

“Living Centrally”: The Singaporean Dream?

AGS Real Estate Consultants

Amoz Kuang / Gilbert Hartato / Syahiran Rafi

DSI-SG-42

Project 2

Overview

01

Introduction

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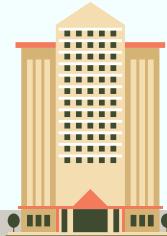
Key Statistics

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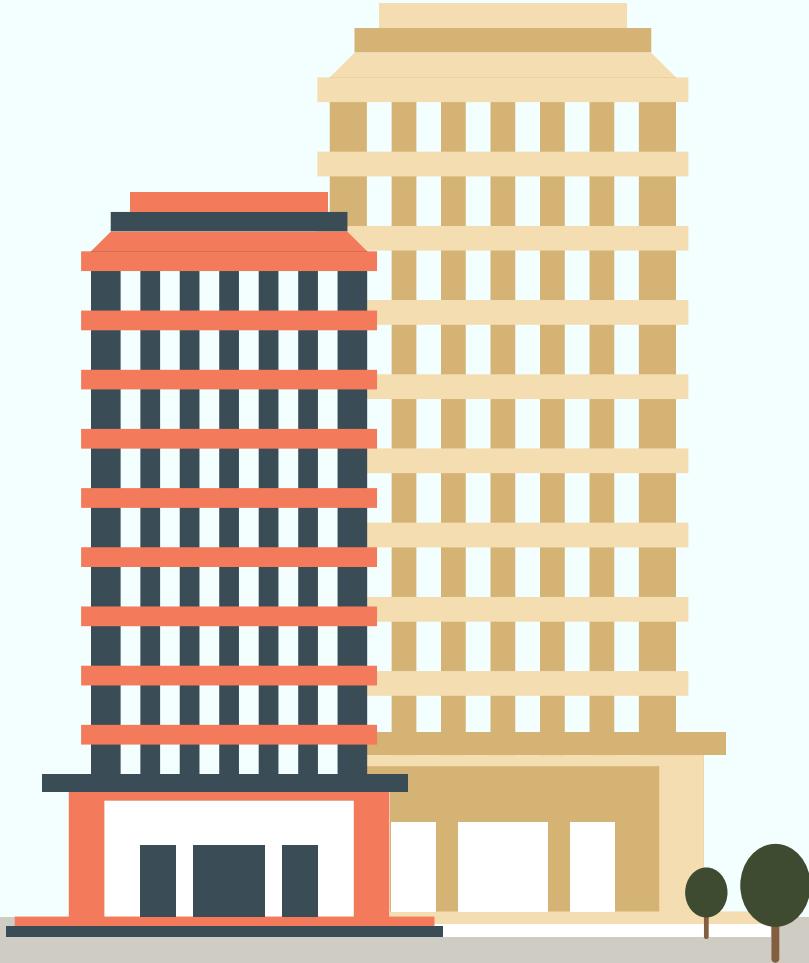
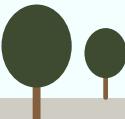
Our Predictive
Model



01

Introduction

Who are we? Who is our target audience?



Who are we?



Real Estate Consultants

Who are you?

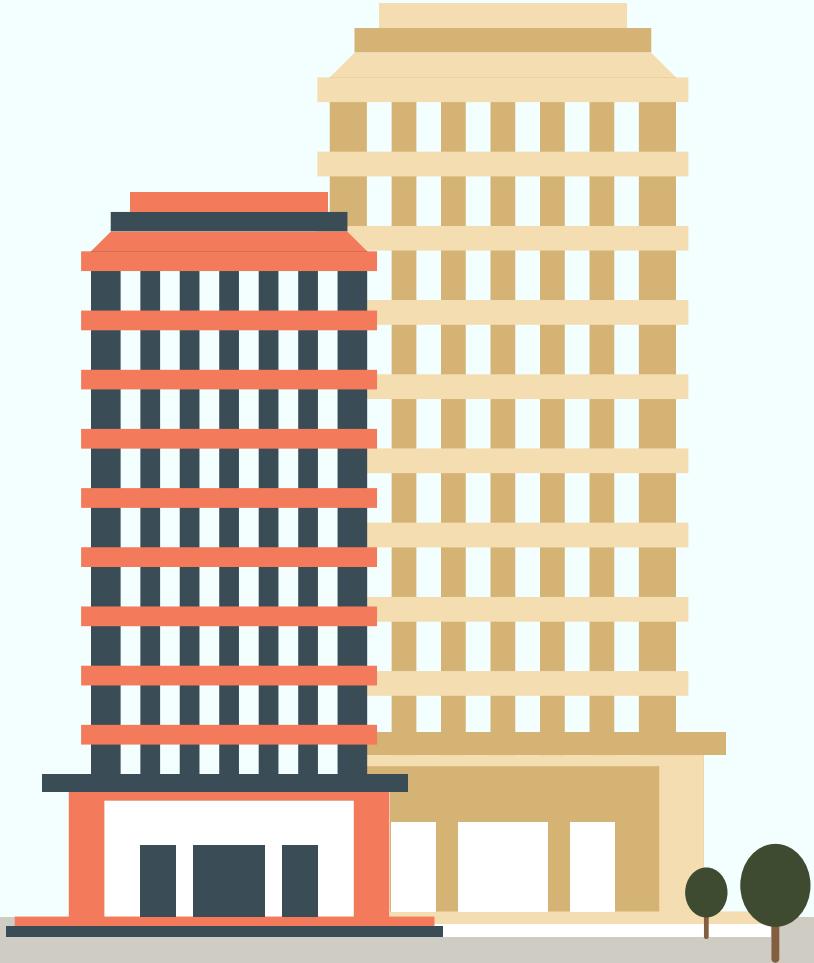
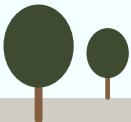


Prospective Clients
(young families hoping to live
in central region towns)

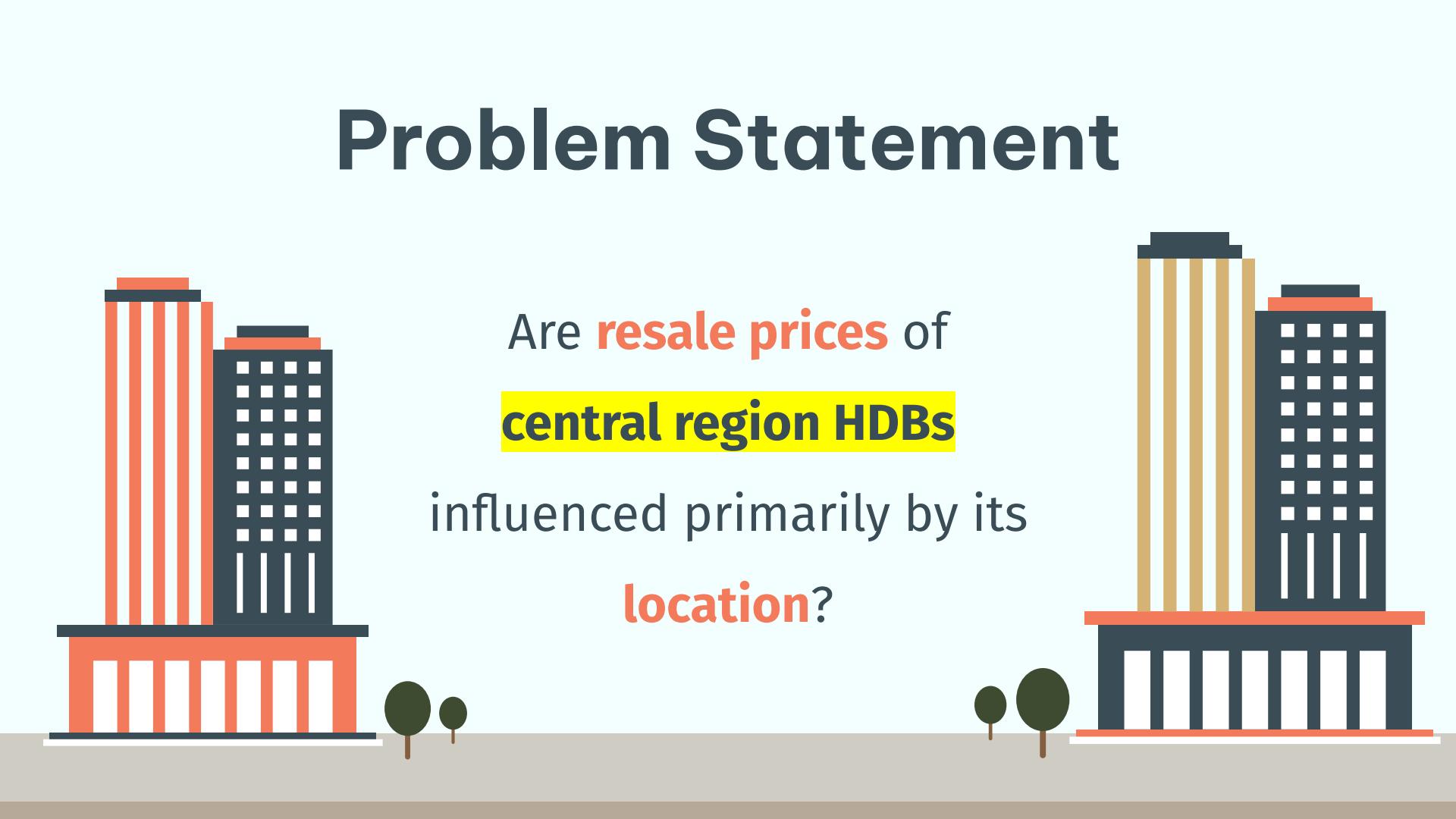
02

Problem Statement

What problem are we trying to address?



Problem Statement



Are **resale prices** of
central region HDBs
influenced primarily by its
location?

Why resale HDBs?

THE STRAITSTIMES

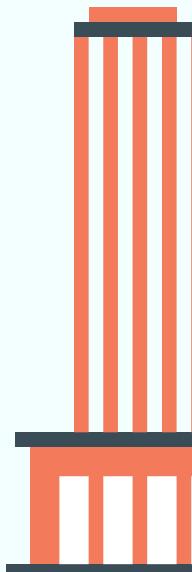
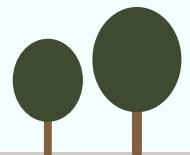
Some younger home owners prefer HDB resale flats that offer bigger living spaces, more amenities

She is among a group of young first-time home owners who are turning to older resale flats despite their shorter leases and what can sometimes be much higher costs.

Source: The Straits Times, Nov 2023

“long wait times for BTO flats”

“desire for bigger living spaces and amenities”



Resale HDB Statistics

470

\$1 million resale flat transactions in 2023

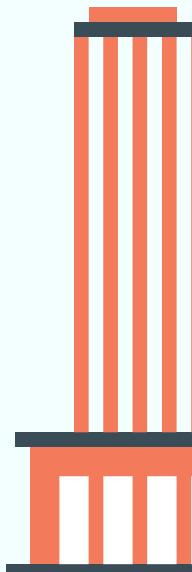
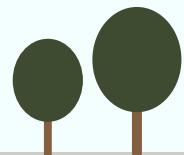
4.9%

Increase in resale HDB prices in 2023

\$700k

Average price of a 4rm flat in Bishan

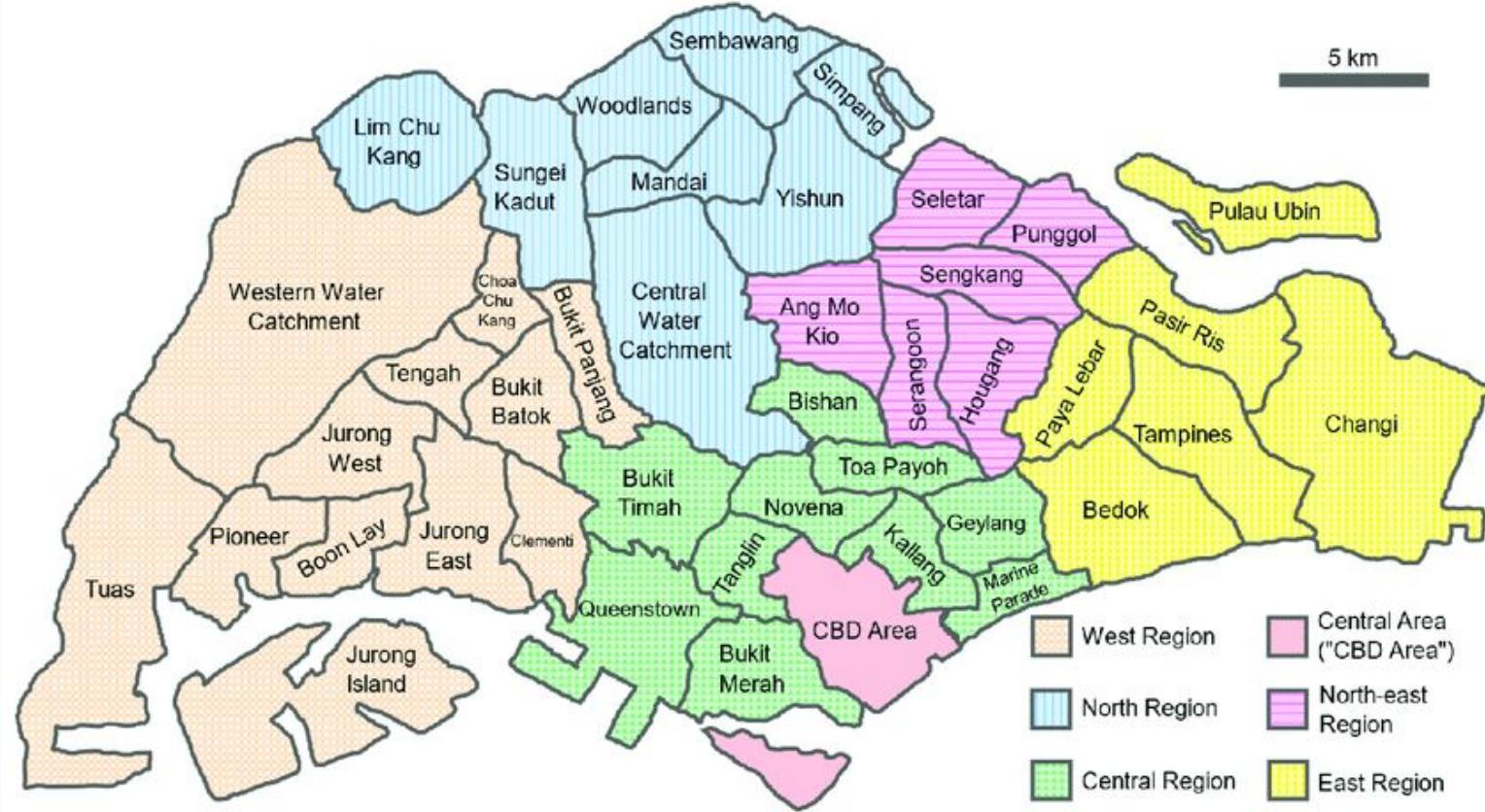
Sources: [The Straits Times, Feb 2024](#) and [PropertyGuru, Jan 2024](#)



HDB resale prices rise 1.5% in January; record 74 units sold for at least \$1 million each

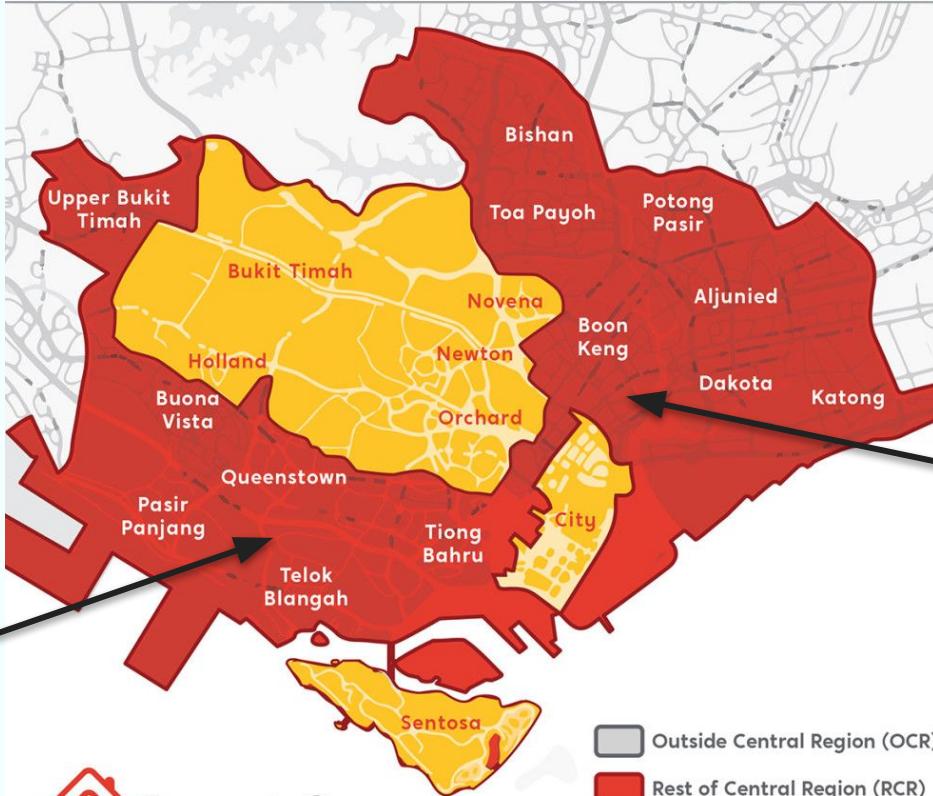
“Of the 74 million-dollar HDB resale flats sold in January ... [most] of them were in mature estates such as **Bishan, Bukit Merah, Kallang/Whampoa, Toa Payoh, Queenstown and Ang Mo Kio, while four were in non-mature towns **Hougang, Punggol and Woodlands.**”**

Source: [The Straits Times, Feb 2024](#)



Source: [ResearchGate](#), June 2022

Bukit Merah

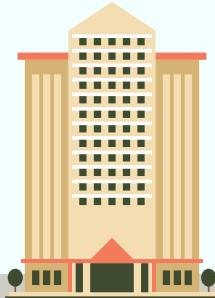


Source: [PropertyGuru](#), Sep 2023

Living Centrally: the ‘Singaporean Dream’?

Resale prices in **central region towns** like Bishan, Toa Payoh and Queenstown have been breaking records in recent years, with more and more resale units **breaking the \$1 million mark.**

You might be a **newlywed couple** or **parents with young children.** Do you have aspirations to purchase a highly sought-after home in these towns?



Client Profile



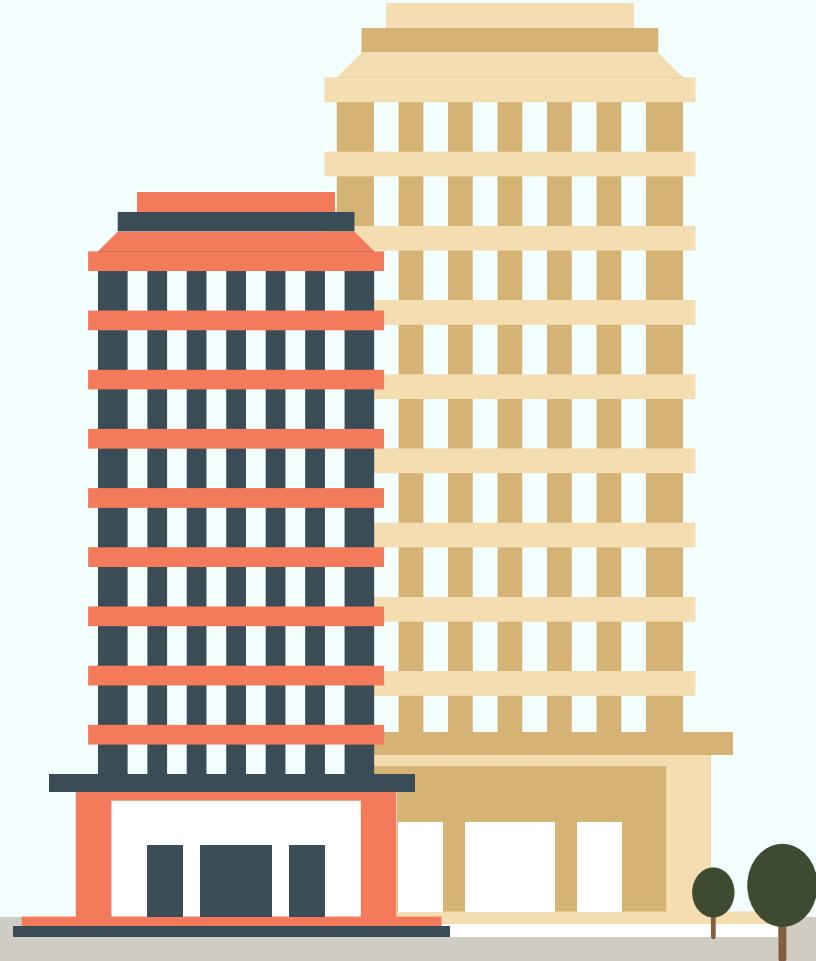
Mr and Mrs Tan

- 2 children (age 2 and 5)
- Living in a 4-room HDB flat in Tampines
- Intend to upgrade to a **5-room HDB flat**
- Central location is preferred, **but not a must**
- **Accessibility by public transport** is highly important
- **Less than \$550k** budget

03

Key Statistics

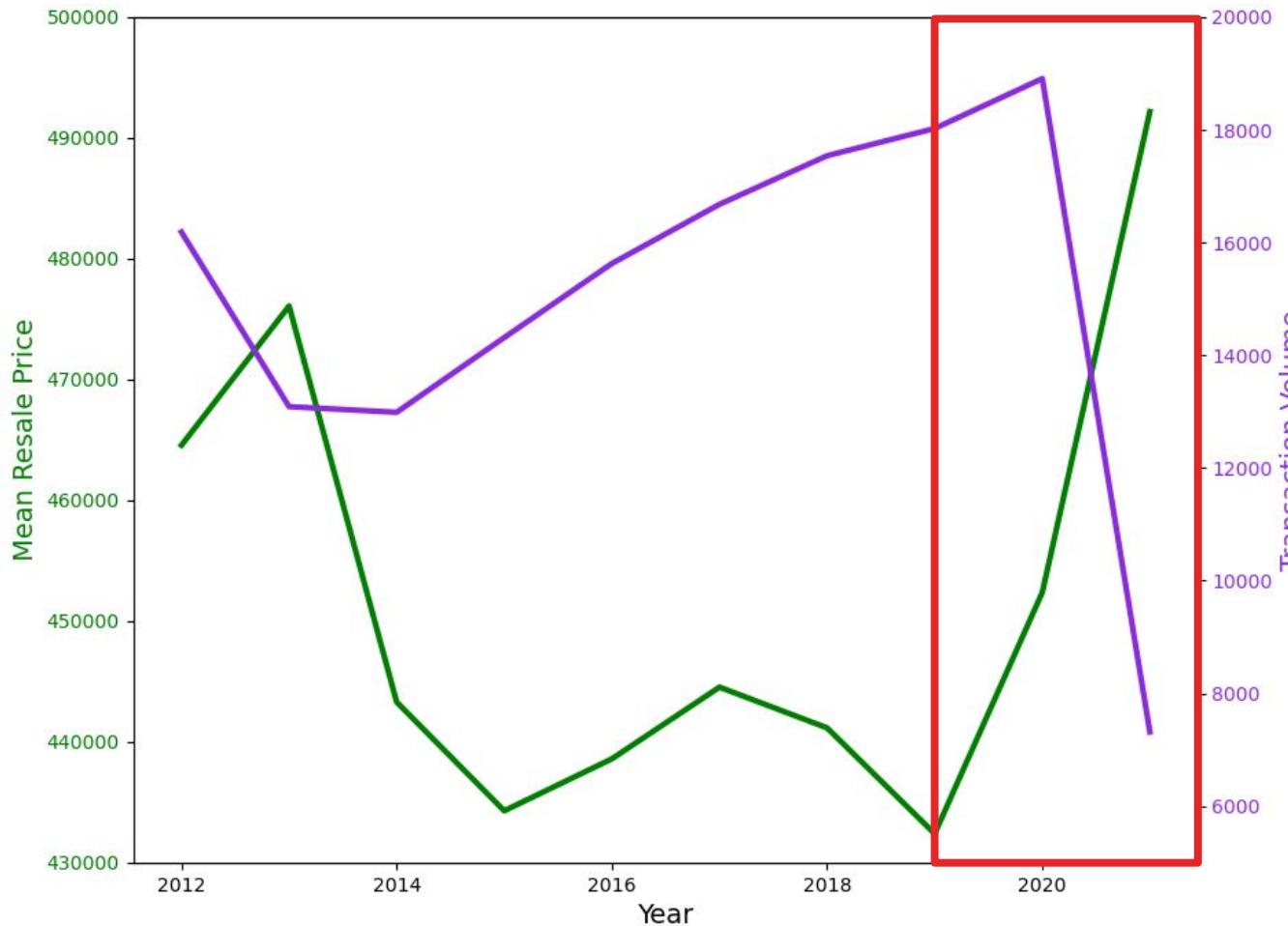
A closer look at the correlations between some key features.



Time-based Analysis



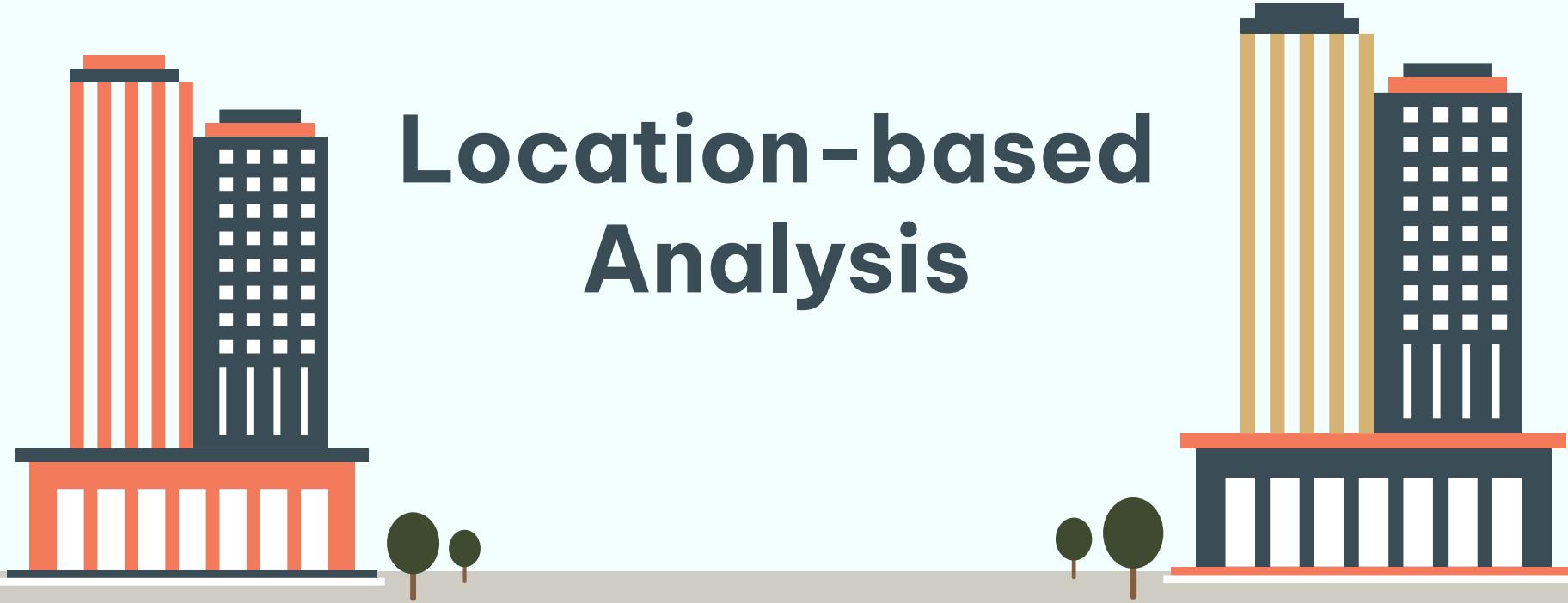
Yearly Mean Price and Transaction Volume of Resale HDBs

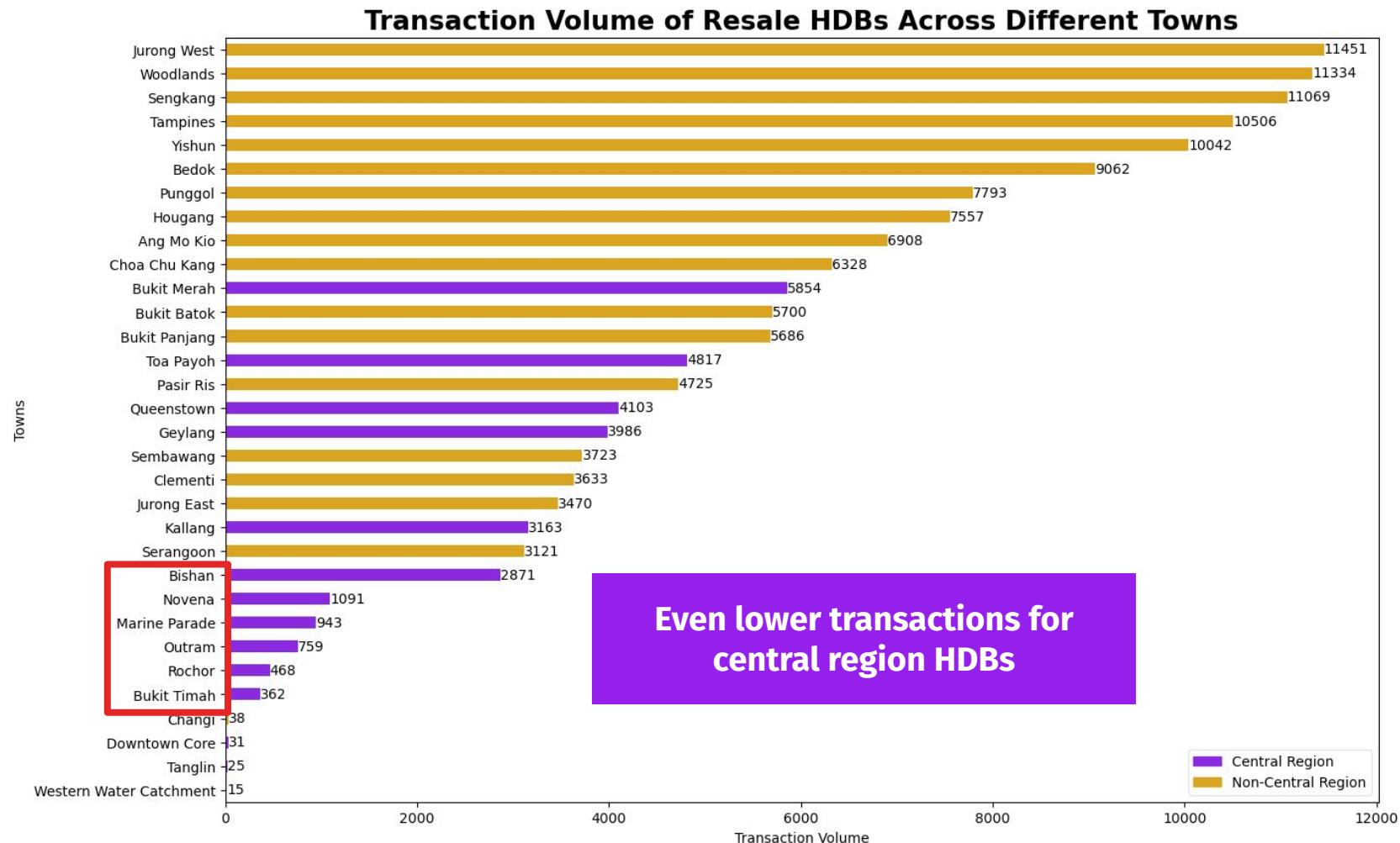


Higher prices

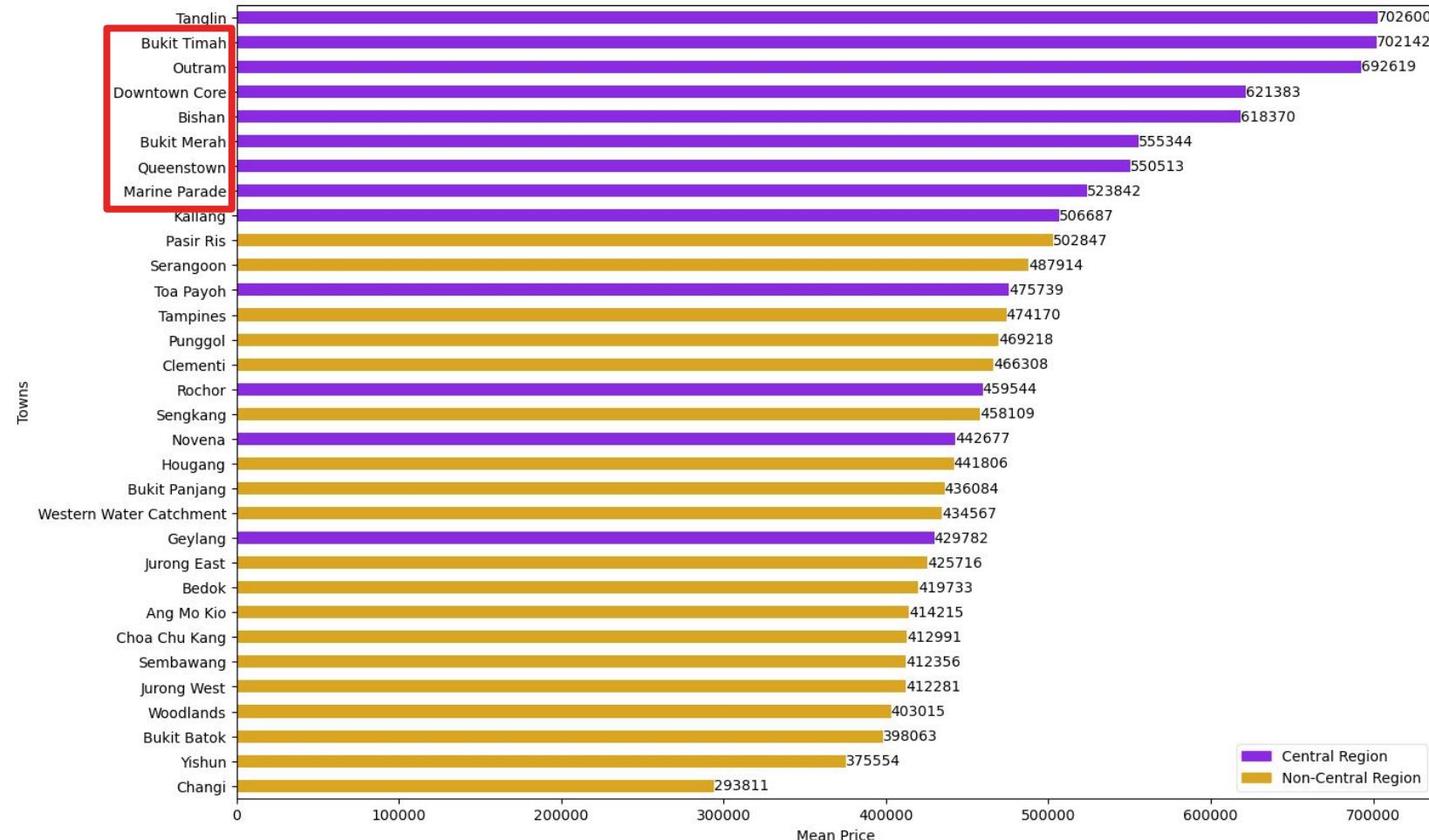
Lower transactions

Location-based Analysis

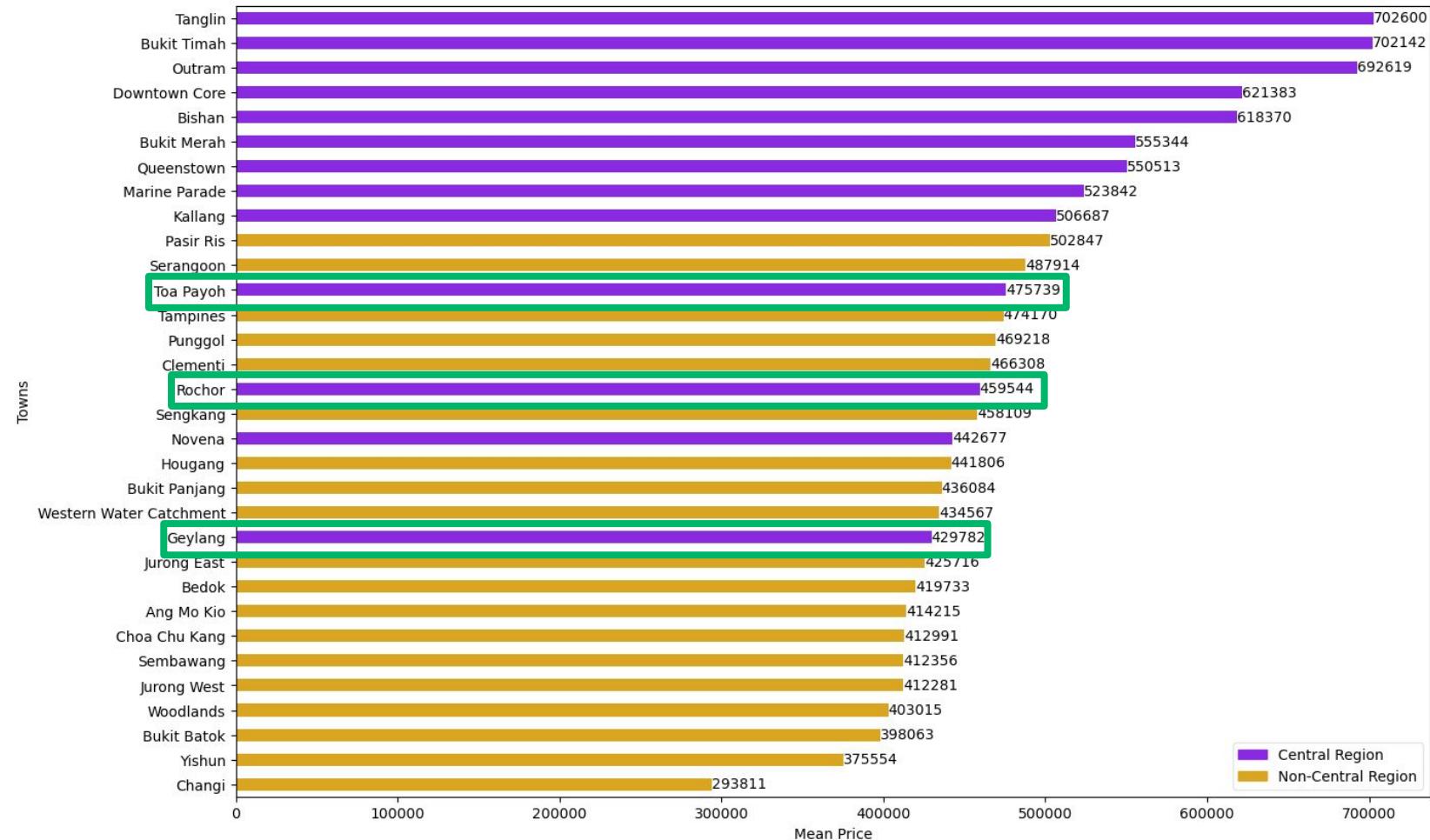




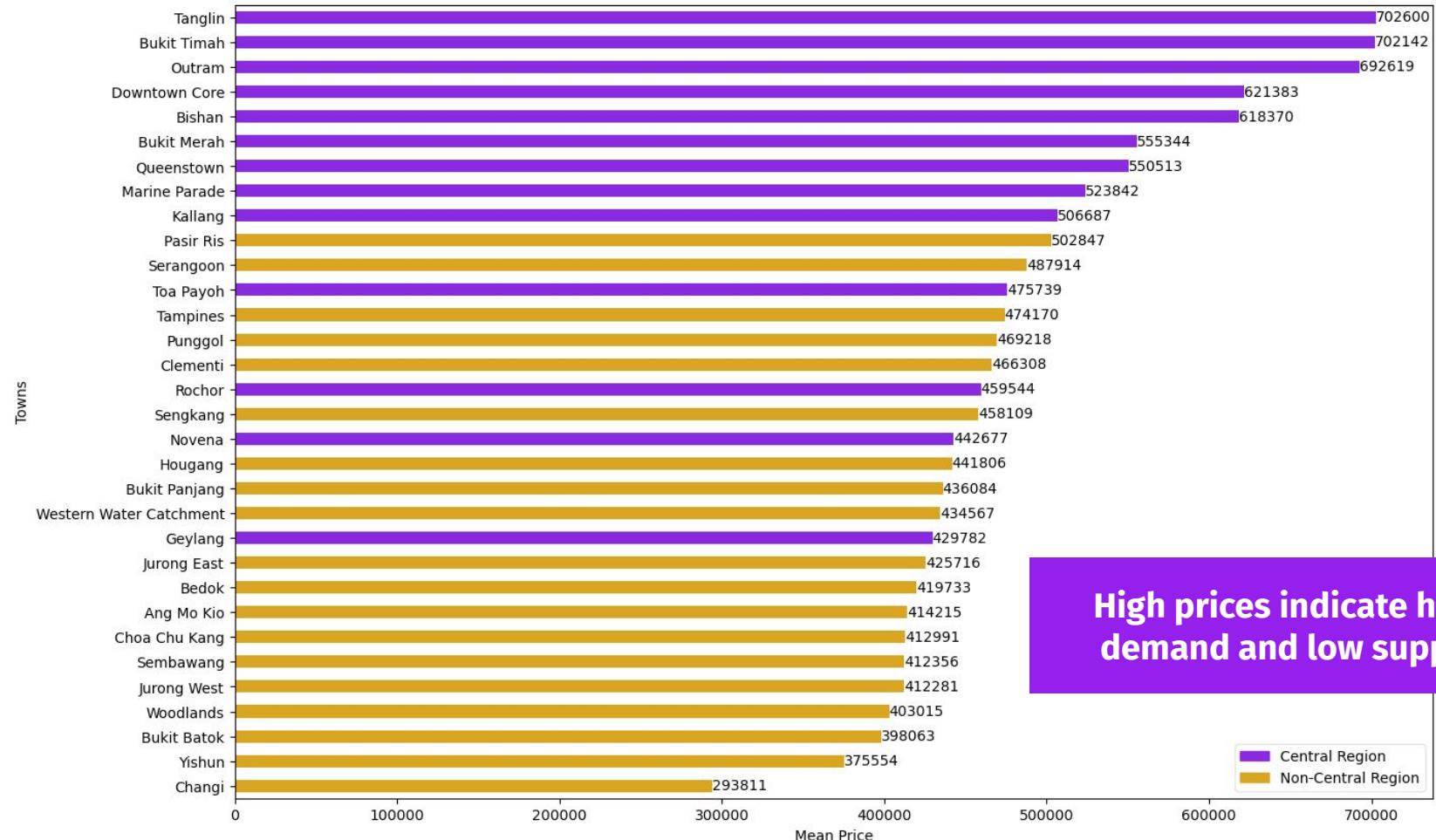
Mean Price of Resale HDBs Across Different Towns



Mean Price of Resale HDBs Across Different Towns



Mean Price of Resale HDBs Across Different Towns



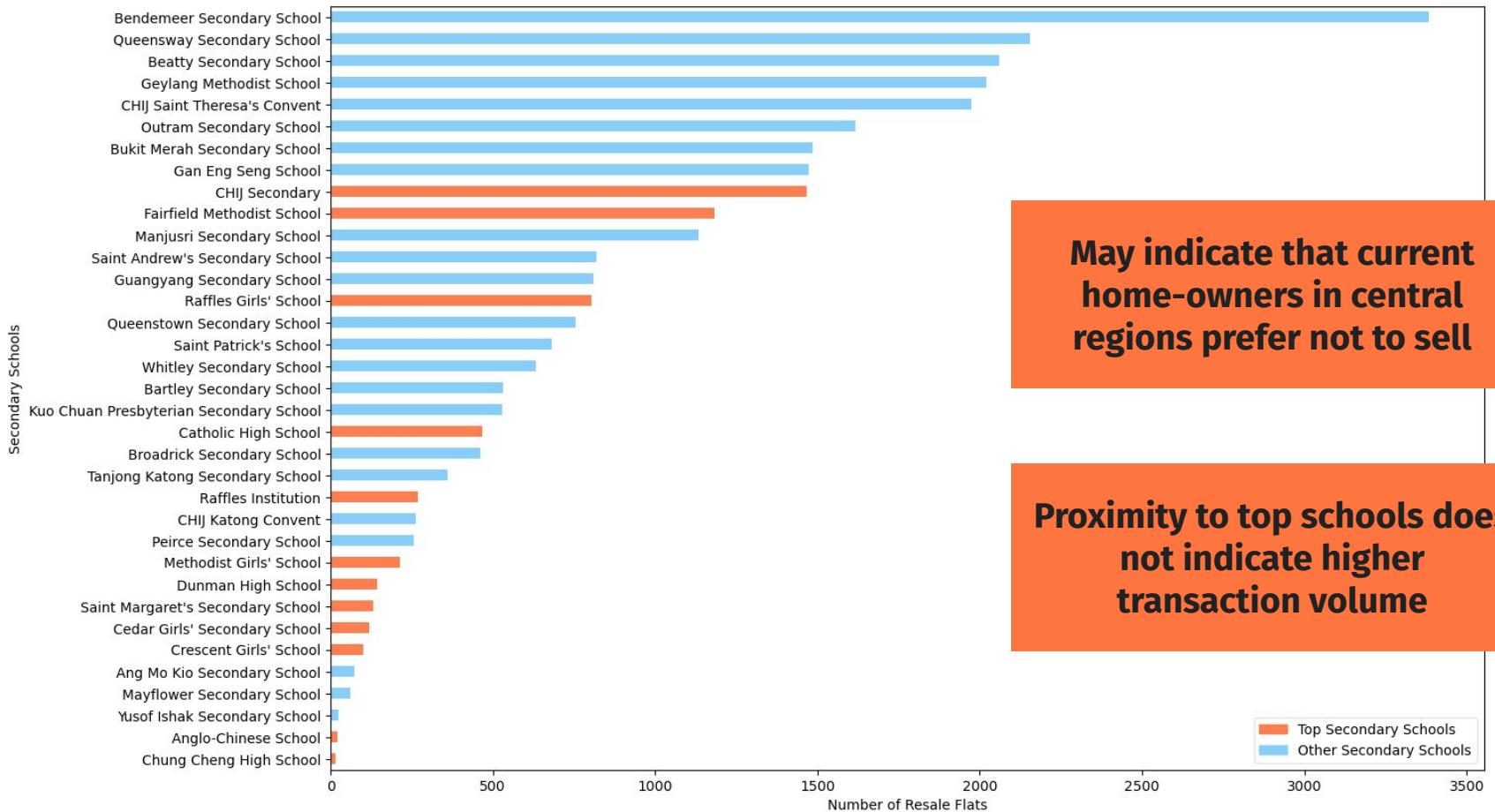
High prices indicate high demand and low supply

Central Region
Non-Central Region

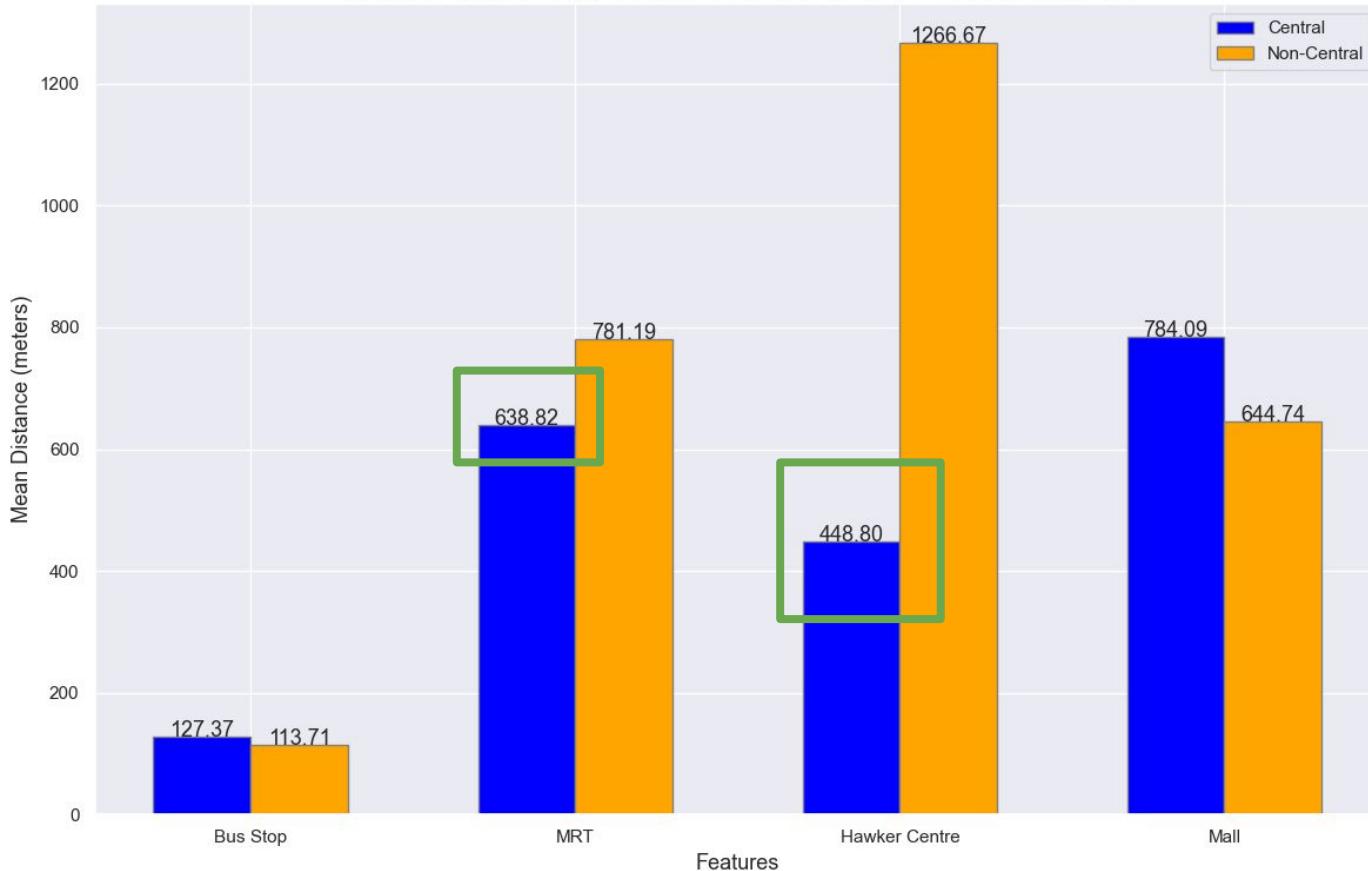
Other Factors



Transaction Volume of Resale HDBs, Near Each Sec Sch, in Central Region

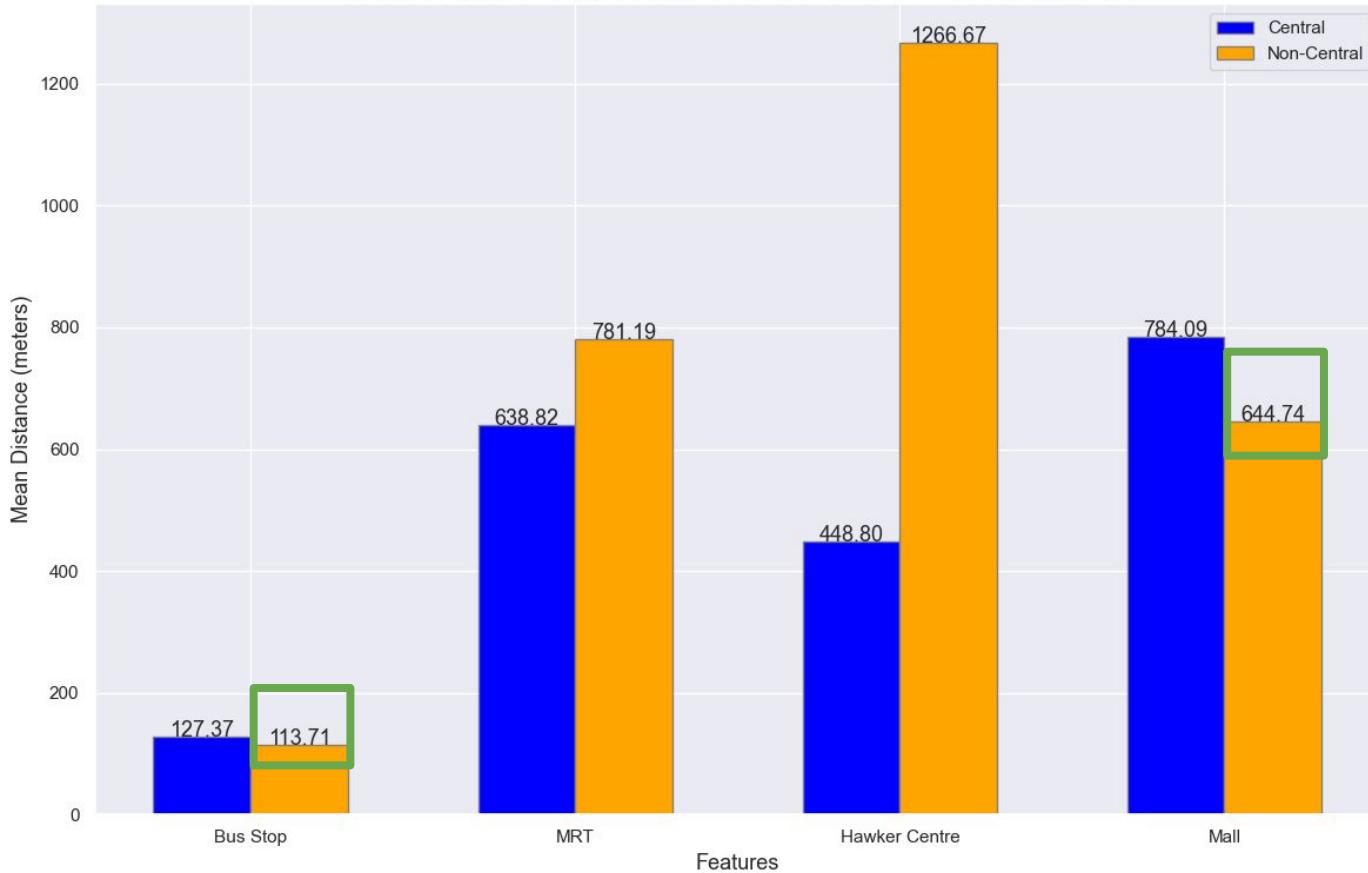


Nearest Transport-Amenities: Central vs Non-Central Regions



Central HDBs tend to be closer to MRT stations and hawker centres.

Nearest Transport-Amenities: Central vs Non-Central Regions



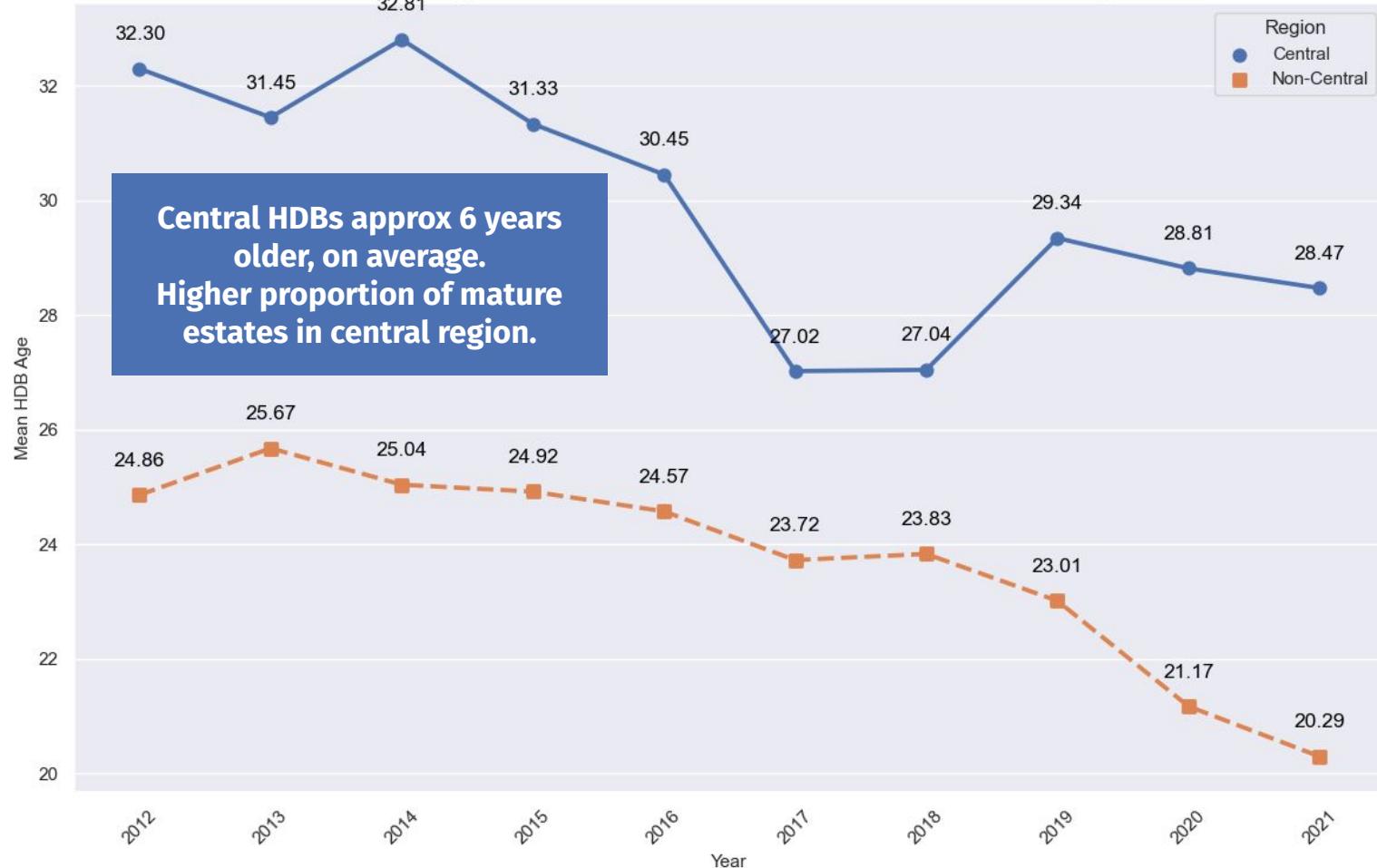
Central HDBs tend to be closer to MRT stations and hawker centres.

Non-central HDBs tend to be closer to bus stops and malls.

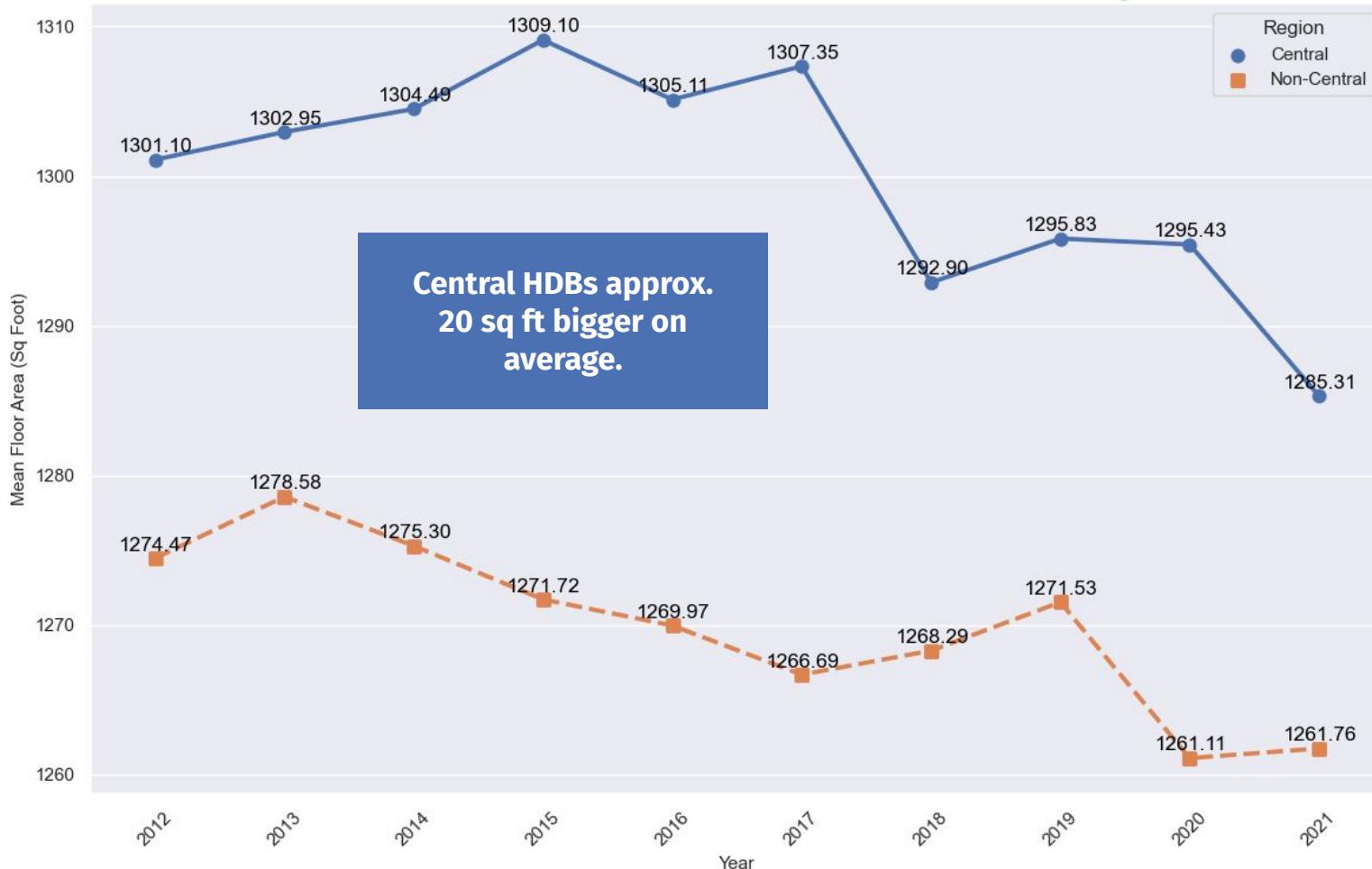
Mean HDB Age for 5-Room HDBs: Central vs. Non-Central Regions



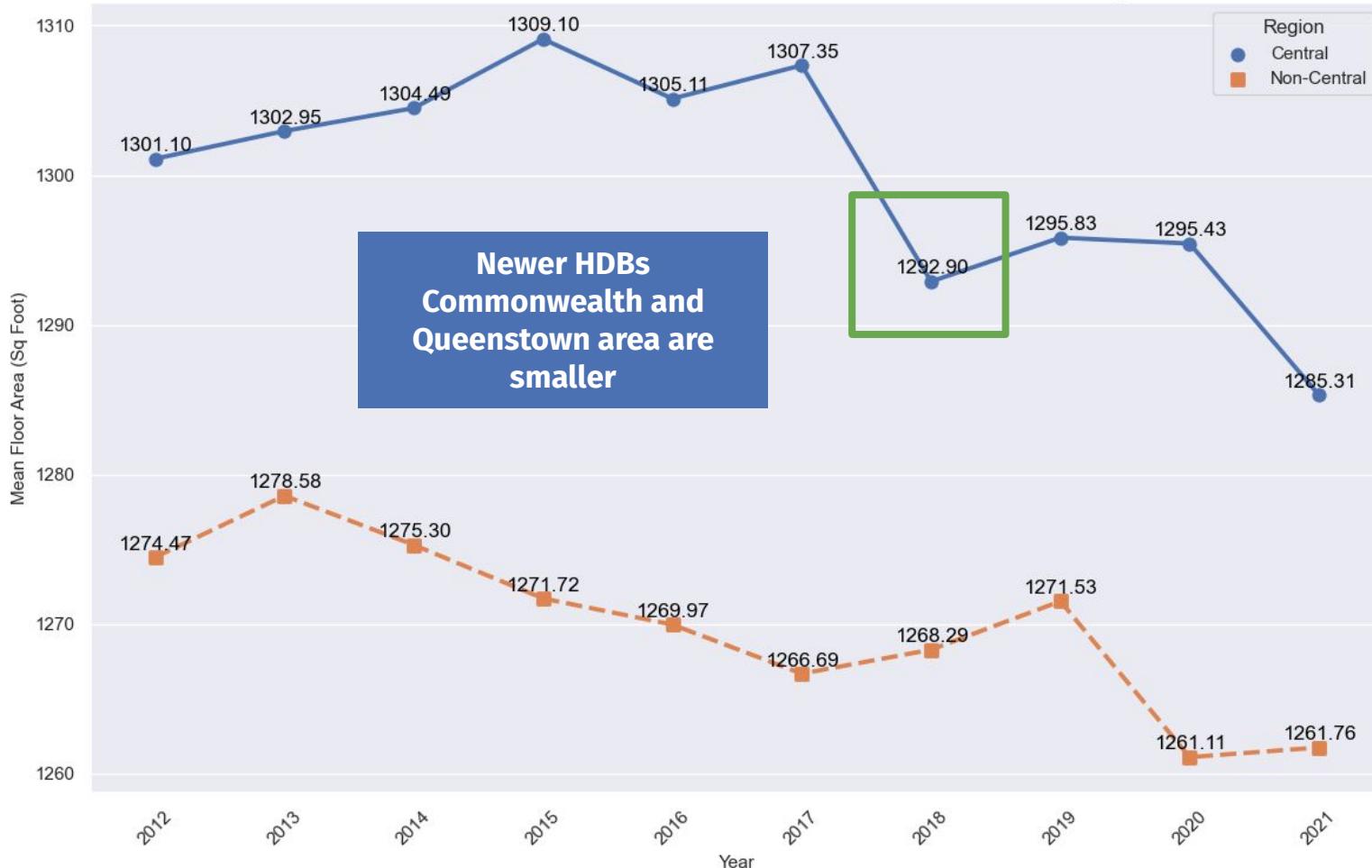
Mean HDB Age for 5-Room HDBs: Central vs. Non-Central Regions



Mean Floor Area for 5-Room HDBs: Central vs. Non-Central Regions

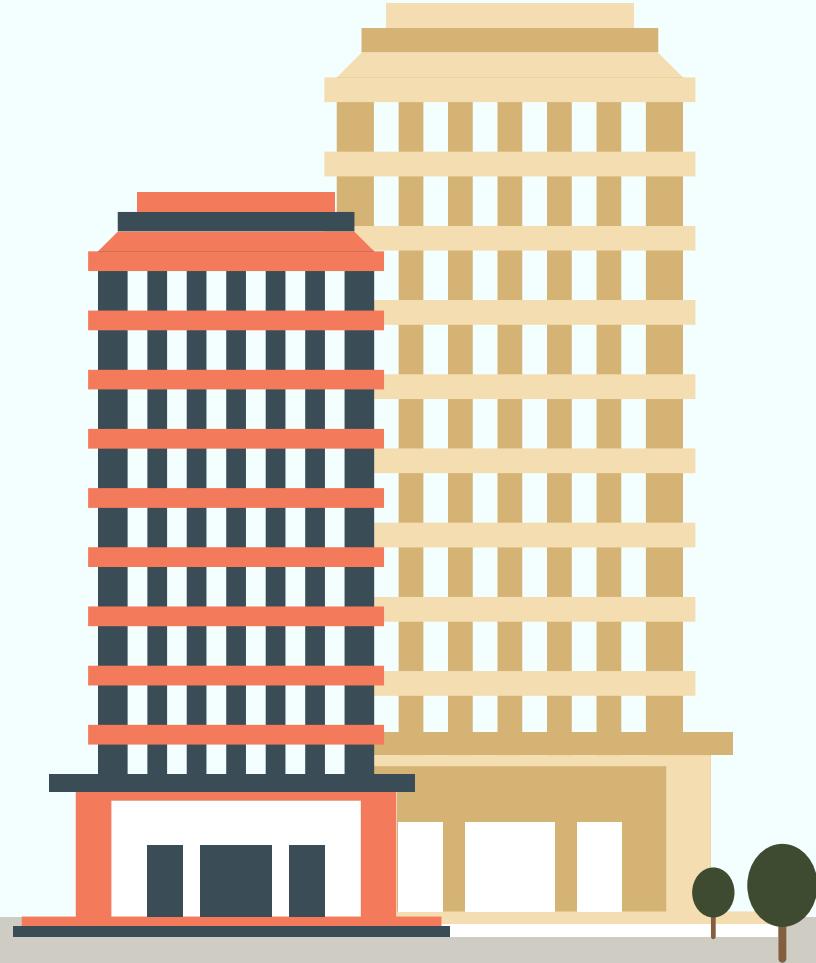


Mean Floor Area for 5-Room HDBs: Central vs. Non-Central Regions

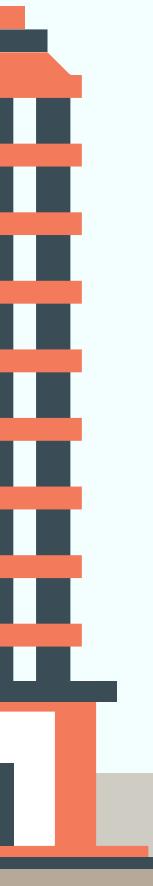


04

Conclusion & Recommendations



Conclusion



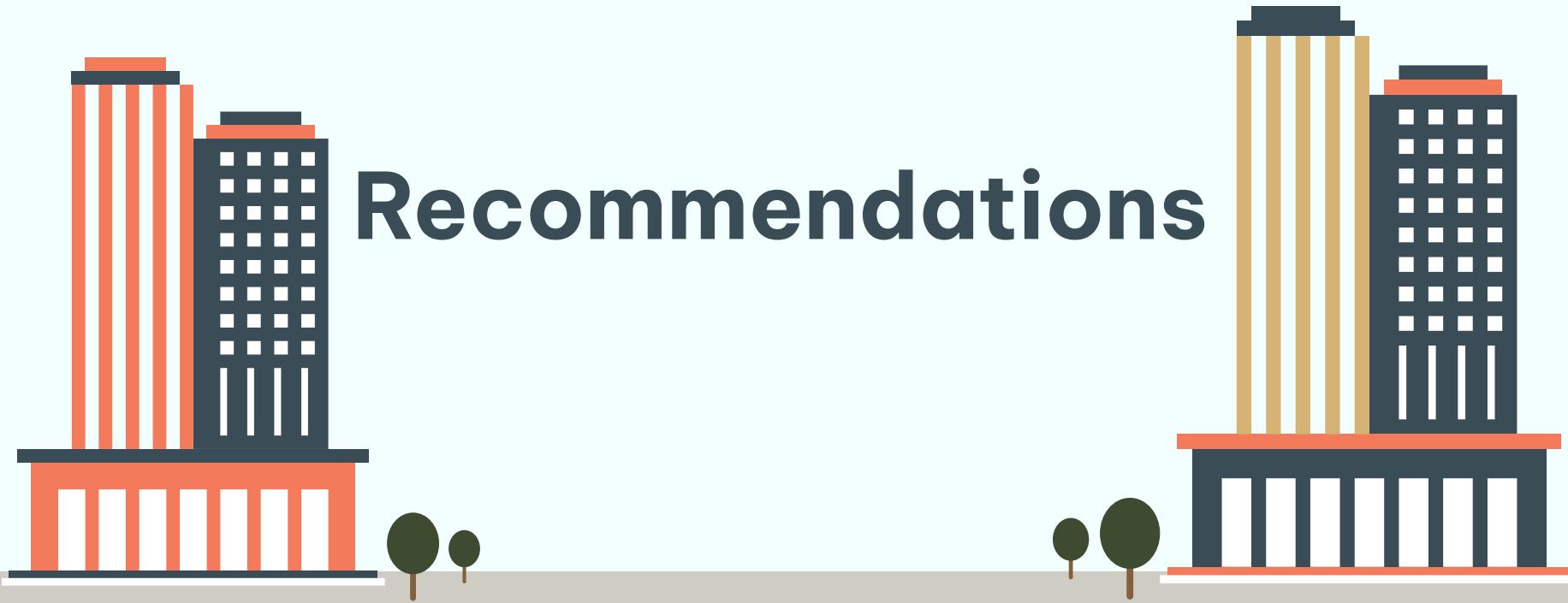
Yes, **resale prices** of **central region HDBs** seem to be influenced primarily by its **location**.

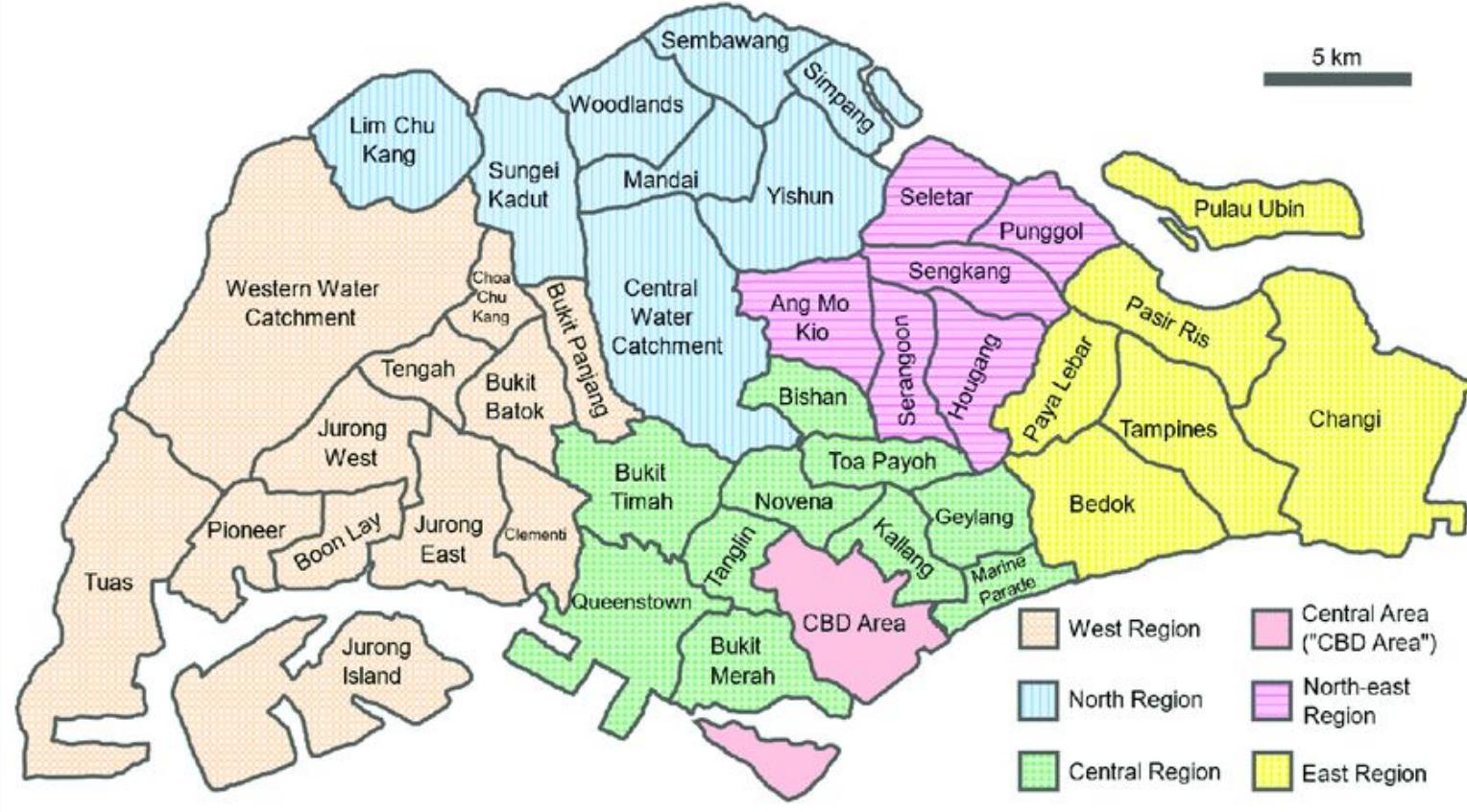


Secondarily, buyers may be drawn to the generally **larger floor areas** of central HDBs. However, this may also be found in **non-central mature estates**.

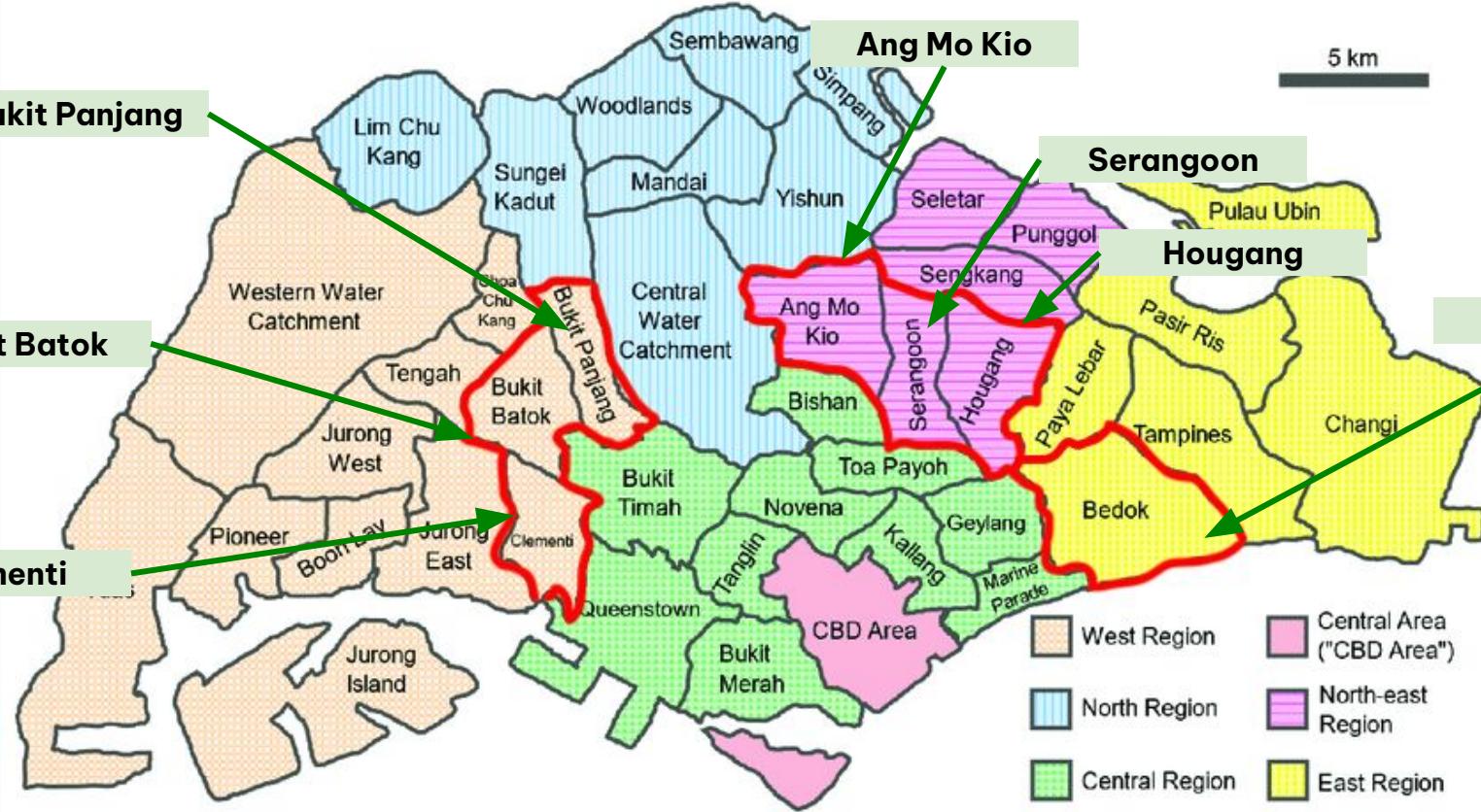
Other factors such as **proximity to top schools, malls, hawker centres** and **connectivity via public transport** don't seem to affect resale prices in the central region as much.

Recommendations



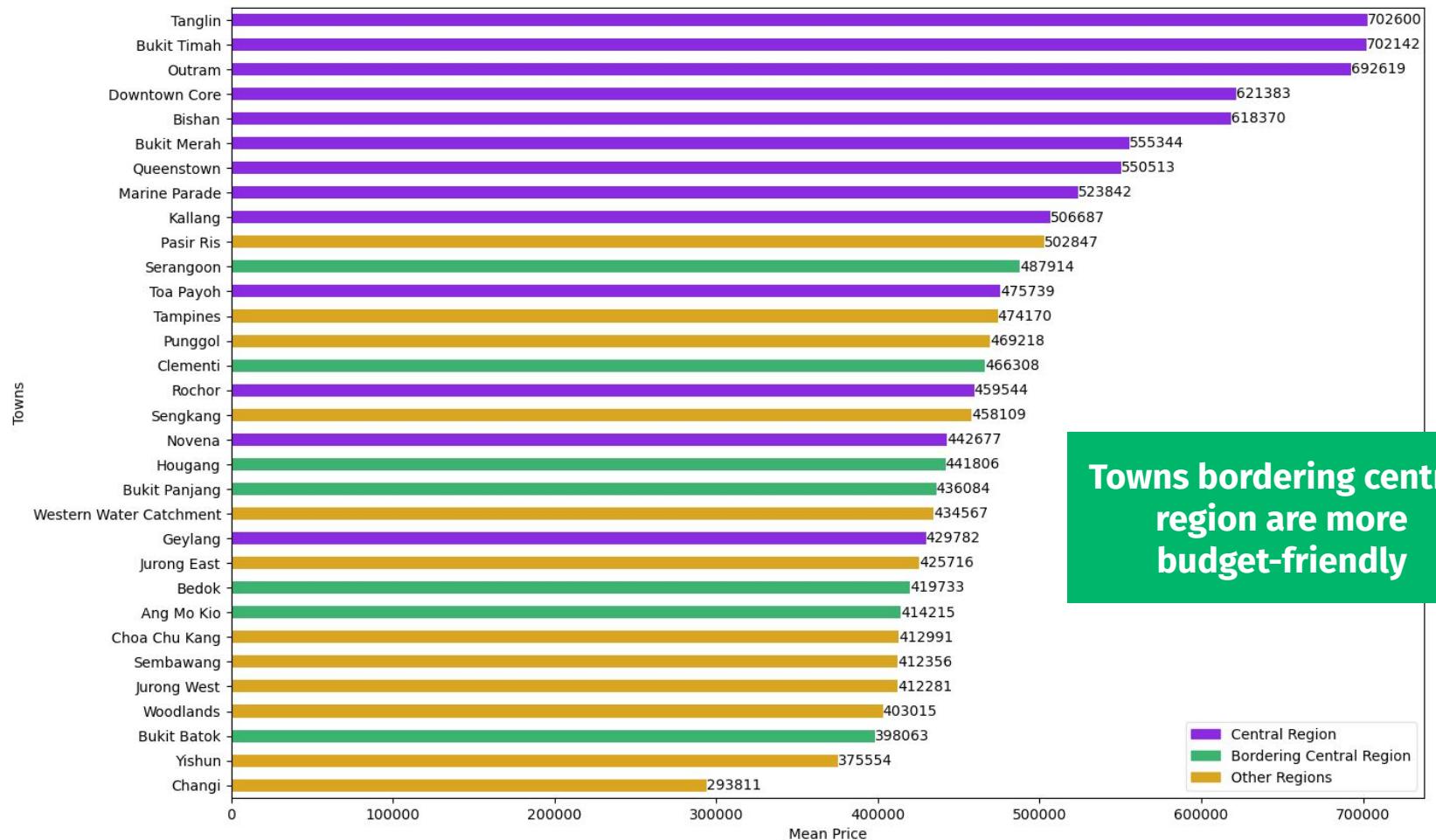


Source: [ResearchGate](#), June 2022

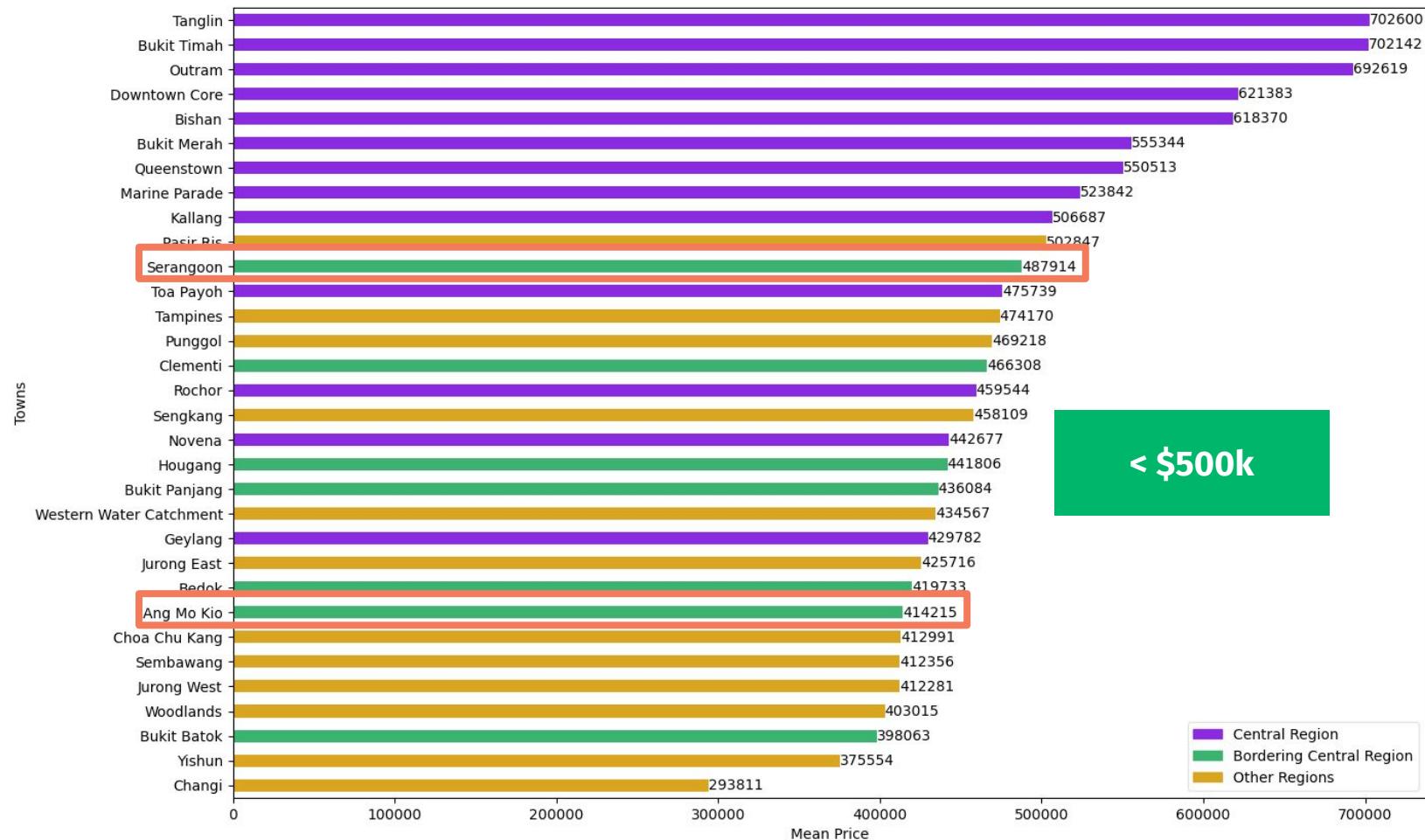


Source: [ResearchGate](#), June 2022

Mean Price of Resale HDBs (across different towns)



Mean Price of Resale HDBs (across different towns)



Sources:

[LTA Rail Network](#) / [Land Transport Guru, Serangoon](#) /
[Land Transport Guru, Ang Mo Kio](#)

Public Transport Connectivity in Serangoon

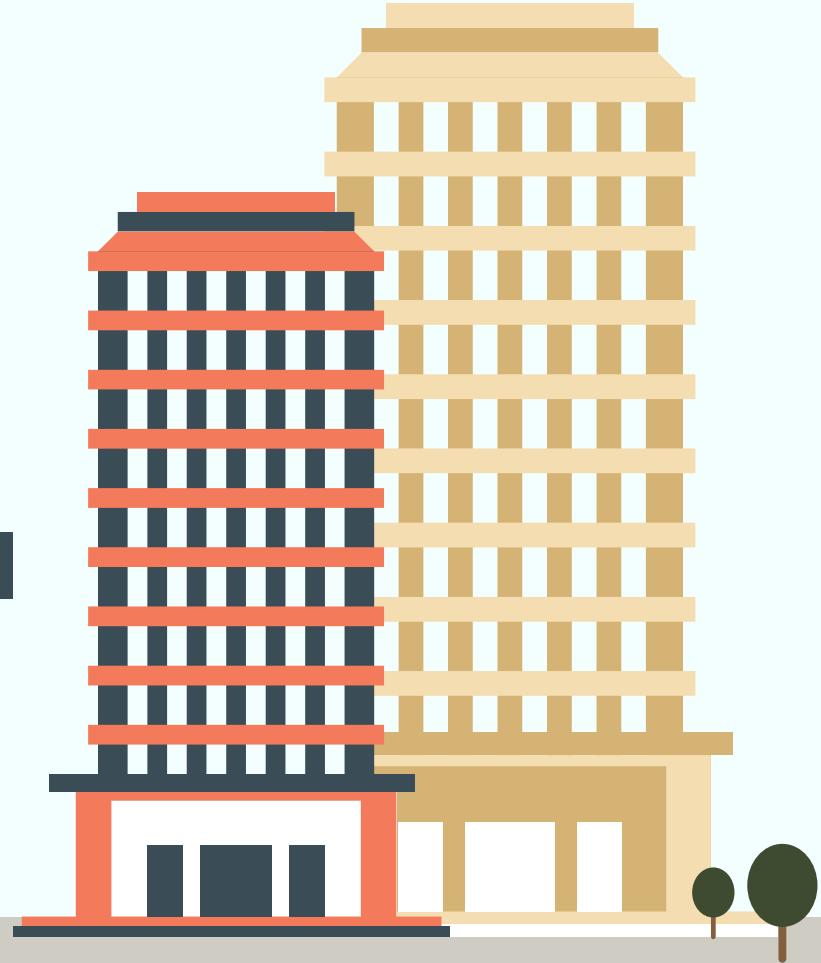


Public Transport Connectivity in Ang Mo Kio



05

Our Predictive Model

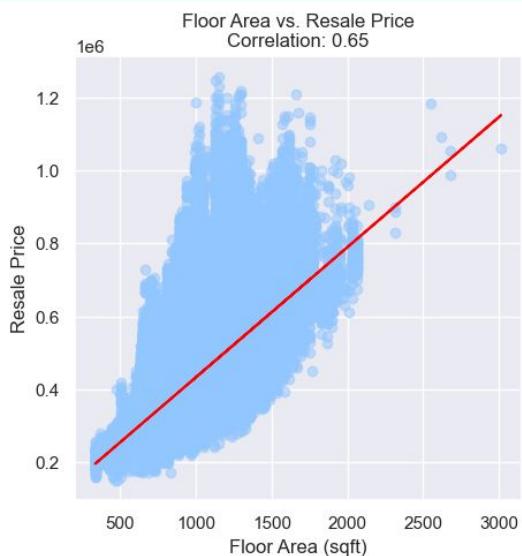


Dataset Details

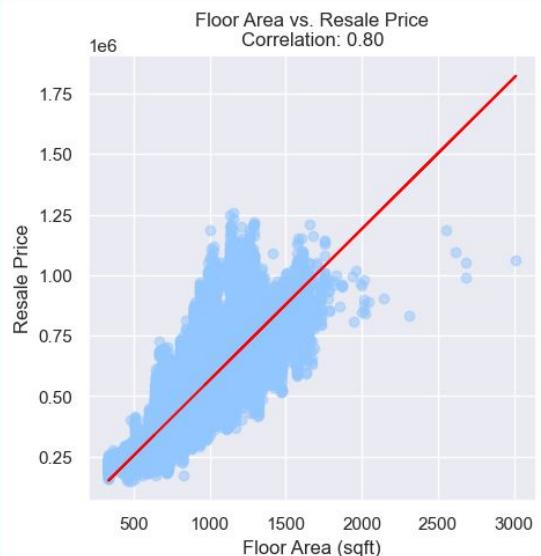
No. of resale HDB transactions	~150k
No. of features	70 +
Transaction period	2012 to 2021

Selection of Features (**Floor Area**)

ALL

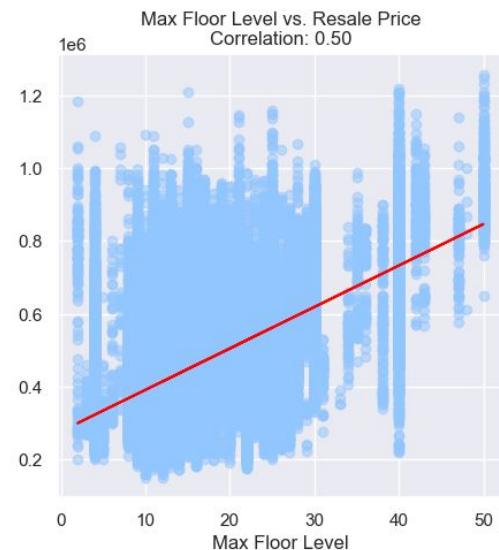


Central Region

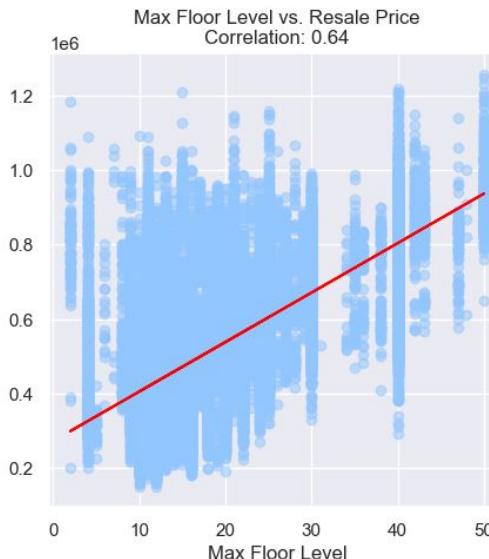


Selection of Features (**Max Floor**)

ALL

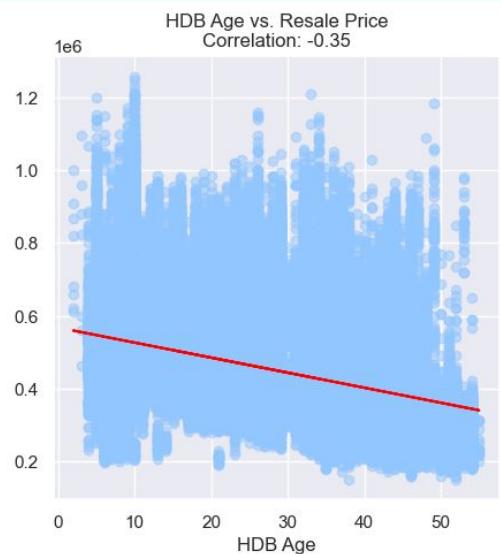


Central Region

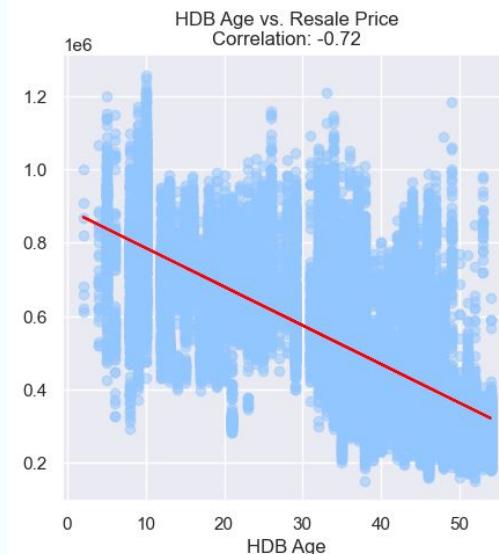


Selection of Features (HDB Age)

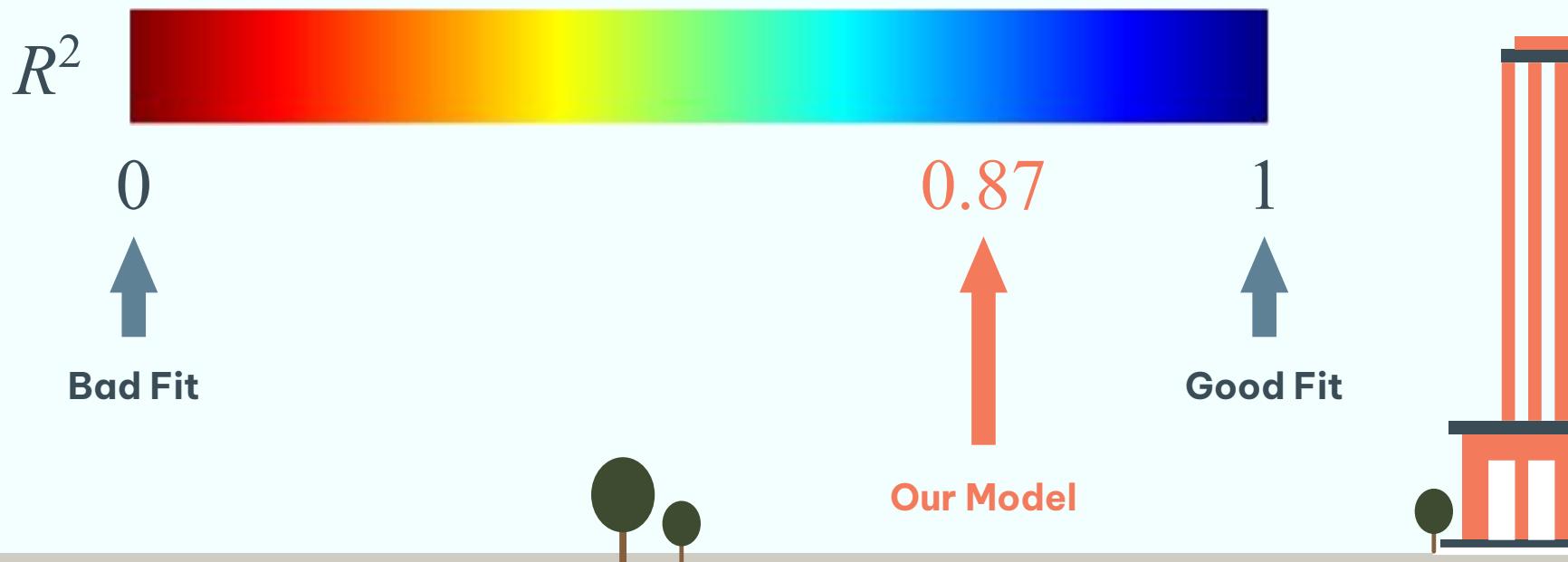
ALL



Central Region



How well does our model fit existing data?



How well does our model fit **existing data**?

9.4%

Mean Absolute
Percentage Error

How well does our model fit new data?

 PropertyGuru

Home > HDB Estates > Bishan > Bishan Street 23 > Blk 229 > 229 Bishan Street 23

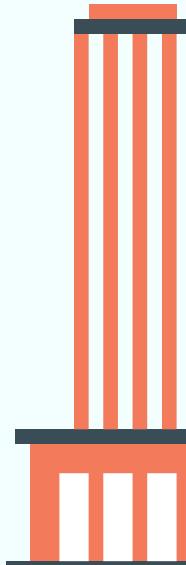


15  1  1 

229 Bishan Street 23

229 Bishan Street 23 Ang Mo Kio / Bishan / Thomson (D20) [See on Map](#)

Features	Input Values
Mature estate	Yes
Floor area (in sqft)	1097
Hdb age	32
Highest floor lvl	18
PSLE cutoff point	253
MRT nearest dist (in m)	810
Pri sch nearest dist (in m)	560
Sec sch nearest dist (in m)	560
Hawker within 2 km	8
Central region	Yes
Planning area	Bishan
Flat type	4 ROOM
Flat model	Model A



How well does our model fit new data?

 PropertyGuru

Home > HDB Estates > Bishan > Bishan Street 23 > Blk 229 > 229 Bishan Street 23



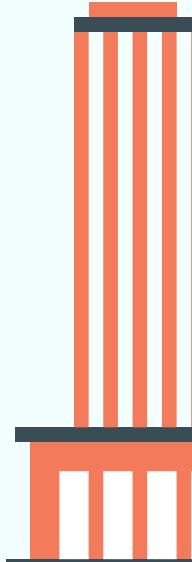
15  1  1 

229 Bishan Street 23

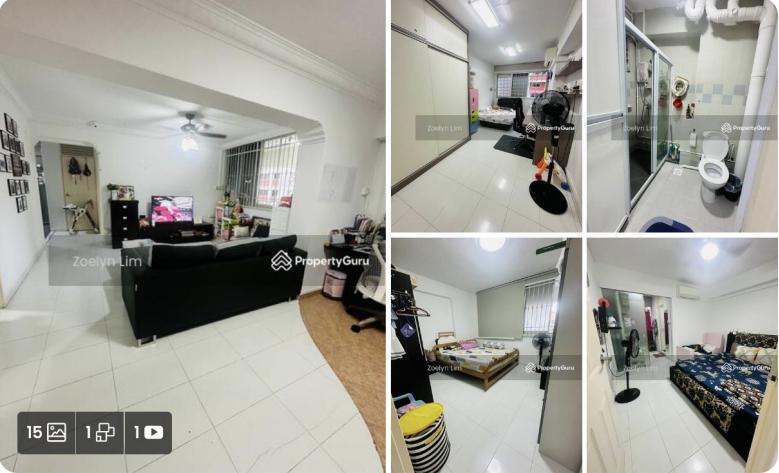
229 Bishan Street 23 Ang Mo Kio / Bishan / Thomson (D20) [See on Map](#)

Predicted Value

\$613,785



How well does our model fit new data?



229 Bishan Street 23

229 Bishan Street 23 Ang Mo Kio / Bishan / Thomson (D20) [See on Map](#)

HDB Flat

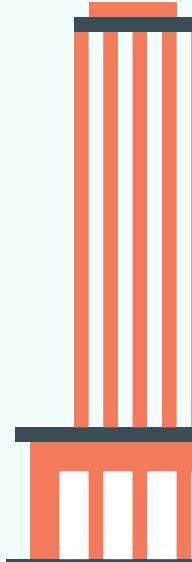
S\$ 768,000

Est. Repayment S\$ 2,749 / mo
[Get Mortgage Pre-Qualified >](#)

Actual Value

Predicted Value

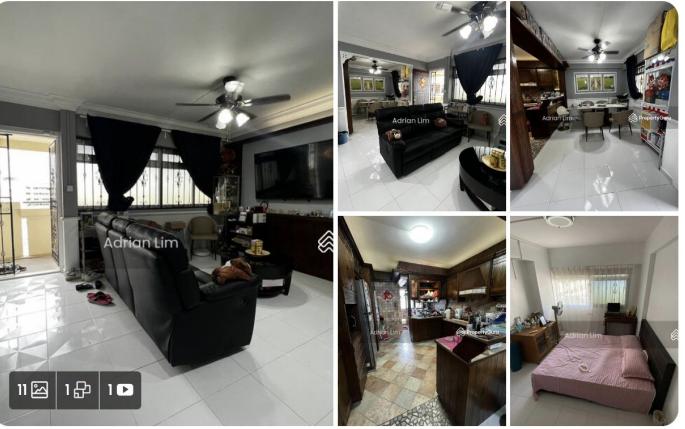
\$613,785



How well does our model fit new data?

 PropertyGuru

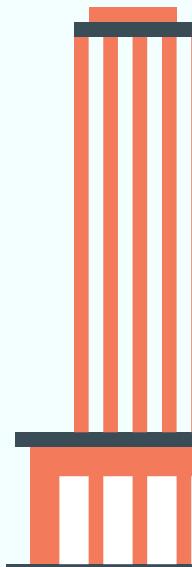
Home > HDB Estates > Tampines > Tampines Street 33 > Blk 317 > 317 Tampines Street 33



317 Tampines Street 33

317 Tampines Street 33 Pasir Ris / Tampines (D18) [See on Map](#)

Features	Input Values
Mature estate	Yes
Floor area (in sqft)	1152
Hdb age	29
Highest floor lvl	10
PSLE cutoff point	237
MRT nearest dist (in m)	410
Pri sch nearest dist (in m)	770
Sec sch nearest dist (in m)	770
Hawker within 2 km	2
Central region	No
Planning area	Tampines
Flat type	4 ROOM
Flat model	New Generation



How well does our model fit new data?

PropertyGuru

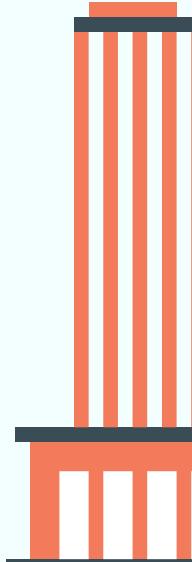
Home > HDB Estates > Tampines > Tampines Street 33 > Blk 317 > 317 Tampines Street 33

317 Tampines Street 33

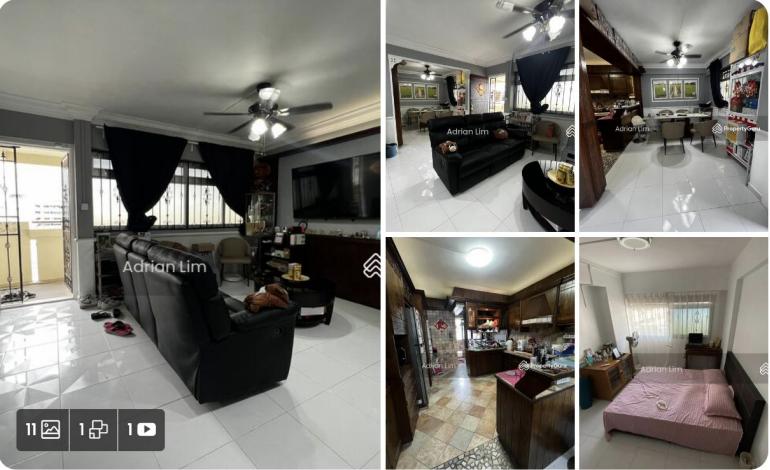
317 Tampines Street 33 Pasir Ris / Tampines (D18) [See on Map](#)

Predicted Value

\$485,620



How well does our model fit new data?



317 Tampines Street 33

317 Tampines Street 33 Pasir Ris / Tampines (D18) [See on Map](#)

HDB Flat

S\$ 620,000 Negotiable

Est. Repayment S\$ 2,219 / mo
[Get Mortgage Pre-Qualified >](#)

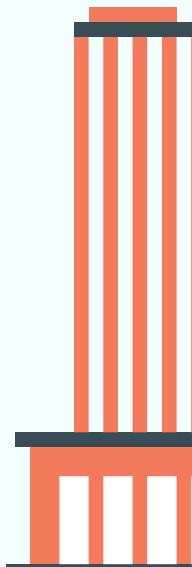
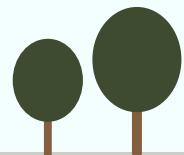
Predicted Value

\$485,620

Actual Value

Analysis of Results

Resale HDB	Predicted Value	Actual Value	Percentage Difference
229 Bishan St 23	\$613,785	\$768,000	20.1%
317 Tampines St 33	\$485,620	\$620,000	21.7%

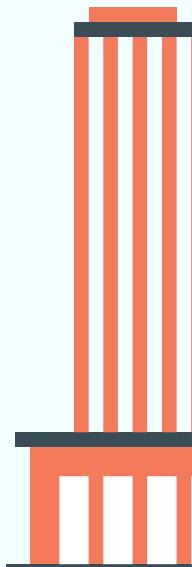
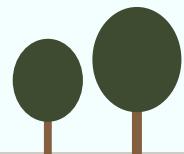


Analysis of Results

Resale HDB	Predicted Value	Actual Value	Percentage Difference
229 Bishan St 23	\$613,785	\$768,000	20.1%
317 Tampines St 33	\$485,620	\$620,000	21.7%

Markup

Inflation

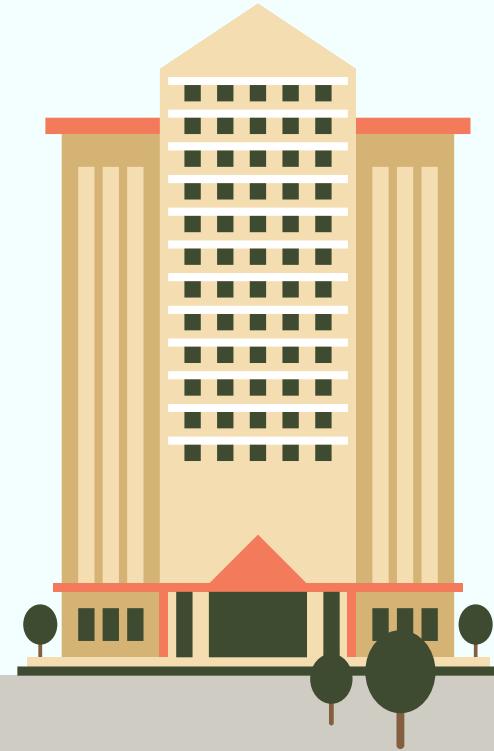
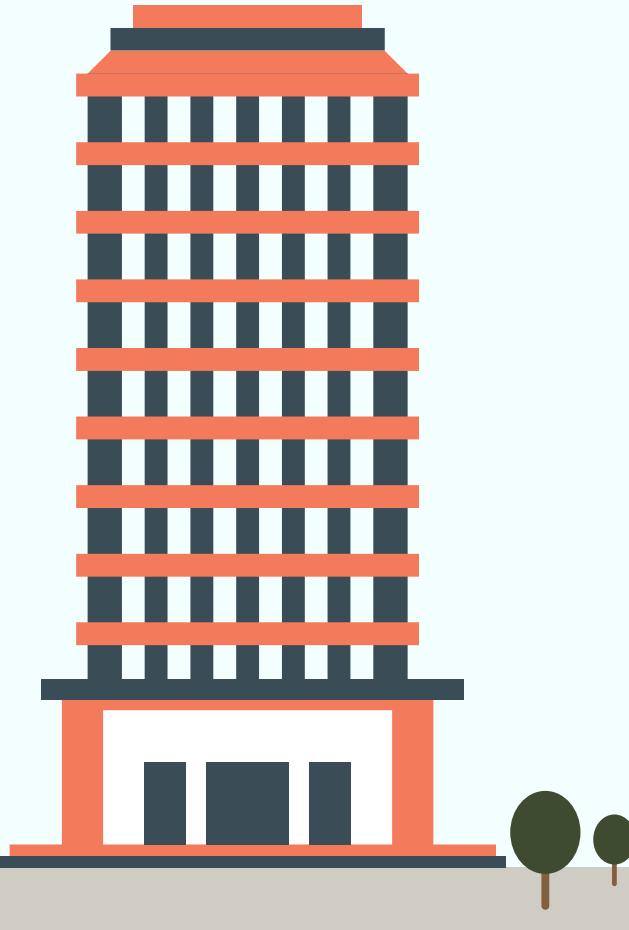


Future Considerations

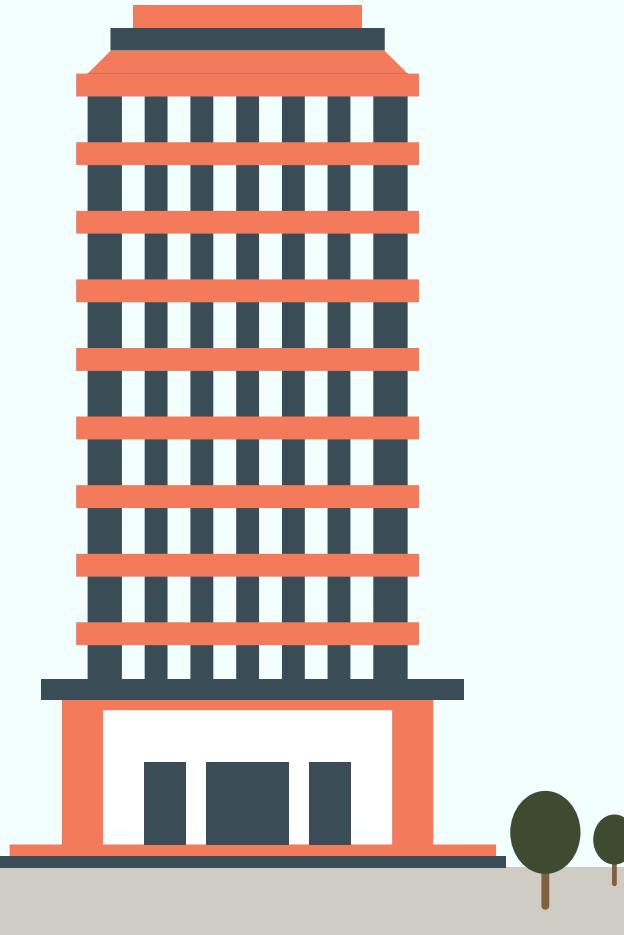
Limitations	Possible Solutions
Latest transactions in the dataset took place in 2021	Include transactions till 2023 to reflect the latest resale prices
Improved infrastructure such as new MRT lines and URA urban planning* within certain towns may affect resale prices	Include “developing_towns” as an additional feature in dataset
Transaction volume alone may not be a sufficient indicator of supply & demand	Include “time_taken_to_sell” as an additional feature in dataset

Source: [URA, 2019*](#)

Thanks!

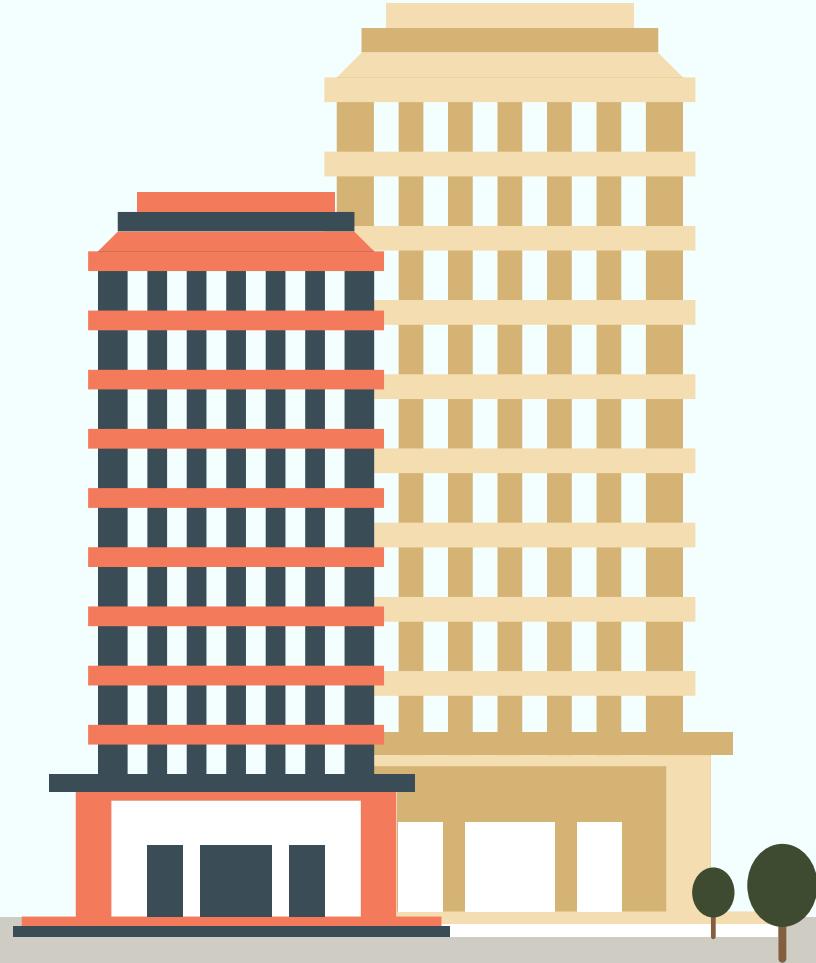


Q&A



06

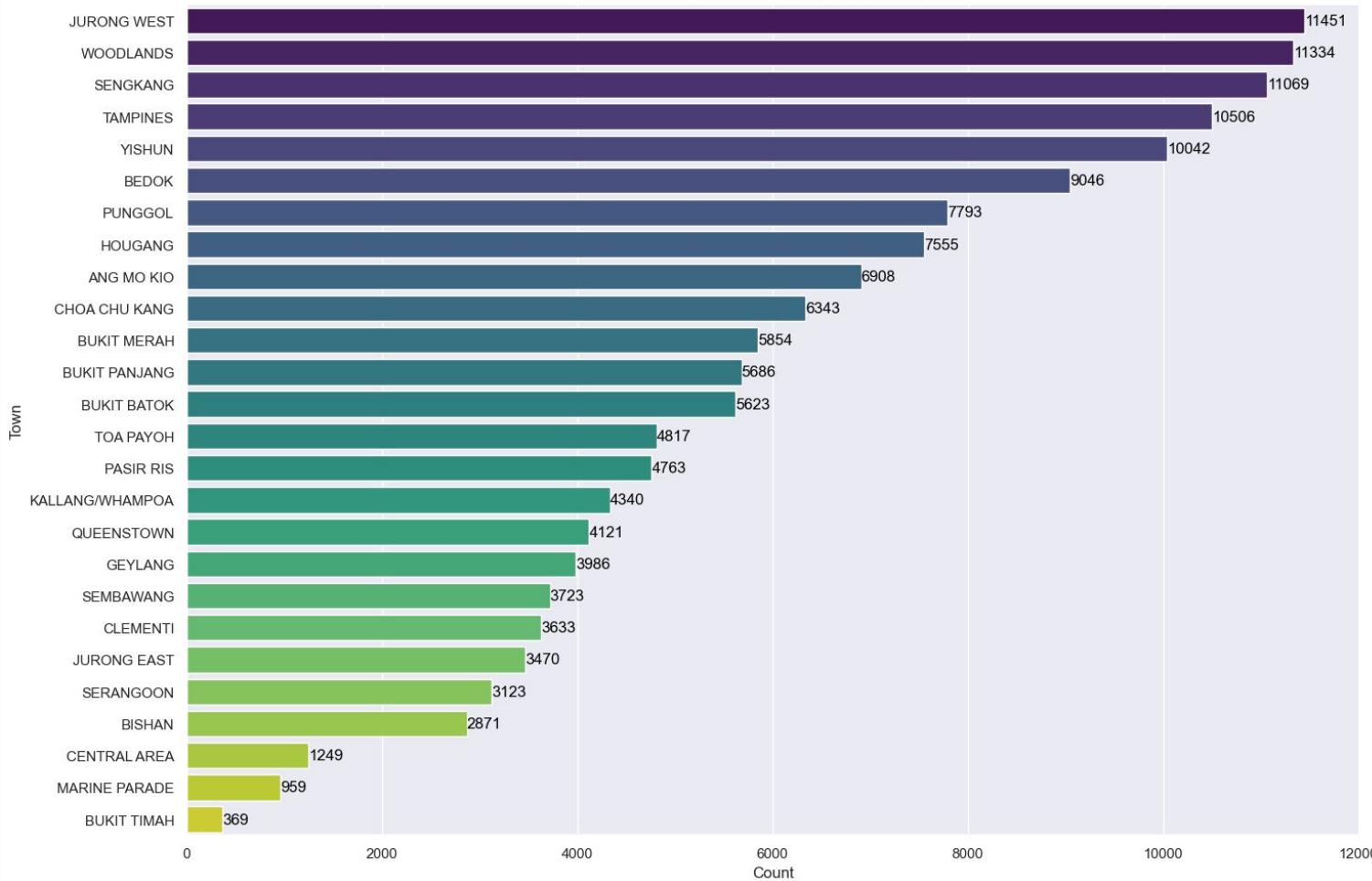
Appendix



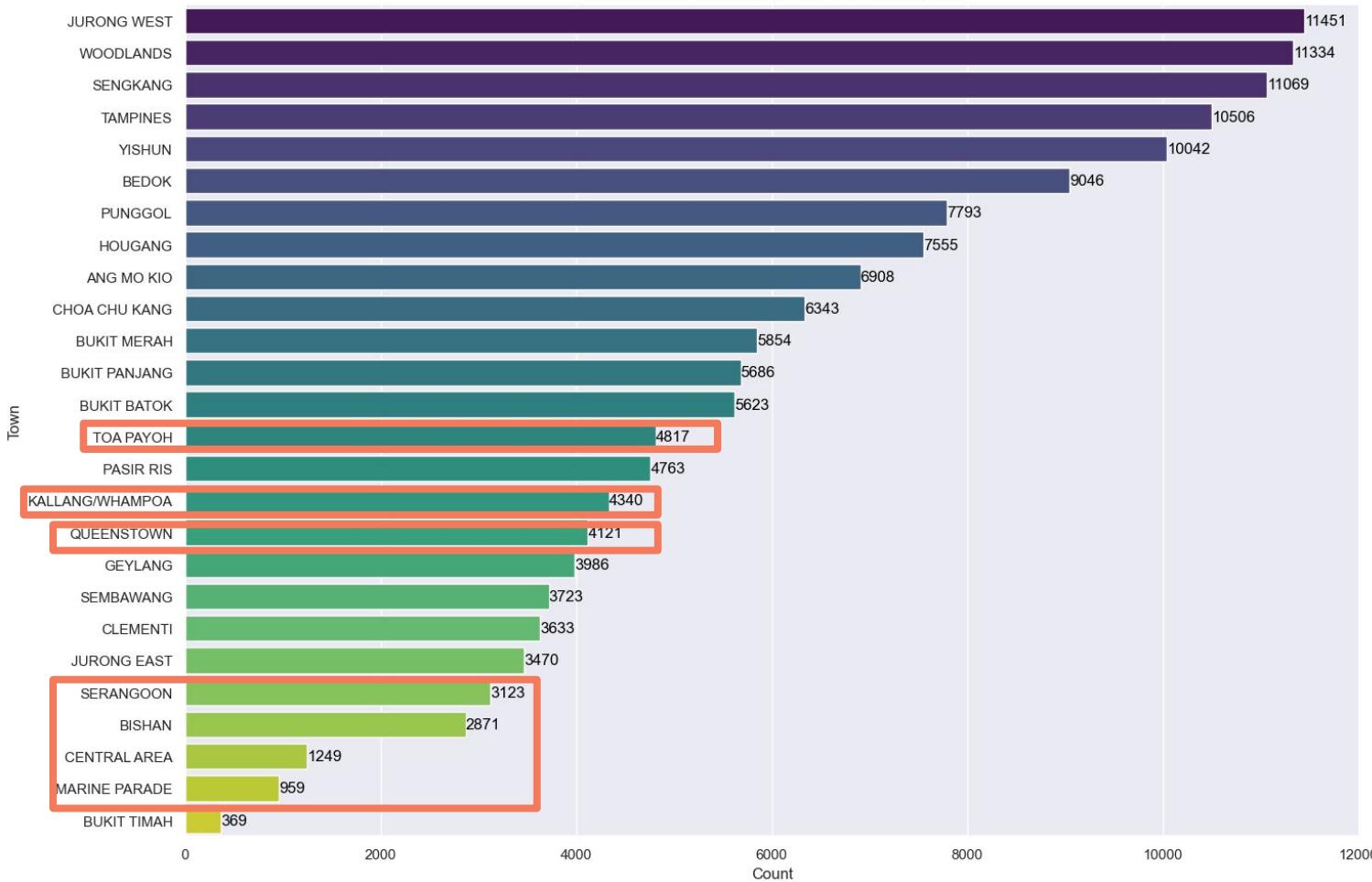
Feature Selection



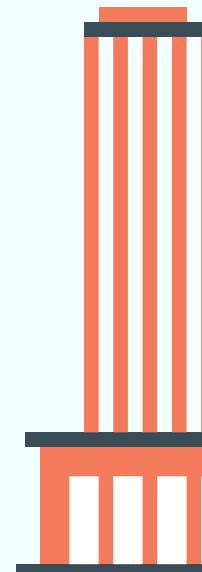
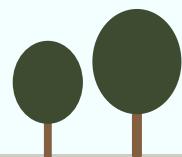
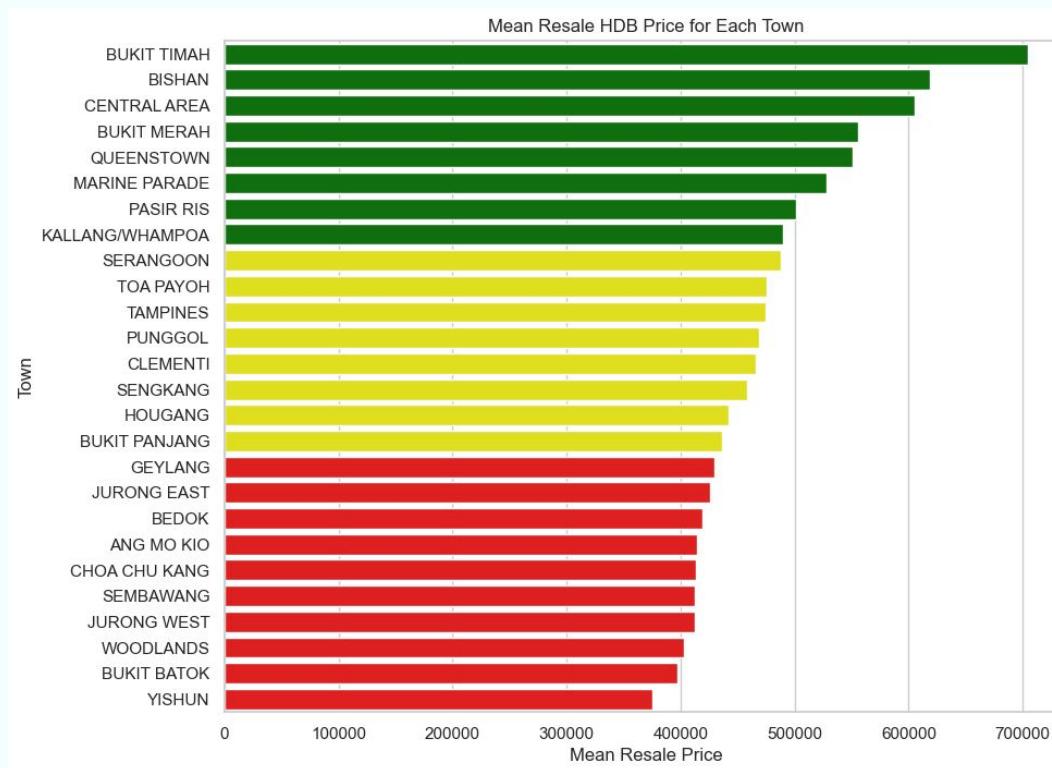
Volume of Resale HDB Transactions



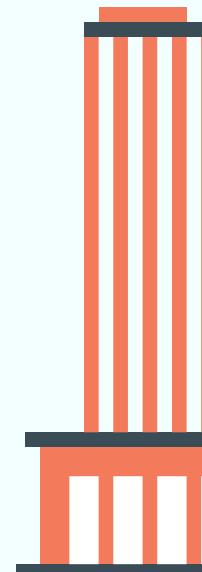
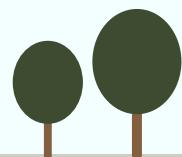
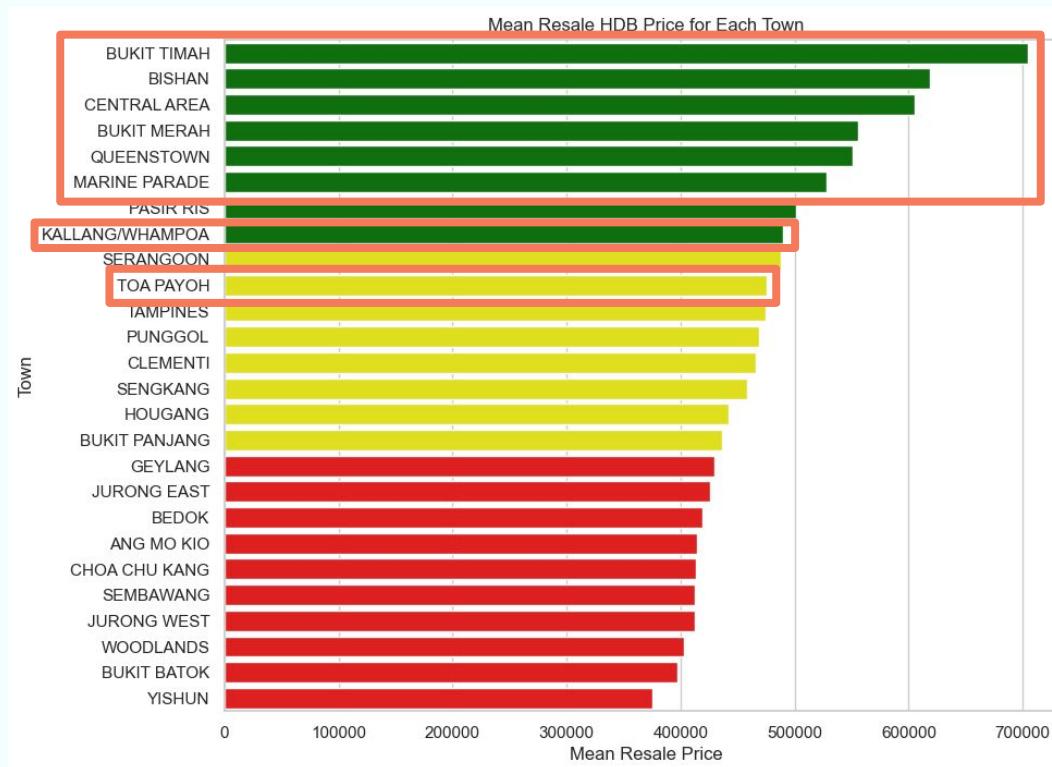
Volume of Resale HDB Transactions

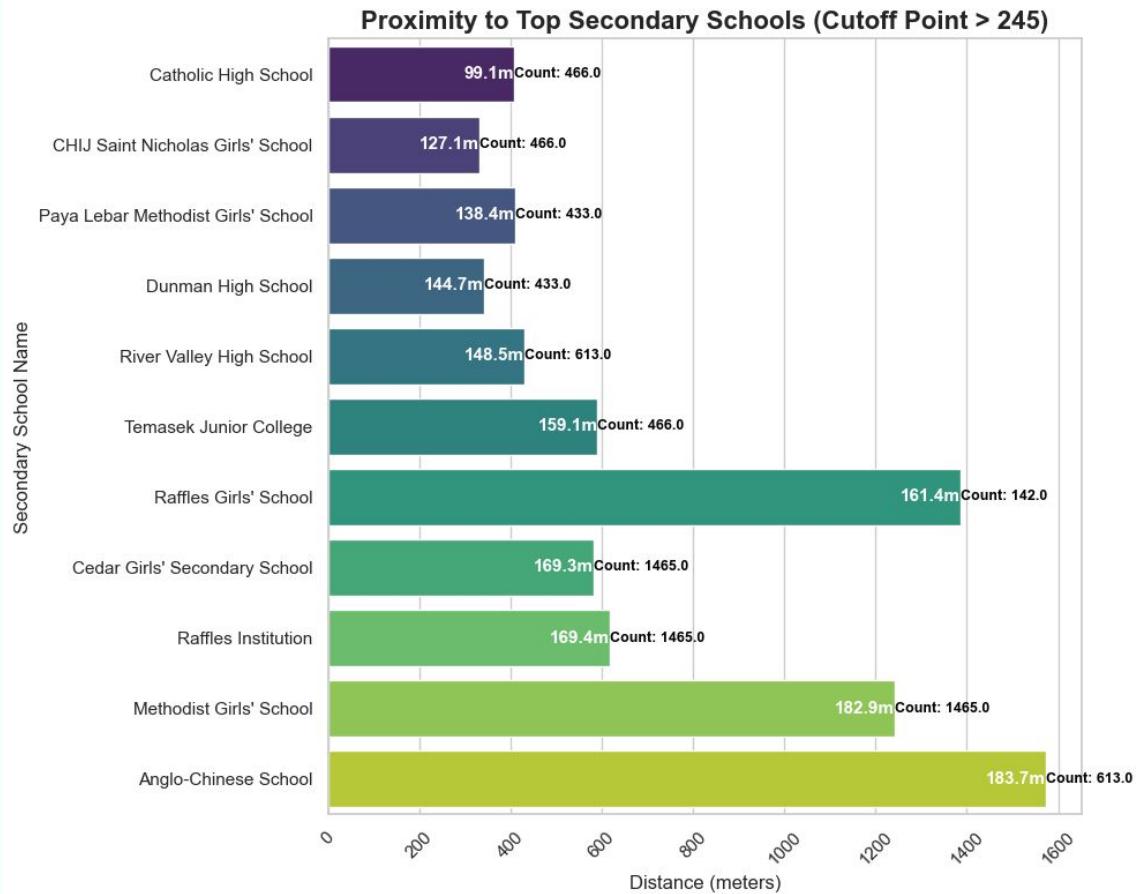


Price of Resale HDBs



Price of Resale HDBs





Sources: [Integral Learning Academy, 2020](#) and [Salary Singapore, 2023](#)

Proximity to Secondary Schools in the Central Region



