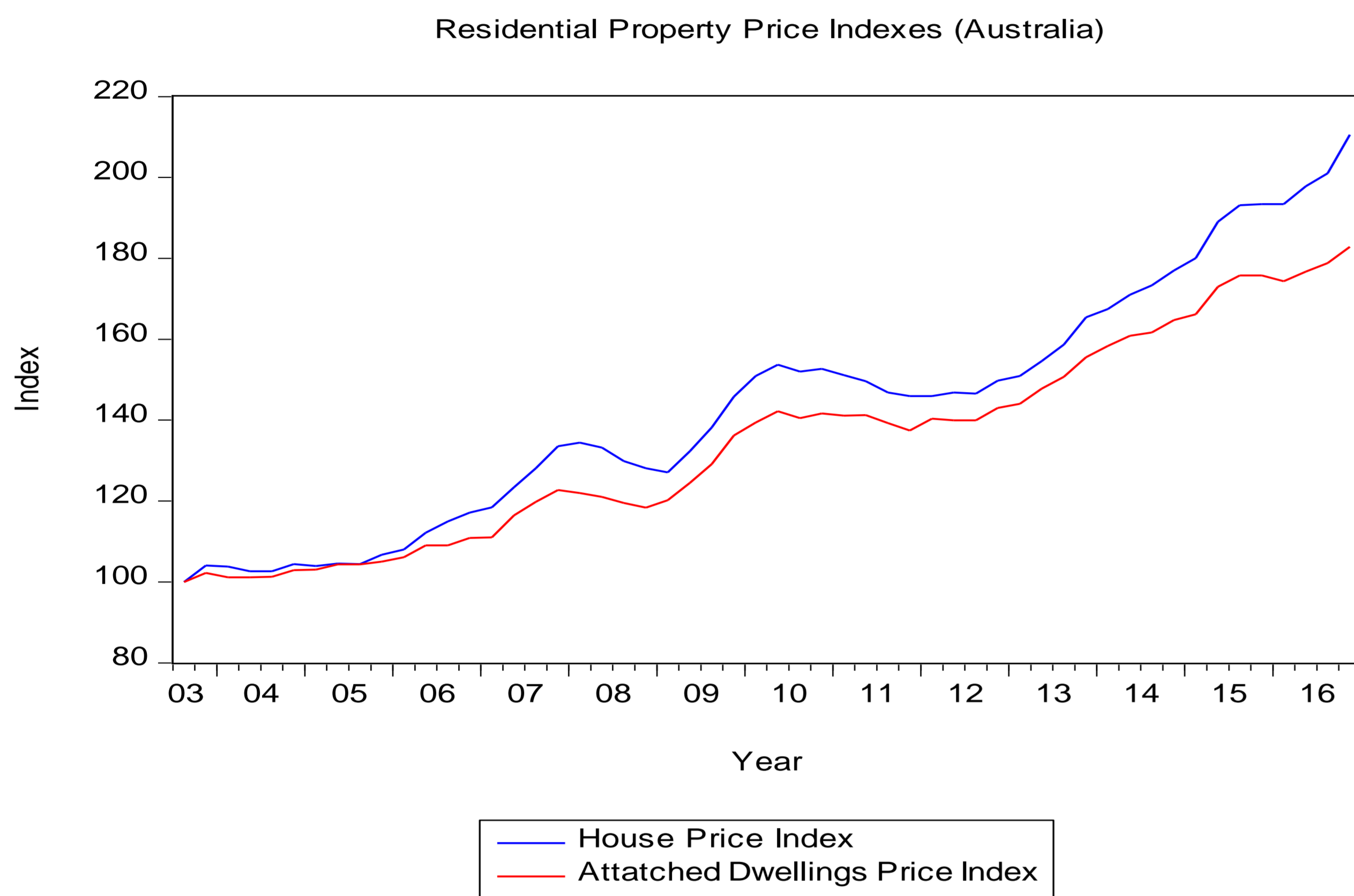


Measuring Price Change for New Dwellings

Australian Bureau of Statistics

Strong price growth in Australia

- The Australian housing market has experienced strong price growth over the last decade.
- There is interest in the drivers of housing price inflation and the market for new dwellings.
- New insights can be gained through a price index for new dwellings utilizing data linkage techniques.



Source: ABS, Residential Property Price Indexes (cat. no. 6416.0)

Growth fueled by strong demand and supply rigidities

- Demand driven by population growth; demographic shift towards smaller household sizes; and low interest rates
- Supply responds with a lag due to long building approval and construction times, especially for apartments.

Drivers of house prices for new and established dwellings

1. Price of Land

- Primary driver of housing value in Australia.
- Price of land is a function of geographic location and the amenities provided (views, travel distance from CBD).
- New and established dwellings prices in the same geographic location will experience the **same rate of change** for land.

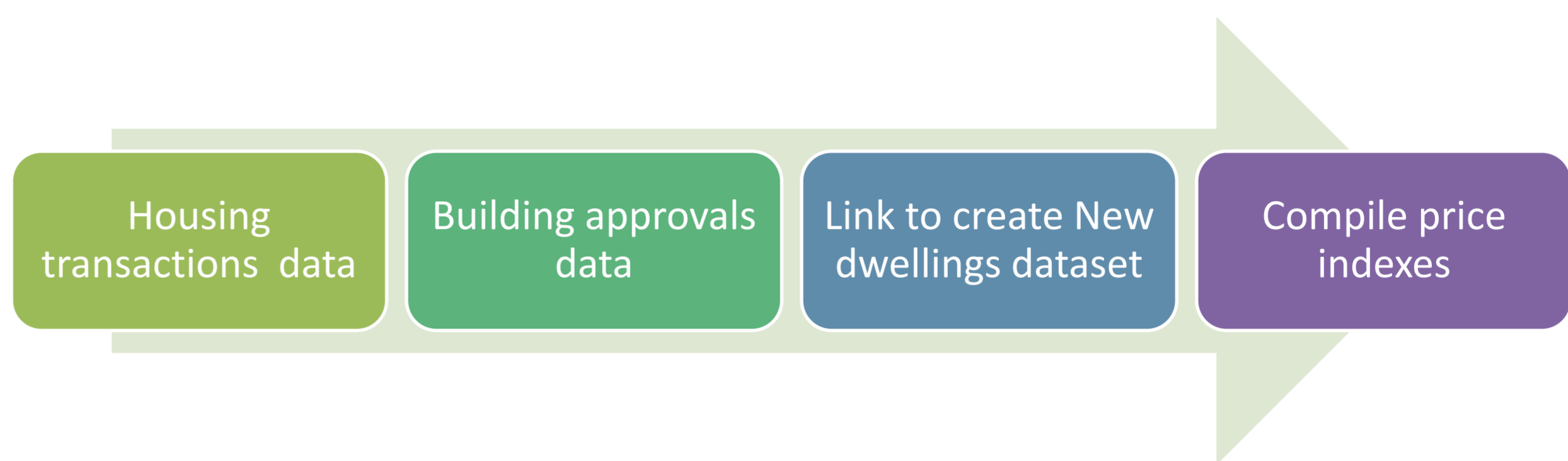
2. Price of Structure

- New dwellings are “new” for a limited time window, making it difficult to re-price new dwellings. An indicator is construction costs, which have risen over time.
- Established dwellings experience depreciation over time. Constant quality prices for established structure should move with new dwellings prices.
- Higher costs of new housing leads to **substitution** to cheaper housing for a given geographic location, pushing up prices of established dwellings as well.

3. Behavior and Preferences of Buyers

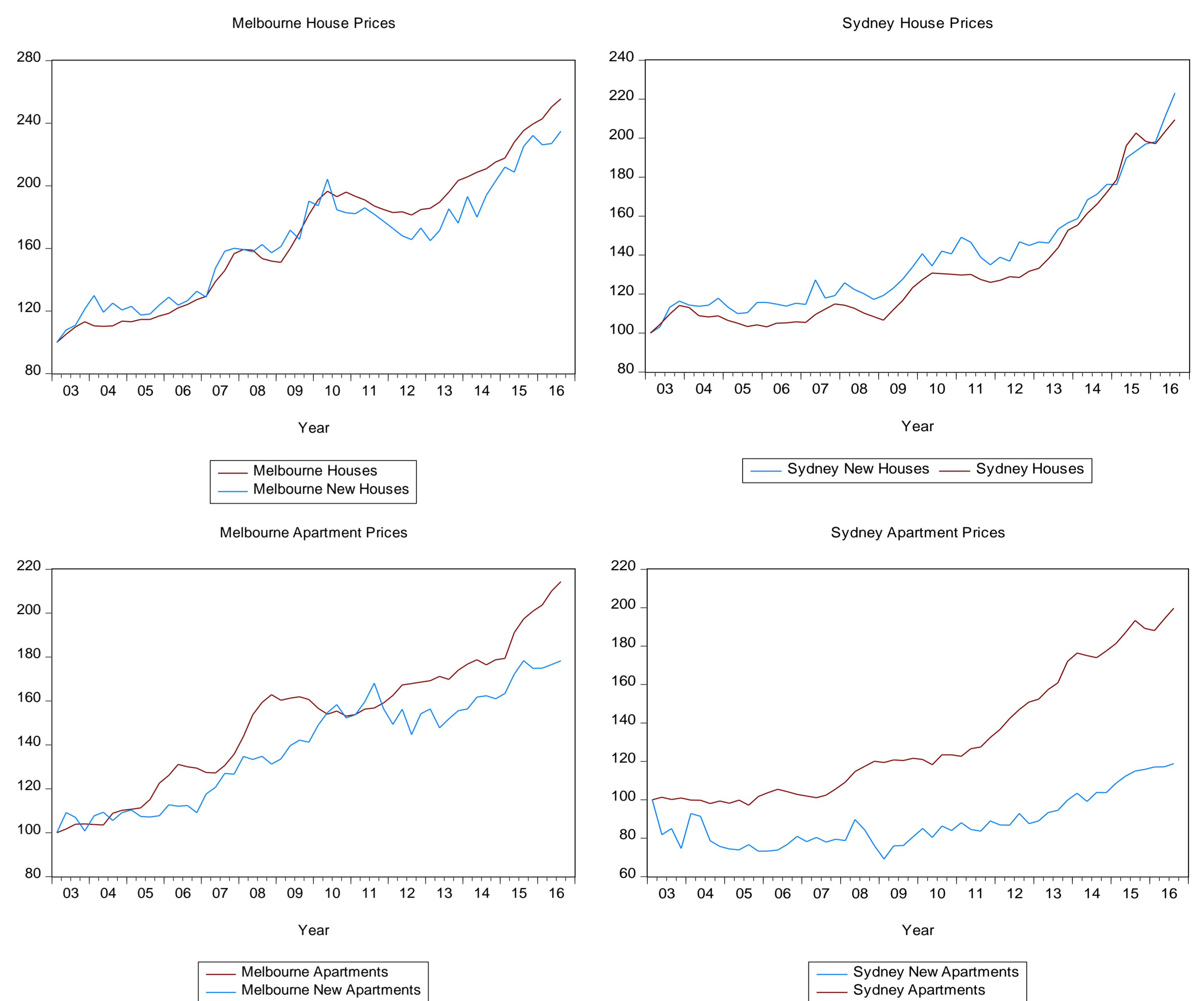
- A preference for new housing could lead to established dwellings being an imperfect substitute.
- Institutional factors also influence buyers’ decisions – foreign buyers by law can only purchase new residential property in Australia.
- If the substitution effect is limited, then the price spillover to established dwellings will not be as strong. This could lead to **different growth rates** in new and established dwellings prices.

Creating a price index for new dwellings



- Housing transactions dataset does not identify new dwellings.
- Buildings approvals records exist at the address level.
- New dwellings are identified by linking housing transactions to past building approvals records (past four years) by address.
- If a dwelling was approved in the recent past and is linked to a transaction, it must have recently been built and then sold.

Comparison of new dwellings price indexes to RPPIs



- RPPI includes both new and established (imperfect comparison)
- House prices track well, with the exception of added volatility.
- New attached dwellings price movements are unexpected. The series for Sydney suggests that new apartments have not grown as fast as their established counterparts over the last decade.

Unexpected results due to measurement error

1. Lack of weights and compositional shift
 - Preliminary stages - data limitations did not allow for weights.
 - New apartments supply arrive in clusters (large projects) and shift between geographic areas. Without frequently updated weights, market leading strata are underrepresented.
2. Not accounting for changes in quality
 - Shift towards high density apartments. Living spaces are getting smaller, but this change is not accounted for. The constant quality price should be higher- new apartments index is downward biased.

Conclusion and way forward

- More data needs to be linked to improve robustness of indexes as well as the addition of a proper weighting scheme.
- A companion series for established dwellings must be created, the RPPIs are not a true comparison because they contain both types.