

The Connection Between Covid-19 and “Three-nil Buildings”

By Mr. Wei WU, Student Member of CIHAPB

Dr. Miu Yee WONG, University of Westminster, CIHCM

This article will talk about how the property management and facilities maintenance have close connection to public health by conducting an analysis of the infection of Covid-19 and “Three-nil Buildings” at Sham Shui Po District.

** Three-nil buildings:*

No property management company, No Owners Incorporation (IO) and No owner or resident's management organization

i. Characteristics

(i) Social Economics

Sham Shui Po District was the earliest industrial and commercial centre in Hong Kong. The wholesale and retail of textiles and clothing, goods and non-staple foods industries was mainly located at Lai Chi Kok and Cheung Sha Wan at the very beginning. As most of the factories moved northward, Sham Shui Po gradually switched to commercial, trade and logistics uses. Although bringing with new vitality, the business nature at Sham Shui Po still remains at the level of low value-added sectors. In addition, Sham Shui Po is also a distribution point in selling the computer equipment as well as the electronic products. The computer shopping mall even be more attractive and keep with a high rate of pedestrian flow, which provides large number of job opportunities and business development.

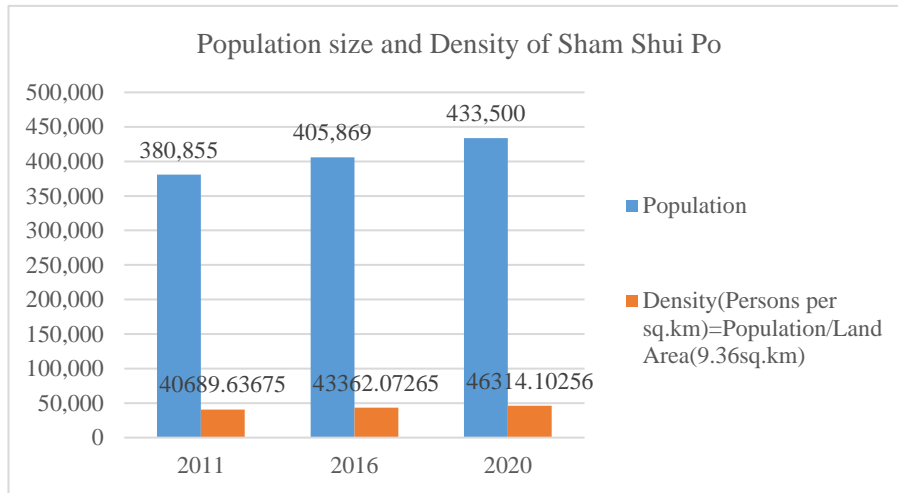
(ii) Demographic

Table 1 Ref. Census and Statistics Department

According to the above Table 1, it indicates the population of Sham Shui Po increased from 390,000 to 440,000 within nine years from 2011 to 2020, which is an increment of about 50,000 nos. The population density of the region also shows an upward trend, with increasing from 40,689 people per square kilometer at 2011 to 46,314 people per square kilometer at 2020, with an increment of about 5,700 people per square kilometer.

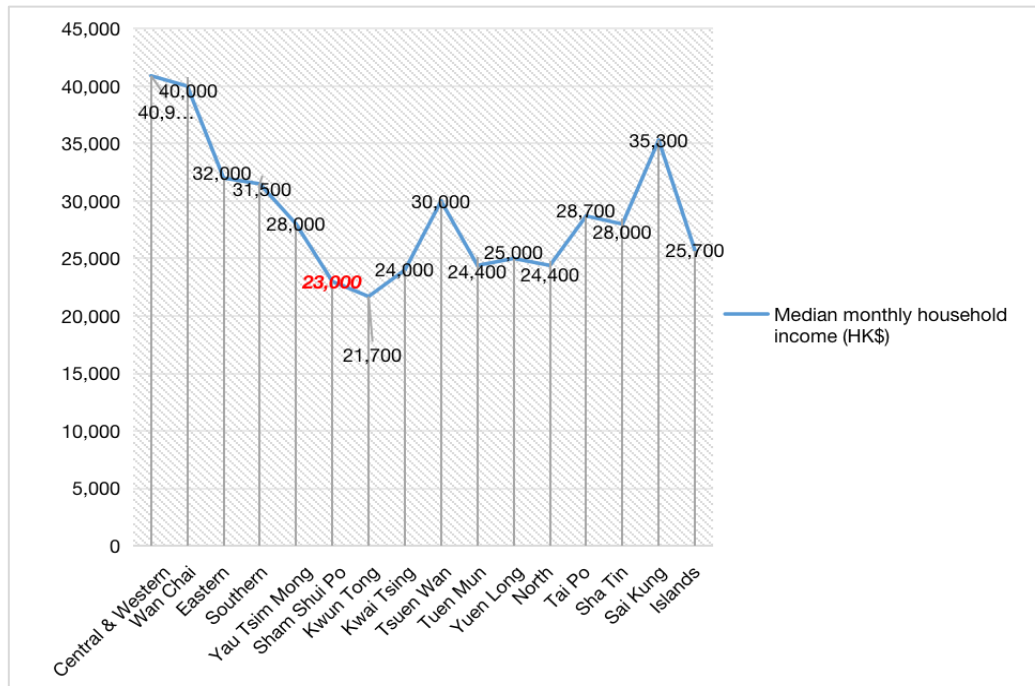


Table 2 Ref. Census and Statistics Department

The Table 2 at above shows the monthly income level per head of Hong Kong. The monthly median income of each household was \$27,000, decline \$1,700 from the previous year due to the reason of COVID-19 impact. Sham Shui Po ranks the second, with a median monthly income of \$23,000, which is also decreased \$1,300 when compare with the figure of 2021.

According to the Hong Kong Poverty Report 2017 (C&SD, 2017), Sham Shui Po is one of the highest poverty districts. It shows 7.5% of the household units are single-parent, while 7.1% of household units are new-immigrants, these household units are at the highest percentage of poverty rate among the other eighteen districts. Meanwhile, the proportion of poor households with children and working families was 34.2% and 38.7%, which is more serious than the overall poor households. What's more, there was 20.4% of the proportion of poor households receiving CSSA, which is the second highest area among the 18 districts.

ii. Three-nil Buildings VS Buildings with IO

(i) Definition of IO

The Owners' Incorporation (IO), which is a body corporate by owners of private buildings under the *Building Management Ordinance (Cap. 344)*. It is a type of self-governing organization composed by owners, aiming to exercise legal power to manage and to supervise the contractors and with other respective functions.

(ii) Differences of Buildings with IO VS without IO

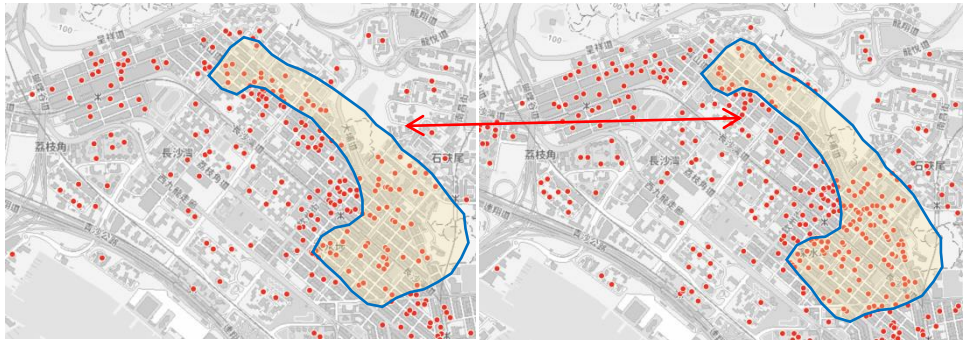
As the title suggests, the Three-nil Buildings is the buildings without management organization. In the absence of a management organization, the safety and health of occupants in those buildings cannot be guaranteed, which greatly reduces the ability of epidemic prevention and control, also causes the high risk of community transmission. Buildings with IO can exercise legal rights to supervise and urge the property management company on behalf of the owners to disinfect the public facilities, manage the visitors' registration or even restrict the entry from external personnel (like the delivery of goods) etc.

In general, the IO is a self-autonomy statutory body, protects the rights and liability of owners by law. During the special period of COVID-19, the importance of IO for private buildings is highlighted, as it undertakes the tasks for health and safety to residents directly.

iii. Risk of “Three-nil Buildings” under COVID-19

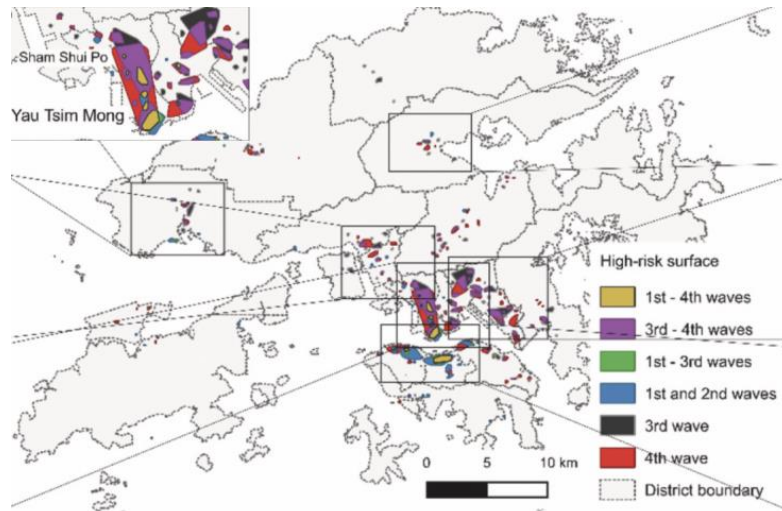
(i) Distribution of confirmed cases

Confirmed cases of the Third & Fourth wave of COVID-19



Confirmed & Suspect Cases in the Third wave(Left) VS the Fourth wave(Right)

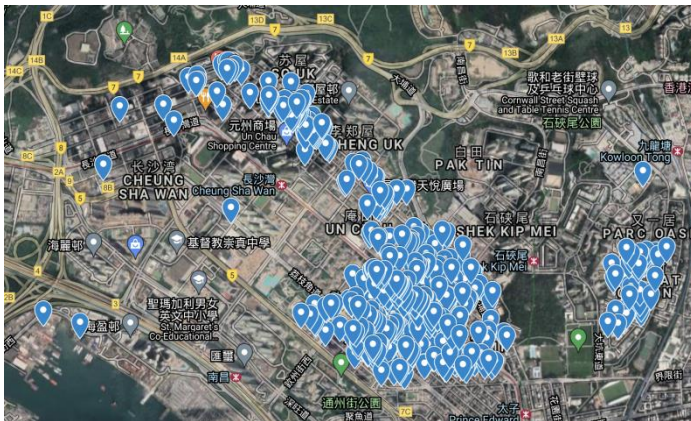
By comparing the distribution of the third and fourth waves of the epidemic and combining with the dense located areas of Three-nil Buildings, it can see that the distribution of confirmed and suspected cases in Sham Shui Po at the two waves of epidemic occurred is at high density area, and tended to spread out to the surrounding areas. It can be inferred that when there are potential of infected patients in the densely populated areas happened at Three-nil Buildings, there is a high probability that the surrounding communities will have the risk of virus transmission.



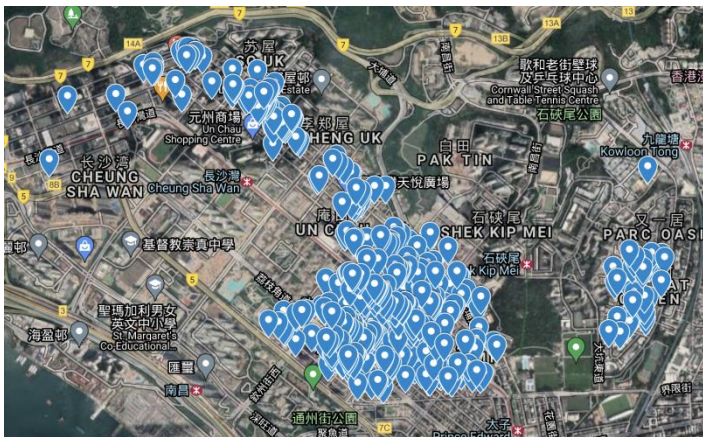
Ref. Huang et al., 2021

The above risk distribution chart shows that, after the first and second waves of the epidemic, Sham Shui Po district still presents high risk of epidemic transmission in the third and fourth waves, on the premises of existing protective measures and response plans. The resistance and response capacity of Sham Shui Po to COVID-19 is basically at a very low level due to the distribution of Three-nil Buildings with high density. Furthermore, it can be seen from the figure that Sham Shui Po district is the only area with high risk of transmission in all four waves of COVID-19, and the high-risk areas are overlapping, indicating its strong recurrence.

(ii) Physical Risks



541 units of Three-nil buildings



523 units of Three-nil buildings which over 30 years

The above comparison chart shows, 523 of the 541 Three-nil Buildings are over 30 years. The aging rate exceeded 96.7 percent, which is not optimistic. The physical risk comes from the possible danger brought by the structure of the building or settings of sewage and drainage system. The overcrowded environment of old tenement may lack of U-pipes, then have the possibility to cause serious outbreaks within the community (RTHK,2021). Refer to the transmission characteristics of COVID-19 at the previous cases, the virus can be transmitted in Aerosol form. As the pipe structure of the Three-nil buildings in Sham Shui Po is mainly the old-fashioned straight drainage, the domestic sewage of the units without U-shaped pipes will

flow directly into the same sewage pipe within one building. Under the effect of pressure, Aerosol will enter the households through the sewage pipe, greatly increasing the risk of virus transmission. At the same time, due to the high density of houses and residences in Sham Shui Po area, the virus will circulate to the adjacent households or the nearby units by means of exhaust fans, resulting in community transmission.

(iii) Non-physical Risks

From the point of view of formation of IO to those particular Three-nil buildings, most of the tenement types are low rise and with ratio of fewer owners, resulting in a small number of owners per unit. As per the low income of Sham Shui Po residents mentioned at above, most owners may not have the relevant mindset and positive awareness to organize IO, resulting in high resistance, low participation and cohesion, make it difficult to form such statutory body. However, no IO means even more difficult to change the condition and management of Three-nil Buildings, and the current problem will only lead to a vicious circle.

From the perspective of community management at Sham Shui Po – Since the Three-nil Buildings does not have IO and property management company, it basically relies on the autonomy and mutual supervision of owners and residents. For the risk of sudden infected disease, those Three-nil Buildings have no capacity to rectify the problem.

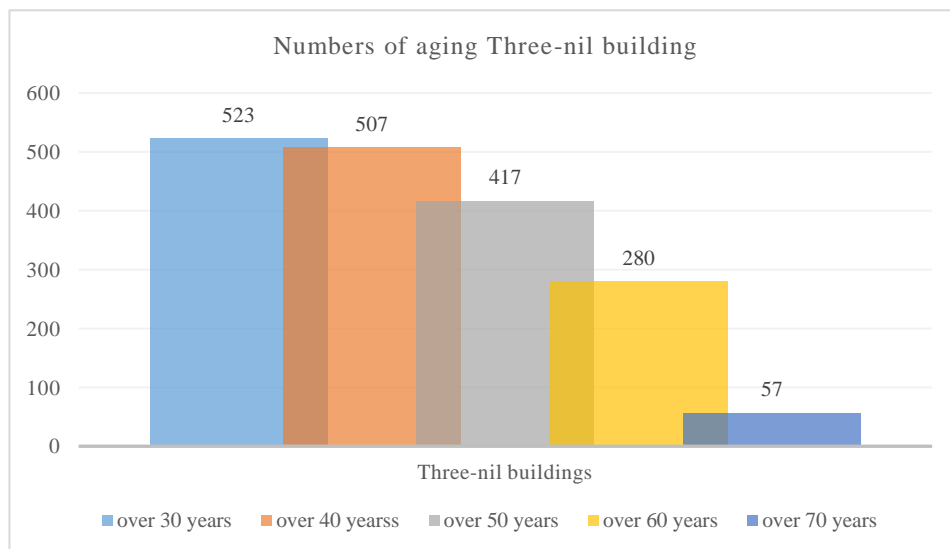
From the perspective of macro management by Government – Due to the composition of residents at Three-nil Buildings is relatively complicated and lack of building management, also with the problem of sub-divided flats, it results the government have no track at any time, can't carry out any strict measurement to prevent or control the spread of epidemic.

iv. Suggestions

(i) Promote the formation of IO

Due to the difficulty and particularity of IO formation at Three-nil Buildings mentioned above, the establishment of a special department for promotion is required. In case of necessary, the IO can exercise the power to recruit a property management company to carry out daily management of building.

(ii) Conduct Urban Renewal of revitalization to improve the old buildings



Ref. Home Affairs Department

According to the Urban Renewal Authority of Hong Kong, there are more than 900 units in Sham Shui Po that are over 50 years. (HKEJ,2019). As refer to the table above, the Three-nil Buildings in Sham Shui Po is very aging. Among the buildings that are over 30 years, 97% are over 40 years, 80% are over 50 years, and even 54% are over 60 years. In Sham Shui Po district, the most fundamental solution is revitalization to renovate old buildings.

(a) Redevelopment

Redevelopment is the most direct way to upgrade the region, but the difficulty is higher than Rehabilitation. After redevelopment, the demographics will be changed, the housing structure will be more safe, the ability to resist the risk of infected diseases will be enhanced, and the property management company may help for a better management. For the blocks with super-aging buildings or improper building structure, which can be transformed to redevelopment purpose either by Urban Renewal Authority or by private developers. It is not only to improve the quality of the population, but also upgrade the surrounding facilities, bringing positive influence to the regional development.

(b) Rehabilitation

Rehabilitation aims to improve the comfort level of the occupants and the hygienic condition through renovation project, also to improve the appearance of the area and add value of the property. The renovation mainly involves the modification of the exterior facade and interior surface, and try to conserve the original building structure. It is difficult to solve the problems that may lead to the risk of virus transmission, such as the toilet exhaust fans facing each other in adjacent units and the irrationality of the sewage system, therefore it would be effective if have the government to subsidies on the drainage and sewage system to those Three-nil Buildings.

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