

Jan 2022

# Transit-oriented development

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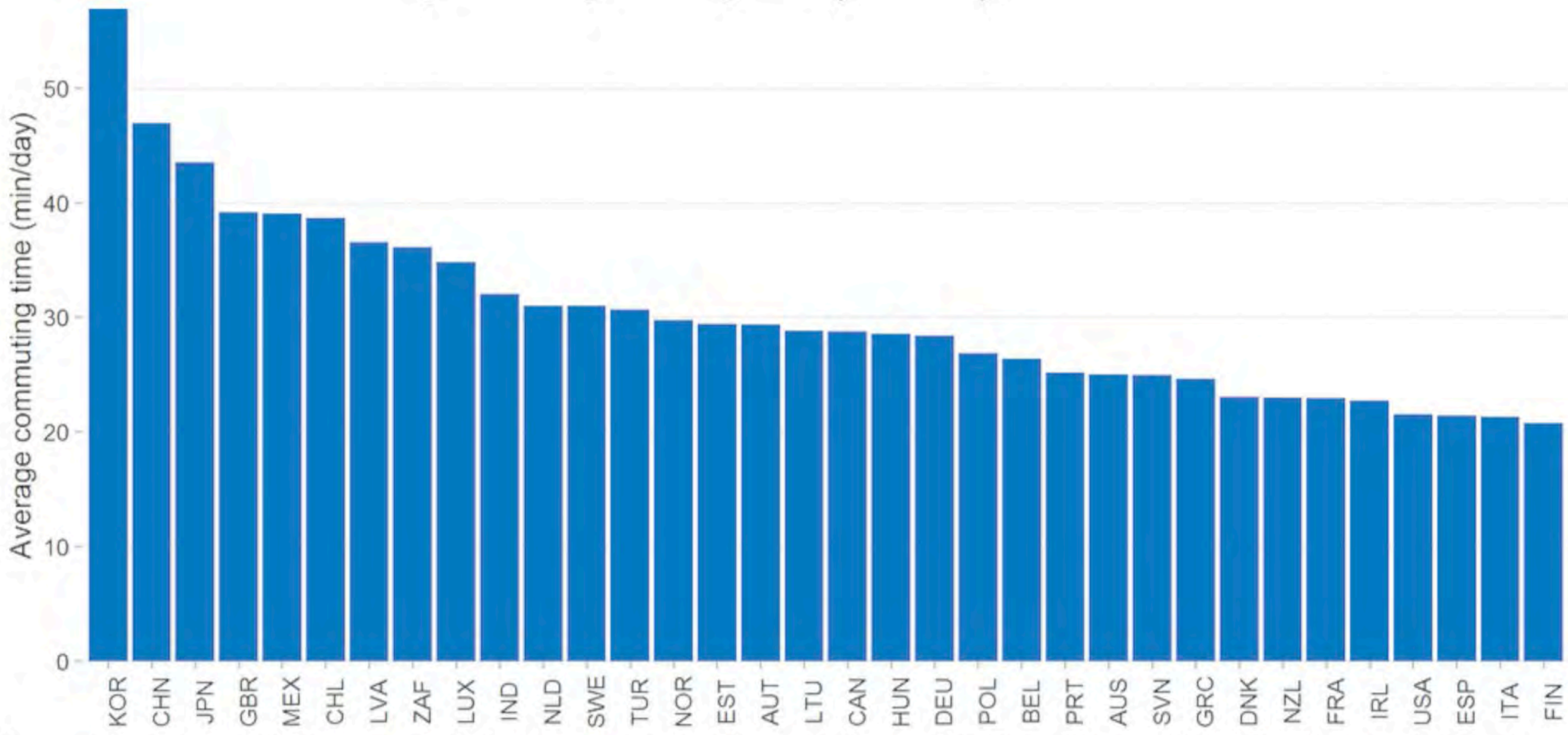
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# Why transit-oriented development?

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- Reduce the number of trips people need to take, or avoid them overall → reduction in congestion
- + impact on economic productivity levels due to concentration of economic activity due to transit accessibility.
- Makes public transport more effective, as people are incentivised to use it
- Positive environmental impacts → also through reduction in pollution.
- ToD can be used to unlock revenue for transport investments, such as through levying fees for density allowances near the transport link, land-value capture, etc.
- Can be used as a tool for urban renewal and urban growth.



Source: OECD



**Legend**

<b>Rail &amp; Metro Network</b>	<b>Population Density</b>
<ul style="list-style-type: none"> <li>Density at station</li> <li>Residents</li> <li>Jobs</li> <li>Rail/Metro Station</li> <li>Rail/Metro Line</li> <li>Peak Station Density</li> <li>Residents &amp; jobs / km<sup>2</sup></li> <li>Light Rail Line</li> </ul>	<ul style="list-style-type: none"> <li>Each contour represents a 10,000 increase in residents &amp; jobs per km<sup>2</sup></li> <li>Urban Land</li> <li>GreenSpace</li> <li>Ferry Route</li> </ul>

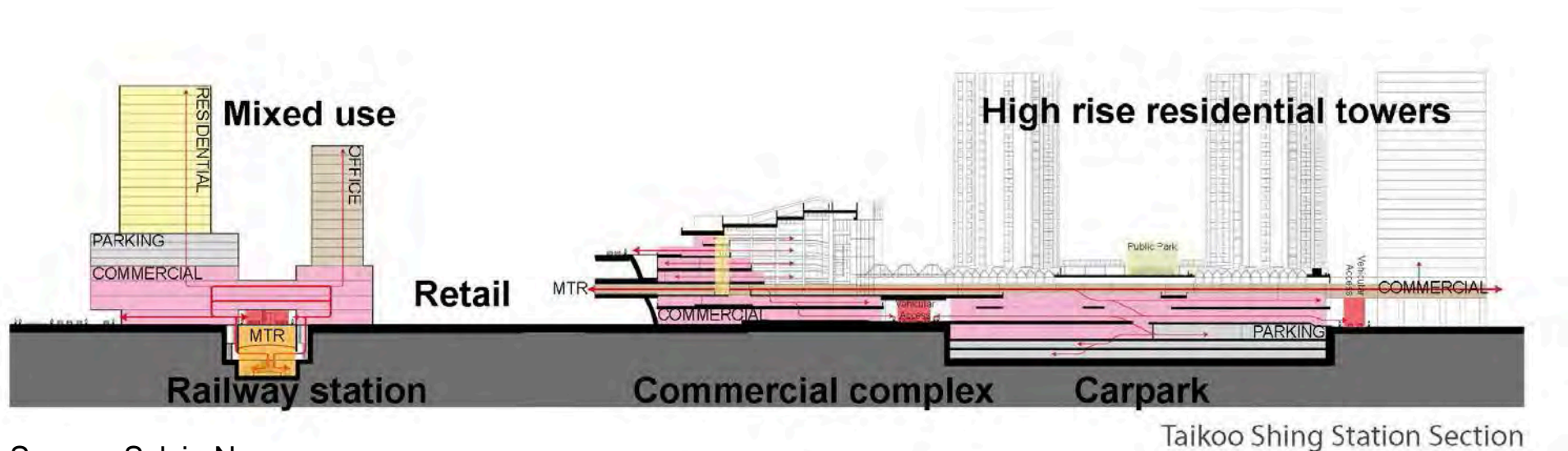
Cartography by DA Smith, LSE Cities

**Hong Kong Metropolitan Region**

3D Map Extent  
40 km by 32 km

Source: LSE Cities.

- 75 percent of people and 84 percent of jobs in Hong Kong live less than 1 kilometer from a mass transit station.
- 90% of the people use public transport and the city spends only 5% of GDP on motorized travel – compared to upwards of 12% in Houston.
- The rail plus property business model is used to capture land-value prices to subsidise public transit system. This system declares the 500 meter catchment area to the main station, as a TOD zone.



Source: Sylvie Nguyen

Taikoo Shing Station Section

Jan 2022

# Integrated urban planning

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# 5 principals of land-use planning

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- 1) The need to facilitate residential and commercial density → without density, the city sprawls with negative economic and environmental impact.
- 2) Keeps adequate space for transport links and other public spaces .
- 3) Coordinating positive and negative ‘spillover’ effects → such as through anchor private investment expectations.
- 4) Connects land use planning to strategic planning → designing spatial plans that provide long term certainty to investors, and allowing for sufficient flexibility.
- 5) It is proactive → takes a long-term approach.



# The Built-up Area of Atlanta and Barcelona Represented at the Same Scale

— 10 km of metro line

## Atlanta:

2.5 million people (1990)

4,280 km<sup>2</sup> (built-up area)

Transit in Atlanta VS Barcelona		
	Barcelona	Atlanta
Length of metro lines (km)	99	74
% of population within 600 m from a metro station	60%	4%
% of trips using metro	30%	4.50%
Length of metro line that would be required to serve 60% of atlanta population (km) :		3400
Number of station required		2800

## Barcelona:

2.8 million people (1990)

162 km<sup>2</sup> (built-up area)

Despite the same populations, Atlanta occupies a built-up land area 26 times larger than that of Barcelona.

Image by Alain Bertaud.







# Contacts

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