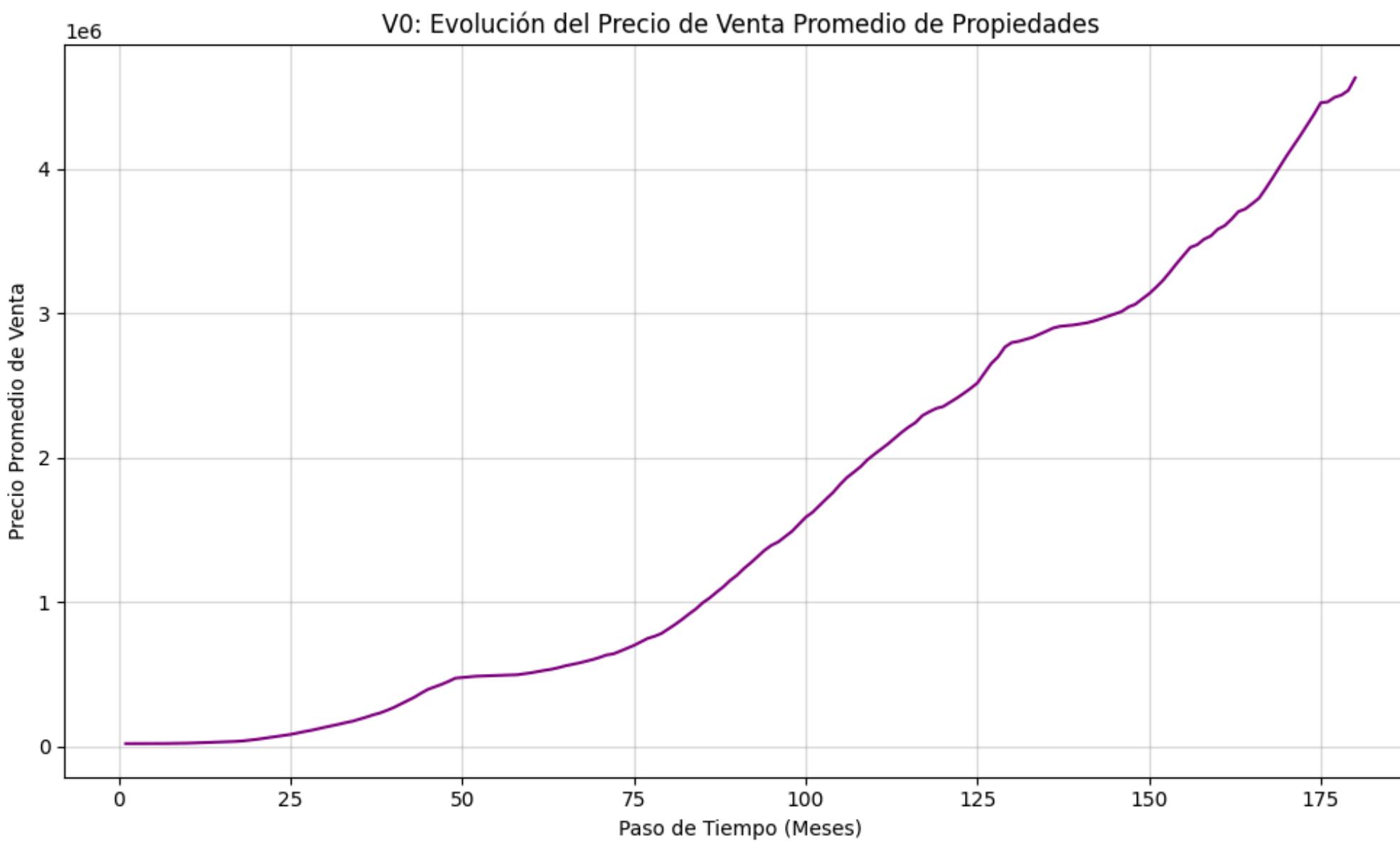


FINAL PROJECT

PROGRAMMING I

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EVOLUTION OF THE AVERAGE SALE PRICE OF PROPERTIES (V0)



- Hosts can buy properties in any area of the city (without any special rules).

- X axis - number of months that have passed (180 months = 15 years)
- X axis - the average selling price of the properties.

When hosts can buy everything they find, in any area, competition increases significantly ...



PRICES INFLATE

Over time, the market becomes highly speculative, with prices soaring to over 4 million.

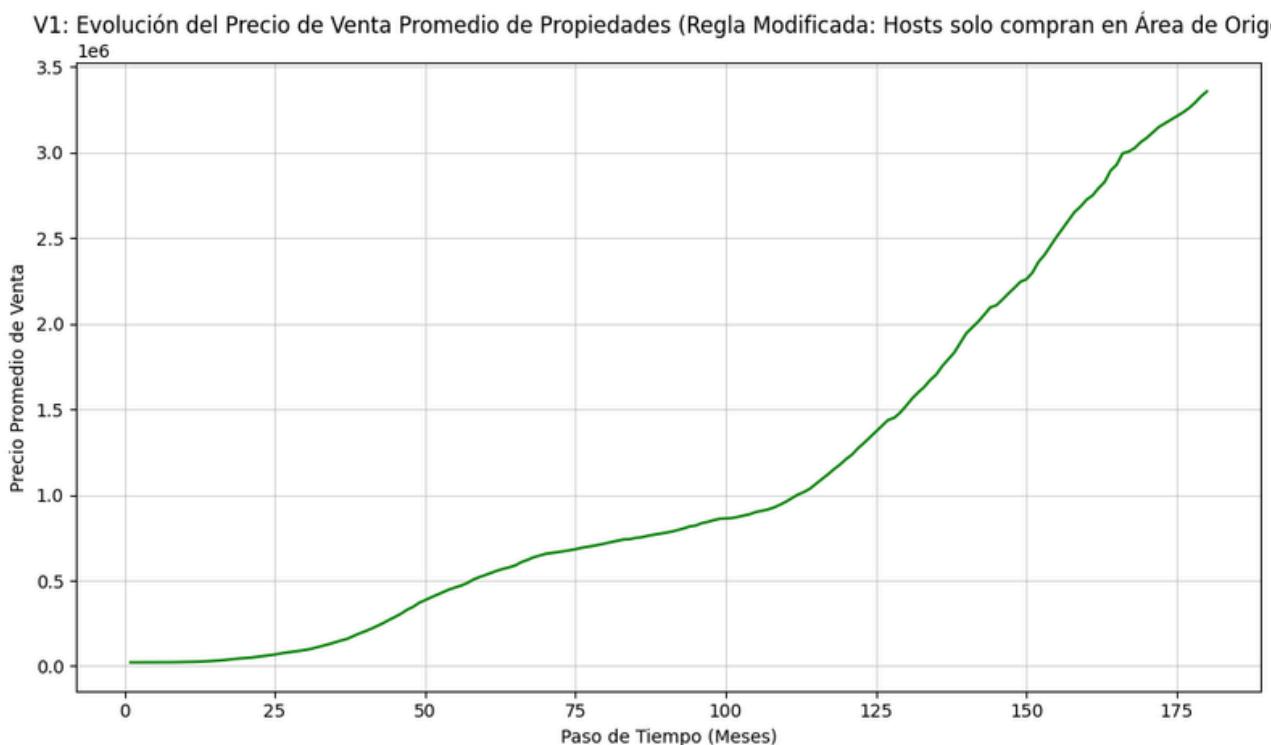
EVOLUTION OF THE AVERAGE SALE PRICE OF PROPERTIES (V1)

ORIGINAL CODE (WITHOUT ANY RESTRICTION)

```
for pid in opportunities:  
    place = city.places[pid]  
    ask_price = place.get_ask_price()  
  
    # Offer condition: the host can pay  
    if self.profits >= ask_price:  
        bid = {  
            'place_id': pid,  
            'seller_id': place.host_id,  
            'buyer_id': self.host_id,  
            'spread': self.profits - ask_price,  
            'bid_price': self.profits  
        }  
        bids.append(bid)
```

MODIFIED CODE (WITH RESTRICTION)

```
if city.is_v1_active and place.area != self.area_of_origin:  
    continue
```



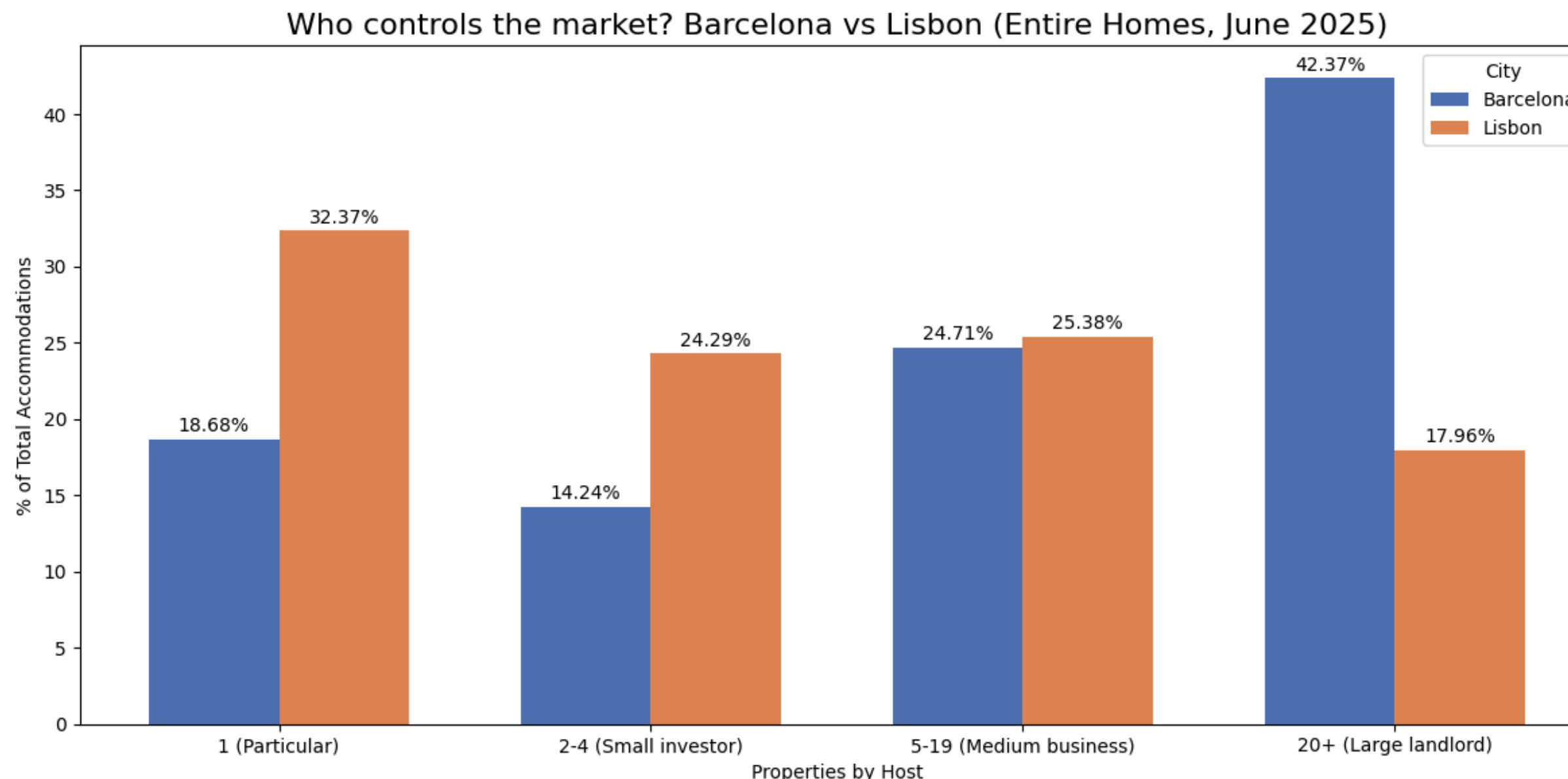
- Hosts can only purchase properties located in the same zone as their original zone.

- Growth in average sale price is significantly lower in V1.
- Prices remain more stable over time because owners can no longer freely expand into wealthier zones.
- Reduces competitive bidding between zones (which means that transactions are closed at lower prices)

This prevents inter-city expansion, faster property concentration, and a rapid increase in average sale prices.

PART 2: WHO CONTROLS THE MARKET? BARCELONA VS LISBON (ENTIRE HOMES – JUNE 2025)

We wanted to check if both cities are equally dominated by large multi-property hosts, or if Lisbon/Barcelona is more dependent on professionalised ownership.



Barcelona

- Far more concentrated market.
- **Large landlords (20+)** control over **40%** of all entire homes.
- Suggests stronger professionalisation and scalability.

Lisbon

- Market is more fragmented.
- Private hosts (1-4 accommodations) represent a much larger share.
- Lower dominance of “big players”

Barcelona's entire-home market is significantly more concentrated, driven by large multi-property hosts, while Lisbon remains more diversified.

THANK YOU!