

# Dubai Housing Price Analysis

## Excel Formulas:

To Replace negative values with the Average according to Neighbourhood and SquareFeet:

```
=IF(F2<0, AVERAGEIFS(F:F,D:D,A:A,">"&A2-100,A:A,<"&A2+100,F:F,">0"),F2)
```

Add Price per SquareFeet column

```
=F2/A2
```

Adding Property Age column

```
=CONCATENATE(YEAR(TODAY()-E2)," years")
```

## Insight Summary

This analysis explores housing market patterns in Dubai using interactive Tableau dashboards. Key focus areas include **property size**, **year built**, **price per square foot**, and **neighborhood trends**. The dataset was analyzed across six major visualizations, each providing meaningful insights into market behavior and investment opportunities.

## Key Performance Indicators (KPI Overview)

The dashboard begins with 5 KPIs (not detailed here) to give a quick snapshot of average pricing, square footage, and property volume — providing immediate context for deeper analysis in the following visualizations.

### 1. Median Price per Square Foot by House Size & Neighborhood

- **Insight:** Across **urban, rural, and suburban neighborhoods**, **small houses** consistently show a **higher price per square foot** than medium or large homes.
- **Interpretation:** Buyers are paying a premium for compact homes, likely due to:
  - Prime locations
  - Modern design or renovations
  - Lower total cost despite higher unit price

**! Apparent Contradiction:**

The **Square Feet vs. Price** scatter plot shows **large houses have higher total median prices**.

✓ **Clarification:**

This isn't a contradiction:

- **Small homes = expensive per square foot**, but lower total price
  - **Large homes = cheaper per square foot**, but higher total price
- This reflects the **trade-off between affordability and space efficiency**.

## 2. Median Price by Year Built

- **Insight:** Houses built in **1973** have a **high median price**, even higher than newer constructions like 2021.
- **Interpretation:** These older homes may:
  - Be in high-demand locations
  - Be larger or uniquely designed
  - Have undergone renovations
- This suggests buyers place value on heritage or space over construction age alone.

## 3. Percentage of Price by Year Built (Neighborhood Breakdown)

This graph shows how much each construction year contributes to total market price **within each neighborhood type**.

### Urban

- **Highest Contribution:** 2013 → **6.48%**
- **Lowest:** 1989 and 2012 → **-6.90%**

### Rural

- **Highest:** 2010 → **7.41%**
- **Lowest:** 1983 → **-5.17%**

### Suburb

- **Highest:** 1962 → **6.94%**
- **Lowest:** 1960 → **-5.22%**

### Insight:

- Urban buyers favor newer builds (2013), while suburbs show strong value for older, possibly heritage homes (1962).

- Low-contributing years suggest underperformance in price, possibly due to age, poor upkeep, or location.

## 4. Price per Square Foot Histogram

- **Insight:** The majority of homes fall within the **98–119 per square foot** range.
- **Interpretation:** This concentration shows market stability in the mid-range price segment and could represent standard residential construction pricing.

## 5. Percentage of Price Change by Year Built

- **Insight (from an earlier graph):**
  - 1973 was initially seen to contribute **+2.68%**, but in the updated dataset, it contributes **-1.5%**, showing the importance of verifying data versions.
  - 1961 and 2012 show significant negative contributions (**-2.65%**).

### Clarification:

The contradiction arises because **median price  $\neq$  total market contribution**:

- Homes built in 1973 are **expensive individually**, but **few in number**, leading to **low total contribution**.

## 6. Square Feet vs. Price Scatter Plot

- **Insight:** As expected, **larger homes have a higher median total price** than medium or small homes.
- **Interpretation:** This aligns with buyer expectations — more space = higher cost. However, price **per square foot** still favors larger homes, showing **greater value per unit area**.

## Additional Insight: Price Efficiency Opportunity

By comparing **price per square foot** and **total price**, we discover:

- **Small homes = high per-square-foot cost but affordable upfront**
- **Large homes = better value per square foot but costlier overall**

This gives investors and buyers the opportunity to:

- Maximize value with **larger homes in rural/suburban zones**
- Target **compact homes in premium urban areas** for lifestyle or rental yield

## Recommendations

### **For Buyers:**

- Choose small homes in urban areas for **location and convenience**, despite higher price per sqft.
- Consider larger homes in rural/suburb areas for **long-term value and cost efficiency**.

### **For Sellers:**

- Highlight features like location, renovations, or architectural uniqueness to justify higher unit pricing.
- For homes from low-performing years, focus on **value-add strategies** like staging or upgrades.

### **For Investors/Developers:**

- Target **low-performing build years** (e.g., 1983, 1989, 2012) for **renovation, redevelopment, or land acquisition**.
- Track **year-built vs. price trends by neighborhood** to identify **emerging or undervalued zones**.

### **For Analysts:**

- Cross-analyze property age with location, condition, and sale frequency for deeper forecasting models.
- Create multi-layer filters (e.g., year + neighborhood + size) to identify **investment-grade clusters**.