

# A property Rights Analysis of Subsidized Homeownership – Problems and solutions

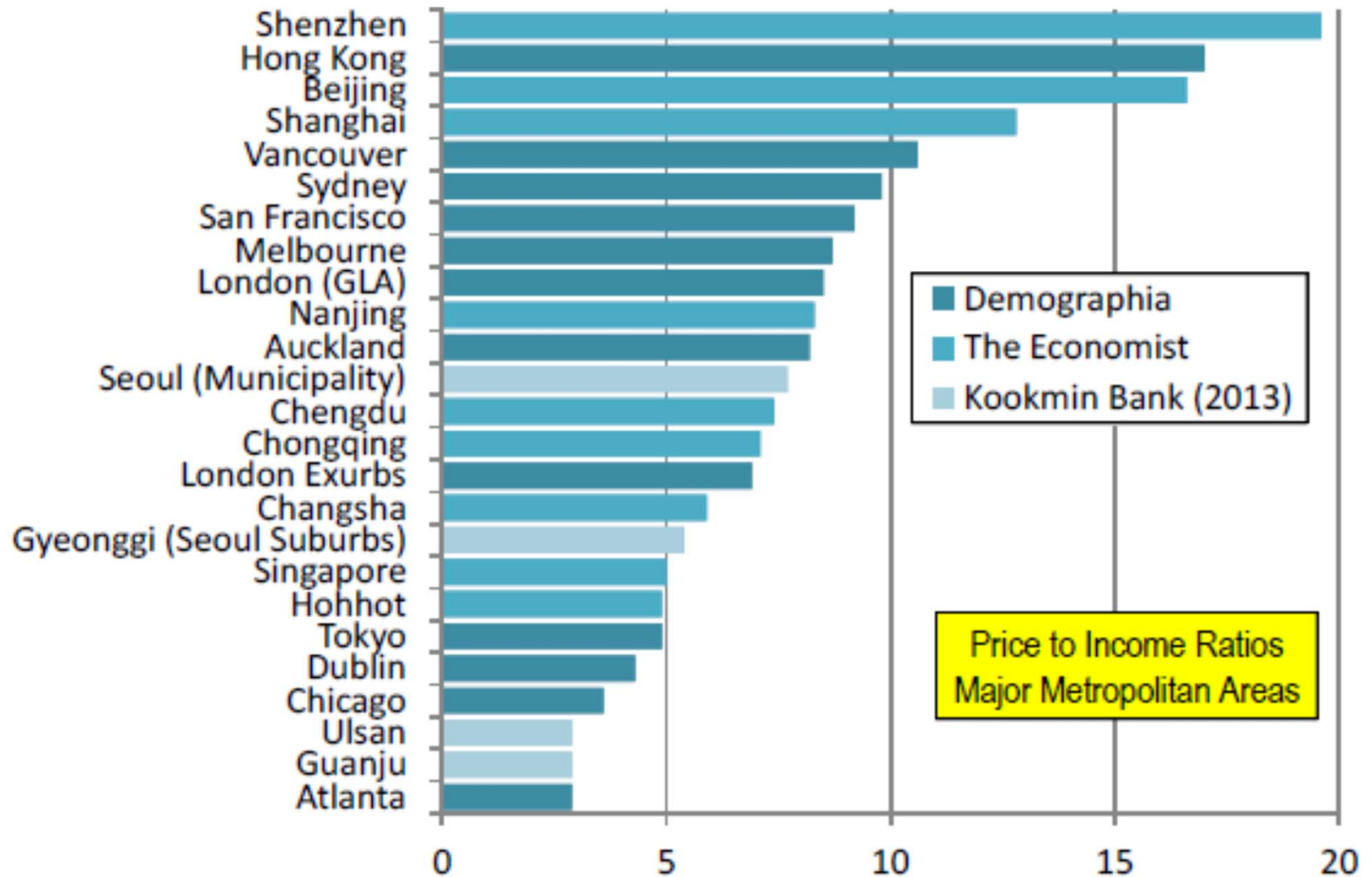


"It doesn't matter if a cat is black or white, so long as it catches mice". *Deng Xiaoping*



# Price to income ratio

the most unaffordable housing markets



Source: 11th Annual Demographia International Housing Affordability Survey: 2015

# Price to income ratio

the most affordable housing markets

Rank	Nation	Metropolitan Market	Median Multiple
1	U.S.	Detroit, MI	2.1
2	U.S.	Rochester, NY	2.4
3	U.S.	Buffalo, NY	2.6
3	U.S.	Cleveland, OH	2.6
5	U.S.	Cincinnati, OH-KY-IN	2.7
5	U.S.	Grand Rapids, MI	2.7
5	U.S.	Pittsburgh, PA	2.7
5	U.S.	Saint Louis, MO-IL	2.7
9	U.S.	Atlanta, GA	2.9
9	U.S.	Indianapolis, IN	2.9
9	U.S.	Kansas City, MO-KS	2.9
9	U.S.	Louisville, KY-IN	2.9
13	U.S.	Columbus, OH	3.0
13	U.S.	Oklahoma City, OK	3.0

Source: 11th Annual Demographia International Housing Affordability Survey: 2015

# Housing problem

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High housing price is often a unintended side effect of government policies

Unaffordable housing price is politically undesirable

Hong Kong solution – negative lesson



# Housing Subsidies

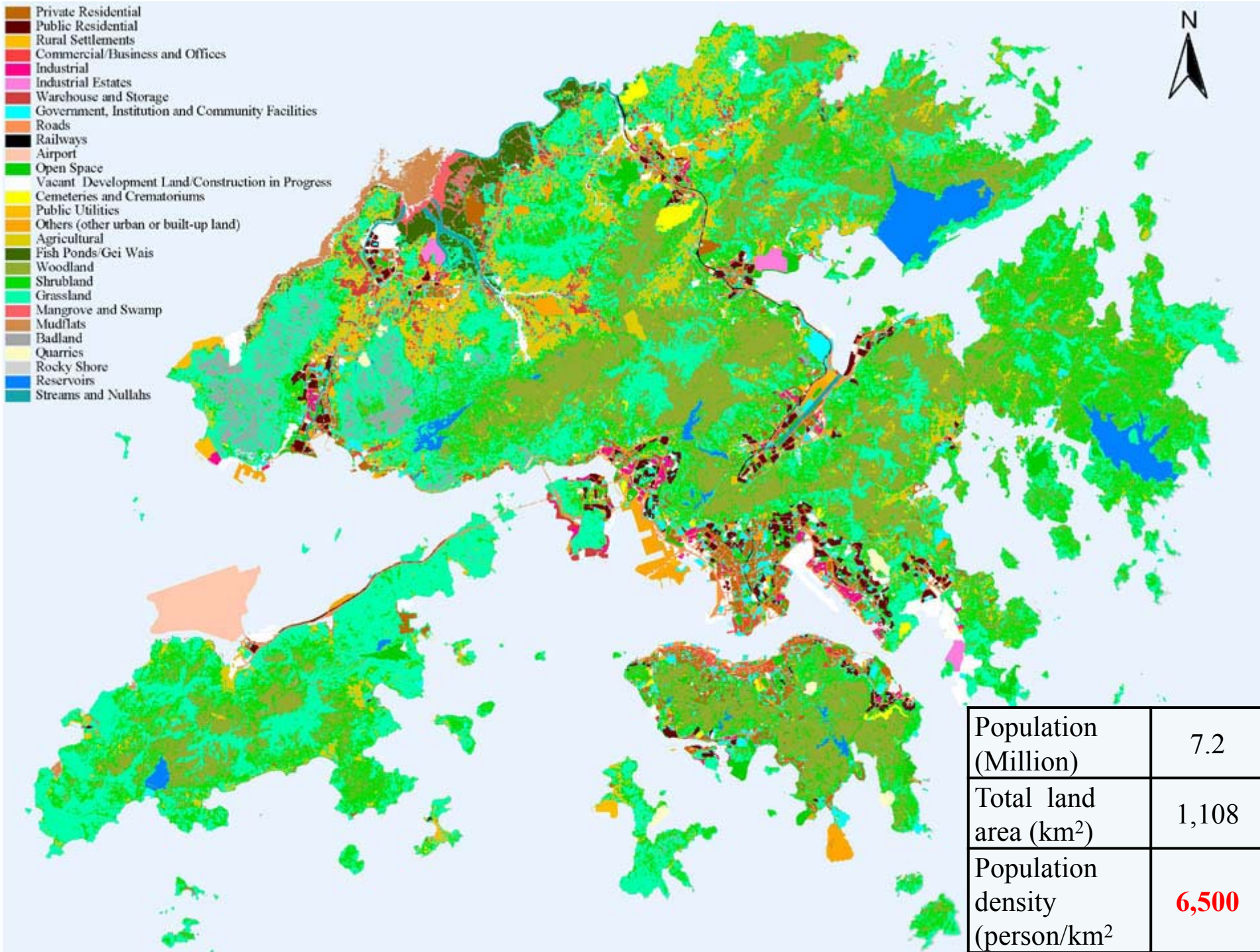
- Housing subsidy to lower income group is necessary for social and political reasons
- Physical subsidies
  - Subsidized rental housing
    - Public rental housing
  - Subsidized homeownership
    - Home ownership Scheme



- Singapore model?
- > 90% of the Singapore Citizens are owners of housing units provided by the government



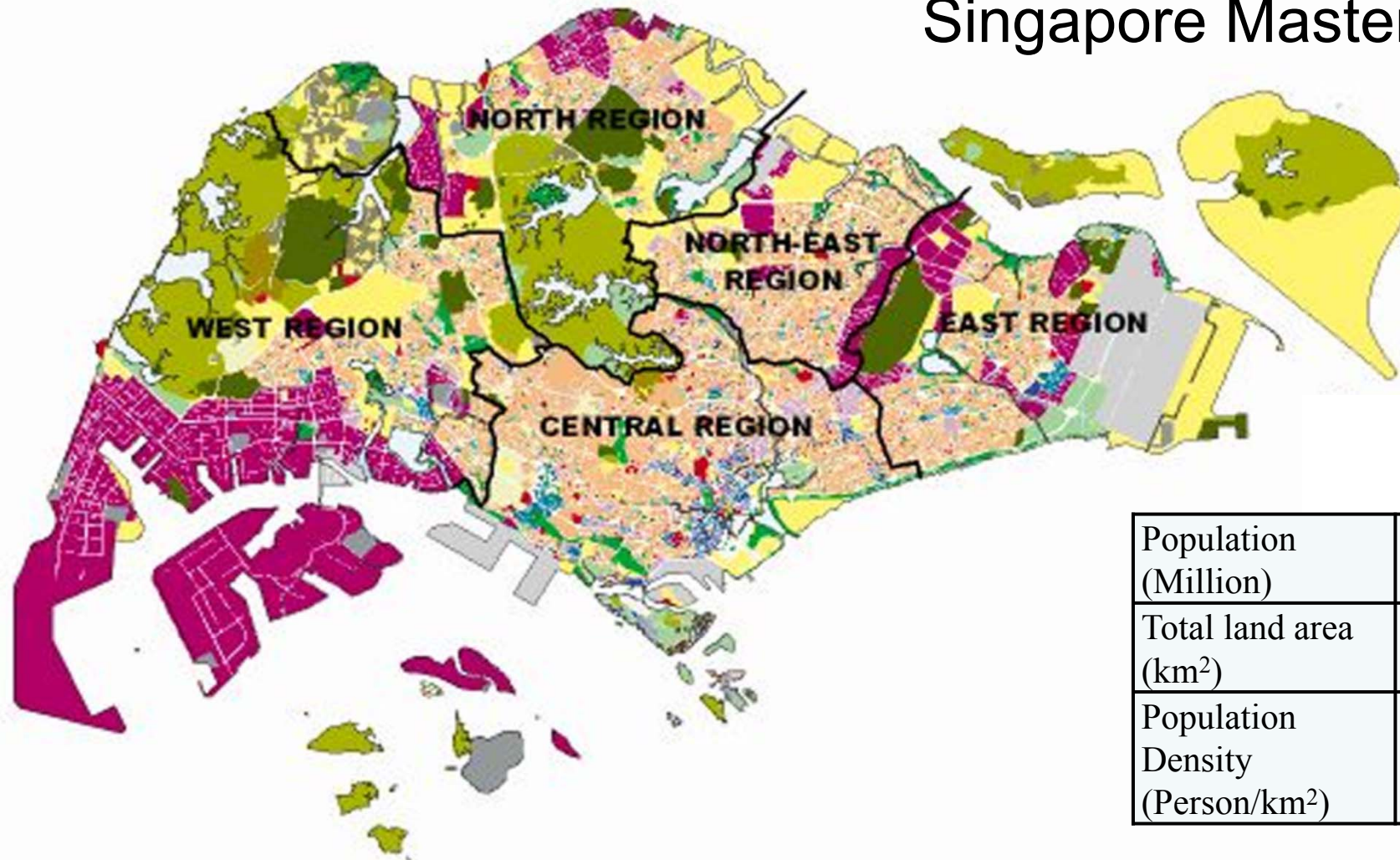
- Private Residential
- Public Residential
- Rural Settlements
- Commercial/Business and Offices
- Industrial
- Industrial Estates
- Warehouse and Storage
- Government, Institution and Community Facilities
- Roads
- Railways
- Airport
- Open Space
- Vacant Development Land/Construction in Progress
- Cemeteries and Crematoriums
- Public Utilities
- Others (other urban or built-up land)
- Agricultural
- Fish Ponds/Gei Wais
- Woodland
- Shrubland
- Grassland
- Mangrove and Swamp
- Mudflats
- Badland
- Quarries
- Rocky Shore
- Reservoirs
- Streams and Nullahs



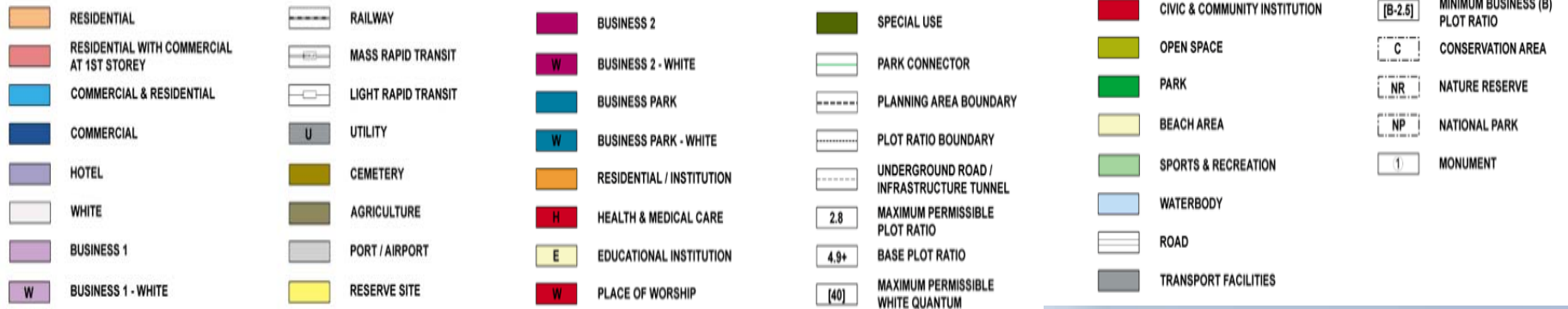
Population (Million)	7.2
Total land area (km <sup>2</sup> )	1,108
Population density (person/km <sup>2</sup> )	<b>6,500</b>



# Singapore Master Plan



Population (Million)	5.4
Total land area (km <sup>2</sup> )	714
Population Density (Person/km <sup>2</sup> )	<b>7,500</b>



# Homeownership Scheme (HOS)

- Housing units sold to eligible household at a discount (usually 40% discount)
- Owners are not allowed to resell in second-hand market within the first 3-5 years unless
  - They are sold at a discount to eligible household / government
  - Paid the discount back to the government



# Housing as a bundle of rights

	Private Housing	HOS
Exclusive	Y	Y
Freely Transferrable	Y	N
Receive income	Y	N
inheritable	Y	Y

# Rent dissipation in HOS

- Lack of choice – recipient's valuation lower than market value
- Physical subsidy attached to the housing unit
  - Household has to return the unit subsidy they move to another place
  - Low liquidity
  - Households continue to live in "sub-optimal" locations



# Equity Issues

- Single upfront subsidy (rental subsidy for an indefinite period of time) to households who are eligible at the time of application (vs rental subsidy to even lower income households)
- Inheritable (children may not need the subsidy)
- Eligible households >> HOS available (random allocation)



# A Solution

- HOS units has a limited life (e.g. on leasehold land of 50 years)
- Freely transferrable (no or nominal subsidy)
- New HOS unit are still affordable but less rent dissipation



# Solutions

- New HOS units - rights with a limited life (e.g. on leasehold land of 50 years)
- Freely transferrable (no or nominal subsidy)
- New HOS unit are still affordable but less rent dissipation



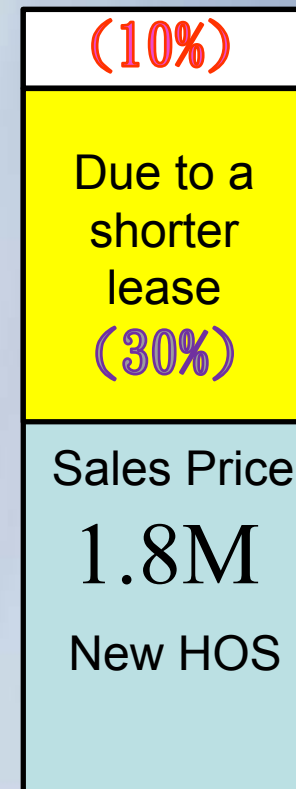
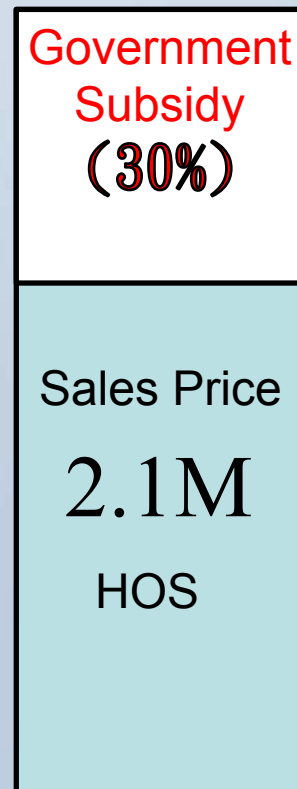
# Real option to redevelop

- New HOS unit (say 50 years) are cheaper since the owner do not have the option (right with out obligation) to redevelop when opportunity arises in the future
- Empirical evidence in Vancouver, Singapore and HK suggest that the value of redevelopment real option = 30% - 40% of market price





# Property rights and Sales Price comparison



Government Subsidy



Close to freehold<sup>1</sup>

Close to freehold<sup>1</sup>

<sup>1</sup>Due to the land policy after 1997

50 years non-renewable  
No redevelopment real option

# Other benefits

- Not inheritable (practically)
- Housing units with different economic life - more options
- Achieve the same functions of reverse mortgage but lower transaction cost
- Little financial subsidy from the government
- Sustainable (units can be recycled)
- Redevelopment problem due multiple ownership
- No comparison with existing HOS – easier to implement

