Is density doomed? Cities post-Covid-19

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The benefits of urban density are well known and will not become irrelevant overnight, writes Prof. Stephen Cairns in The Straits Times. What counts is how density is designed

Image: Naomi Hanakata

The Covid-19 pandemic has reactivated concerns about the negative effects of high population densities in cities. The World Health Organisation's (WHO) advice to reduce the spread of the virus by "maintaining physical distances and avoidance of close, unprotected contact" would lead us to assume that densely populated cities are dangerous places.

Are dense cities more prone to pandemics?

Prof. Stephen Cairns programme director of the Future Cities Laboratory, says that this is not necessarily so. He writes in an opinion article in the Straits Times, Is density doomed? Cities in a post-Covid-19 world that density can be integrated better in cities to raise the quality of life.

What is clear is that density, as a single quantitative measure, tells us little about the incidence of Covid-19.

There are high-density cities where incidences have been comparatively low (Hong Kong, Taipei, Shanghai). Yet, comparably high infection numbers can be observed at opposite ends of the density spectrum. Hyper-dense neighbourhoods such as Dharavi in Mumbai (Patranabis, Gandhi and Tandel, 2020) and relatively low-density regions of rural Africa, for example, are both witnessing a high number of cases, according to the WHO.

What seems to count is how density is designed - that is, integrated with other factors. Cities are complex assemblages of people, activities, institutions, regulations, information, knowledge, capital, spaces, buildings, technology, infrastructure, parks, gardens and waterways. Good cities are those that weave all of these elements together.

Prof Cairns lists four actions to improve the design of density:

1. Deepen density integration
2. Intensify use of the outdoors
3. Diversity mobility
4. Design the cyber-physical city

Density must be woven into the city fabric, so that its benefits are harnessed for all in a post-coronavirus world. Read the full article

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Urban density, as a single quantitative measure, tells us little about the incidence of Covid-19, says the writer. What seems to count is how it is designed. Cities are complex assemblages of elements such as people, activities, capital and infrastructure, and good cities are those that weave them together. ST PHOTO: LIM YAOHUI

Coronavirus: The Great Disruption

Is density doomed? Cities in a post-Covid-19 world

Are dense cities more prone to pandemics? Not necessarily. Density can be integrated better in cities to raise the quality of life

Stephen Cairns

For The Straits Times

"sprawl (of Los Angeles) may have saved lives" (Los Angeles Times). Both received support of a more scientific kind from Stanford University epidemiologist Steven

between buildings, wider streets and avenues, and homes individually equipped with clean and efficient kitchens and bathrooms. This modernist approach was eagerly adopted across the world and guided the reconstruction of war-torn cities and the construction of brand new cities in the second half of the 20th century.

Singapore, of course, not only

demand, and the intensification of urban experience.

For economists, higher density means better market integration. Furthermore, scholars increasingly recognise that high-density cities can help curb urban sprawl, thereby reducing competition for food-producing hinterlands.

In short, urban density offers the best opportunity to harness

host of social, cultural and environmental benefits, and aligning with wider issues of food security.

It is no surprise that advocates of urban density are working hard to challenge the link between urban density and high rates of Covid-19 infection. The World Bank, for example, correlated recent data on Covid-19 cases and population in Chinese cities and concluded that "urban density is not an enemy in the coronavirus fight".

Unfortunately, other evidence clouds the situation. It is reassuring to know that there are high-density cities where incidences have been comparatively low (Hong Kong, Taipei, Shanghai). Yet, comparably high infection numbers can be observed at opposite ends of the density spectrum. Hyper-dense neighbourhoods such as Dharavi in Mumbai (Patranabis, Gandhi and Tandel, 2020) and relatively low-density regions of rural Africa, for example, are both witnessing a high number of cases, according to the WHO.

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Hong Kong, Taipei and Shanghai unlock the benefits of density because they do that well, while in hyper-dense Dharavi and low-density rural Africa many such city elements are either unavailable or inadequate.

Redesigning the Singapore city

What does this emerging debate mean for Singapore and the post-coronavirus world? There are four action points that jump out.

FIRST, DEEPEN DENSITY INTEGRATION

Singapore already integrates density into the city well. Density is never just a number, but is used as a parameter around which transport, energy, water and waste infrastructures are planned. Jobs, services and amenities are arranged in ways that make neighbourhoods convenient, liveable and, in some older cases, lovable.

transport. Comparatively few cases were contracted outdoors.

By comparison to the Northern Hemisphere where winters can be harsh, Singapore benefits from a relatively benign climate. It is true that the heat and humidity of the tropics can be a challenge. But conducting more of our everyday life outside – or at least in sheltered but not confined spaces – is feasible.

Singapore's hawker centres point the way. Other forms of dining, as well as exercise, worship, entertainment and even classes and business meetings, could be enhanced with outdoor aspects. These activities can be supported by rapid advances in low-energy outdoor cooling technology, passive cooling principles for public space design, better cycling infrastructure and expansion of the tradition of outdoor gymnasiums. These initiatives fit hand-in-glove with broader efforts to integrate nature into the city.

THIRD, DIVERSIFY MOBILITY

Commuting remains a weak spot for Covid-19 transmission in dense cities around the world. The rise in shared, electric and potentially autonomous mobility offers some exciting opportunities to reduce reliance on mass-transit buses and private cars for commuting.

This could increase choice for commuters. More interesting still is the possibility to bring goods and services to individual homes and communities. Design studies are already being conducted in this area, with a focus on how on-demand or highly flexible schedules could work. Pop-up markets and the FairPrice on Wheels initiative are useful examples.

FINALLY, DESIGN THE 'CYBER-PHYSICAL' CITY

This means integrating virtual and augmented technologies (cyber) with the ordinary spaces of everyday life (physical). Think of the Zoom or Skype video calls that we make with increasing regularity in this circuit breaker period. Add to this communication on Twitter, Facebook, Instagram and other social media platforms as well as integrated sensor systems, and we start to approach a mixed cyber-physical city. Designing the cyber-physical city presents enormous challenges, such as in ensuring data privacy, handling fake news and managing the stresses that come from mixing domestic and professional

(FCL) FUTURE

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