inner-city area, experienced marked LQ increases in



 $\textbf{Fig. 6.7} \quad LQ \ map \ of \ bottom \ SES \ group \ in \ Hong \ Kong, \ in \ 2001 \ and \ 2016. \ Planning \ data \ reproduced \ with \ permission \ of \ the \ director \ of \ planning. \\ \hline \textcircled{@} \ Hong \ Kong$

top SES working population due to the completion of urban redevelopment projects. Meanwhile, neighbourhoods affected by urban renewal projects in Kwun Tong, an industrial and working-class residential area in east Kowloon transforming into a new commercial district, experienced a relatively significant LQ decrease in bottom SES working population.

6.4.4 Socio-Economic Composition of Neighbourhoods

To further examine the pattern of residential segregation, all neighbourhoods are categorised in accordance with their respective proportions of working population from different SES groups. As shown in Fig. 6.8, the majority of neighbourhoods

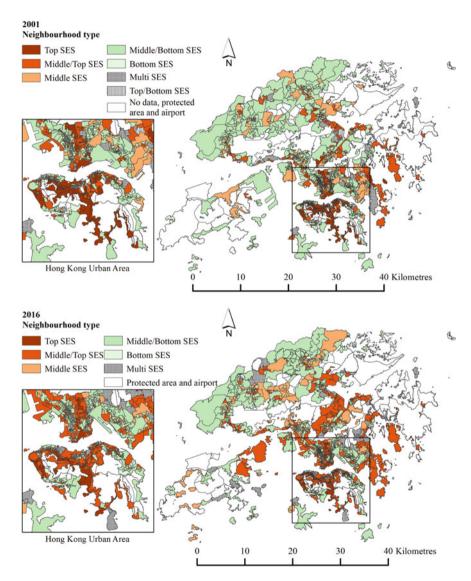


Fig. 6.8 Spatial distribution of neighbourhoods classified by SES in Hong Kong, in 2001 and 2016 (Reproduced from the classification provided by Marcińczak et al. 2015. Planning data reproduced with permission of the director of planning. © Hong Kong)

in Hong Kong can be categorised as mixed (Middle/Top or Middle/Bottom) SES neighbourhoods during the study period, meaning that most neighbourhoods are socio-economically heterogeneous. This situation is probably due to a compact and dense urban living environment where populations with diverse SES have to be accommodated within small areas. Yet, the distribution of 'Middle/Top SES' and 'Middle/Bottom SES' neighbourhoods is rather distinctive, echoing the distribution of the top and bottom SES workforce.

In urban areas, 'Middle/Top SES' neighbourhoods can be found in middle-class and wealthy residential areas, such as the northern coast of Hong Kong Island and coastal areas of Kowloon Peninsula (where gated private high-rise residential towers were built), as well as central Kowloon, a low-density residential area. On the other hand, 'Middle/Bottom SES' neighbourhoods are located in inner cities and public housing areas such as Chai Wan on Hong Kong Island as well as Sham Shui Po and Kwun Tong in Kowloon, all of which had low LQs of the top SES working population. The neighbourhood classification reveals clear socio-economic and spatial segregation in the urban areas of Hong Kong.

Meanwhile, a minority of neighbourhoods labelled as 'Middle SES' and 'Multi-SES' neighbourhoods were evenly distributed throughout the urban areas and new towns without apparent spatial clustering. In new towns, the widespread presence of 'Middle/Bottom SES' neighbourhoods is probably associated with the prevalence of public housing, often considered as neighbourhoods for low-income households. There is sporadic existence of 'Middle/Top SES' neighbourhoods amidst primarily 'Middle/Bottom SES' ones. Hence, new towns in Hong Kong could be regarded as residential areas mainly for the middle and bottom SES population.

Notwithstanding the prevalence of mixed SES neighbourhoods, spatial clustering of top SES neighbourhoods within luxurious residential areas in urban areas (e.g. The Peak and southern Hong Kong Island) was clearly observable. However, some of these neighbourhoods were no longer dominated by top SES population and became 'Middle/Top SES' neighbourhoods by the end of the study period. This was probably due to the departure of top SES population to gentrified urban areas or newly built gated communities in the New Territories, whilst the population there was replaced by middle SES population. Self-segregation of the top SES workforce takes place not only in urban, but also in rural areas. In Fig. 6.8, 'Middle/Top SES' neighbourhoods are confined within gated low-density residential areas with detached houses. In the meantime, rural New Territories house the majority of agricultural workers, who are classified as part of the bottom SES group. Together with other bottom SES workers, they spread evenly in various typical rural settlements, thus giving rise to an extensive 'Middle/Bottom SES' residential area throughout rural New Territories, particularly in northwest and northeast New Territories adjacent to the Hong Kong-Shenzhen border.

6.5 Underlying Causes for Socio-Spatial Segregation

Socio-spatial segregation in Hong Kong has been attributed to income polarisation due to economic restructuring together with rising house prices since the 1980s. After the implementation of China's Open Door Policy in the late 1970s, economic restructuring in Hong Kong transformed the city into a financial and service hub and China's strategic gateway to the global economy. As a consequence, the occupational structure of Hong Kong changed, with a shrinking manufacturing sector and an expanding tertiary sector (see Sect. 4.1). The tertiary sector is subdivided into highincome tertiary sector workers (e.g. managers and administrators, professionals) and low-income tertiary sector workers (e.g. services and sales workers, elementary occupations). Although Hong Kong had experienced rapid and continuous economic growth until the Asian financial crisis in late 1997 (the year Hong Kong returned to Chinese rule), most economic benefits were skewed towards the high-income tertiary sector including the financial and professional sectors. Therefore, top SES workers who were engaged in related occupations experienced rapid income increases. On the contrary, bottom SES workers, many of whom were originally employed in the manufacturing sector that moved out of Hong Kong to mainland China since the early 1980s, had to enter the low pay tertiary sector, sharing little, if any, benefit from economic growth.

Concurrently, soaring house prices over recent decades have made home ownership a very remote dream for those in the bottom SES workforce (see Fig. 6.4). Even though bottom SES workers have experienced income increases, these were severely outpaced by a massive rise of property and rental values. Therefore, bottom SES workers mostly could not afford to buy private units and have to either apply for public rental housing or rent low-cost private units including subdivided flats. These types of dwellings are mostly located in new towns and in inner-city areas such as Sham Shui Po, with relatively high proportions of the impoverished bottom SES working population (see Fig. 6.7). Given the relatively large population size, segregation of the bottom SES workforce was less pronounced than the self-segregation of the top SES workforce over the study period.

Secondly, the urban-biased and property-dominant mode of (re)development led by the government and property developers have sustained or even intensified sociospatial segregation in Hong Kong. For many decades, the Hong Kong government has relied on massive reclamation projects to create new land along coastal areas to accommodate urban growth and new town development, whilst the vast rural land resources in the heart of the New Territories have been largely left untouched. Urban development has thus long been confined to urban areas and new towns. The Hong Kong government, as the city's dominant landowner under the leasehold land tenure system, has relied on high land prices and related income as major sources (at least 20%) of revenue (Wong 2015). As a thriving property sector is indispensable to sustain high land prices, an 'alliance' between the government and big property development tycoons is perceived to have developed in the course of urban development. To maximise profit from developing valuable land plots, the

planning and building mechanisms have allowed property developers to build highrise residential blocks, especially in coastal areas with great sea views that often give rise to 'wall-like buildings', 'overshadowing' old urban areas (Ng et al. 2011; Ng 2014; Wong et al. 2011). The exorbitant prices for these housing units mean that only the top SES workforce can afford to live there. Hence, coastal areas in both urban areas and new towns have become primarily top SES neighbourhoods (see Figs. 6.5 and 6.6).

Redevelopment is an alternative means of recycling scarce land resources in urban Hong Kong. Usually, redevelopment projects are carried out by public—private partnership between property developers and the Urban Renewal Authority, a statutory body responsible for facilitating urban redevelopment (Ng 2002; Ye et al. 2015). Therefore, redevelopment projects in the city are directed towards the maximisation of exchange value (Tang 2017) and often result in gentrification of neighbourhoods. As residents affected by redevelopment often cannot afford soaring house prices within their original communities of residence, they are often displaced to other areas with lower rents such as other inner-city areas, new towns (Ye et al. 2015) or even the rural New Territories. Meanwhile, the regenerated built environment in redeveloped areas can only be afforded by the top SES population. As a result, socio-economic segregation in urban Hong Kong is also characterised by the infilling of the top SES population into gentrified inner cities and the exodus of the bottom SES population to other inner cities and remote areas. This process is expected to accentuate in years to come.

Interestingly, it seems that colonial legacies continue to influence the current socio-spatial distribution of Hong Kong's population. In urban areas, the designation of The Peak on Hong Kong Island as a European-exclusive residential zone in the first half of the twentieth century (Lai and Yu 2001) and the establishment of a low-density Garden City in Kowloon Tong before World War II had attracted the elite and affluent population for residence (Forrest et al. 2004; Lo 2005). These residential areas are still mainly for the top SES population today. In the massive territory of the rural New Territories where the colonial government had avoided major investments, except for coastal areas reclaimed for new development, most neighbourhoods are classified as 'Middle/Bottom SES' neighbourhoods.

6.6 Conclusion

The legacies of Hong Kong's colonial urban development history can still be seen in the new millennium. Dictated by historical events, a dual land regime can be seen in Hong Kong: dense urban development had once been concentrated on Hong Kong Island and Kowloon until the development of new towns in the 1970s; the implementation of a 'Small House Policy' since 1972, and the designation of conservation areas, green belts and Sites of Special Scientific Interest in rural New Territories, have led to low population density. Such spatial patterns of urban development and population distribution have sustained a property-dominant mode of urban-biased

development, a cornerstone of the government's high land price policy to sustain its coffer.

Meanwhile, the restructuring (or tertiarisation) of Hong Kong's economy as a result of the Open Door Policy in China since the 1980s has led to occupational and income polarisation among the city's working population. As depicted by the rising trend of the Gini Index, the income gap widened constantly despite the improvements in welfare provision over recent decades. The widening income gap coupled with the astronomical rise of housing costs also intensified residential segregation in the city, especially in urban areas and new towns.

As indicated in Tables 6.1, 6.2 and Fig. 6.8, self-segregation of the top SES working population is arguably one of the key features of socio-spatial segregation in Hong Kong as the IoD levels between top and bottom SES occupational groups mostly stood at 0.5 or above throughout the study period. Spatial clustering of top SES neighbourhoods is clearly identifiable. In the meantime, the IoD levels between middle and bottom SES groups as well as between top and middle SES groups generally stayed at 0.4 or below, showing no apparent residential segregation between these occupational groups.

Contrary to other major cities where segregation is characterised by monotonous neighbourhoods with a dominant SES and/or racial group, segregation in Hong Kong, due to its dual land regime, is marked by the clustering of two types of socioeconomically mixed neighbourhoods: 'Middle/Top SES' neighbourhoods in high-and middle-class residential areas and 'Middle/Bottom SES' neighbourhoods where old tenement buildings and public housing dominate. This is especially obvious towards the end of the study period. Such a dichotomy of socio-economically heterogeneous neighbourhoods, a consequence of a compact urban environment in the city's dual urban—rural land and density regimes, demonstrates Hong Kong's distinctive feature of residential and socio-economic spatial segregation.

Acknowledgements This research was funded by the Research Grants Council of the Hong Kong Special Administrative Region, China (grant numbers CUHK14652516 and CUHK14604218).

References

Adams D, Hastings EM (2001) Urban renewal in Hong Kong: transition from development corporation to renewal authority. Land Use Policy 18(3):245–258. https://doi.org/10.1016/S0264-8377(01)00019-9

Bertaud A (2018) 15th Annual demographia international housing affordability survey: 2019, Rating middle-income housing affordability. https://demographia.com/dhi.pdf. 12 Mar 2019

Census and Statistics Department, HKSAR Government (CSD) (1993) Hong Kong 1991 population census main report. CSD, Hong Kong

Census and Statistics Department, HKSAR Government (CSD) (2002) Hong Kong 2001 population census key statistics. CSD, Hong Kong

Census and Statistics Department, HKSAR Government (CSD) (2007) 2006 population by-census main report:, vol I. CSD, Hong Kong

- Census and Statistics Department, HKSAR Government (CSD) (2012) 2011 population census main report:, vol I. CSD, Hong Kong
- Census and Statistics Department, HKSAR Government (CSD) (2017) 2016 population by-census: main results. CSD, Hong Kong
- Census and Statistics Department, HKSAR Government (CSD) (2017) 2016 population by-census thematic report: household income distribution in Hong Kong. CSD, Hong Kong
- Census and Statistics Department, HKSAR Government (CSD) (2018a) Table E213 domestic households by district council district, monthly domestic household rent (hk\$), year and type of quarters. https://www.bycensus2016.gov.hk/en/bc-mt.html?search=E213.18 Mar 2019
- Census and Statistics Department, HKSAR Government (CSD) (2018b) 2016 population by-census thematic report: persons living in subdivided units. CSD, Hong Kong
- Census and Statistics Department, HKSAR Government (CSD) (2019) Hong Kong in figures–2019. CSD, Hong Kong
- Central Intelligence Agency (2019) The world factbook 2018. Central intelligence agency. https://www.cia.gov/library/publications/download/download-2018/factbook.zip. 11 Mar 2019
- Chau KW, Lai LWC (2004) Planned conversion of rural land: a case study of planning applications for housing and open storage uses in agriculture zones. Environ Plan B: Plan Des 31(6):863–878. https://doi.org/10.1068/b3122
- Forrest R, La Grange A, Yip NM et al (2004) Hong Kong as a global city? social distance and spatial differentiation. Urban Stud 41(1):207–227. https://doi.org/10.1080/0042098032000155759
- Forrest R, Yip NM (2014) The future for reluctant intervention: the prospects for Hong Kong's public rental sector. Hous Stud 29(4):551–565. https://doi.org/10.1080/02673037.2013.878020
- Glaser R, Haberzettl P, Walsh RPD et al (1991) Land reclamation in Singapore, Hong Kong and Macau. Geo J 24(4):365–373
- Guo Y, Chang SS, Sha F, Yip PSF et al (2018) Poverty concentration in an affluent city: geographic variation and correlates of neighborhood poverty rates in Hong Kong. PLoS ONE. https://doi.org/10.1371/journal.pone.0190566
- Gurran N, Bramley G (2017) Urban planning and the housing market—international perspectives for policy and practice. Palgrave Macmillan, London
- Hayes J (2007) The great difference: hong kong's new territories and its people 1898–2004. Hong Kong University Press, Hong Kong
- HKSAR Government (2008) 2007–08 policy address. https://www.policyaddress.gov.hk/07-08/eng/policy.html. 15 Jan 2019
- HKSAR Government (2016) Public health. In: Hong Kong: the facts.HKSAR government. https://www.gov.hk/en/about/abouthk/factsheets/docs/public_health.pdf. 11Mar 2019
- HKSAR Government (2017) Hong Kong yearbook 2016. HKSAR Government, Hong Kong
- HKSAR Government (2017b) Half-yearly economic report 2017. HKSAR government.https://www.hkeconomy.gov.hk/en/pdf/er_17q2.pdf. 13 Dec 2018
- HKSAR Government (2018a) TD announced implementation details of public transport fare subsidy scheme. (Press release) https://www.info.gov.hk/gia/general/201811/01/P2018110100588.htm. 15 Jan 2019
- HKSAR Government (2018b) Education. In: Hong Kong: the facts. HKSAR government. https://www.edb.gov.hk/attachment/en/about-edb/publications-stat/hk_thefacts_education/HK_The Facts_Education_EN.pdf. 11Mar 2019
- Lai LW, Yu MK (2001) The rise and fall of discriminatory zoning in Hong Kong. Environ Plan B: Plan Des 28(2):295–314. https://doi.org/10.1068/b2720
- Lai LW, Ho WK (2002) Planning for open storage of containers in a major international container trade centre: an analysis of Hong Kong development control statistics using probit modelling. Environ Plan B: Plan Des 29(4):571–587. https://doi.org/10.1068/b12819
- Lau KY, Murie A (2017) Residualisation and resilience: public housing in Hong Kong. Hous Stud 32(3):271–295. https://doi.org/10.1080/02673037.2016.1194376
- Lee KM, To BHP, Yu KM et al (2014) The new paradox of thrift: financialisation, retirement protection, and income polarisation in Hong Kong. China Perspect 1:15–24

- Legislative Council, HKSAR Government (LegCo) (2018) Small and medium enterprises. In: Statistical highlights—commerce and industry. LegCo. https://www.legco.gov.hk/research-public ations/english/1718issh28-small-and-medium-enterprises-20180608-e.pdf. 11Mar 2019
- Lo CP (2005) Decentralization and polarization: contradictory trends in Hong Kong's postcolonial social landscape. Urban Geogr 26(1):36–60. https://doi.org/10.2747/0272-3638.26.1.36
- Marcińczak S, Tammaru T, Novák J, Gentile M, Kovács Z, Temelová J, Valatka V, Kährik A, Szabó B et al (2015) Patterns of socioeconomic segregation in the capital cities of fast-track reforming post-socialist countries. Ann Assoc Am Geogr 105(1):183–202. https://doi.org/10.1080/00045608. 2014.968977
- Miller T, Kim AB, Roberts JM, et al (2019) 2019 Index of economic freedom: 25th anniversary edition. The heritage foundation. https://www.heritage.org/index/pdf/2019/book/index_2019. pdf. 11 Mar 2019
- Ng E, Yuan C, Chen L, Ren C, Fung JC et al (2011) Improving the wind environment in high-density cities by understanding urban morphology and surface roughness: a study in Hong Kong. Landsc Urban Plan 101(1):59–74. https://doi.org/10.1016/j.landurbplan.2011.01.004
- Ng I (1998) Urban redevelopment in Hong Kong: the partnership experience. Int J Public Sect Manag 11(5):414–420. https://doi.org/10.1108/09513559810226879
- Ng MK (2002) Property-led urban renewal in Hong Kong: any place for the community? Sustain Dev 10(3):140–146. https://doi.org/10.1002/sd.189
- Ng MK (2014) The state of planning rights in Hong Kong: a case study of 'wall-like building.' Town Plan Rev 85(4):489–511. https://doi.org/10.3828/tpr.2014.28
- Ng MK (2018) Transformative urbanism and reproblematising land scarcity in Hong Kong. Urban Stud. https://doi.org/10.1177/0042098018800399
- Rating and Valuation Department, HKSAR Government (2019a) Price indices by class (Territorywide) (from 1979). https://www.rvd.gov.hk/en/property_market_statistics/index.html. 5 Jun 2019
- Rating and Valuation Department, HKSAR Government (2019b) Rental indices by class (Territorywide) (from 1979). https://www.rvd.gov.hk/en/property_market_statistics/index.html. 5 Jun 2019
- Ronald R, Doling J (2010) Shifting East Asian approaches to home ownership and the housing welfare pillar. Int J Hous Policy 10(3):233–254. https://doi.org/10.1080/14616718.2010.506740
- Sawada Y (2004) The social security system in Hong Kong: establishment and readjustment of the liberal welfare model. Dev Econ 42(2):198–216. https://doi.org/10.1111/j.1746-1049.2004.tb0 1063.x
- Social Welfare Department, HKSAR Government (SWD) (2018a) Comprehensive social security allowance (CSSA) scheme.https://www.swd.gov.hk/en/index/site_pubsvc/page_socsecu/sub_comprehens/index.html. 15 Jan 2019
- Social Welfare Department, HKSAR Government (SWD) (2018b) Old age living allowance. https://www.swd.gov.hk/oala/index_e.html. 15 Jan 2019
- Tang WS (2017) Beyond gentrification: hegemonic redevelopment in Hong Kong. Int J Urban Reg Res 41(3):487–499. https://doi.org/10.1111/1468-2427.12496
- Transport Department, HKSAR Government (TD) (2018) Government public transport fare concession scheme for the elderly and eligible persons with disabilities.https://www.td.gov.hk/en/gov_public_transport_fare_concession/index.html. 15 Jan 2019
- Valença MM (2015) Social rental housing in HK and the UK: Neoliberal policy divergence or the market in the making? Habitat International 49:107–114. https://doi.org/10.1016/j.habitatint. 2015.05.017
- Wong MS, Nichol J, Ng E et al (2011) A study of the 'wall effect' caused by proliferation of high-rise buildings using GIS techniques. Landsc Urban Plan 102(4):245–253. https://doi.org/10.1016/j.landurbplan.2011.05.003
- Wong SHW (2015) Real estate elite, economic development, and political conflicts in postcolonial Hong Kong. China Rev 15(1):1–38
- Ye M, Vojnovic I, Chen G et al (2015) The landscape of gentrification: exploring the diversity of 'upgrading' processes in Hong Kong, 1986–2006. Urban Geogr 36(4):471–503. https://doi.org/10.1080/02723638.2015.1010795

Open Access This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

