



**SINGAPORE** A water park below a viaduct outside Choa Chu Kang MRT station. The country should explore how to make better use of the spaces beneath flyovers, says the writer. These spaces can sometimes be quite large, and they should be creatively repurposed. ST PHOTO: AZMI ATHNI

**ELSEWHERE** In Taipei, the famous Jianguo Holiday Jade Market and the Jianguo Holiday Flower Market have tapped space below Jianguo Elevated Road. When certain activities flock to the spaces around transport infrastructure, it frees up land elsewhere to be put to other uses. PHOTO: REUTERS



# Bring dead spaces beneath flyovers, viaducts back to life

Singapore cannot afford to let valuable space around its transport infrastructure go to waste.

**Sing Tien Foo**

Those who live in small homes know how important it is to make the best use of space. Every nook and cranny must be put to use.

Similarly, small countries like Singapore have no choice but to make the most efficient use of their limited land.

feeling squeezed in our living environment.

Traditional land use planning also tends to put a land parcel to a single use. This means the space can end up being underutilised.

Housing Board blocks were demolished to make way for new MRT stations and expressways, the spaces beneath the viaducts supporting MRT rail tracks were not put to any use. Similarly, spaces adjacent to other major roads, such as the section of the West Coast Highway from Pasir Panjang to Tanjong Pagar, have mostly been left vacant.

Can we put such dead spaces to better use to make the most of our limited land?

On Jan 19, the Land Transport Authority invited tenders to conduct feasibility studies on tapping two land plots underneath rail viaducts next to Yishun and Choa Chu Kang MRT stations for commercial or community uses.

Minister of State for Home Affairs and National Development Faishal Ibrahim also called for new and smart ideas to turn "dead spaces" into functional and social spaces. Many of these spaces are linked to our transport infrastructure. How can we use them better?

## AN EYE ON DISAMENITIES

Ever since the North-South and East-West lines started operations

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in 1987, the Mass Rapid Transit system has been the backbone of Singapore's public transport system.

Its advantages have been well documented. The MRT system has reduced the reliance on private cars. One study I undertook with Professor Diao Mi from Tongji University and Dr Dai Fangzhou from NUS Cities found that many people gave up private cars for the MRT after the opening of the Downtown Line.

Without the MRT system, the demand for private cars could be even higher, which could push our already high certificate of entitlement prices even higher.

But transport requires lots of land.

Based on a projection by the Ministry of National Development, some 13 per cent of total land in Singapore, or 9,700ha, is allocated for transport infrastructure uses up to 2030.

However, the land used for transport can have negative side effects. It is up to urban planners to minimise these disamenities. For example, airplane noise and height restrictions imposed for flight landing and taking-off paths near Changi Airport mean a large tract of land around it cannot be used for residential developments. It is now being used for golf courses instead.

Trains also generate noise. In a study that I did with Professor Li Qiang from Deakin University, Professor Diao Mi from Tongji University and Dr Zhan Changwei from the National University of Singapore, we found that installing noise barriers along selected segments of MRT rail tracks could mitigate noise effects from passing trains.

Housing prices near above-ground MRT tracks increased by 2 per cent after such projects were announced and by 3 per cent when the projects were completed.

## USING DEAD SPACES

Sometimes, there is not much one can do with the space around transport infrastructure. For example, land on both sides of above-ground rail tracks and expressways is usually set aside as buffer zones due to traffic noise.

Many narrow strips of land near rail tracks can at best be used for bicycle and pedestrian pavements. Spaces between major roads are used to house standby generators, electric substations and covered drainages.

But the unused spaces under flyovers and MRT stations can sometimes be quite large – ranging from 3,000 sq m to 6,000 sq m. They should be creatively repurposed and, in some cases, this is already being done. For example, the space beneath the Thomson flyover was converted into a futsal court – approximately 40m long and 20m wide, much to the delight of enthusiasts.

Similarly, in January 2017, Singapore Land Authority (SLA) partnered The Local People, a start-up, to run small artisan markets (called "Duct Tape Party") in the space beneath the flyovers at the West Coast Highway along Clementi Road. The space was also used to test an urban farming concept. It has now been leased to Salt & Light Archery to promote the sport of archery.

We need to explore how to make better use of the spaces beneath flyovers and MRT viaducts. SLA, which manages the use of such spaces, could invite private firms to lease those lands and inject new life into them.

The idea is for private firms to experiment with different business concepts so that such spaces become magnets for visitors. It is important to give the firms leases for a term of at least 10 to 15 years so that they have enough time to recover their investments.

The private firms can then use their creativity to put such spaces to different uses at different times of the day. They could, for example, use them as farmers' markets during daytime and pasar malam (night markets) in the evening. They could host food stalls, outdoor events and live performances. These could become themed marketplaces around Chinese New Year, Hari Raya, Deepavali and Christmas.

There are good examples to learn from. In Taipei, the famous Jianguo Holiday Jade Market, a massive wholesale jade market, and Jianguo Holiday Flower Market have tapped space below Jianguo Elevated Road.

The stretch of land beneath a train overpass of Koganecho in Yokohama is now a burgeoning art scene attracting many budding artists to exhibit their work. Such spaces can be used as

pop-ups and start-up spots for entrepreneurs who cannot afford higher rent in commercial buildings. One can also consider using them as pickleball courts and outdoor gym parks to promote an active lifestyle.

## IT'S NOT JUST THE MONEY

Tapping dead spaces near rail tracks and expressways will obviously open up a revenue stream for the Government. But, more importantly, it can make the environment better for people living nearby.

Aesthetically, such spaces will start to look better as activities mask the hard surfaces and structures of rail viaducts and flyover bridges. Even traffic noise may get muffled when such dead spaces come to life.

Also, when certain activities flock to the spaces around transport infrastructure, it will free up land elsewhere to be put to other uses.

Like a good housekeeping practice, "decluttering" brownfield sites by putting dead spaces to work will reduce "wastage" of space and make our small island less squeezed.

• Professor Sing Tien Foo is Provost's Chair Professor at the Department of Real Estate, NUS Business School, National University of Singapore. These are his personal views.