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20th anniversary

Hong Kong Economic Policy

Green Paper 2021

HKU Business School and the Hong Kong Institute of Economics and Business Strategy (HIEBS) have been dedicated to Hong Kong economic policy research. Through this debut joint publishing of the annual Economic Policy Green Paper, we aim to engage the society in policy discussion, facilitate the policy reform, and contribute to local sustainable economic development in the long run.

Hong Kong Economic Policy Green Paper 2021
香港經濟政策綠皮書 2021

Publisher: HKU Business School
出版者：港大經管學院

Address: 4/F., K. K. Leung Building, The University of Hong Kong, Pokfulam Road, Hong Kong
地址：香港薄扶林道香港大學梁銶琚樓4樓

Website 網址: https://www.fbe.hku.hk

Email 電郵地址: fbecomm@hku.hk

Version: January 2021 (Hong Kong - First Edition)
版次：2021年1月香港初版

ISBN 國際標準書號：978-988-75581-0-1

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Preface

Three years ago, Dean Hongbin Cai of the HKU Business School encouraged colleagues in economics to apply their analytical skills to address economic policy issues facing Hong Kong. Beginning in early 2018, monthly lunch hour seminars were organized to discuss Hong Kong economic issues among ourselves and with external experts and professional. A growing number of our colleagues began writing regular economic commentaries for public interest. The idea of preparing a collection of papers on Hong Kong economic policies to stimulate discussion and debate was initiated by Dean Cai in the second half of 2019 during the social unrest movement. Within a few months the world was hit by one of the worst pandemics in recent memory. This, we believe, makes the relevance of such a project even more acute, but also more challenging as the economic environment has been rendered more uncertain.

Hong Kong has thrived for decades under a policy of maximum market openness, minimum government intervention, and adapting nimbly and quickly to the changing economic environment. This has been a recipe of great success. Nevertheless, as our economy transformed from an export-oriented goods manufacturing city into a producer services economy Hong Kong began to lose its legendary nimbleness and productivity. To rekindle the city's dynamism Heiwai Tang's article argues that launching a third economic transformation is urgently needed through investments in research and development, alleviating the shortage of talent, and reindustrialising the economic structure.

After China's opening, Hong Kong had successfully remade itself into an economic center for driving and export-oriented manufacturing base across the border, but its firms have yet to succeed at breaking into China's fast growing and vast market. Zhigang Tao's article on why firms in Hong Kong should focus on developing the regional markets, especially that of the Mainland, makes this point. This is an issue of enormous significance given the recently agreement by 11 nations to form a Regional Comprehensive Economic Partnership among fifteen member countries.

As a predominantly service economy, Hong Kong's competitiveness depends crucially on the human capital of its workforce. While some talents can be imported, it is absolutely necessary to invest in our own people for both effectiveness and equity reasons. Hongbin Cai's article calls for a doubling of Hong Kong's investment in human capital as a matter of top priority. Hong Kong's markets have also become less competitive, less open and more regulated as a result of the structural transformation from highly open and competitive manufacturing industries into more closed and protected service industries. Yuk-Fai Fong and Jin Li's article on reforming our regulatory approach to reinvigorate market competitiveness addresses this issue directly.

The economic recession upon us following the pandemic and escalation of US-China geopolitical tensions have worsened Hong Kong's fiscal position. Our ageing population will inevitably become a growing burden for the younger generation, which an unwilling fiscal authority cannot shy away from. Stephen Ching, Stephen Chiu and Maurice Tse's article on Hong Kong's fiscal challenges and Sau-Him Paul Lau and Qilin Zhang's article on the lessons of the new public annuity programme as an element of retirement income protection highlights the dilemmas of the fiscal authority.

Few problems in Hong Kong have captured public attention more than housing shortage and runaway prices and rents. To the general public, the failures of public policy is nearly total and the source of great public distrust. Stephen Ching's article reviews the literature of the futility of using punitive transactions taxes to dampen rising property prices and rents. He proposes instead to adopt measures that reduce property values and remove measures that boost property values. Yue-Chim Richard Wong's article argues in favor of privatizing public housing as a measure to meet the demand for homeownership, narrow the wealth divide due to homeownership, improve the efficient allocation of public housing resources, restore government's damaged fiscal position, and stimulate economic recovery.

The present collection of eight papers represents our initial ideas on some of the challenges Hong Kong will be facing and how some of the issues may be addressed. Given the considerable uncertainties Hong Kong and the world economy is still under, some of our analysis and ideas are necessarily preliminary. We have decided to put them forward at this time because we share a deep concern that many of the challenges need to be addressed urgently. In a number of areas, we feel that valuable time has already been lost for too long. Many problems have remained unaddressed or unsuccessfully addressed. For this reason, we have rushed these articles to print and hope that they will rekindle discussion and debate on matters of great importance for Hong Kong in the years ahead.

Hong Kong's Urgently Needed Third Economic Transformation

Hong Kong's Urgently Needed Third Economic Transformation

Heiwai Tang

As US-China tensions continue to escalate amid the Covid-19 pandemic and a global trend of deglobalisation, Hong Kong's role as an economic gateway between mainland China and the rest of the world will likely shrink in the foreseeable future. Moreover, its current finance- and real-estate propelled economic growth, which has contributed to substantial income and wealth inequalities, may not be sustainable.

Hong Kong therefore needs another economic transformation, picking up where it left off from the first one in the 1960s (from primary to manufacturing) and the second one in the 1990s (from manufacturing to services). It should leverage pressure from the pandemic and the US-China tension to turn crises into opportunities. Hong Kong's third economic transformation, unlike the previous two, relies on government support to foster the creation of a knowledge economy buttressed on science and technology (S&T) and research and development (R&D). Such transformation should be accompanied with re-industrialization, which should lead to an expansion of good jobs with upward mobility.

Background

2019-2020 was one of the most challenging times in Hong Kong's history. The double whammy of the social movement that began in the summer of 2019, together with the Covid-19 pandemic in 2020, has dragged Hong Kong's economy to its slowest growth on record.[1] The retail, tourism, and hospitality industries, in which many low-income workers and small-medium enterprises are concentrated, were hit the hardest. The pandemic-driven economic recession has had a disproportionate impact on lower-income individuals and smaller firms, widening existing income and wealth inequalities.

However, Hong Kong has long been suffering from structural economic problems, as characterized by a heavy reliance on a few service sectors. In particular, the government-promoted four pillar industries -- financial services, tourism, trading and logistics, and professional services — accounted for around 60% of the city's GDP. Such heavy reliance on the four pillar industries limited job diversity and spillover to other sectors on the one hand, and subjected its economy to an excessive amount of external macroeconomic volatility on the other. In addition, among the four pillar industries, only finance saw significant wage growth, as Figure 1 shows.[2] The median wages of the other three industries were significantly lower and grew much slower, sometimes even at a negative rate.

[1] According to the Hong Kong Institute of Economics and Business Strategy's Macroeconomic Forecast, Hong Kong's gross domestic product is forecasted to decline by 7.2% in 2020, compared to 2019.

[2] According to the Hong Kong's population census, the median monthly salary of workers in finance has increased from 16000 HKD in 1996 to 26000 HKD in 2016, a 63% growth in 20 years.

The employment share of the four pillar industries has in fact been declining since 2011, largely driven by the decline in employment in the sectors of tourism (i.e., retail-accommodation-restaurant) and trading and logistics, which was not completely offset by the mild employment growth in finance and professional services (see Figure 2). While their total contribution to Hong Kong's GDP has been relatively stable and hovered around 60% in recent years, finance is the only sector that exhibited persistent growth, as Figure 3 shows. The two service sectors that pay relatively lower income – trading and logistics, as well as tourism — have been shrinking since 2010 and 2013, respectively.

Replacing the shrinking share of the three pillar industries is not high-tech knowledge-intensive sectors, which Hong Kong, as an advanced economy, should have specialized in. Instead, more low-income service jobs, particularly in retail and personal services, were created in the past two decades. As Figure 4 shows, similar to the US (Autor, 2019), the job market in Hong Kong has become more polarized, with increasing shares of both high- and low-income jobs displacing middle-income jobs, including administrators, production workers, and sales professionals. According to the most recent data from Hong Kong's Population Census, the share of low-income jobs in total employment grew even faster than that of high-income jobs between 2011 and 2016. Amid the global trends of de-globalization and de-intermediation, the prevalence of trading and logistics and the related service industries in Hong Kong's economy and employment will likely continue to decline,[3] while the tourism and hospitality sector, which has been ravaged by the Covid-19 pandemic, will probably take years to recover back to its pre-pandemic level.

Against this backdrop, Hong Kong's economic and productivity growth have been slowing, while both income and wealth inequalities rose to a level that makes it one of the most unequal cities on earth.[4] As is well known, Hong Kong has the most expensive residential housing in the world. While its economy seems to be doing fine as gauged by its solid 89% GDP per capita growth between 2000 and 2020, its median household income increased by only 63% over the same period, while the cost of private housing for a family of four increased by 306% (see Figure 5).[5] Even someone without the pressure of purchasing a residential flat may still feel the pressure of the rising food costs, which have inflated by over 80% during the same period. Singapore, a city state that is often compared to Hong Kong, had a 90% growth in its median household income over the same period, while its average housing and food costs increased only by 52% and 1.2%, respectively (see Figure 6). It is natural for most Hong Kong people to feel that their quality of life has not improved much, with many of them even feeling poorer than before.

[3] As a matter of fact, the share of global exports in global GDP has been declining since 2010. The annual growth rate of global exports has been around 3%, compared to the 7% average for the period between the early 1990s and 2008.

[4] Hong Kong's TFP growth was also sliding, from an average 2.9% in 1980s to 1.8% in 2010s. Its Gini coefficient has risen from 0.45 in 1980 to 0.54 in 2016.

[5] It is the average housing price of class B private residential flat per square footage. Class B private residential flats are private housing units with a saleable area ranging between 40 sq m and 69.9 sq m (i.e., 430 sq ft to 750 sq ft).

In the eye of the storm of ongoing US-China tensions, the Hong Kong government can leverage the global crises to implement the necessary economic policies that facilitate the long overdue third economic transformation, after the first transformation in the 1960s and the second one in 1990s. This next transformation should foster inclusive and sustainable economic growth, aiming at creating multiple innovative knowledge-intensive sectors. Such a growth path should simultaneously create good jobs that offer opportunities for upward mobility and on-the-job training. This third economic transformation, unlike the first two, requires stronger-than-ever government support, partly because of a different global economic environment and mostly because of the stronger positive externalities associated with knowledge- and R&D-intensive activities.

Proposed Growth Policies

I propose three specific strategies to facilitate the third economic transformation.

Strategy 1: Significantly increasing research and development (R&D) expenditure

As a developed economy, Hong Kong should have been at the forefront of the "new economy" sectors. One of the obstacles has been the government's limited public expenditure in R&D. According to the World Bank, R&D accounted for a mere 0.8% of Hong Kong's GDP in 2017. That's significantly lower than most developed economies (e.g., 1.94% for Singapore, 4.55% for South Korea, 3.26% for Japan, 2.82% for the U.S., and the average 2.4% among the Organisation for Economic Cooperation and Development member countries).[6]

In recent years, Hong Kong's government seemed to have realized its comparatively low financial support for R&D. In the government's 2017 policy address, the city's chief executive proposed to increase the share of R&D in the city's GDP to 1.5% (approximately HKD 45 billion or USD 5.8 billion per year) by 2022. This is encouraging news, but the government has so far fallen short of the scheduled target by the end of 2019. The HKD 45 billion pledge as a long-term annual investment target pales in comparison to the government's multiple epidemic relief measures that have totaled HKD 300 billion. In addition to regular fiscal support, the Hong Kong government has accumulated a considerable amount of wealth after years of fiscal surplus just before the pandemic stroke the world in 2020. For instance, the government's HKD 200 billion "Future Fund", which is currently under the Hong Kong Monetary Authority's management, can rely on the city's experts in venture and angel funds to more flexibly invest in scientific research and start-up businesses. If the above is achieved, investors and talents in science and technology (S&T) will see the commitment of the Hong Kong government and be more willing to consider Hong Kong as a base.

[6] All these figures are for 2017 and from the World Bank (https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS)

Strategy 2: Solving the Talent Shortage in Science and Technology (S&T)

When it comes to the overall economic development of Hong Kong, the main obstacle is not capital, but the lack of suitable talents.

As such, the second strategy is undoubtedly about solving the shortage of talents. Hong Kong has always had many local talents and experienced professionals, especially in the financial, medical, legal, and tertiary education sectors. However, a substantial amount of knowledge and R&D in those sectors have not been commercialized and hence benefited the market, in terms of job or product creation. The linkages of those industries with the rest of the economy have been rather weak, with the exception of the financial sector, which has helped develop other high-skilled service industries like the legal sector. Another reason for the weak linkage across industries is the shortage of mid-skilled S&T talents.[7]

The reason for the shortage of mid-level S&T talents can in turn be attributed to the mismatch of supply and demand in the labor markets. Expecting stable and high-income careers after graduation, university students in Hong Kong often prefer to study medicine, law, and business administration, rather than science or engineering, which have propelled economic growth in many advanced economies and mainland China. A key reason is that the labor market does not offer sufficient opportunities for science and engineering graduates to apply their knowledge. It is thus a "chicken or egg" problem. Hence, to solve the shortage in supply of mid-skilled talents, perhaps it is more crucial to tackle the shortage in demand first. To this end, the government may consider using part of the substantially increased R&D expenditure to establish research institutions to design and even produce products and technologies. The pilot areas of research include biotechnology, medical science, and financial technology, in which Hong Kong currently has a comparative advantage.

In addition, the Hong Kong government can consider providing economic incentives to attract overseas and mainland Chinese new-economy companies to set up affiliates in Hong Kong. The goal is to transfer technology and knowhow, and to ultimately create high-tech jobs in Hong Kong. That said, given the initial talent shortage in Hong Kong, there should not be any domestic labor requirements for those foreign investors. Instead, if the Hong Kong government wants those foreign companies to employ local talents, it can consider subsidizing the local labor costs. Such policies to attract foreign companies to first help increase local demand for technology workers can solve the shortage of talent supply and effectively enhance the S&T and research environment in the medium run.

[7] Examples:
"Hong Kong banks struggle to plug tech talent shortage" *Hong Kong Business* https://hongkongbusiness.hk/hr-education/news/hong-kong-banks-struggle-plug-tech-talent-shortage;
"Hong Kong IT leaders welcome government's support in easing skills shortage" https://www.roberthalf.com.hk/press/hong-kong-it-leaders-welcome-governments-support-easing-skills-shortage

Besides increasing the supply of mid-level talent, the Hong Kong government should simultaneously increase the supply and quality of scientists and researchers from local universities. The University Grants Committee currently has fixed quotas on the number postgraduate student intakes in each department of a university. For example, the Department of Economics at the University of Hong Kong has about 30 full-time research faculty members, but can only accept a maximum of 8-10 doctoral students each year. From the perspective of training and research, the ratio is far from ideal. It should be noted that most of the doctoral students trained in Hong Kong are from overseas, particularly from mainland China. Given that the education and training provided by universities in Hong Kong are globally recognized, even if the increased supply of doctoral students cannot be absorbed in the local labor market in the short run, many of the doctoral graduates can still choose to work in research institutions, companies, and universities in China and aboard. Hence, besides planting the seeds for Hong Kong's ultimate economic transformation, increasing the supply of researchers can help raise Hong Kong's soft power and its status as a global knowledge hub.

Regarding policies to attract foreign talents, the Hong Kong government should consider fine-tuning and expanding the scale of existing plans. For instance, the number of skilled workers coming to Hong Kong through the Technology Talent Admission Scheme (TechTAS) since 2018 is only 321, far below the expected 1,000-person target. While it is likely related to Hong Kong's economic instability in recent years, certain rigid aspects of the plan may be partly to blame. Based on my interviews with some local start-up business owners, the two-year fixed term employment contract for foreign skilled workers and the bundled arrangement to employ at least one local staff per foreign worker hired at a related position are some of the reasons discouraging companies from using the plan. It is understandable that the Hong Kong government wants to protect jobs for the locals. However, it is also worth noting that economic research has shown that creating high-tech jobs has a strong multiplying effect on other job markets, including those in non-tech industries. Specifically, Moretti (2012) finds empirically that a high-tech job created in the U.S. can lead to five other positions added in the economy, including those in high- and low-skilled service sectors. In this regard, creating high-tech jobs can expand the diversity of jobs and foster inclusive economic growth.

Regarding programs to attract foreign talent, the Hong Kong government should offer holistic packages to attract leading S&T experts in academia and the industry to come work in Hong Kong. Given the rising tension between China and the West, in particular the U.S., some S&T experts may be encouraged by certain push factors to consider overseas opportunities. Besides financial incentives, leading experts are typically concerned about the research environment and living conditions of Hong Kong. The Hong Kong government can consider building senior staff quarters, like those constructed decades ago to attract foreign senior academics to join local universities, for select experienced and unique experts. Since the number of qualified professionals will not be high, the impact on the existing housing problem should be limited. The targeted leading experts should also be encouraged to bring along their junior-level staff members (e.g., postdocs or graduate students) to Hong Kong.

Strategy 3: Reindustrializing the Hong Kong Economy

The third specific strategy is to reindustrialize the Hong Kong economy. The key purpose is to create good job opportunities that are associated with upward mobility, on-the-job training and more diverse career paths for young people. Reindustrialization is also important to help complete the ecosystem for scientific research and start-ups. In 2019, the manufacturing sector accounted for less than 1% of Hong Kong's GDP, while in the other three "Asian Tigers", namely, Taiwan, South Korea, and Singapore, manufacturing accounted for 30%, 25% and 20% of their GDP, respectively. After decades of slow economic growth, Japan can still maintain a 21% manufacturing share in its GDP. Although manufacturing's employment shares are typically lower than GDP shares due to automation and outsourcing of jobs, these East Asian examples show that manufacturing can rejuvenate in advanced economies. Their successes in manufacturing are obviously not only due to more effective cost control, given their high labor costs compared with emerging markets, but their strategic adoption of technology, automation, supply chain management, and marketing in international markets. In other words, the main challenges facing advanced economies' reindustrialization are often not about high production costs, but how to improve on production efficiency, product quality, market positions, and government policies.

One may ask: what comparative advantages does Hong Kong still has in manufacturing? Hong Kong's comparative advantage outside high-skilled services are probably in finance- and medical-related fields. The city has the potential to be a manufacturing and design hub for high-tech products in medical, biotech, pharmaceutical, and financial sectors. The small local market should be used to test products. The target market should be international. So far, the government, the monetary authority, and the industry have had a consensus to develop fintech. With its heavy use of artificial intelligence and big data, fintech should be a natural stepping stone for Hong Kong to be on its S&T and R&D paths. It is also the sector that will most likely see progresses in S&T application and employment. As for the medical and biotech sectors, digitalization and the adoption of artificial intelligence will also be the trends. There should be constructive cross-overs between the medical professionals and the computer science/ engineering community. Given Hong Kong's mature medical sector and its world-class medical experts, the Hong Kong government should leverage on the Covid-19 pandemic to industrialize and commercialize research findings in the medical and biotech fields, designing and even producing vaccines and testing kits.

Finally, any good policy needs to be promoted with good marketing campaigns to gain popular support. S&T, R&D, start-ups and re-industrialization all seem to be remote and unrelated to the lives of most ordinary citizens. Without seeing the direct benefits, people may pessimistically deny the urgent policies needed to diversify the Hong Kong economy. It is understandable that most Hong Kong people have their minds occupied with high costs of housing and living. The government should emphasize that while there is a severe shortage in the supply of *residential* housing, there is no shortage of industrial buildings after more than two decades of de-industrialization, which cannot be converted to residential units legally. The Hong Kong 'government approach of revitalizing industrial buildings has focused on occupying vacant factory space with small businesses in services, arts and food-and-beverage industries. In fact, by 2017, 40% of the industrial buildings were still used for storage purposes. Simply put, land shortage is not the barrier to re-industrialization. With the

declining rental costs in industrial buildings after the pandemic, there are only good opportunities to finally use those space for industrial activities.

When promoting the much-needed industrial policies, the government should emphasize that a reindustrialized economy can help foster inclusive economic growth. “Inclusivity” should be a criteria of regular policy reviews. As Rodrik and Sabel (2019) point out in their paper "Creating a Good Jobs Economy", sustainable and inclusive economic growth should be able to create good jobs. In addition to providing workers with sufficient wages to meet basic living needs, the nature of their work should also offer opportunities for on-the-job learning, as well as aspiration for upward mobility, motivation and responsibility. Compared with most service industries, high-tech manufacturing appears to be promising in offering good jobs.

Conclusions

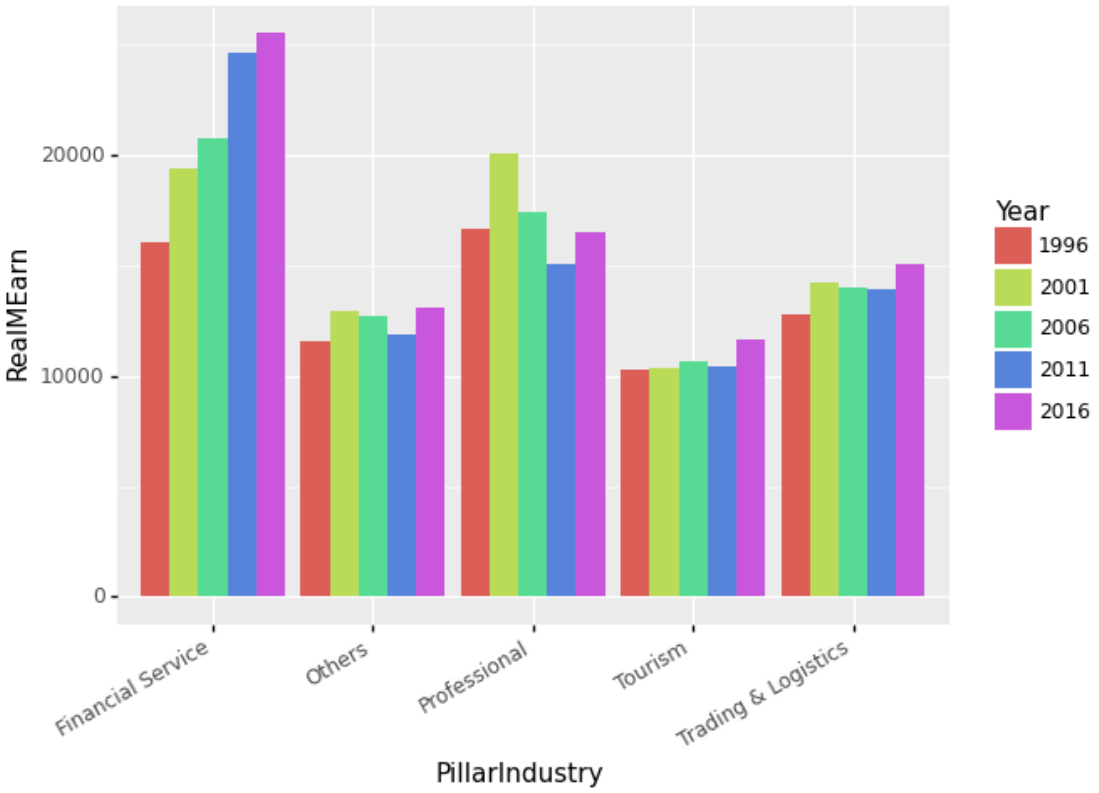
The “big market, small government” non-intervention policy advocated by the Hong Kong government under British colonial rule in the 1960s and 1970s was an appropriate economic policy approach and thinking in the absence of market failure. However, the government must change course when there is severe market failure.

The most classic example of market failure is the appearance of externality in the market, and the most commonly discussed example in economics is pollution. When the market lacks an effective mechanism to make polluters compensate for those who suffer from pollution, the general public somehow accepts some government intervention (such as imposing a tax) to increase the production costs of polluters. However, there is little consensus about what a government ought to do to incentivize companies and individuals, whose innovative activities can create positive externalities, to produce more to benefit society. Gruber and Johnson (2019) in their book "Jump-Starting America" identified 102 U.S. cities as having the fundamentals to be transformed into new-economy cities, including Detroit that was hit hard by de-industrialization. What is missing, according to the authors, is strong and committed financial and policy support from the U.S. federal government, which used to fund many R&D and S&T projects that propelled the country’s rapid economic and productivity growth during the Cold War period.

Hong Kong’s economic stagnation has its roots in several intertwined problems, ranging from the mismatch between the demand and supply of talents, to the uncertainty investors and entrepreneurs face in start-up businesses. A piecemeal approach may not work and the above-mentioned three strategies need be implemented together for each of them to be effective. Given Hong Kong’s small size, it obviously needs to rely on foreign talents and cooperate with partners abroad. With its relatively lower labor mobility compared with capital mobility, I cannot see another way out for Hong Kong besides a third economic transformation to an inclusive knowledge-based economy.

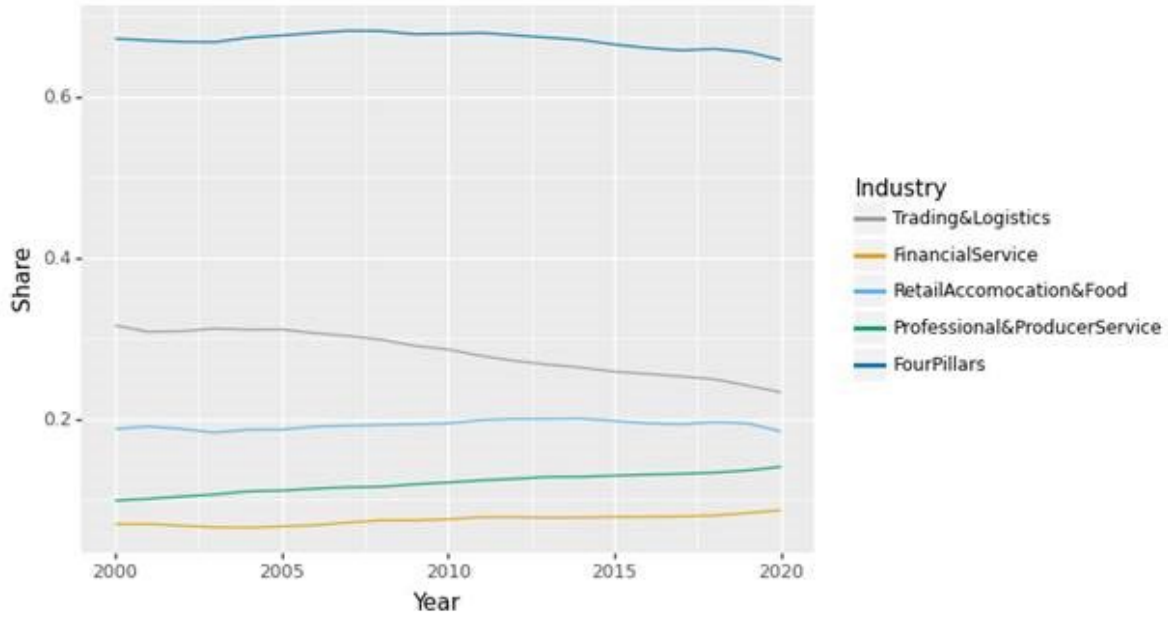
Figures

Figure 1: Four Pillar Industry: Real Median Income



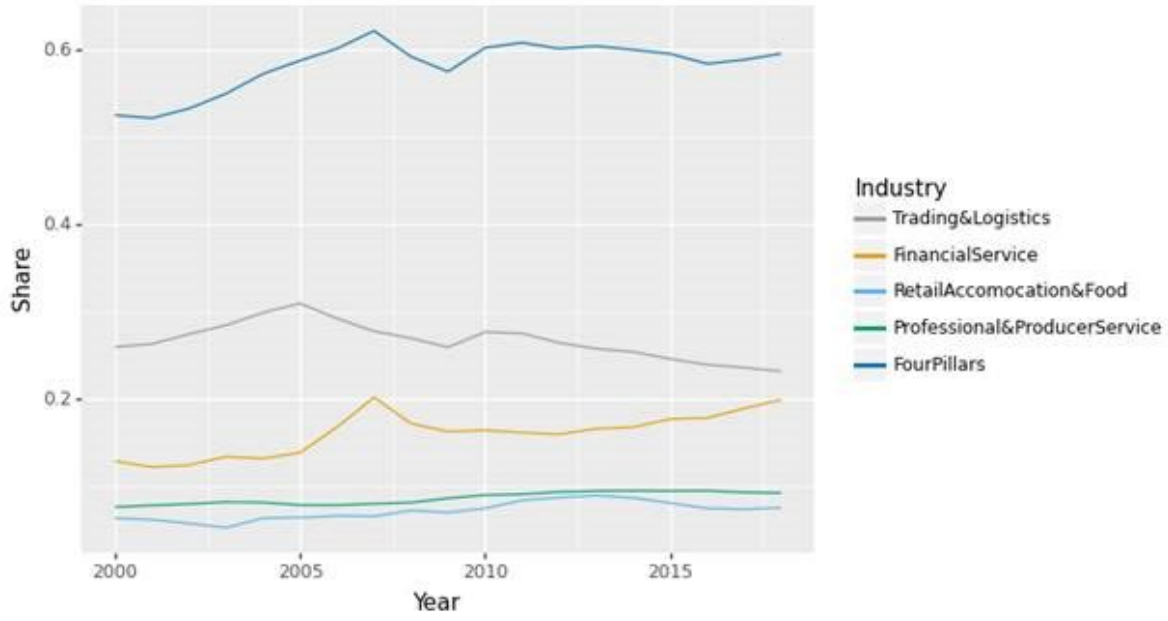
Source: Census and Statistics Department, Hong Kong SAR Government

Figure 2: Employment shares of Hong Kong's 4-Pillar Industries



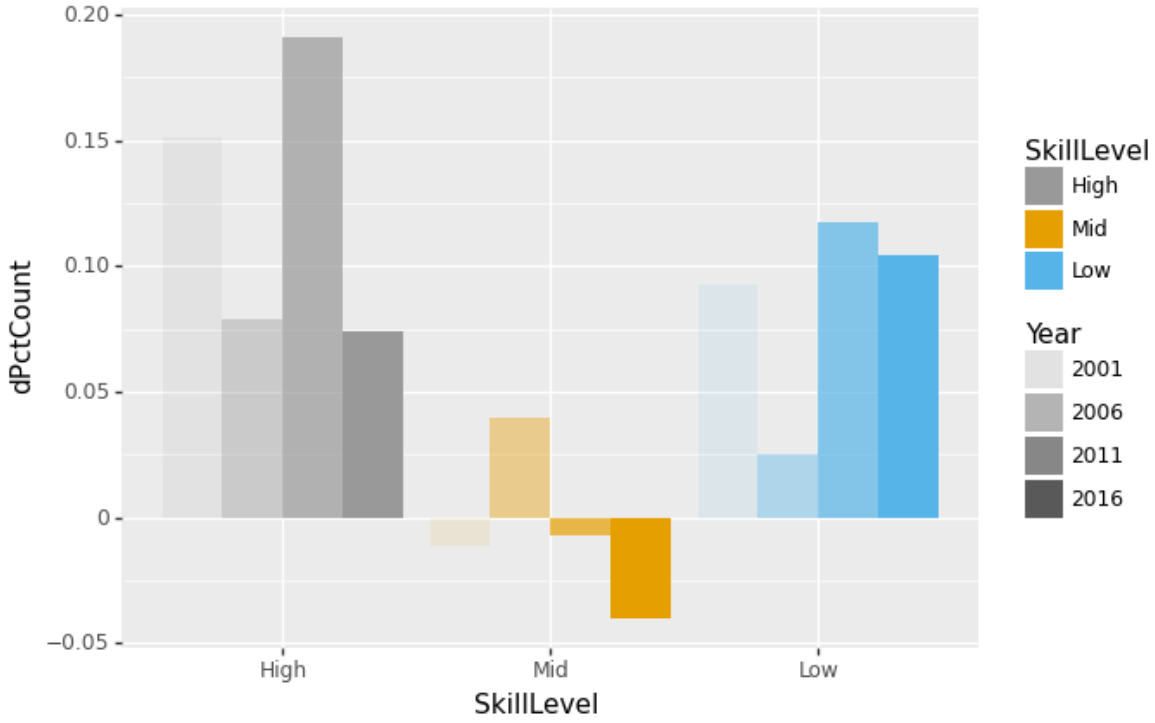
Source: Census and Statistics Department, Hong Kong SAR Government

Figure 3: GDP shares of Hong Kong's 4-Pillar Industries



Source: Census and Statistics Department, Hong Kong SAR Government

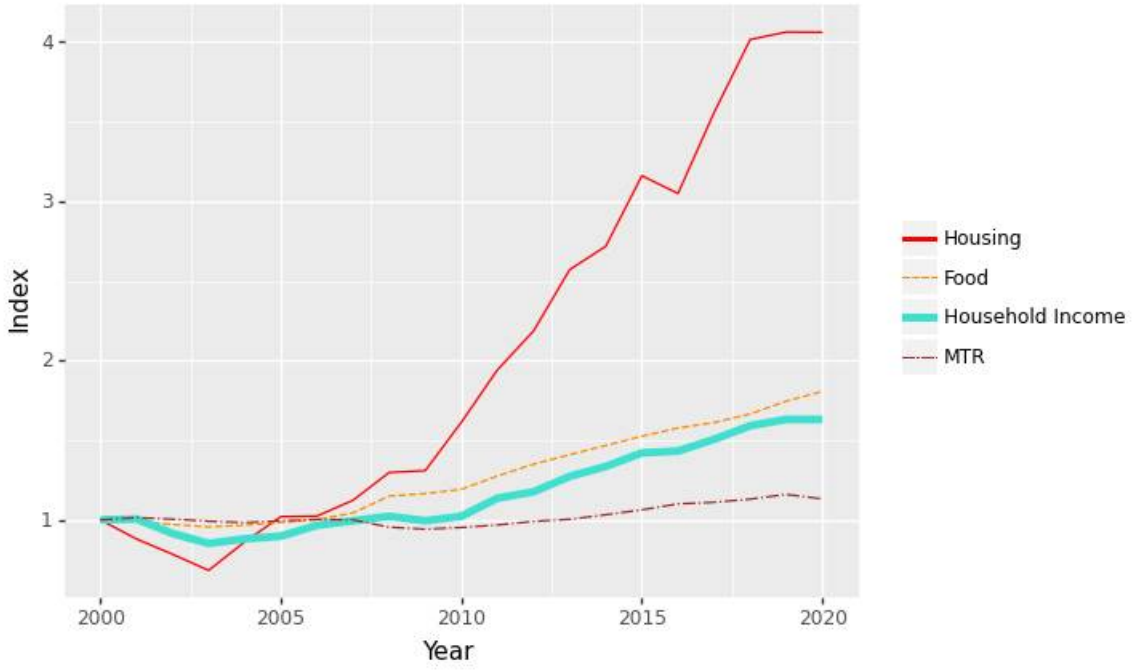
Figure 4: Changes in the Share of Employment by 3 Skill Levels



Source: Census and Statistics Department, Hong Kong SAR Government

Note: The "high-skilled" group includes employment in the occupations of managers, professionals, technicians; The "mid-skilled" group employment in the occupations of administrators, production workers, and sales; The "low-skilled" group includes employment in the occupations of personal, cleaning, security, operators, laborers. The classification follows closely that of Autor (2019).

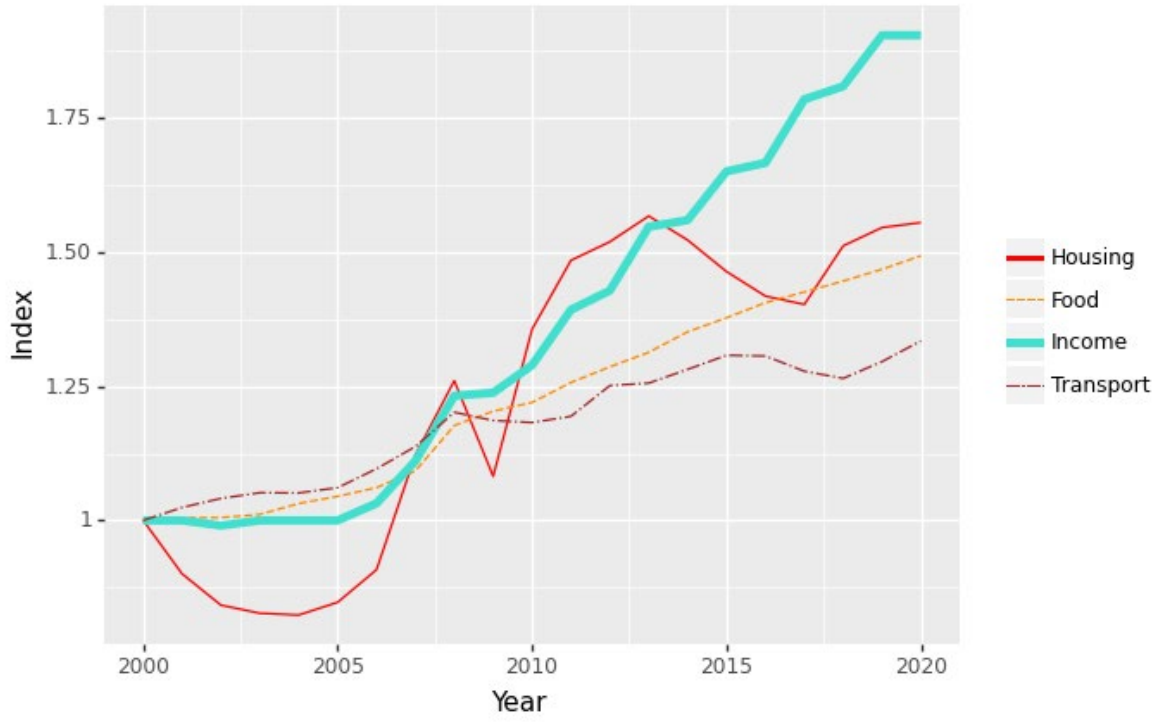
Figure 5: Hong Kong's Median Income and Costs of Living



Source: Census and Statistics Department and Rating and Valuation Department, Hong Kong SAR Government

Note: Data for food CPI is from Hong Kong's Census and Statistics Department. The definition is the weighted average of food prices including meals bought outside home. Data on MTR and household income is from the Census and Statistics Department. Data on housing cost is from the Rating and Valuation Department. The definition is the average housing price of class B private residential flat per square feet. All data series are normalized to 1 for the base year 2000.

Figure 6: Singapore's Median Income and Costs of Living



Source: Department of Statistics, Ministry of Manpower, and Urban Redevelopment Authority, Singapore

Notes: Data for food CPI is from the Department of Statistics. The definition is the weighted average of food prices including food serving services. Data on transportation, defined as the weighted average of public transport prices, is from the Department of Statistics. Data on household income, defined as the nominal gross median monthly income of employed persons, is from the Ministry of Manpower. Data on housing cost is from the Urban Redevelopment Authority. The definition is the average price of urban private residential apartment per square meter. All data series are normalized to 1 for the base year 2000.

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Trade and Regional Development

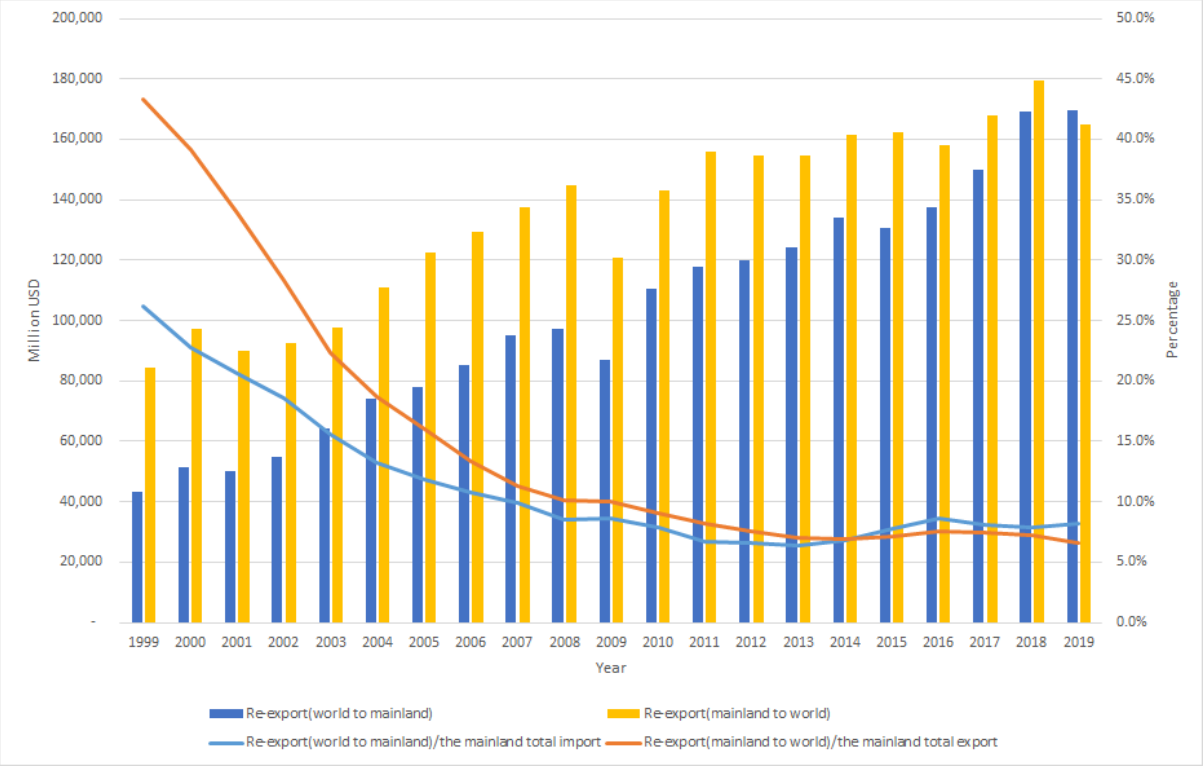
Trade and Regional Development

Zhigang Tao

Hong Kong is experiencing one of the worst economic recessions in its history due to a combination of factors, including the social unrest of 2019, the US-China trade war, and the Covid-19 pandemic. While the government is actively dealing with the immediate economic difficulties, particularly unemployment in sectors related to tourism (one of the four pillar industries in HK), it is also time to consider the long-run competitiveness of the HK economy, which in addition to tourism consists of finance, trade and logistics, and professional and producer services.

In terms of employment, trade and logistics are much bigger than the finance industry, and the competitiveness of HK's trade and logistics industry hinges on its continuing role as the trade intermediary for mainland China. What's worrying, however, is that Hong Kong's role as mainland China's export intermediary to the world has been eroding rapidly since China's entry into the WTO in 2001.

Figure 1: HK as a trade intermediary for mainland China



HK's census and statistics department provides statistics on the city's imports from the mainland and its subsequent re-exports (of these imports), which surprisingly includes a substantial re-export back to the mainland China (called **re-export back**, which I will discuss in detail) as well as re-exports to the world. To get a sense of Hong Kong's changing role in intermediating the mainland's exports, we calculate *the ratio of HK's re-exports of its imports from the mainland to the world (in value) and the mainland's total export (in value).* Using this ratio to measure HK's export intermediary for the mainland's exports (represented by the orange line in Figure 1), we find that HK played a significant role back twenty years ago, accounting for as high as 43% of mainland's export in 1999. But to our shock, we find this ratio dropped sharply to just over 10% by 2007 and lowered further to 6% in 2019. It is not an exaggeration to say that HK has lost its role as the intermediary for the mainland's exports, even though one may argue that the absolute value of the mainland's exports passing through HK did increase substantially over the past twenty years.

There are a number of caveats. We subtract the **re-export back** to the mainland from HK's total re-exports of goods with mainland origin to get an estimate of the mainland's exports intermediated by HK (the yellow bar in Figure 1). Some of HK's imports from the mainland are consumed locally either for final consumption or as inputs for HK's domestic exports to the world, though that amounts to less than 0.1% of HK's total exports. However, we don't have numbers on the usage of mainland imports in HK, as a result of which we may over-estimate the scale of Hong Kong's role as an export intermediary for the mainland. Moreover, HK's re-exports of its imports from the mainland generally carries some mark-up, thereby further inflating the role of HK as mainland's export intermediary.

The steep decline of Hong Kong as an export intermediary for the mainland was due to several reasons, according to a study, conducted by Zhigang Tao and supported by a public policy grant from the then Central Policy Unit of HKSAR government.

The first reason is the decline of manufacturing in Guangdong, contrasted with the rise of manufacturing firms in other parts of China, implying greater distances between Hong Kong and manufacturing firms on the mainland and hence a lower likelihood of Hong Kong being the export intermediary. Manufacturing firms have moved away from Guangdong, both because of the higher costs of production there and more market opportunities in other parts of China. A survey of 2400 enterprises (based in Yangtze River Delta) by Yue-Chim Richard Wong and me in 2003 revealed that firms set up in YRD for accessing domestic markets as well as exports to the world, whereas firms set up in PRD are more oriented towards exporting to the world.

The second reason for the decline of Hong Kong as mainland China's export intermediary is the rise of China's indigenous private firms at the expense of China's state-owned enterprises. As China's indigenous private firms have the least tendency of using Hong Kong as an export intermediary as compared with both state-owned enterprises and foreign invested firms, such a change in the ownership mix of China's exporters does not bode well for Hong Kong.

The third and possibly the most important reason is the loosening of monopoly power of state-owned trading firms as China entered the WTO in 2001, after which China's private firms could export directly without going through state-owned trading firms. As state-owned trading firms had a heavy presence in Hong Kong, partly due to the unique access of Hong Kong to the world during mainland China's planned economy era (1949-1978), such a loss of monopoly power of state-owned trading firms also implies the loss of monopoly power of Hong Kong in intermediating China's export. Incidentally, this also explains the rising share of exports by China's indigenous private firms (the afore-mentioned reason), as exports by state-owned firms before 2001 could well be indirect exports on behalf of private firms.

The steady decline of Hong Kong as the mainland's export intermediary has a historical counterpart, following the same trajectory of Canton (today's Guangzhou) after the First Opium War. The Qing government in 1757 granted Canton a monopoly over China's trade, which was further controlled by some prominent merchants (the so-called thirteen Hong merchants). However, Canton's monopoly in exporting China's tea and silk ended in 1842 after the First Opium War, when four other ports (including HK) were forced to open. Amazingly, by 1852 (just ten years after the opening of the other ports), more than half of China's trade had shifted to the port of Shanghai. Canton took another hit after the Second Opium War when Yangtze River was forced to open to foreign trade, granting even more advantages to Shanghai, which could manage Yangtze River trade as well as coastal trade. The challenge for HK is to avoid repeating the history of Canton in dealing with competition.

HK's role in intermediating mainland China's imports from the world has followed the same trend as that for an export intermediary. From the city's Census and Statistics Department, we get data on HK's re-export of its imports (from other countries/regions) to the mainland (the blue bar in Figure 1) and divide it by mainland's total imports to measure the role of HK in intermediating mainland imports. We find that the share of such re-exports in mainland China's total imports (represented by the blue line in Figure 1) dropped from 25% in 1999 to 10% in 2007 and stabilized to 7% by 2019.

It is interesting to note that until recently HK's re-exports (of its imports from the world) to the mainland was lower in value than its re-exports (of its imports from mainland China) to the world. This is due to the traditional emphasis of Hong Kong on the American and European markets, and its positioning in helping mainland China to export to these markets. Indeed, Guangdong was once called the factory of the world, with HK-invested firms doing most of the low-cost production and then exporting to the world via HK. Over the past forty years, however, domestic consumption of China has been growing rapidly, and the same pattern holds for China's imports from the world. A closer look at HK's re-exports to the mainland shows that it is mostly related to enterprise investment and operations, and only a small fraction (slightly over 3 percent) is related to consumption. Apparently, HK has counted on affluent mainland Chinese coming to HK as tourists to spend on luxury goods instead of being the intermediary for mainland's imports. The sustainability of this approach hinges on the improvement of HK's relations with the mainland and the return of mainland tourists.

Besides the declining role of HK as mainland China's trade intermediary (single digit contributions for both imports and exports), there is a somewhat peculiar type of trade between the mainland and HK, namely, HK's imports from the mainland and subsequent re-exports back to the mainland. As ***such re-exports back*** involve first HK's imports from the mainland and then HK's exports back to the mainland, it is counted twice in HK's trade statistics. Its share in HK's re-exports (with mainland as origin) and that in HK's re-exports (with mainland as consignment) both experienced substantial increase between 1999 and 2013, and then stabilized to 40% in 2019. Our conjecture is that re-exports back is motivated by export subsidies and tax savings from imported inputs because mainland companies could enjoy subsidies from exporting, and they could also enjoy tax savings for imported imports. As a result, mainland upstream firms export their products to HK, which are subsequently re-exported back to mainland downstream firms. Such a workaround involves trading costs as well as warehouse costs in HK, but the export subsidies and tax savings are more substantial to justify such a re-export back. The sustainability of this kind of re-exports hinges on both mainland government policies and the availability of other free ports like HK. To the extent that mainland processing firms could get similar benefits from its new free trade zones, say for example in Hainan, such kinds of re-exports back may disappear overnight, further undermining the trade and logistics industries in HK. Such a risk should be highlighted as it accounts for 40% of HK's re-exports related to the mainland, even though the share of such re-exports back in mainland's overall trade is in the single digits.

One final point is about HK's offshore trade, which obviously involves intermediation by HK even though the goods involved do not physically pass through HK ports. Hong Kong's official statistics show that offshore trade (with the mainland as the destination) has maintained rapid growth throughout the last two decades, surpassing both re-exports (with China as consignment) and re-exports (with China as origin). Given the significance of offshore trade, it is important to understand the motivation behind it and its sustainability. Our conjecture is that offshore trade (with mainland as the destination) arises because of the lower tax in HK as opposed to both the mainland and origin country, as a result of which foreign multinationals may want to book its profits in HK through intra-firm trade. The sustainability of this type of trade regime again depends on how serious the mainland is in building Hainan as a low tax as well as free port.

The future does not bode well for HK's trade and logistics, as it has essentially lost its role as the trade intermediary for the mainland in a short span of two decades after China entered the WTO – reminding us of a similar history of Canton losing its monopoly over China trade after the First Opium War. While "China syndrome" is behind much of the debate of the US-China economic and increasingly political relations, it is surprising that little attention has been paid to the loss of HK's trading advantage.

Strategies could certainly be developed to arrest the decline of HK as the trade intermediary for mainland China. Nonetheless, it is high time for HK to focus on the mainland as a market (rather as the factory to serve the global market). Specifically, HK should seize the opportunity of integrating with Guangdong where there is a market of 113 million people as well as thousands of HK-invested firms. One successful example is China Resources, a HK-based state-owned firm set up in 1938 for trading purposes. The company was reported to intermediate more than one-third of the mainland's exports during its peak and was called the "second ministry of foreign trade." The company faced increasing competition as China started to open and reform its economy. Instead of clinging to its monopoly position, which is simply impossible, the company anticipated the loss of its monopoly power over exports once China joined the WTO, made a bold move to reinvent itself from a trading firm to a firm serving the growing needs of domestic consumers, and succeeded in the transformation. By the same token, HK can reinvent itself by becoming a centre of technological innovations and focusing on the mainland as a market.

Possibly contrary to some common beliefs, the Pearl River Delta lags the Yangtze River Delta in both newly granted patents and the cumulative number of patents (Tao, 2020). While much research is needed in understanding why PRD is behind YRD in R&D output (measured by patents), one possible reason is there are much fewer universities in Pearl River Delta than in YRD. Indeed compared with YRD, there are much fewer patents held by universities as well as patents jointly held by universities and enterprises in Guangdong. The same conclusion can be drawn if we look at the share of university patents in total patents. Among the lower number of university patents in PRD, there is a higher percentage of patents being jointly held by universities and enterprises. Presumably due to the lack of universities, whose research would yield positive externalities, enterprises in Guangdong have played a much bigger role in R&D.

Another feature of R&D in Guangdong is its heavy concentration in a few industries. The HHI (Herfindahl-Hirschman Index) of patents is higher in Guangdong than in YRD, no matter whether industries are finely classified or broadly defined. Patents in PRD are heavily concentrated in just two industries (electronics and telecommunications) whereas YRD is diversified in metals, equipment, chemicals, and transports as well as electronics and telecommunications. Wong et al (2007) highlighted this difference between YRD and PRD in a survey of 2,400 enterprises in YRD. Relatedly, using a comprehensive data set of manufacturing industries in 231 of China's cities for the period 1998-2005, Lu, Ni, Tao, and Yu (2013) show that specialization is important for the growth of mature industries in China, but diversity is crucial for the development of China's relatively new and fast-growing industries.

Moreover, PRD patents are more heavily concentrated among firms within industries than YRD. Using cumulative patents held by enterprises as of 2018, we calculate the *relative patent position* of each firm as compared with the leading firm of its industry (measured by the number of patents held by an enterprise divided by the total number of patents held by the leading firm – the firm with the most patents of the same industry), and then plot the density of the relative patent position. We find that relative patent position of firms in PRD are more clustered around zero than those in YRD, indicating the heavier concentration of patents within industries in PRD.

While the concentration of PRD R&D activities in a few industries and in a few enterprises (such as Huawei, ZTE, and Foxconn) within these select industries may yield benefits associated with industrial agglomeration and regional specialization, it also brings the risk of over-reliance on a few firms within a few industries, the success of which are dependent on cooperation from other regional and national economies. The recent sanctions on ZTE and Huawei by the American government is a warning which should be taken seriously. Meanwhile, HK has some of the best universities in Asia, which can help PRD move up the value chain and diversify into other industries such as materials sciences and biomedical sciences. Only by becoming a centre of technological innovations for PRD and helping firms there thrive can HK maintain its leading position in producer services in particular the financial service.

We have some policy suggestions for HK to become a centre of technological innovations:

- Build Hong Kong as a centre of technological innovations in the Greater Bay Area, by substantially increasing government expenditure on R&D and further strengthening the international competitiveness of Hong Kong universities.
- Incentivize Hong Kong universities and their professors by introducing a law like the U.S. Bayh-Dole Act, which grants patents to the universities and its researchers and has been found to be instrumental in making the United States an innovative economy.
- Induce Hong Kong universities to do more impact projects, by giving more weight to knowledge exchange in University Grants Committee's assessment criteria on funding universities.
- Build a cluster of world-class researchers in HK by attracting global talents in the short run and nurturing home-grown talents in the longer run.

“Double Human-capital Investment Scheme”: a Top Priority for Hong Kong

"Double Human-capital Investment Scheme": a Top Priority for Hong Kong

Hongbin Cai

Introduction

Given its short-term economic plights and long-term uncertain prospects, Hong Kong must bite the bullet and resolve to undergo economic transformation. To restore its former glory, the city must step by step build up a knowledge-based, innovation-driven new economy with high-end professional services as a mainstay industry. The key to embarking on this path is human capital. However, the reality now is that human capital is still stuck in the traditional-economy era, far inadequate to satisfy the demands for economic transformation.

Should human-capital investment be significantly bolstered soon, it can stimulate demand and revive the local economy in the short run and lay the foundation for economic transformation and upgrading in the long run. Closely interwoven with Hong Kong's future, human-capital investment should be oriented to young people so that they can see where their hopes and opportunities lie in future. It would be advisable for the SAR Government to make investment in this regard a strategic focus of its economic policy and launch a "Double Human-capital Investment Scheme".

HKSAR is way behind in terms of human-capital standards

With educational inputs that have long been inadequate and backward, Hong Kong falls behind many Organization for Economic Cooperation and Development (OECD) member countries. Statistics of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in 2015 show that the per-capita years of education for individuals aged 25 or above were 12.8 for Israel, 12.5 and 12.2 for Japan and South Korea respectively, but only 11.6 for Hong Kong. Given that almost everyone enjoys nine to 10 years of compulsory education in developed countries, such a gap reflects the proportion of adults receiving university education.

Since university education is geared towards popularization in a knowledge-based, innovation-driven economy, young people studying for postgraduate programmes are set to increase with time. As a developing country, India may need to catch up in its overall development but its unique competitive edge in the information technology industry can be put down to its human-capital input in related areas. Driven by rapid advances in modern technology, demands for manual and low-skilled workers are fast replaced by artificial intelligence and automation as the labour market continues to demand better skills. Among countries which move with the times, South Korea has managed to achieve a close to 95% tertiary-school enrolment rate (World Bank data in 2017). By contrast, Hong Kong still sticks to the mode of education under the traditional economy. University education is targeted at the elites rather than the masses. The percentage of postgraduate students, particularly at doctoral level, remains low. This has been a hindrance not only to its economic transformation and upgrading but also to the enhancement of Hong Kong's economic competitiveness in the global arena.

HKSAR's human-capital investment grossly insufficient both in amount and efficiency

For decades the SAR Government's human-capital investment efforts have been lacklustre. Despite increased education inputs in recent years, the gross domestic product (GDP) share of local education expenditure at a paltry 3.3% is still much lower than the OECD average at 5.1% and pales in comparison with that in Israel at close to 6% (World Bank data). With better performance in the popularization of primary and secondary education, the gap in Hong Kong's education expenditure lies mainly in inadequate inputs in higher education. The number of first-year, first-degree places funded by the University Grants Committee (UGC) has all along been kept at about 15,000 per annum. Only in recent years were limited subsidies allocated to other higher-education programmes, such as sub-degree courses.

When it comes to public spending on educational research and development (R&D), Hong Kong lags even farther behind, with its total expenditure among various industry sectors, the Government, and universities making up merely 0.8% of the local GDP. By contrast, the respective GDP share of R&D expenditure is more than 4.5% in South Korea and Israel and over 3% in Sweden and Japan. The corresponding percentage among OECD member countries is 2.4% on average, three times that in Hong Kong. Despite raised R&D inputs in recent years, the SAR Government still has much ground to make up.

Hong Kong's human-capital investment is not just seriously lacking in quantity but is also rather inefficient. One drawback of the local higher-education management system is administrative orientation. Universities enjoy too little educational autonomy and are unable to leverage their respective advantages on the basis of social demands as well as their own characteristics. Under the same assessment criteria framework, the eight UGC-funded universities engage in homogenous competition with little differential development and mutual collaboration. In addition, since higher educational inputs are too reliant on rigid planning and formulas, resource allocation goes too much by the book and thus fails to adapt to the changing times. Coupled with the mindset in favour of elitist higher education, this has led to inattention to educational inequality and social mobility.

Launching "Double Human-capital Investment Scheme" within 5 years

To realize economic transformation, Hong Kong must build a knowledge-based, innovation-driven economy, highlighting a substantial increase in human-capital inputs as the top priority. I would like to propose a "Double Human-capital Investment Scheme" as the first and foremost strategy for the SAR Government in the next five years. Details of the Scheme are as follows:

- To raise the GDP share of public expenditure on education to 5%. Despite still being lower than the OECD average rate, this will be conducive to narrowing the gap in Hong Kong's human-capital investment. In the long run, this is an essential measure to build a knowledge-based, innovation-driven economy. Over the short term, this is the best economic stimulus measure which will facilitate the expansion of demand. Educational investment basically tops the list of social investments in terms of returns.

- To increase the number of first-year, first-degree places funded by the UGC to 20,000 or above, of which 5,000 will be allocated to areas required for future economic transformation, and to increase UGC-funded sub-degree places. The first step is to ensure that all applicants meeting the minimum entry requirements (approximately 18,000 students in 2020) will gain admission to UGC-funded universities and to lower the university entrance threshold as warranted by circumstances in future. Given the grim economic situation and enormous employment pressure, the Government should take prompt action to expand university places so as to give local young people more hope and opportunities.

- To double financial support for private higher-education institutions and vocational training providers.

- To boost the GDP share of public expenditure on R&D to 2%. This will no doubt still be lower than the OECD average rate and far lower than the ultimate requirement for building a knowledge-based, innovation-driven economy. Therefore, further increase on this basis will be necessary in future.

- To at least double doctoral degree places.

- To set up a "Senior Research Talent Scheme": local outstanding university graduates will be granted full scholarships to pursue doctoral studies at renowned universities overseas and have to meet the reasonable requirement to return to work in Hong Kong. This will help to sustain the nurturing of local senior research personnel.

- To set up an "Educational Loan Scheme": to provide zero-interest or low-interest, long-term loans (e.g. interest-free for the first 10 years, with a low annual interest rate thereafter), sponsor tuition fees and living expenses of local university students, as well as support local students and working adults to study taught postgraduate programmes.

Other feasible complementary measures

To launch the five-year "Double Human-Capital Investment Scheme", the SAR Government should plan thoroughly and adopt a range of complementary measures so as to strike a balance among various social and economic goals.

- ***To issue an educational bond***

  In the event of the "Double Human-Capital Investment Scheme" going over-budget, the Government can issue a long-term educational bond as a funding source. As a means of safeguarding people's livelihoods and reviving the economy, this will be instrumental in relieving pressure on public finances. Moreover, in the current low-interest era, thanks to the SAR Government's high credit standing established over the years, it will probably not be a problem for the educational bond to raise capital at low cost. As evidenced from global experience, human-capital investment has high social and economic returns over time. The growth in labour productivity will then also provide strong support for the government coffers. Eventually, therefore, bolstering human-capital investment by issuing an educational bond will not prove too heavy a burden for the financial well-being of Hong Kong.

- ***To raise efficiency by reforming university education management and input systems***

  While increasing its human-capital investment, the SAR Government should proactively reform university education management and input systems and endeavour to enhance the efficiency of human-capital investment. The focus is on minimizing excessive administrative intervention, elevating the autonomy of universities, and encouraging universities to develop their own competitive advantages. For example, on the basis of previous fund allocation as the basic source of funding, individual universities can redeploy their own resources, thus encouraging innovation and differential development among them with the new funds as guidance. Adjustments should be made to university tuition fee systems, expanding subsidies to students from low-income families and raising tuition fees for those from high-income families.

- ***To build an international education hub as a major economic pillar***

  While Hong Kong is an international financial centre, its other traditional industries are no longer in a position to provide key impetus for economic growth. The city's overall prosperity can hardly be supported by the thriving financial industry alone. The path to its economic transformation and upgrading hinges on the professionalism and competitive advantages created by Hong Kong people in the past. In addition to maintaining and reinforcing its status as an international financial centre, it is necessary for Hong Kong to establish international hubs covering the industries of education, healthcare, cultural creativity, as well as R&D and innovation. Of these, building an international education hub is not only the most feasible but will also be a driving force for other industries.

  Hong Kong is already in possession of a sound foundation in international education. In face of the reversal of globalization today, while the demand for international education remains huge among Mainland China and emerging countries in Asia, the US and Europe are becoming less and less open to foreign immigrants in pursuit of work and study opportunities. This offers a rare window for Hong Kong to develop international education.

  The SAR Government should allow all UGC-funded universities to expand their ratios of Mainland and international students. So long as tuition fees remain reasonable, this will probably suffice to meet education costs and will contribute towards the sustainable development of the universities. Encouraging universities to launch taught postgraduate programmes and proactively expand their education services will also provide an extra source of revenue for the UGC-funded universities and raise their level of internationalization and international competitiveness. This will be conducive to enhancing the quality of higher education geared towards local students. As for possible competition against local graduates seeking employment, this can be mitigated by work visa arrangements and employment priority for local workers.

Hong Kong's Fiscal Stance

Hong Kong's Fiscal Stance

Stephen Ching
Stephen Chiu
Maurice Tse

The Government's Revenue Composition

In accordance with the Basic Law, the HKSAR government has adopted a tax system similar to what existed before 1997. The tax system is simple and predictable, and tax rates are among the lowest in the world.

In the five fiscal years from 2014-15 to 2018-19, business tax accounted for a share of between 22.29% to 31.16% total government revenue in the respective year. Salaries tax accounted for a share of between 9.82% to 12.86%. Land premiums accounted for a share of between 13.53% to 26.59%. Given the heavy reliance on land premiums as an important source of budget revenue, it is no wonder that there are criticisms of the high land price policy. The next single important component is stamp duties, which accounted for a share of between 10.8% to 15.64% of government revenue. The remaining is investment income and other revenue.

Table 1: Composition of government revenue

Year	14-15	15-16	16-17	17-18	18-19
Profit tax	28.80%	31.16%	24.29%	22.44%	27.78%
Land premium	16.25%	13.53%	22.33%	26.59%	19.48%
Stamp duties	15.64%	13.93%	10.80%	15.35%	13.34%
Salaries tax	12.40%	12.86%	10.31%	9.82%	10.03%
Other revenue and investment income	26.91%	28.52%	32.27%	25.80%	29.37%
Total government revenue (HKD, billion)	478.7	450	573.1	619.8	599.8

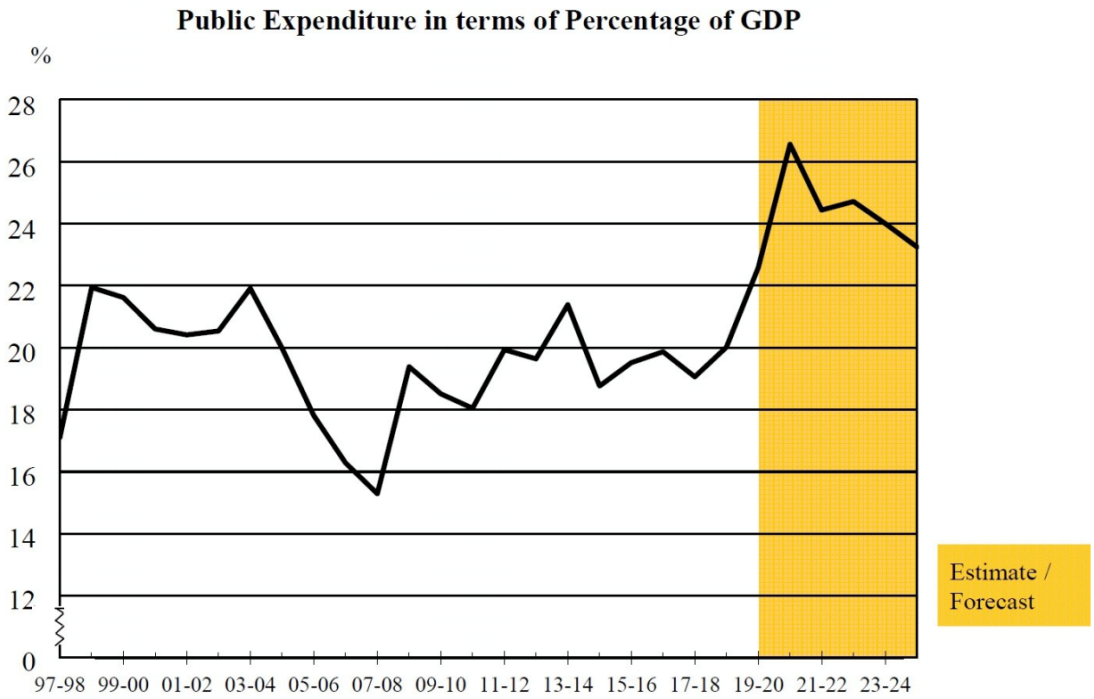
Source: https://www.censtatd.gov.hk/hkstat/sub/sp110.jsp?tableID=193&ID=0&productType=8, and own calculations

Land premium, as a significant source of budget revenue, has been most volatile among all other sources, fluctuating from HK$5.4 billion in 2003-04 to $164.8 billion in 2017-18. One should wonder if land premiums can serve as a stable and reliable source of income in the long run for the Government to sustain its ever-growing public expenditure.

Expenditure

The public expenditure, which is government expenditure plus expenditure by the Housing Authority and other funds (the former usually exceeds the latter by around 10%), has fluctuated between 15% to 22% of the year's GDP. It has hit the upper bound recently and is expected to be even higher in the near future. (See Figure 1)

Figure 1: Public Expenditure in terms of Percentage of GDP

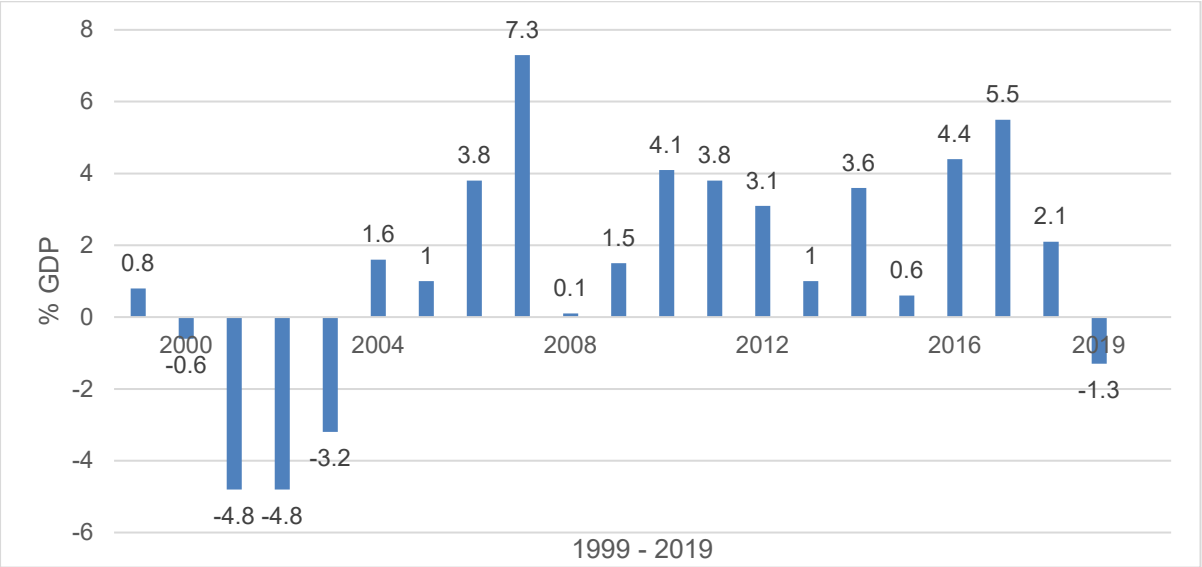


Source: 2020–2021 The Budget, Hong Kong SAR Government

Fiscal Surplus

Hong Kong has had a budget surplus for much of the last two decades. We had, nonetheless, a budget deficit of around 1.3% of our annual GDP in the 2019-20 fiscal year. The last time we experienced budget deficit was in the early 2000s, after the Asian financial crisis and before the outbreak of SARS epidemic in 2003. Figure 2 shows the government's budget deficit as a percentage of the year's GDP.

Figure 2: Hong Kong SAR Government Budget Surplus



Source: tradingeconomics.com

As the culmination of budget surpluses, Hong Kong's fiscal reserves at the end of March 2020 totaled HK$1.16 trillion. This amounts to HK$154,000 per person, 40.5% of Hong Kong's GDP, or 191% of government expenditure in 2019. On the other hand, Hong Kong's fiscal reserves reached an all-time low at HK$0.234 trillion in October 2003 and an all-time high of HK$1.20 trillion in January 2019. (See Note)

The huge fiscal reserves have prompted some important questions. Have fiscal reserves been well-managed and invested? Will the high fiscal efficiency and transparency continue in the future? What should the optimal size of the fiscal reserves be? Should we reform the fiscal policy so as to prudently reduce the revenue and spend more on government expenditure? Should the fiscal reserves be spent so as to benefit the Hong Kong community as a whole? Or should we simply go for more generous handouts?

In the last two fiscal budget years, the Government has aimed to adopt a more forward-looking strategy in managing the accumulated fiscal surpluses. That strategy includes investing for the future; investing in preventive measures such as preventive medical care, training, retraining, and in social enterprises; enhancing Hong Kong's competitiveness in terms of social and economic development; as well as providing tax reliefs to companies to enhance their competitiveness. All these measures are to be implemented on the premise of ensuring the health of Hong Kong's public finances.

Challenges Ahead

These issues, however, may no longer be immediately relevant. In the last two years, Hong Kong's economy encountered a series of difficulties brought about by the US-China trade war, social turmoils, and the ongoing COVID-19 pandemic.

In fact, in the near term, steep challenges confront the Hong Kong economy's prospects. These include the slowdown of the major economies in the world due to the pandemic, ongoing conflicts between the US and China on issues of trade and economic development, uncertainties brought forth by Brexit, geopolitical risks in the Middle East and Asia, and the impacts of local social turmoil. Perhaps most importantly, Hong Kong's status as an open economy will hinge on the global economy's shifting politico-economic landscape.

The Hong Kong government has implemented determinedly aggressive measures to combat the catastrophic economic impacts of the COVID-19 pandemic. These include two rounds of anti-epidemic fund measures and an expansionary expenditure as economic relief measures. The total amount committed in the recent government budget came to HK$280 billion, or 10% of Hong Kong's GDP.

We believe that the huge fiscal surplus that Hong Kong has accumulated over the years will allow Hong Kong to weather this round of the economic slowdown caused by the pandemic without having to compromise its fiscal health. At the end of the second quarter this year, the fiscal reserves dropped to HK$800 billion.

However, even once the pandemic is brought under control globally, the "normal" economic conditions that prevailed before the outbreak of COVID-19 will not necessarily resume. Unfortunately, Hong Kong will likely have to face new challenges that will threaten our fiscal well-being.

One challenge is a constitutional one. As Article 107 of the Basic law stipulates," The Hong Kong Special Administrative Region shall follow the principle of keeping the expenditure within the limits of revenues in drawing up its budget, and strive to achieve a fiscal balance, avoid deficits and keep the budget commensurate with the growth rate of its gross domestic product."

We think that Article 107 should not be interpreted dogmatically because running a budget deficit, even for a few years, is understandable given the epic battle against the COVID-19 pandemic.

An even greater underlying challenge ahead is the worsening relationship between the US and China, which is already causing a great deal of uncertainty to the continuing role of Hong Kong as a gateway between China and the rest of the world.

Hong Kong may be the only jurisdiction in the world that is legally required to maintain its status as an international financial centre under Article 109 of the Basic Law. It stipulates that the Hong Kong Special Administrative Region must "provide an appropriate economic and legal environment" to maintain Hong Kong's status as an international financial centre.

Furthermore, according to the "Outline development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area" issued by the Central Government on February 18, 2019, Guangzhou, Shenzhen, Hong Kong and Macao have the following strategic priorities of development: (1) developing international technology and innovation centres; (2) accelerating infrastructure construction to improve the flow of talent, goods and information; (3) establishing a modern industrial system with global competitiveness; and (4) promoting ecological protection to create a high-quality living environment.

To this end, Hong Kong must consolidate and enhance its position as an international financial, shipping, trade centre and international aviation hub; strengthen its position as a global offshore RMB business hub, an international asset management centre, and a risk centre; promote the development of high-end, high value-added finance, commerce, logistics and professional services; vigorously develop innovation and technology; nurture emerging industries; build international legal and dispute resolution service centres in the Asia-Pacific region; and build a more competitive international metropolis.

The big question against all the headwinds is whether Hong Kong will be able to play its key role as an international financial centre. If the recent international risks facing Hong Kong suggest a permanent change to the role of Hong Kong, then as far as public finance is concerned, this may prolong Hong Kong's budget deficit.

To deal with this issue, we can either cut government expenditure, or increase fiscal revenue, or do a combination of both. It is hard to cut expenditure when the economy is taking a nosedive and the public needs government support most. To increase revenue, it is hard to increase profits or salaries tax rates without undercutting some basic taxation principles that Hong Kong has been proud of all along.

We have already relied quite heavily on land premiums and stamp duties in property market transactions as a significant source of fiscal revenue. But their high volatility makes them less viable as a long-run source of stable income to the government. We need some novel thinking on the design and the formulation of a fiscal strategy that can sustain the healthy and balanced growth of Hong Kong's fiscal reserve.

To provide a more stabilized source of fiscal revenue in the long run, our research shows that one feasible means is reforming the tax policy that underpins the operations of the domestic property market sector.

Note: https://www.fstb.gov.hk/tb/en/financial-statistics.htm

Regulatory and Regulatory-reform Framework for a Rapidly Changing World

Regulatory and Regulatory-reform Framework for a Rapidly Changing World

Yuk-fai Fong
Jin Li

In the past decade, numerous advancements in technologies have profoundly changed our lives. Social media now connects billions of people worldwide, facilitating highly affordable methods of communication. Widespread adoption of sharing platforms has completely changed how people access services like car rides and vacation accommodations. Advances in machine learning methods and artificial intelligence have vastly enhanced companies' capabilities to understand customers' needs and better meet their demands. The emergence of FinTech solutions has also disrupted how consumers transact with merchants, do banking, obtain credit, and invest.

In a rapidly changing world, well-intended regulations suited for the world even just a few years ago may no longer solve problems but instead hinder the adoption of new services and technologies today. This article proposes short-term remedies for specific socioeconomic issues and a new, long-term approach to regulation and deregulation.

Proposals for Regulatory Reforms to Address Two Existing Issues

Ride-hailing Service

According to the South China Morning Post (21 March, 2019), complaints against Hong Kong's taxi drivers hit a record high of 11,000 in 2018, having more than doubled over the past decade and a half. Most complaints dealt with bad driving, circuitous routes, and overcharging. One effective way to improve taxi services is to introduce greater competition. However, the Hong Kong government has not issued any new taxi medallions since 1994 despite Hong Kong's population having grown 23.5% in the past 26 years. The entry of Uber and other ride-hailing platforms into Hong Kong has introduced competition in the ride-hailing market. There are currently 14,000 Uber drivers in Hong Kong. According to the General Manager of Uber Hong Kong, Mr. Estyn Chung, over two million Hong Kong people have used Uber's service. However, under current regulations, it is illegal for private car drivers to provide paid rides in Hong Kong. This limits the extent to which Uber and other ride-hailing platforms can exert pressure on taxi operators and drivers to improve the quality of their services, and also discourages these technology platforms from making long-term commitments to improve their driver network and services in Hong Kong.

In 2017, the Consumer Council proposed that, "[t]o reduce barriers of entry and to foster innovation, it would be desirable to impose fewer requirements for E-hailing services as far as possible." Uber also more recently appealed to the Hong Kong government to legalize Uber rides in Hong Kong, promising to move their Asia Pacific Headquarters to the city in exchange. However, the government seems reluctant to reform the industry's regulation. Currently, the most vocal opposition to legalizing Uber comes from the Association of Taxi Industry Development. The Association's chairman insisted that the government "needed to resolve the long-standing issue of taxi licenses currently priced at more than HK$5 million (US$645,000) each." He proposed that the government buy back all the licenses to clear the path for reform.

To increase competition in the taxi or ride-hailing industry, one of our proposals is for the government to sell special licenses to operate ride-hailing companies and legalize private car rides offered through these licensed ride-hailing companies. Each license permits a ride-hailing company to provide a certain number of rides or a certain number of hours of operation with a certain number of vehicles. Since the objective of the issuance of licenses is not to generate revenue for the government, a certain percentage or all revenue from license sales can be transferred to existing license owners to recognize the potential impact of new entrants on the value of each existing license. This will also help reduce the resistance from the current license owners. If ride-hailing companies are indeed efficiency-enhancing and can create substantial value to consumers, they should be able to pay the entry costs similar in nature to what existing license owners had previously paid, and still stay profitable.

Alternatively, the government could consider legalizing the provision of private car rides without charging an upfront license fee. Instead, providers of car rides or the ride-hailing platform provider would be required to pay a tax for each ride, and all or part of the tax revenue will go to existing taxi license holders. Either approach of this particular regulatory reform would not require the government to compensate the taxi license holders as the Association of Taxi Industry Development has demanded. Without having to bear the fiscal burden, the government is also able to reform the regulations for more industries using the same approach. This method is less efficient than the previous one from an economic perspective because the per-ride tax will distort the car-ride fare upward, but is a helpful alternative if an upfront license fee proves to be too much of a burden for the entrant, say, due to liquidity constraints. In general, a combination of an upfront license fee and a tax per ride is also possible, and the possibility of reducing the tax per ride over time should also be considered.

Doctor Shortage

Another longstanding issue facing Hong Kong is the shortage of doctors. According to the Our Hong Kong Foundation, Hong Kong has only 1.9 doctors per 1,000 people, far below the average of three doctors per 1,000 people among high-income countries/regions as calculated by the World Bank. According to SCMP, as of 2019, Hong Kong permits only 25 foreign doctors to practice in Hong Kong each year. Aside from allowing very few foreign doctors to practice in Hong Kong, these doctors can only obtain "limited registration" under a renewable three-year contract. Until 2019, foreign doctors had to first do internship when they entered Hong Kong regardless of their previous experience. When the internship requirement was waived in 2019, Dr. Ho Chung-ping of the Hong Kong Medical Association expected only 30 foreign specialists would be attracted to Hong Kong per year.

Singapore also faces a similar problem of doctor shortages, but its government takes a much more active approach in welcoming foreign doctors to practice in the country. In 2012, the Singaporean government launched the Healthcare 2020 Master Plan to meet the shortfall. From 2007 to 2016, Singapore imported more than 500 doctors on average annually against Hong Kong's 25. As of 2017, the latest year for which figures are available, Singapore had 5,873 foreign-trained doctors.

To solve the long-standing issues of doctor shortages in Hong Kong, we propose that, instead of trying to overcome the hurdle of importing more foreign doctors, the Hong Kong government could build hospitals in Shenzhen to serve Hong Kong residents. To build such hospitals, the Hong Kong government would need cooperation from the Shenzhen municipal government. The operations of the hospitals can be modelled after the HKU-Shenzhen Hospital. HKU-SZH is a major comprehensive public hospital built by the Shenzhen municipal government. It introduced a modern management model with the help of the University of Hong Kong. The hospital's International Medical Center provides high quality advanced medical services, meeting international standards. Apart from funding the construction of the hospital, the Shenzhen municipal government also subsidizes the operation of the hospital. HKU-SZH is mostly aimed at serving residents in the mainland.

Unlike HKU-SZH, the hospitals we propose are to be constructed using Hong Kong government's funding, just like public hospitals in Hong Kong, and they aim at serving Hong Kong residents. The hospitals will be run in a similar fashion to HKU-SZH, using the management style of Hong Kong hospitals and being led by medical experts from Hong Kong. Unlike hospitals in Hong Kong, these hospitals will predominately hire qualified doctors trained on the mainland, and who are screened and managed by medical experts in Hong Kong. The fees for service will follow those of public hospitals in Hong Kong. When certain patients cannot be treated in these hospitals, they can be referred back to hospitals in Hong Kong. If there is concern that the cost of going to Shenzhen is too high for some patients, the Government could negotiate with the MTR to offer reduced fares for those making medical trips to these hospitals in Shenzhen. Currently, HKU-SZH accepts vouchers for Hong Kong senior citizens issued under the Elderly Health Care Voucher Scheme of the Hong Kong Government. These vouchers should also be accepted at these new hospitals. With the comprehensive Hong Kong-style medical services provided in Shenzhen, Hong Kong retirees living in the Greater Bay Area can also be better served in their healthcare needs.

New Regulatory and Deregulatory Framework

In the previous section, we proposed some practical solutions to address the under-provision and low quality of taxi services and the shortage of doctors in Hong Kong. These are all short-term solutions intended to address pre-existing problems. In this section, we propose a new framework for regulation and deregulation. This new framework can prevent regulations from becoming obsolete in a fast-changing environment. We will state the main objectives of the new regulation framework, list several key approaches that are essential for reaching the objective, and finally comment on a number of design issues, potential pitfalls associated with the new regulation framework, and possible solutions.

The main objective of the new regulatory framework is to make the economy agile and adaptive in a volatile, uncertain, and complex environment. When the market environment is changing and the future difficult to predict, what's required of regulations also changes constantly. What used to be a solution to market inefficiency can become its cause in a new environment. However, when a regulated environment becomes the status quo, reform or deregulation is difficult to achieve because the previous regulation has created certain players with vested interests in the market. This is shown in the case of the Hong Kong taxi market, where existing taxi license owners "oppose any change that could hinder the return on their investment—such as introducing modern competition" (Fortune, 2020).

For regulation to facilitate adaptation, three key issues must be addressed. First, when there are vested interests, as is illustrated in the taxi example above, regulation needs to reduce the incentives of vested interests to oppose efficient entry. Second, regulation should prevent and mitigate the rise of the vested interests to the extent possible. Third, regulation should create environments that facilitate firms' experimentation on new ways of doing business.

To reduce the resistance by vested interests of entry into the market by potential competitors armed with new technologies, the regulatory framework should facilitate a win-win outcome. As long as the new technology creates sufficient amount of value, everyone should be able to benefit from it as long as there is a proper rule of sharing the benefits. In other words, when the benefit of the technology is clear, the regulatory authority should not only focus on whether to allow the potential competitor to enter, but propose mechanisms for new entrants to compensate existing stakeholders to reduce their incentive of fighting adoption of the new technology. In the taxi license example, we have discussed using direct monetary compensations. There are also other forms of compensations, such as requiring entrants to employ existing workers in the industry or having existing stakeholders become shareholders or partial owners of the new entrants. Depending on the characteristics of the entrants and existing stakeholders, different industries require different forms of compensations to overcome the existing stakeholders' resistance, and details matter. To account for the differences while still maintaining a uniform standard, there should be a clear set of guidelines on what different types of compensations are feasible and how they are administered.

Next, to prevent and reduce the rise of vested interests, we propose that whenever any new regulation is proposed, a clear roadmap for future deregulation or undoing of the new regulation should also be provided. More specifically, rationale for the new regulation should be clearly articulated. Based on that, conditions under which the rationale is no longer valid and the regulation is no longer needed should be as clearly stated as possible. This prevents those who benefit from the regulation from taking it for granted, as they understand there will be eventual deregulation or reform. When deregulation or reform is proposed, there will be less resistance, and since there is no need to compensate those vested interests, a more efficient outcome of deregulation can be achieved. By putting in place a path for phasing out existing regulation when a new one is implemented, there will be less resistance overall to the introduction of new regulation.

Third, to help firms to experiment on new ways of doing business, we propose to expand the use of sandbox regulatory approaches. Hong Kong has made progress in using the sandbox regulatory approach in areas such as Fintech, but a similar approach can be used in industries such as education, food, housing, investment, legal, and medical services. Our proposal to build public hospitals to serve Hong Kong residents can be considered a regulatory sandbox. If the hospitals are a success, then we may use the same model to meet some other under-supplied services in Hong Kong.

In general, instead of ensuring that all regulatory requirements are met before a business begin operations, regulatory authorities can allow the firms to operate first and giving grace periods to satisfy licensing requirements. Instead of focusing on establishing rules for compliance, the regulatory authority could aim at creating a safe 'playground' to experiment in, allowing market forces to sort out good business practices from bad ones, and making sure that the possible damages from failed experimentation can be contained.

We end the proposal by discussing a few potential pitfalls and design issues related to the new framework.

First, compensating existing stakeholders due to entry creates incentives for parties to take actions to increase their compensation. One could imagine vested interests exaggerating their losses caused by new entrants. Guidelines for compensation must be designed to discourage this type of behavior.

Second, any compensation decision or ways for phasing out a regulation is by nature complex, subjective, and error-prone, and as such public trust is crucial for the success of these regulatory operations. Since more compensation decisions and deregulation are expected under the new approach of regulation, it is important to gain the public's trust in these processes. To create trust, it will be useful to establish an impartial regulation sub-agency consisting of experts from different industries. To ensure impartiality and expertise, members of such a sub-agency may consider employing relevant international expert. There should also be institutional arrangements to ensure the independence and autonomy of the sub-agency.

Finally, the sandbox approach changes both the incentives and skill requirements of the regulatory authority. Traditional regulators excel at problem prevention and have an incentive to err on the safer side. The sandbox approach requires talent who, one, can spot problems early and prevent further damage, and two, can design and discover safe 'playgrounds' for the companies to experiment in. In short, a sandbox approach will require the regulatory authority to take initiative and experiment on new ways of regulation. For it to be successful, we propose to establish a new agency that specializes in the sandbox approach. It will be easier for a new agency to attract and develop talent that excel as problem spotters and problem solvers. It will also be easier for a new agency to design incentive systems that encourage the regulators to experiment on new approaches.

Public Annuity as a Component of Retirement Income Protection Policy: Lessons from Hong Kong and Overseas

Public annuity as a component of retirement income protection policy: Lessons from Hong Kong and overseas

Sau-Him Paul Lau
Qilin Zhang

Introduction

According to the Hong Kong's Department of Health, the life expectancy at birth for Hong Kong males increased from 67.8 years in 1971 to 82.3 years in 2019, and that for females increased from 75.3 years to 88.1 years over the same period.[1] Among those who were 65-years-old in 2016, 30.7% of males and 52.2% of females are expected to survive to 90 years old.[2]

One issue associated with population aging is that more citizens may have inadequate financial resources at old age, particularly if they live longer than expected. Unlike many developed economies, the major component of retirement income protection in Hong Kong is the Mandatory Provident Fund (MPF) scheme, a funded defined-contribution (DC) system.

Although the MPF aims at helping people save more for retirement, it does little on guiding people how to use their retirement wealth effectively to insure against longevity risk, which is the risk of outliving their resources when they live longer than anticipated. If a person withdraws her savings too quickly, she will end up with inadequate resources during advanced age. If she withdraws too slowly, she will consume at a lower level when alive, implying a wastage of her resources. Moreover, even though some people do understand the importance of consumption smoothing, a critical problem is that people do not know exactly how long they will live. As a result, it is hard for them to determine how much to withdraw from their savings every year.

To help citizens deal with the problem of longevity risk, the Hong Kong government introduced the public annuity (PA) program in 2018.[3] As an annuity supplier, the government steps in the market and offers lifelong annuity products. People can make a single payment at retirement in exchange for monthly annuity income as long as they are alive.

[1] See https://www.chp.gov.hk/en/statistics/data/10/27/111.html (access at July 2020).
[2] The numbers are based on our calculation using the life table of 2016. Data source: https://www.censtatd.gov.hk/hkstat/sub/sp190.jsp?productCode=B1120016 (access at July 2020).
[3] Besides the PA, people may buy annuities from the private market, but it is well known that the purchases are limited (see, for example, Benartzi et al., 2011). People may also rely on family support, but a lot of people think that this type of support may be less reliable in the coming decades.

The public provision of annuity products offers greater economies of scale than private provision. However, some people may also be skeptical and perceive that the government is less efficient than the private market in providing the annuity product. While there is no clear consensus regarding the efficiency or inefficiency of public provision of annuity contracts, recent research suggests another important reason to support the provision of PAs: PA policy design may matter in delivering desirable outcomes at both the individual and societal levels.

Public Annuity Program in Hong Kong: A Brief Description

In the early 2010s, there was a heated public debate in Hong Kong regarding the retirement protection policy. In particular, there was no consensus regarding two major suggestions: universal retirement protection system versus a means-tested system focusing on "those with financial needs." [4] Influenced by the newly introduced PA plans in Singapore, there was also an alternative suggestion of PA plans. [5] In July 2018, the PA program, officially called the HKMC Annuity Plan, was launched. The plan is underwritten by the Hong Kong Mortgage Corporation (HKMC) Limited, a company wholly owned by the Hong Kong Government.

The HKMC Annuity Plan is designed as a voluntary program. Initially, all Hong Kong permanent citizens aged 65 and above were eligible to buy, but the eligibility age was reduced to 60 in 2020 (HKMC Annuity Limited, 2020). The government does not ask for any health information of an applicant or require any medical examination before she plans to buy.

If a person decides to buy, she has to pay at least 50,000 Hong Kong Dollars (HKD) as the premium, and there is also a ceiling in the amount of purchase. The level of maximum purchase changes from time to time. It was set at 1 million HKD in July 2018, extended to 2 million in December 2018, and further to 3 million after May 2019.

Perhaps because the program is voluntary and still at the early stage of development, its market size is relatively small. Up to the end of July 2020, the total number of policies sold was 8,900, with the total premium of 5.61 billion HKD.[6]

Up to now, the rate of participation in annuitization is low. Only a small fraction of senior citizens (such as the 456,000 people in the 65-69 age group) in Hong Kong has purchased the PA product. If the PA participation rate is higher, more people would worry less about the longevity risk after they reach their 80s or 90s. Moreover, a higher participation rate would be beneficial to the PA program, due to a larger scale of operation and potential advantages of lower average cost.

It is therefore interesting to compare the PA policies in Hong Kong with those in other economies to shed light on possible directions for policymakers to move forward.

[4] A comparison of the "regardless of rich or poor" and "those with financial needs" options can be found in Commission on Poverty (2015, Chapter 6).
[5] The proposal of PA plans is mentioned in Commission on Poverty (2015, Annex 6).
[6] Data source: The HKMC Annuity Limited.

Similarities and Differences of Observed Public Annuity Practices

Besides Hong Kong, other economies have also introduced their own PA programs. These include Sweden's premium pension program since 1999, Singapore's Lifelong Income for the Elderly (LIFE) program since 2009, and Lithuania's centralized pension annuity program in 2020. [7]

Table 1 displays a brief comparison among the four economies. All of them are small developed economies facing the problem of population aging. Their population sizes range from three to ten million, with a high percentage of citizens aged 65 and above. They have high GDP per capita and are classified as high-income economies by the World Bank. These economies use the DC individual account system. In each case, the government is the sole supplier of the PA.

Table 1

	Sweden	Singapore	Hong Kong	Lithuania
Socio-economic characteristics				
GDP per capita (2018)	54651 USD	64582 USD	48676 USD	19071 USD
Population size (2018)	10.2 million	4.0 million [a]	7.5 million	2.79 million
Fraction of aged 65 & above	19.9 %	13.7 %	17.4 %	19.6 %
Life expectancy at birth (2017)	82 years	83 years	85 years	75 years
Public annuity programs				
Type of PA program	Mandatory	Mandatory	Voluntary	Mandatory
Year of PA launch	1999	2009	2018	2020
PA market size	Large	Large	Small	Unclear
Gender-based annuity	No	Yes	Yes	No
Bequest element	No	Yes	Yes	Yes
Escalating element	No	Yes	No	No

a. Refer to resident population consisting of Singapore citizens and permanent residents.

[7] More detailed information about these PA plans can be found in Zhang (2020, Chapter 1).

Despite these similarities, we find that the PA program in Hong Kong differs from the others in two important aspects.

(A) Voluntary versus mandatory plans

First, the PA program in Hong Kong is a voluntary scheme not connected to its DC system, while the others are mandatory ones connected closely with their DC systems. The DC system in Singapore is known as the Central Provident Fund (CPF). Singaporeans are required to set aside at least the amount of Full Retirement Sum (FRS) from their CPF saving accounts.[8] The savings set aside are converted to CPF LIFE annuity after retirement. In Lithuania, the requirement is similar: a retiree is required to buy PA if the amount in her DC account is between 10,000 and 60,000 Euros.[9] In Sweden, either all or part of the savings in a person's DC account has to be converted to the PA. In each of these economies, there is a clear linkage between the DC system and PA programs, converting the savings in the DC system to the annuities.

The absence of a connection between the HKMC Annuity Plan and the MPF means that Hong Kong residents simply withdraw their savings in their MPF accounts after retirement. On the other hand, they can use either their MPF savings or private savings to purchase the PA or private annuities from the market.

(B) One simple contract

Second, the PA program in Hong Kong offers one simple contract for each gender, while other economies offer several annuity contracts. In Hong Kong, the PA contract guarantees to pay an agreed amount to the buyer while she is still alive or to her beneficiary (up to 105% of the premium in nominal terms) after she dies. The CPF LIFE in Singapore currently offers three types of contracts: the Standard Plan, Basic Plan, and Escalating Plan.[10] The Standard Plan emphasizes annuity income level while the Basic Plan puts more weight on bequest level. The Escalating plan deals with inflation risk and puts more weight on future income level. Sweden offers various contracts, including single-life versus joint-life annuities, immediate versus deferred annuities, and variable versus fixed-term annuities. Lithuania offers both immediate and deferred annuities.

[8] The level of FRS is 181,000 Singaporean Dollar in 2020. If a person has a property, she may choose to set aside the amount of Basic Retirement Sum, which is half of FRS. People also have the choice to set aside up to the level of Enhanced Retirement Sum, which is 1.5 times of FRS.

[9] The persons with savings below 10,000 Euros in their DC accounts are exempted from mandatory annuitization.

[10] Initially twelves plans were recommended in 2008. Four of them were selected and launched in 2009. The number of plans was reduced to two (namely, the Standard and Basic Plans) in 2013. The Escalating Plan was introduced in 2018.

Public Annuity Policy Design Matters

Based on existing research on this topic, there are several results relevant to PA policy making.

First, the introduction of the PA program, even with just one plan, is beneficial to the citizens. A major function of the annuity is the sharing of a "mortality premium," with the resources of those who die earlier being transferred to those who live longer. When the PA is available, particularly in an environment in which the government is willing to bear various risks of issuing a long-term financial instrument and simply take the neutral position of zero profit, the effect to annuity buyers could be beneficial.

Second, a major issue in the annuity market is that buyers and sellers may have asymmetric information about the survival probabilities of individual buyers. Since the government usually does not examine PA buyers' health condition, those with good health (i.e., high-risk types) tend to buy a larger amount of PA. The asymmetric information about health may cause the problem of adverse selection, making the PA expensive. An appropriate PA policy design to mitigate the efficiency loss caused by information asymmetry would be beneficial. The conventional point of view is that a mandatory plan with uniform annuitization removes adverse selection. However, this gain from a mandatory plan is accompanied with the cost due to the loss of choice flexibility. In particular, a mandatory plan with very strong restriction may lead to substantial distortion in buyers' behavior, particularly those with poor health. In contrast to the mandatory plan that imposes strong restriction, a voluntary plan with a ceiling can also reduce the severity of adverse selection while maintaining choice flexibility and a lower level of distortion (Lau and Zhang, 2020). The tradeoff of restriction versus flexibility is an important factor in designing a PA program.

Third, when adverse selection is a major source of market imperfection, a "pure" PA contract with only survival-contingent payment may be dominated by a weaker version with bequest or guarantee elements. When the government guarantees that some amount of the premium will be paid to the beneficiaries (as in the HKMC Annuity Plan), the PA provider has to reduce the survival-contingent payment to maintain its budget. People with good health are likely to live longer and thus care more about the survival-contingent payment. Given a smaller payment, these retirees want to buy more PA to support their original targeted level of consumption. In a PA plan when buyers with sufficiently good health are constrained by the imposed purchase ceiling, they cannot take full advantage of their private information to buy more annuities. As a result, the severity of adverse selection of the PA market can be reduced.

Lessons Learned for Retirement Income Policy in Hong Kong to Move Forward

In Section 4 we discussed how the PA policy design could help people hedge against longevity risk more effectively. In this section we provide some general suggestions for the retirement income protection policy in Hong Kong. We discuss the following aspects: simplicity, transparency, complementarity, active promotion, and nudging.

(A) Simplicity

Policies usually perform well when they serve as few important objectives as possible. A policy aiming at many objectives is usually complicated, and the complexity increases the cognitive burden of understanding it (Brown et al., 2017). In the context of PA plans, a complicated policy is likely to confuse buyers rather than help them, because many citizens lack financial literacy (Lusardi and Mitchell, 2014) and the cognitive ability of the elderly is declining over time.

Compared with other PA plans, the PA plan in Hong Kong so far takes a relatively simple form. The PA provider has done well in this aspect and hopefully would continue to maintain the simplicity of the PA products. For example, offering the PA as a lifelong fixed contract is better than as a lifelong variable one, because the main objective of PA is to insure against the longevity risk. If the element of financial investment is added, it would likely distract some elderly from insuring against longevity risk to expecting to earn higher investment return (by bearing higher risk in return too), reducing the effectiveness of the current PA plan.

(B) Transparency

A well-designed and transparent policy allows citizens to make their plans accordingly. Transparency is important because it not only keeps the buyers better informed about the product but it also maintains the PA provider's credibility.

There is at least one aspect where transparency can be improved: the possible different PA plans for future generations. Because of the continuing improvement in medical science and healthcare system, life expectancy is likely to continue increasing in the coming decades (Lee, 2003). The current life table used to calculate the payment of existing PA plans will become outdated in, for example, five years. So far, the public knows little about how the premium schedules for the PA plans of future cohorts may be adjusted. To address the concern of future cohorts, the PA provider should consider periodically announcing the plan to determine the payments of future PA plans based on an updated lifetable, if practical.

(C) Complementarity between PA and other solutions

The PA plans, which are about the drawdown phase, is only part of the retirement income protection system. In analyzing the broader question of retirement income policy, there are many policy objectives for consideration, including income inequality and redistribution. Up to this point, we have analyzed the PA from the insurance angle, as a solution to longevity risk. Alternatively, we can view it through the lens of resource redistribution. The PA plans (together with mandatory saving policy) contain elements of longitudinal (or intertemporal) redistribution at the individual level and among people of similar age groups.

On the other hand, it is well known that the PAYGO system and many of the social safety net policies (such as the social assistance programs) involve cross-sectional redistribution from the young generation to the elderly. As society ages with the proportion of young people shrinking, social safety net policies impose huge budgetary burdens on the government.

A well-built PA system ensures that citizens will have some protection of lifelong income, which in turn reduces the budgetary burden of implementing appropriate social safety net policies. To mitigate old-age financial inadequacy, the PA program as a solution to longevity risk should be viewed as complementary to (not a substitute of) the social safety net policies.

(D) Active promotion

The PA provider may consider introducing education and promotion programs to improve financial literacy and minimize behavioral biases. Some people are simply unaware of the importance of retirement protection. Although some people recognize the importance of a steady retirement income, few comprehend well the complicated intertemporal tradeoff involved in annuity purchase. Moreover, the lack of financial literacy may interact with behavioral factors (such as procrastination and loss aversion) and the combined effect could cause people to make inappropriate decisions (including repeatedly delaying their annuitization decisions). Education programs about the importance of retirement planning and promotion programs regarding the PA products to insure against longevity risk would give people opportunities to think about their retirement plans proactively and carefully.

(E) Nudging and insight of behavioral economics

Applying conventional ideas based on rationality, as well as those of behavioral economic research, would help improve retirement income policy. An interesting example is the application of framing to encourage PA participation. Brown et al. (2008) conducted an experiment by framing annuity as either an investment product or a consumption product. When annuity is viewed as a risky asset (i.e., the investment frame), only a small fraction of individuals prefers annuity, because of concerns about possible investment loss. However, annuity becomes more attractive when it is viewed as a form of insurance (i.e., the consumption frame). In addition, Thaler and Sunstein (2008) argue persuasively that the insights from behavioral economics are useful not only for understanding policy design questions, but also for providing an appropriate choice architecture when the government implements the policies. The government should encourage similar research and develop its nudging strategy regarding retirement income protection.

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Managing Demand for Housing in Hong Kong

Managing Demand for Housing in Hong Kong

Stephen Ching

Housing is a severe and deep-rooted problem in Hong Kong. Private housing is beyond affordability for much of the population, and neither is public housing a viable option for many because they may not meet the strict eligibility criteria. Even if some are eligible for public housing, the average waiting time for Public Rental Housing (PRH) stood at 5.6 years as at end-September 2020, and is increasing. With private housing beyond affordability, it is not uncommon for low-income families to cramp in tiny "subdivided units" for several years while waiting for a public housing unit.

The increasing unaffordability of housing has triggered a number of policy responses. The first notable one is known as *Special Stamp Duty (SSD)*, which took effect on November 20, 2010. For residential properties acquired *on or after November 20, 2010 and before October 27, 2012*, if the seller resold the property within a holding period of *24 months*, the seller was liable to an SSD of *5-15%* of the market value of the property. A heavier SSD has been imposed on properties acquired *on or after October 27, 2012*: if the seller resells the property within a holding period of *36 months*, the seller is liable to an SSD of *10-20%* of the market value of the property.

One should consider the following questions before imposing a heavier SSD:

Q: What is the purpose of introducing an SSD?

A: It is believed that an SSD can be used to cool down the housing market by reducing speculative demand for housing.

Q: What are the limitations of using an SSD to cool down the housing market?

A: There are two limitations. First, an SSD may not be effective in reducing speculative demand for housing. Second, even if it is effective on speculative demand, the effect may take the form of inducing people to switch from a shorter holding period to a longer one, i.e. displacing speculative demand with investment demand. Note that a longer holding period implies a decrease in short-run supply of housing.

For the sake of argument, while it is possible that the initial SSD of 5-15% was too mild to be effective in reducing speculative demand, the subsequent SSD of 10-20% was made sufficiently heavy to be effective on speculative demand, but it is still not effective in cooling down the housing market due to the second limitation above.

The lesson is that one should assess the limitations of a policy instrument before adopting it, and have an exit strategy in place before committing to it.

Another policy response, known as *Buyer's Stamp Duty (BSD)*, was introduced together with the heavier SSD and also took effect on October 27, 2012. For residential properties acquired on or after that date, a buyer who is not a Hong Kong permanent resident (HKPR) is liable to a BSD of *15%* of the market value of the property. HKPRs are exempted from paying BSD. (A company is not a HKPR and is liable to BSD.)

It should be clear that the intention was to use BSD to cool down the housing market by reducing non-local demand for housing. (While companies are liable to BSD, local investment demand for housing is not the primary concern of BSD. HKPRs not using companies as a vehicle to purchase residential properties, even as investment, are not subject to BSD.)

The BSD policy has two limitations. First, it may not be effective in reducing non-local demand for housing. Non-HKPRs can circumvent BSD by arranging HKPRs to purchase residential properties on their behalf. Such arrangements are illegal but exist unless enforcement of BSD is perfect.

Second, BSD has a side effect on supply of housing. Existing non-HKPR owners of residential properties have less incentive to sell their holdings, because they anticipate their BSD liability should they repurchase residential properties subsequently. In other words, BSD has an unintended effect of decreasing supply of housing from existing non-HKPR owners.

The lesson is the same: it is vital to assess the limitations of a policy instrument and prepare an exit strategy before committing to it.

It was not until February 23, 2013 that a policy response on investment demand for properties was introduced. The Ad Valorem Stamp Duty (AVD) on residential and non-residential properties was essentially doubled to 1.5-8.5%[1] on February 23, 2013 (known as Doubled Ad Valorem Stamp Duty or DSD)[2] and AVD on residential properties was further increased to a flat rate of 15% on November 5, 2016 (known as New Residential Stamp Duty or NRSD).

When DSD was introduced, HKPRs who did not own any residential property when acquiring residential properties were exempted from paying DSD. Instead, they paid an AVD of approximately 1.5-4.25% (see Rates at Scale 2 in Appendix) on or after February 23, 2013 but before November 5, 2016. When DSD on residential properties was increased to NRSD on November 5, 2016, the exemption was extended until a loophole became evident.

The loophole was that the exemption allowed HKPRs who did not own any residential property when acquiring multiple residential units in a single agreement to pay an AVD of 1.5-4.25% (approximately). There was a case in which a HKPR who did not own any residential property and purchased 15 residential units in the single agreement. The total consideration of the agreement was $145.23 million and the buyers paid an AVD of 4.25% only. Had the NRSD been applied, the buyer would have paid a stamp duty of $15.61 million more. Clearly, the loophole undermined the effectiveness of NRSD on reducing investment demand for housing.

[1] See Rates at Scale 1 (Part 2) in Appendix.

[2] The Government announced to revert the AVD rates on non-residential properties from Part 2 of Scale 1 to Scale 2 (see Appendix) on November 26, 2020.

The loophole was not difficult to address and was closed by adding the condition of "acquiring a 'single residential property'" to the exemption as follows: On or after April 12, 2017, HKPRs who do not own any residential property when acquiring a "single residential property" pay an AVD of 1.5-4.25%, instead of NRSD.

Recall that tax evasion of BSD can be carried out via a relatively simple (but illegal) arrangement, which involves arranging HKPRs to purchase residential properties on behalf of non-HKPRs. Tax evasion of NRSD is more complicated (and illegal), and involves arranging a HKPR who does not own any residential property to purchase a "single residential property" on another's behalf. Hence, tax evasion of NRSD is more difficult and NRSD should be relatively effective in reducing investment demand for housing. Additionally, NRSD should also be effective in reducing non-local demand for housing, because non-HKPRs are also liable to NRSD (on top of BSD).

The more important limitation of NRSD is its unintended consequences of decreasing supply of housing from existing owners. Existing HKPRs owners of multiple residential properties and non-HKPRs owners of residential properties become more reluctant to sell their holdings, because they anticipate their NRSD liability should they repurchase residential properties in the future.

Even if NRSD is effective in reducing investment and non-local demand for housing, its unintended side effects on supply of housing may undermine its effectiveness in cooling down the housing market. The unintended consequences of NRSD (and BSD) are known as lock-in effects of transaction taxes. While SSD is a transaction tax, its side effect on supply (of housing) is closely related to a lock-in effect of capital-gains taxes.

Aregger, Brown, and Rossi (2013) examined the impact of transaction taxes and capital gains taxes on residential house price growth in Switzerland. In their review of related literature, they found that it "provides ambiguous [theoretical] predictions and inconclusive empirical findings on the relationship between transactions taxes, capital gains taxes and house price developments."

The results of their empirical study are noteworthy. First, "transaction taxes have no impact on house price growth." Second, "higher taxes on capital gains exacerbate house price dynamics," which "support[s] the existence of a lock-in effect of capital gains taxes on housing supply." These findings "suggest that taxes on real estate capital gains and transaction values are not suitable measures to prevent excessive house price growth."

Evidently, SSD, BSD, and NRSD have not been effective in cooling down the housing market in Hong Kong. BSD and NRSD are transaction taxes and have lock-in effects. SSD is also a transaction tax, whereas its lock-in effect is similar to that of capital-gains taxes. SSD was imposed a decade ago. It is time to review the effectiveness of each of these measures and make changes to the ones deemed ineffective.

It is conceivable that some, if not all, of the above demand-side management measures are ineffective. Good policy making entails planning for such a possibility, including making a contingency to replace ineffective measures with effective ones. Poghosyan (2016) offers some useful advice.

He showed that "property taxes have a negative impact on house price volatility" and the "impact is causal." "The key policy implication is that property taxation could be used as an effective tool to dampen house price volatility. However, using transaction taxes in a countercyclical fashion may not be the best option given that they tend to thin the markets and discourage transactions that would allocate properties more efficiently. … Instead, reforms could target recurrent property taxation … One possibility is to tax imputed rents."

Like Agregger, Brown, and Rossi (see above), Poghosyan regarded transaction taxes to be undesirable. Furthermore, he recommended using recurrent property taxation as an effective policy tool and specifically suggested taxing imputed rents.

It is relatively straightforward to implement his suggestion in Hong Kong, because "rates are charged at a percentage of the rateable value which is the estimated rental value of a property … properties in all parts of Hong Kong are liable to be assessed to rates ... Altogether the 2020-2021 Valuation List includes about 2.56 million assessments comprising about 3.35 million units" (see https://bit.ly/2S0Vl2l). As one may expect, rates are one of the most broad-based taxes in Hong Kong.

Being a broad-based tax allows rates to be used an effective relief measure. Rates concessions have been offered in each financial year since the FY2007-2008. It should be noted that "both the owner and the occupier are liable for rates. In practice, this will depend on the terms of the agreement between the owner and the occupier of the premises" (ibid). If rates are paid by the owner, then rates concessions are reliefs to the owner, not to the occupier (or the tenant) of the premises.

There is one notable exception, however. Rates of PRH are paid by the Housing Authority (HA). The HA has been adopting a practice of passing all rates concessions received to the tenants of PRH. Consequently, the tenants of PRH have been receiving rates concessions (via the HA) without paying rates, so their effective rates are negative.

Households in PRH pay zero or negative rates (upon receiving rates concessions via the HA), while their counterparts in private housing pay at least zero rates (rates are at most offset by rates concessions). Since households in PRH have a lower income in general and around 30% of the population lives in PRH, rates can be considered as a progressive tax.

It is time to reflect on whether rates should be used as a one-off relief measure or as an effective policy tool to manage demand for housing. Note that there are other broad-based one-off relief measures similar to rates concessions, e.g. cash payouts. On the contrary, there are no apparently effective policy tools to manage demand for housing (SSD, BSD, and NRSD do not seem to be effective).

If it is sensible to reserve rates as a policy tool to manage demand for housing, rates concessions should be replaced by other relief measures, e.g. cash payouts. However, discontinuing rates concessions is unlikely to be sufficient to make rates effective in reducing demand for housing, because the current rates are very low. For the FY2020-2021, the rates percentage charge is 5%, which is only 0.5 percentage points above the historic low of 4.5% for FY1998-1999. Rates were in double digits prior to FY 1984-1985 and reached a historic high of 18% for FY 1976-1977. Raising rates to the teens is not unthinkable.

It is useful to compare rates to the property tax in Hong Kong, which is a tax on rental income of properties. Currently, the property tax rate is 15%, which is lower than the profits tax rate of 16.5%. But the effective property tax rate is significantly lower than 15% for several reasons. First, rates paid by the owner are deductible. Second, there is a statutory allowance, 20% of rental income, for repairs and outgoings. Third, mortgage interest payments, if any, are deductible if Personal Assessment is elected.

Low effective tax rates do not make the property tax an effective tool to contain investment demand for housing. Making deductibles and allowances not applicable to residential properties can enhance the effectiveness of the property tax. If all the deductibles and allowances are eliminated, the maximum effective tax rate of 15% is obtained. A simpler alternative is to increase rates of residential properties to 15%. This alternative is also more effective, because rates have a broader tax base than the property tax. If rates of 15% are not sufficiently effective, higher rates are needed.

Recall that rates are a tax on imputed rents. If rates are increased to 15%, owner-occupiers may have difficulty paying the increased rates and should be exempted from the increase in rates, i.e. rates for them should stay at 5%. Such a homestead exemption is a common practice and can be implemented in a way akin to the exemption in NRSD, e.g. HKPRs who own a “single residential property” pay rates of 5% on his/her residential property, while all others pay rates of 15% on their residential properties. Note that this exemption implies that non-HKPRs also pay rates of 15% on their residential properties, so it can be used to contain non-local demand for housing as well.

For ease of reference, the main points are summarized as follows:

- SSD, BSD, and NRSD are existing demand-side management measures
- They are transaction taxes and their effectiveness is undermined by the lock-in effects
- Recent empirical research shows that the effectiveness of transaction taxes is questionable (see Aregger, Brown, and Rossi; Poghosyan)
- Poghosyan suggested replacing transaction taxes with recurrent property taxation, e.g. taxing imputed rents
- Rates in Hong Kong are a tax on imputed rents, but are not used as a policy tool to manage demand for housing
- Rates have been used as a relief measure via rates concessions since the FY 2007-2008
- Rates concessions can be replaced by other broad-based relief measures, e.g. cash payouts
- Rates should be reserved for managing demand for housing
- The current rates of 5% are near the historic low, and the historic high was 18%
- The current property tax rate is 15% but the effective tax rate is significantly lower due to its generous deductibles and allowances
- Increasing rates of residential properties to 15% is simpler and more effective than eliminating all the deductibles and allowances of the property tax
- If rates of 15% are not sufficiently effective, higher rates are needed
- A homestead exemption should be granted to HKPRs who own a “single residential property”

Reference

Aregger, Nicole, Martin Brown, and Enzo Rossi, 2013. Transaction Taxes, Capital Gains Taxes and House Prices. Swiss National Bank Working Paper 2013-2.

Poghosyan, Tigran, 2016. Can Property Taxes Reduce House Price Volatility? Evidence from U.S. Regions. IMF Working Paper WP/16/216.

Appendix: Stamp Duty Rates on Sale or Transfer of Immovable Property in Hong Kong

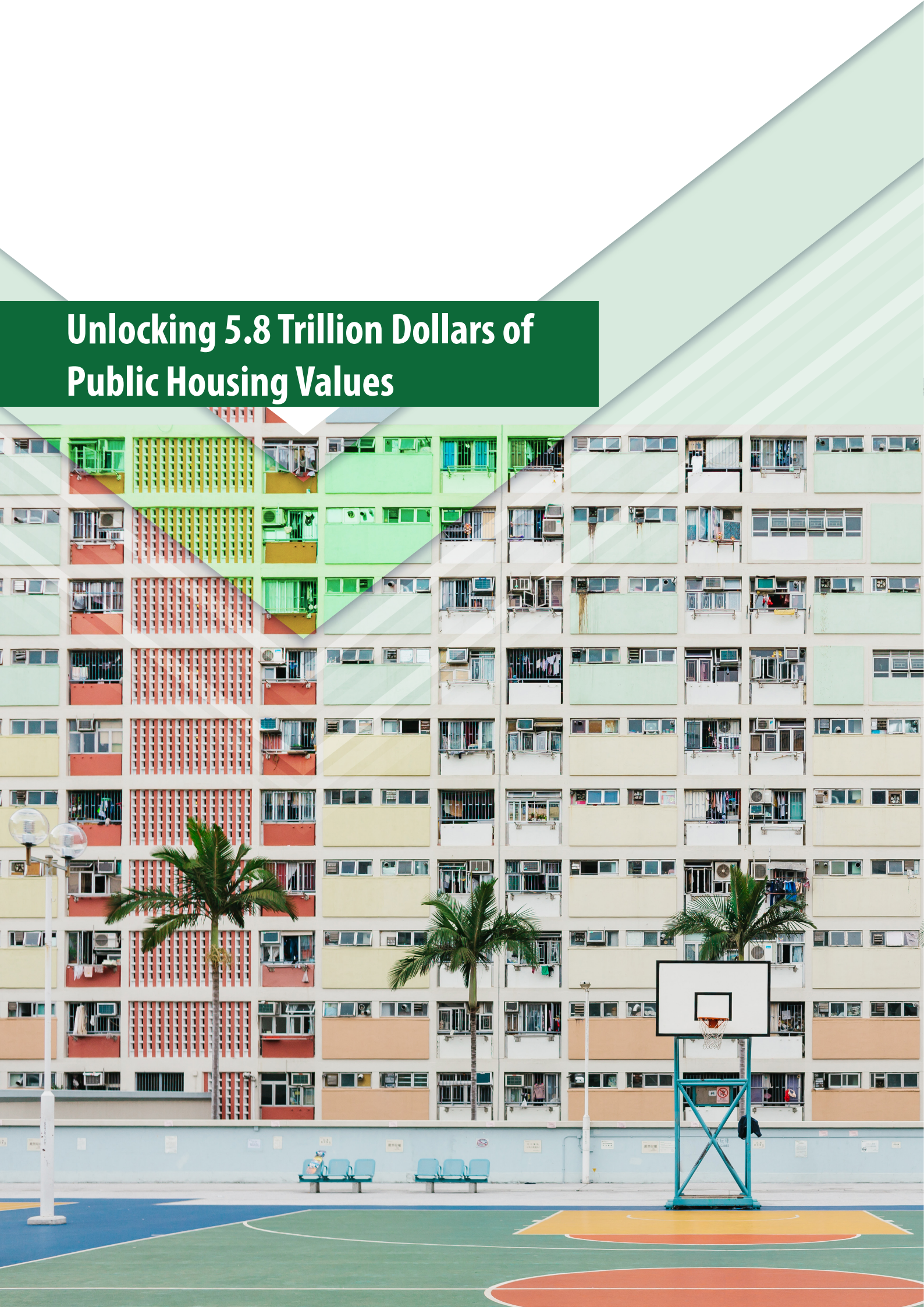
Part 2 of Scale 1 (Applicable to instruments of residential property executed on or after February 23, 2013 but before November 5, 2016 and instruments of non-residential property executed on or after February 23, 2013):

Amount or value of the consideration (whichever is higher)		Rates at Scale 1 (Part 2)
Exceeds	Does not exceed	
	$2,000,000	1.5%
$2,000,000	$2,176,470	$30,000 + 20% of excess over $2,000,000
$2,176,470	$3,000,000	3%
$3,000,000	$3,290,330	$90,000 + 20% of excess over $3,000,000
$3,290,330	$4,000,000	4.5%
$4,000,000	$4,428,580	$180,000 + 20% of excess over $4,000,000
$4,428,580	$6,000,000	6%
$6,000,000	$6,720,000	$360,000 + 20% of excess over $6,000,000
$6,720,000	$20,000,000	7.5%
$20,000,000	$21,739,130	$1,500,000 + 20% of excess over $20,000,000
$21,739,130		8.5%

Scale 2 (Applicable to HKPRs who are exempted from paying DSD on or after February 23, 2013 but before November 5, 2016 or exempted from paying NRSD on or after November 6, 2016 when acquiring a residential property)

Amount or value of the consideration (whichever is higher)		Rates at Scale 2
Exceeds	Does not exceed	
	$2,000,000	$100
$2,000,000	$2,351,760	$100 + 10% of excess over $2,000,000
$2,351,760	$3,000,000	1.5%
$3,000,000	$3,290,320	$45,000 + 10% of excess over $3,000,000
$3,290,320	$4,000,000	2.25%
$4,000,000	$4,428,570	$90,000 + 10% of excess over $4,000,000
$4,428,570	$6,000,000	3%
$6,000,000	$6,720,000	$180,000 + 10% of excess over $6,000,000
$6,720,000	$20,000,000	3.75%
$20,000,000	$21,739,120	$750,000 + 10% of excess over $20,000,000
$21,739,120		4.25%

Unlocking 5.8 Trillion Dollars of Public Housing Values



Unlocking 5.8 Trillion Dollars of Public Housing Values

Yue-Chim Richard Wong

Introduction

For three decades, Hong Kong's housing crisis has been the public's single most important livelihood concern and a cause of anguish as housing prices skyrocketed. Sadly, government policy has recognized the crisis solely as an imbalance of supply and demand.

On the supply side, it has redoubled efforts to build more affordable social housing—Public Rental Housing (PRH) and Home Ownership Scheme (HOS) flats—while on the demand side, it has sought to curb speculation and market demand through a battery of punitive measures. These measures ended up worsening the crisis by making housing even more inaccessible. The result is that only the well-off can afford hefty stamp duties and exorbitantly high initial down payments.

Such a policy approach is far too narrow minded because it is focused only on the phenomenon of housing shortage. Furthermore, it seeks to address the problem based on a legacy housing policy framework centred on shelter provision and locking-up land and housing values, designed half a century ago in the wake of the riots that shook Hong Kong to the core in 1967. But the enormity of Hong Kong's present housing crisis has helped precipitate devastating economic, social and political consequences that need to be addressed through a new and different policy framework.

Housing demand has experienced waves of rapid growth unleashed by economic liberalization and technology driven hyper-globalization, loose global credit environments created by financial and economic crises, and China's opening and economic ascendancy. And our existing housing policy framework—which focuses on shelter provision and locking-up land and housing values—has failed miserably to meet decades of demand growth.

The result is to exacerbate economic inequality, lower upward mobility, worsen intergenerational inequality, stunt household income growth, fragment social cohesion, and fuel economic insecurities and political polarization. Housing policy failure is the result of Hong Kong's failed political leadership.

Continuing along the same path would be disastrous. What is required is a radical change in government's policy mindset from managing housing shortages to tackling economic inequality, lack of upward mobility, income stagnation, social incohesion and insecurity, and political polarization. These problems are being further exacerbated by the raging COVID-19 pandemic.

But there is a simple and quick way to rekindle income growth, reduce inequality, restore cohesion, rebuild hope, and narrow Hong Kong's polarization: (1) sell the existing public rental housing flats to the sitting tenants, and (2) eliminate part of the unpaid premium on subsidized sale flats.

Doing so would create a market where these flats could be bought and sold and leased to new eligible tenants. The resulting reallocation of existing public rental housing stock would be an efficient way to increase their utilization. It would also increase the total effective supply of housing flats from the same existing stock by fiat. Such a policy change would in one fell swoop unlock 5.8 trillion dollars of housing wealth to boost aggregate demand in the hands to government and the public to support economic recovery.

This paper explains how this can be achieved. It provides an empirical analysis of the scale of our problems. And also provides some estimates on the benefits from selling public rental housing on lowering income inequality, mitigating social incohesion and insecurity, reducing housing shortage, and stimulating economic recovery. The findings provide overwhelming evidence that the social and economic benefits of this approach can be enormous, as can the political benefits from healing a highly divided and polarized society.

How Privatization Can Promote Economic Recovery

The social unrest of 2019, the COVID-19 pandemic of 2020, and US-China trade and geopolitical conflicts have reduced aggregate demand in Hong Kong's service economy and introduced new economic uncertainties. In the short run, Hong Kong has to sustain local demand to increase GDP and maintain employment. It also needs to restore government revenues to maintain social expenditures and recover depleted fiscal reserves to invest in economic recovery and development.

We need new ways of doing some things and also new things to do in preparing the Hong Kong economy for the post-COVID-19 future. A future in which the Asian economy and the Greater Bay Area will play bigger roles. This would require government policy leadership, ample resources, and a public incentivized to seize new opportunities.

Privatizing PRH estates and lowering the unpaid premium on subsidized sale flats (most of the flats are TPS and HOS flats) would unfreeze as much as $5.8 trillion in locked-up asset values (see Table 1). This would be equivalent to more than 2 years of GDP or 10 years of government fiscal expenditure. It would provide sufficient resources to create an enabling environment to secure emerging new opportunities.

Table 1: Estimates of the Market Value of Public Housing Wealth after Privatization and Deregulation, 2018/19

	Number of Housing Flats (Thousands) (as at the end of 2018/19)	Estimated Total Value of Housing Flats at TPS and HOS Secondary Market Prices ($ billion)	Estimated Total Value of Housing Flats at Open Market Prices ($ billion)	Estimated Increase in Value of Housing Capital (col. 3 – 2) ($ billion)	Estimated Increase in Value of Housing Capital per Unit (col. 4 ÷ 1) ($ million)
Public Rental Housing Flats	793	0	4,399	4,399	5.54
Tenant Purchase Scheme Flats	139	336	854	518	3.72
Home Ownership Scheme Flats	258	1,236	2,121	885	3.43
Total Government Flats	1,191	1,572	7,374	5,802	4.87
Total Estimated Value as per cent of GDP		55.3%	259.4%	204.1%	

Source: Housing Authority Housing Statistics 2019, CEIC, Transaction Records of HOS/TPS Secondary Market, Author's estimates.

There are a total 793,000 PRH flats. In 2018/19 the average value of each unit was $5.54 million. If all these flats were sold to sitting tenants at a discount, they would create $4.4 trillion (or 155 per cent of GDP) in new wealth. These unlocked sums would be shared between government and PRH tenants, who would become homeowners.

Government revenues would increase over time as the sales were completed. This would reduce the need to increase taxes and avoid reducing aggregate demand. The predominantly low-income PRH households would also possess a substantial asset that would encourage them to spend more on consumption and investment, thus supporting local aggregate demand during a depressed external economic environment.

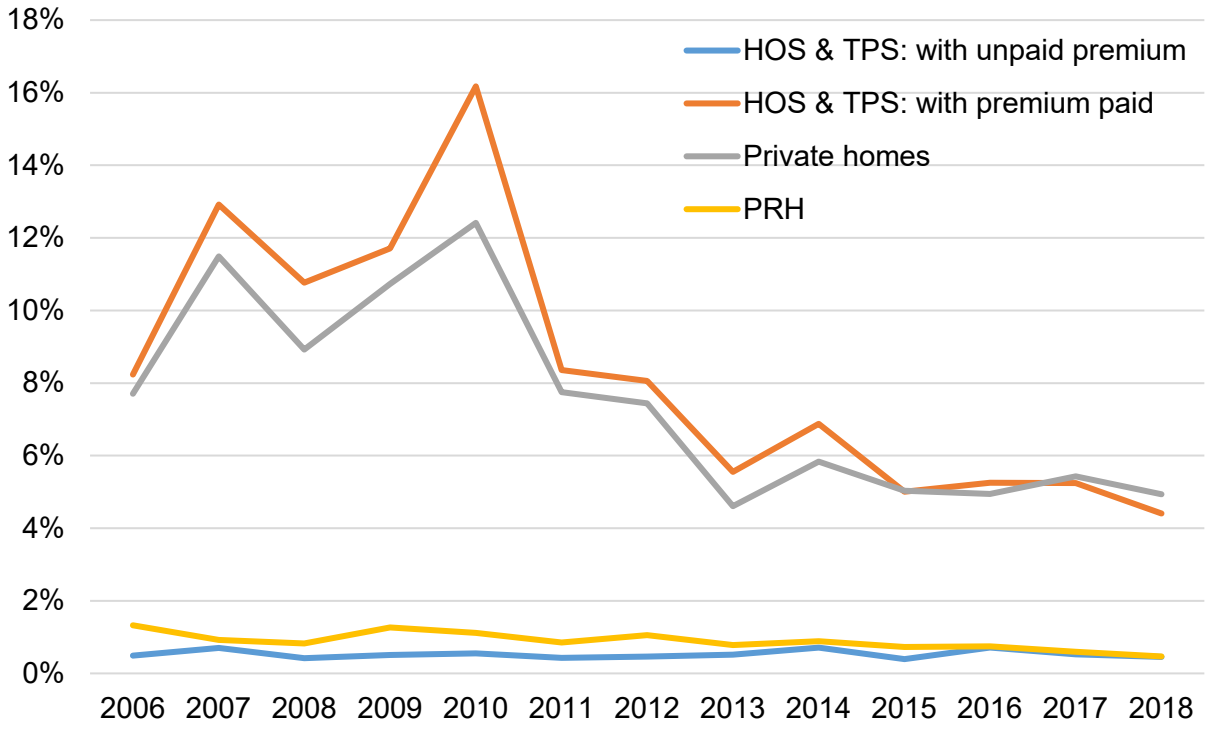
However, one issue needs to be addressed first: the unpaid premium on TPS and HOS flats.

Government subsidized sale flats (both TPS and HOS) are currently sold at a discount but the owners have to repay the unpaid premium (which is the discounted amount) if they choose to sell their flats on the open market. This means owners effectively have only partial ownership of their flats that they share with the government. The value of the unpaid premium has increased substantially as private home prices have skyrocketed. As a result, the owner only captures a portion of the full appreciation value compared to treating the unpaid discount as a loan from government.

Turnover rates and the unpaid premium

The exorbitant unpaid premium is the main reason why very few TPS and HOS flats are sold in the open market. In 2018, annual sales turnover of flats with unpaid premiums was only 0.5 per cent (see Chart 1) compared with 4.4 per cent for TPS/HOS flats with repaid premiums—the latter is similar to the turnover rate of private housing flats. The low turnover is evidence of inefficiencies.

Chart 1: Turnover rates of housing flats by housing sector in 2018



Sources: Housing Authority; EPRC; Census and Statistics Department; Transport and Housing Bureau; Midland Realty.

Notes: (1) The number of transfers under various programmes administered by Housing Authority as a share of total PRH flats.
(2) The number of transactions of all HOS and TPS flats as a share of the corresponding total stock.
(3) The number of transactions (primary and secondary private homes) as a share of the total stock.

There will always be mismatches between occupants and housing flats from time to time, which the market helps to correct through the lease and sale of flats. But this cannot happen with either PRH flats, which cannot be leased or sold, or subsidized TPS and HOS flats, which have an exorbitant implicit transactions cost due to the unpaid premium.

If we look at just the TPS and HOS flats, the problem could be resolved by lowering the unpaid premium to unlock their frozen value. Based on the difference between the estimated total value of housing flats at open market prices and their HOS/TPS secondary market prices, the value locked up amounted to $518 billion for TPS flats and $885 billion for HOS flats (see Table 1).

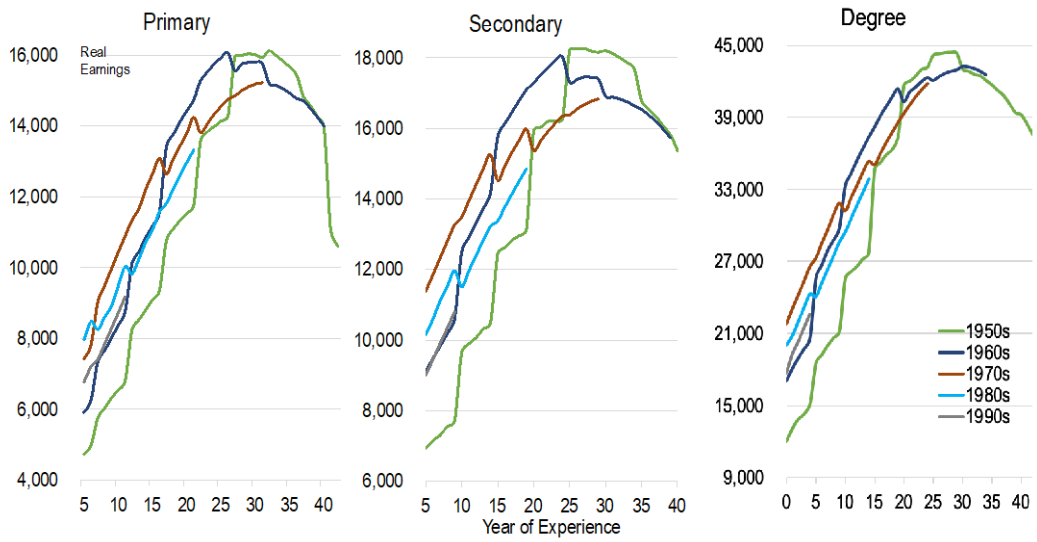
If the inefficiencies in the public housing sector are allowed to continue, this would equate to an estimated annual GDP loss of 2 per cent (calculated by discounting the 204.1 per cent of GDP at an annual rate of 1 per cent). This is a huge loss to society, especially in the present economic recession, that could be easily recovered by a simple change of policy.

Falling Real Earnings by Cohort

Beginning from 1996, the percentage of employers in the labor force has dropped significantly from 6.9 per cent to the current 4.5 per cent. Entrepreneurship has declined and this has reduced the supply of high-quality jobs with good career prospects. The situation is made worse by the effects of hyperglobalization. Hong Kong's transition to a service economy has failed to generate sufficient high value-added jobs. The result has been a secular decline of real earnings among younger cohorts compared to older cohorts.

Historically, the real earnings of men born in the 1960s were higher than those born in the 1950s, after controlling for schooling and years of work experience (see Chart 2). This trend has reversed since the 1970s. Over the subsequent two decades, the real earnings of men have fallen by about 10 per cent each decade. The same falling trends are found among men with primary, secondary, and degree-level education. The results for women are not shown here, but are similar.

Chart 2: Real Earnings by Cohort for Men 1950s - 1990s



Source: 1976-2016 Hong Kong Population Census and By-Census datasets.

This means that intergenerational earnings inequality is worsening. The younger generation, especially those completing their education in the 1990s will be economically less better-off than their parents' generation. It is not difficult for them to realize that economic opportunities have worsened. In searching for explanations as to why things have become so much worse for their generation, it is not difficult to find reasons to blame. Housing policy is an obvious target.

A Broken Housing Ladder—Rising Inequality and Falling Upward Mobility

In the past, low rent PRH provided the disadvantaged in society with shelter and a means of upward social mobility. The HOS helped families get on the next rung of the housing ladder to accumulate wealth. But this approach no longer fulfils its promise.

Compared with 30 or 40 years ago, there has been a rapid decline in the percentage of high-income households living in the public housing sector among both tenants and owners, and a rapid parallel escalation in low-income households (see Table 2).

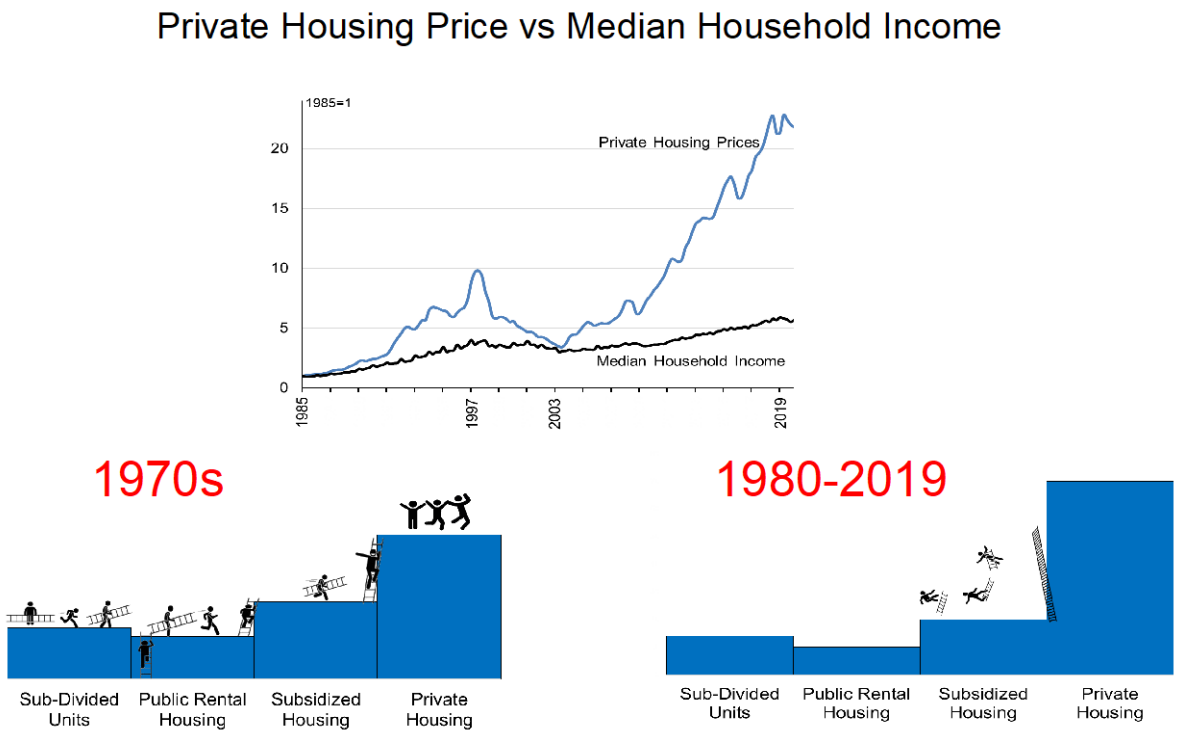
Table 2: Percentages and Numbers of Households under Age 65 by Income Quartiles

	Income Quartiles	1976	1986	1996	2006	2016
Public Renter	**Top 25%**	19.1%	16.8%	10.9%	5.5%	5.0%
	50-75%	28.7%	28.6%	22.9%	18.7%	20.6%
	25-50%	28.8%	31.7%	31.1%	33.1%	34.2%
	Bottom 25%	23.5%	22.9%	35.0%	42.7%	40.3%
	HHs ('000)	313	434	490	483	500
Public Subsidized Owner	**Top 25%**	-	34.8%	23.5%	19.4%	18.4%
	50-75%	-	37.4%	34.0%	34.6%	34.3%
	25-50%	-	19.7%	27.4%	28.3%	27.2%
	Bottom 25%	-	8.1%	15.1%	17.7%	20.1%
	HHs ('000)	-	53	175	297	278
Private Housing	**Top 25%**	28.2%	28.9%	33.3%	36.0%	35.5%
	50-75%	23.0%	22.0%	24.4%	25.2%	24.7%
	25-50%	23.0%	21.5%	21.0%	20.1%	20.4%
	Bottom 25%	25.8%	27.6%	21.3%	18.7%	19.5%
	HHs ('000)	580	770	859	1,005	1,135
Total HHs under 65 ('000)		893	1,257	1,525	1,785	1,914

Source: 1996-2016 Hong Kong Census and By-Census datasets.

As a consequence, fewer households are able to climb the housing ladder. The two bottom frames in Chart 3 below illustrate that in the 1970s, private housing was within affordable reach of those living in subsidized public ownership housing, and the latter was within reach of tenants living in public rental housing. Public subsidies provided an adequate housing ladder for upward social mobility in Hong Kong.

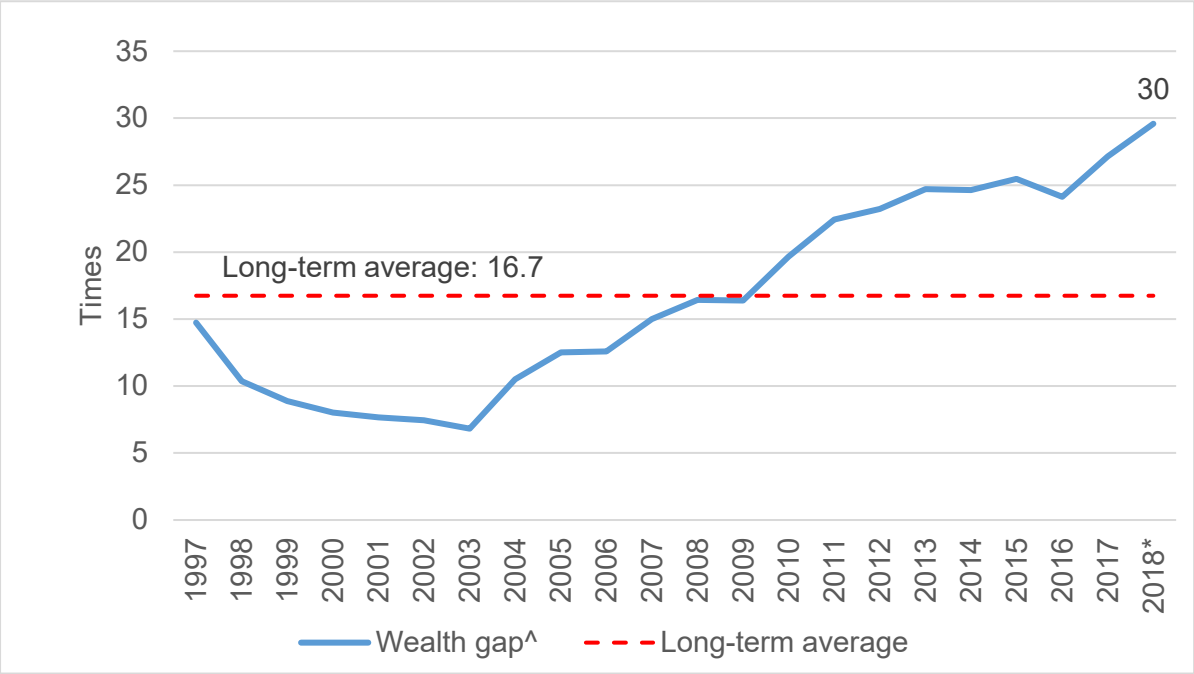
Chart 3: Skyrocketing Housing Prices and the Broken Housing Ladder



But from the 1980s onwards, private housing prices began to escalate rapidly (see the top frame in Chart 3). At the same time, median household income growth lagged far behind. Housing prices corrected downwards during the Asian Financial Crisis in 1997 and in the subsequent six recession years. But price escalation resumed after 2003. Current housing prices are more than double the previous peak before 1997.

For more than two decades now, it has also become increasingly difficult for subsidized ownership households to climb the housing ladder. By 2018, private homeowners possessed on average 30 times as much wealth as PRH tenants on account of the gap in housing wealth alone (see Chart 4).

Chart 4: Wealth Gap between Private Homeowners and PRH Households



Source: Rating and Valuation Department; Housing Authority.

Note:
1. Wealth held by private homeowners is proxied by the average value of a private residential flat (assumed to be 70% of total value of their assets). Wealth held by a PRH household is proxied by using the 3-person PRH household asset limit.
2. (*) Provisional figures as at 31.1.2019.
3. (^) The wealth gap represents the asset value of private homeowners as a multiple of that of PRH households.

The wealth gap induced by housing prices affects the economic well-being and security of not only the current generation, but also the next one. As upward mobility worsens among the younger generation, economic inequality becomes an intergenerational problem. This is the primary cause of economic insecurity. When employment incomes cannot keep pace with housing prices for so long, the younger generation has no hope of homeownership. Their patience with the government will also run out.

Sources of Inefficiency in Public Rental Housing

The PRH programme provides rental housing flats to eligible tenants at a deep discount to market rents. Tenants typically occupy the same unit for life or until they surrender their unit. Because there is no market for PRH flats, tenants have limited freedom to swap their assigned unit when their life circumstances and preferences change—they can be stuck there for prolonged periods of time. This implies the occupying tenant's valuation of their PRH unit is less than its market value. But because there is no market, PRH flats cannot realize their full use value.

This misallocation of scarce PRH flats is what economists call economic inefficiency. It is a form of deadweight social waste. Wong and Liu (1988) and Yan (2000) estimated the annual value of such inefficiency losses to be in the range of 0.46-1.03 per cent of GDP in the period 1976-1996. These are huge losses. Considering property prices have more than doubled since 1997, the loss today is even greater.

These losses could be recovered if a market for PRH flats were created by selling the flats to sitting tenants and reforming future public housing flats to be available both for rent and sale. The estimated market value of these measures would be in the order of $4.4 trillion, or 155 per cent of 2018's GDP (see Table 1 above).

In the absence of a market for PRH flats, households are compelled to make second best choices in many important areas. The Tenants Purchase Scheme (TPS) introduced during 1998-2005 provides an opportunity to examine how households, who became partial homeowners, changed their behaviour relative to those who remained as tenants.

The TPS was applied to 39 out of 99 PRH estates built during 1982-94. Flats in these 39 estates became available for sale to the sitting tenants. Initially around 57 per cent of the available flats were bought, rising eventually to 77 per cent. We compared the subsequent behavior of households in the 60 PRH and the 39 TPS estates, and also between owners and tenants within the 39 TPS estates.

Our basic premise was that choosing to rent or buy public housing will impact other major life decisions. Wong (2020) examined choices households made in areas for which there is data: labor force participation, unemployment, entrepreneurial propensity to be an employer, divorce, single parenthood, propensity of young adults to live with their parents, and years of schooling of young adults. The evidence revealed significant differences between those who became owners and those who remained tenants. We believe these differences are understated because the TPS sales arrangements only transferred part of the ownership in the PRH flats to sitting tenants.

Labor market behavior

In the 39 TPS estates, both men and women had higher labor force participation rates, lower unemployment, and were more likely to be employers than those in the 60 PRH estates (see Table 3).[1] The change in household behavior appeared within 5 years after the TPS was introduced and did not reverse over time.

Table 3: Men and Women Labor Force Participation Rate, Unemployment Rate, and Employer Share of Adult Working Age (18-64) in 39 TPS vs 60 PRH Estates, 2001-2016

	Men			**Women**		
	39 TPS estates	**60 PRH estates**	**Net change in terms of persons**	**39 TPS estates**	**60 PRH estates**	**Net change in terms of persons**
Labor force participation rates	0.874	0.864	1,972	0.632	0.622	1,966
Unemployment rates	0.083	0.090	-1,285	0.064	0.066	-364
Employer shares in the workforce	0.025	0.019	1,149	0.009	0.008	179

Source: 1996-2016 Hong Kong Census and By-Census datasets.

[1] These effects are significant and estimated using multivariate logistics models that control for a variety of factors. Details of the estimations are discussed in Wong (2020).

Family stability

Divorce rates and single parenthood rates were lower in TPS estates for both men and women among married persons aged 18-54. The introduction of TPS also saw more young single adults aged 18-39 living with their families, and young peoples aged 15-34 completing more education than their counterparts in PRH estates (see Table 4). The effects are significant and appeared within 5 years after TPS implementation and did not reverse over time (see footnote 1 below).

Table 4: Men and Women Divorce Rate, Single Parenthood Rate, and Proportion of Young Adults Living with Family in 39 TPS vs 60 PRH Estates, 2001-2016

	Men			**Women**		
	39 TPS estates	**60 PRH estates**	**Net change in term of persons**	**39 TPS estates**	**60 PRH estates**	**Net change in term of persons**
Divorce rate (age 18-54)	0.061	0.068	-1,336	0.109	0.138	-2,756
Single parenthood rate (age 18-54)	0.027	0.032	-1,035	0.065	0.085	-1,635
Proportion of young adults living with family (age 18-39)	0.809	0.799	919	0.710	0.705	410
Year of Schooling attained (age 15-34)	12.01	11.88	0.13	12.34	12.20	0.13

Source: 1996-2016 Hong Kong Census and By-Census datasets.

The empirical effects of introducing the TPS resulted in some very positive labour market outcomes. Labour force participation in the 39 estates increased by a significant 1.0 per cent (or 3,938 workers), unemployment reduced by 0.5 per cent (or 1,649 persons) and employers in the workforce increased by 0.4 per cent (or 1,328 persons).

The TPS has also strengthened family stability in several ways. Divorces fell by 1.4 per cent (or 4,093 cases) and single parenthood by 1.0 per cent (or 2,670 cases). The number of young single adults living with their families grew by 0.5 per cent (or 1,503 individuals). The level of education was also higher among young adults age 15-34 living in TPS households. Unlike PRH flats, the TPS flats can be inherited by children, and there is less incentive for adult working age children to move out to avoid the “double rent” penalty applied in PRH flats.

How Selling PRH Flats Can Effectively Increase Housing Supply

The average household size in PRH estates was 3.1 from 2001-16 versus 3.2 in the 39 TPS estates (see Table 5). These effects appeared within 5 years after the TPS was introduced and did not reverse. Within the 39 TPS estates themselves, the average household size is 3.4 among owners and 2.9 among tenants.

Table 5: Average Household Size in 39 TPS versus 60 PRH Estates and Between Tenants versus Owners within TPS Estates

	39 TPS estates	**60 PRH estates**	**Net change in term of persons**	**Owners in TPS estates**	**Tenants in TPS estates**
2001-2016 average	3.2	3.1	21,807	3.4	2.9

Source: 1996-2016 Hong Kong Census and By-Census datasets.

The larger household size in TPS estates is equal to an extra 21,807 individuals over the past 20 years. This is mostly accounted for by single young adults choosing to live in the family household, and to a lesser degree by a reduction in divorce and single parenthood rates.

Greater family stability encouraged by homeownership in TPS estates had indirectly reduced the demand for sub-divided housing in the private rental market. This had helped relieve housing shortage by accommodating more persons in the same household. The more efficient utilisation of existing public housing stock is an important positive effect of the TPS.

Our research suggests that if the original TPS was revived and implemented across the remaining stock of Housing Authority's 229 PRH estates with 1,578 blocks[2], then as many as 157,257 more individuals could be accommodated (see Table 6). This efficiency would immediately increase the housing supply by about 50,000 flats. This implication is especially significant because there are no other options that can increase the housing supply so substantially in the short term.

[2] If the 17 PRH estates of the Housing Society are included, then there will an additional 87 for-rent blocks adding up to a total of 246 PRH estates with 1,665 blocks.

Table 6: Predicted Household Size and Cumulative Change in Number of Persons Living in the PRH Estates

	Year PRH Estate Completed			All PRH
	1965-1981 1965–1981	1982-1994 1982–1994	1995-2016 1995–2016	
Predicted Average Household Size				
2016	2.6	2.8	2.9	2.8
2019	2.8	2.9	3.0	2.9
2024	2.9	3.0	3.1	3.0
Cumulative Change in Number of Persons to be Accommodated				
2016–2019	32,620	30,104	46,185	108,908
2016–2024	42,973	43,630	70,653	157,257

Source: 1996-2016 Hong Kong Census and By-Census datasets.

Even if TPS is only implemented in PRH estates built in 1995-2016, it could still accommodate an additional 71,000 persons. This is equivalent to an increase in housing supply of around 25,000 flats without even having to construct a single block. In effect, the TPS could increase housing supply by fiat. It would also reduce economic inequality and insecurity by providing many low-income PRH households with an asset acquired at a discount to the market. And the wealth effect generated among households would increase aggregate expenditure to support the economic recovery from COVID-19.

Unlocking Public Housing Values

There are two approaches to unlocking public housing values. But before discussing them, we shall consider a common criticism of privatizing public rental housing, which is that it provides double benefits to PRH tenants, who have already received cheap shelter and should not be given a further windfall gain. The criticism is essentially about unfair selective provision of benefits. I believe this is a false criticism for the following reasons.

First, there are few policies that benefit all equally. A well-known dictum about policy reforms is to not make the pursuit of perfection the enemy of achieving some progress.

Second, about 80 per cent of households in Hong Kong currently have earnings that qualify them to apply for HOS housing and about 40 per cent qualify for public rental housing. The number of households that would be excluded directly from privatization is very small. Few policies would have such a broad egalitarian impact. Even those excluded today will benefit in the future as their turn to join the public housing sector comes up.

Third, I am not aware of any policy that could free up wealth equivalent to 204.1 per cent of GDP in such a short period of time.

Fourth, the world and Hong Kong are facing the likelihood of the worst economic recession since the Great Depression due to geopolitical conflicts and the pandemic. More than ever, Hong Kong needs a massive domestic boost in aggregate demand in the face of faltering external demand.

Fifth, even those who cannot benefit directly from reforming the PRH, TPS and HOS will still benefit from a more robust economic recovery and prosperous future. And those on the applications waiting list for PRH housing will also benefit from a better choice to become a homeowner. Indeed, a reformed public housing sector bringing homeownership for all will rally firm political support behind future government policy.

Sixth, the argument that tenants would receive undeserved windfall gains and that it would be more reasonable to provide shelter for the needy is unconvincing. Are we so sure, after three decades of skyrocketing home prices, what moral justification there still is for those living in housing wealth endowed opulence can claim they have earned it with their sweat and wit? Or are they too merely enjoying windfall gains that fell into their laps because of their fortune in being born at the right time, in the right place, and to the right parents? For those who are less fortunate, what hopes do we offer them? What justifications can we use to convince them to remain patient? And for how long do they have to wait their turn when government has failed to deliver again and again?

Option 1: TPS-I and HOS-I—A Two-Tier Market

TPS-I and HOS-I represents the first option to unlock public housing values. This is similar to the original TPS and HOS schemes with minor changes: it confers more user rights to TPS and HOS owners but keeps the TPS/HOS secondary market essentially separate from the open market.

PRH flats would be sold to the sitting tenant on the same terms they were first offered in 1998, i.e., at 75 per cent market discount with a 50 per cent unpaid premium. HOS-I flats will still retain their current outstanding unpaid premiums, most at 30 per cent discount. If the TPS-I and HOS-I flats are transferred on the TPS/HOS secondary market, there would be no need to settle the unpaid premium.

TPS-I flats and HOS-I flats could be sold or leased to any PRH, TPS and HOS occupants, applicants on the waiting list for PRH flats, White-Form HOS applicants, and all other subsidized housing occupants. The TPS/HOS secondary market would then become a market for both sales and rentals for eligible households.

For TPS-I to achieve full efficiency, the scheme should apply to as many PRH estates and other subsidized rental housing estates as possible, to create a very sizable TPS/HOS secondary market to increase turnover prospect.

If TPS-I and HOS-I flats are sold on the open market, sellers would have to repay the very high unpaid premium. This approach would ward off criticism that the scheme transfers a so-called “double benefit” to PRH tenants.

Option 2: TPS-II and HOS-II—A Nearly Unified Market

TPS-ll and HOS-II are similar to TPS-I and HOS-I, except 30 per cent of the unpaid premium would be waived so the TPS-II and HOS-II flats would be sold at a 55 and 30 per cent market discount, respectively. This change takes a very significant step towards effectively unifying the TPS/HOS secondary market and the open market. The 30 per cent unpaid premium waiver on HOS flats is in fact identical to the earliest HOS Phase I and IIA schemes.

The TPS-II and HOS-II owners would receive a significantly higher windfall gain than the TPS-I and HOS-I owners. Since most of the wealth transfer would come in the form of unlocking land values, there would be no cost to government, not even a redistribution of wealth from the rich to the poor.

Further Key Market Considerations

The definition of the unpaid premium should be changed too. Instead of being based on a percentage of the asset value, it could be converted to a fixed sum. This would transform it from an equity-like government stake into an outstanding loan owed to the government. Making such a change would eliminate the prospect of unpaid premiums rising with increasing home prices.

A fixed sum unpaid premium is in effect a long-term loan from government on which a low-interest rate should be levied. As a receivable it can be securitized and sold as a long term real estate backed publicly tradable security. This would produce a nearly risk free long-term interest rate essential and beneficial for the development of a bond market. It would greatly support Hong Kong's capital market development.

A fixed sum unpaid premium also makes it easier for working out redevelopment options in future when the physical condition of a TPS or HOS block deteriorates. The present equity-like nature of the unpaid premium makes future redevelopment prospects highly uncertain.

Transfers of TPS-I, TPS-II, HOS-I and HOS-II flats on the open market could be prohibited for a period of time after they are sold to eliminate short-term opportunistic transactions.

The government could implement either TPS-I and HOS-I or TPS-II and HOS-II after public consultation. It could also introduce TPS-I and HOS-I first and TPS-II and HOS-II in future after public consultation. Both options would apply to both existing and newly-built PRH/TPS and HOS flats. New PRH/TPS flats could be offered to eligible prospective applicants either for rent or purchase. Those who choose to rent would be given an option to buy later at a price fixed at the time of occupation.

Time to Act

The only adequate way to tackle Hong Kong's economic and social division is to revive the Tenant Purchase Scheme. This will unlock the embedded housing wealth in the public housing sector and transfer a considerable amount of wealth to a fairly broad-based population of lower income households. Done correctly, it will restore the broken housing ladder.

Existing households in public housing, as well as prospective occupants eligible to apply for public housing, would all benefit. The transfer could be done relatively quickly with a realistic expectation that the gap between the "haves" and "have-nots" could be significantly narrowed within a decade. Moreover, such a policy could be accomplished not only at no cost to society, but would bring enormous social and economic benefits.

To be sure, there will be criticisms of this proposal. Should control of public assets be given up? What about the difficulty of managing mixed ownership and tenancy tenures? Will it prolong the wait of applicants on the waiting list? Will it bring double benefits to PRH tenants? These issues are not irrelevant, but neither are they insurmountable or even at the end of the day politically important. The cost of inaction would be devastating, perhaps even incalculable, for Hong Kong.

Given the severity of the housing crisis, the government has little prospect of resolving the problem through increasing supply. It has failed for three decades already. It will continue to fail in the coming decades. Without a change of mindset, economic inequality and insecurity will continue, and so would the social and political divide. The political price to be paid for non-action is not difficult to foresee.

Reviving the TPS is a bold step, but is there a better alternative? It is the only policy that could immediately and significantly narrow the disparity of wealth, provide substantial immediate housing relief, jumpstart a post-pandemic economic recovery, and restore hope and trust in our society. In all these domains, it will make a true difference.

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List of Contributors from HKU Business School

Professor Hongbin CAI	Dean and Chair of Economics
Dr. Stephen CHING	Associate Professor in Economics
Dr. Stephen CHIU	Associate Professor in Economics
Professor Yuk-fai FONG	Associate Dean (Taught Postgraduate) Professor in Management and Strategy, and Economics
Professor Sau-Him Paul LAU	Professor in Economics
Professor Jin LI	Professor in Management and Strategy, and Economics
Professor Wing SUEN	Chair of Economics Henry G Leong Professor in Economics
Professor Heiwai TANG	Professor in Economics Associate Director, Asia Global Institute Associate Director, Institute for China and Global Development Associate Director, Hong Kong Institute of Economics and Business Strategy
Professor Zhigang TAO	Associate Dean (Human Resources) HSBC Professor in Global Economy and Business Strategy
Dr. Maurice TSE	Principle Lecturer in Finance
Professor Yue-Chim Richard WONG	Provost and Deputy Vice-Chancellor, The University of Hong Kong Chair of Economics Philip Wong Kennedy Wong Professor in Political Economy Director, Hong Kong Institute of Economics and Business Strategy
Dr. Qilin ZHANG	Post-doctoral Fellow

**In alphabetical order of surname*