

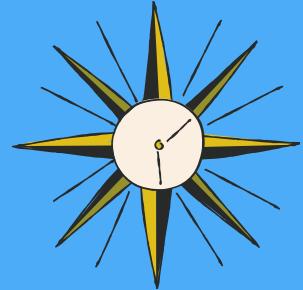
Housing Affordability in Germany

Catherine and Santiago

Jan 24 2024



Introduction



Hypothesis #1

The larger the living space the cheaper the rent per square meter



Hypothesis #2

Rental price rates increase more aggressively than inflation rates



Hypothesis #3

The cost of rent is higher in regions with higher incomes



Hypothesis #4

Females pay a higher percentage of their income on rent in comparison to Males

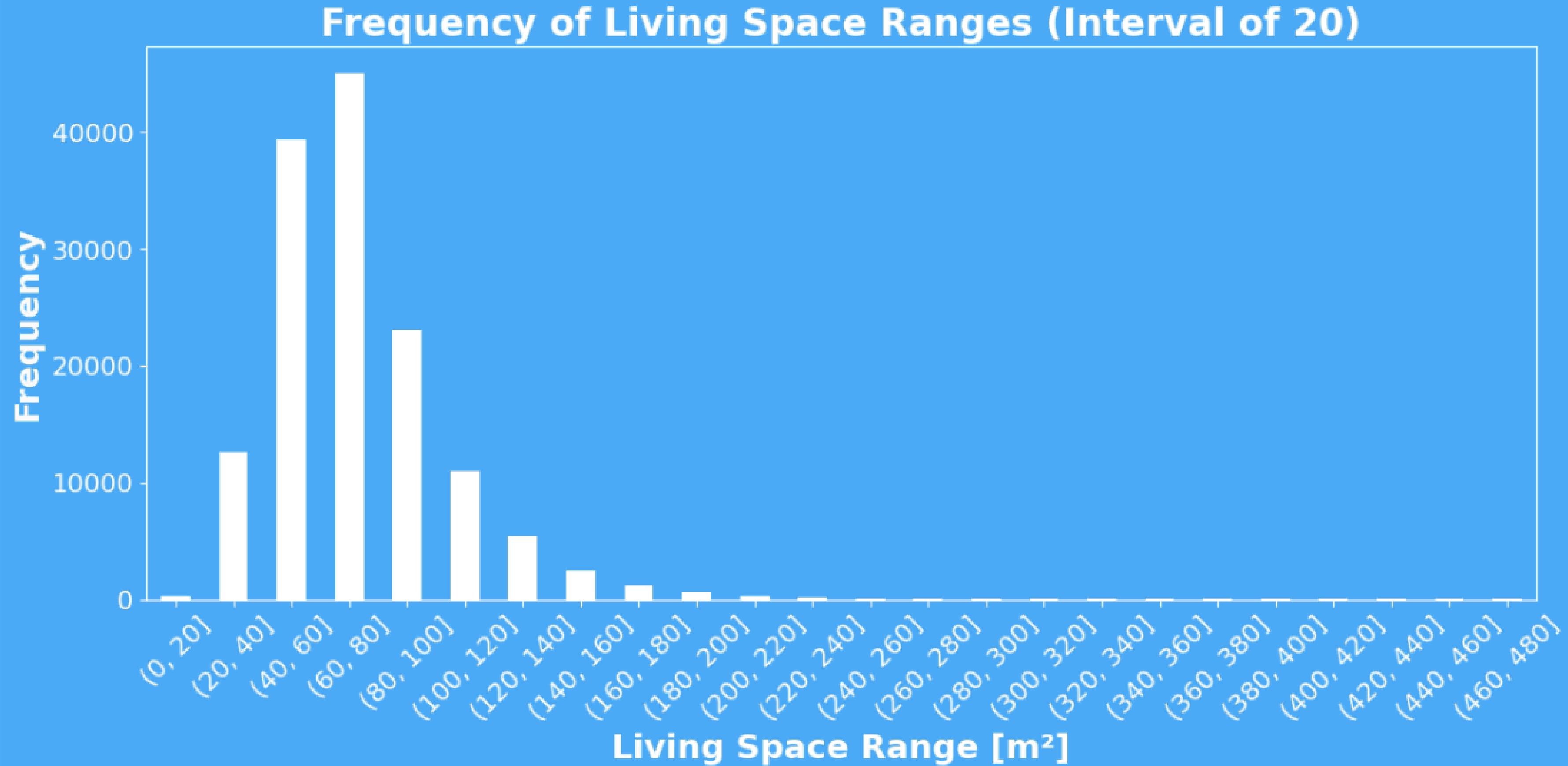
The Cleaning and Wrangling Process



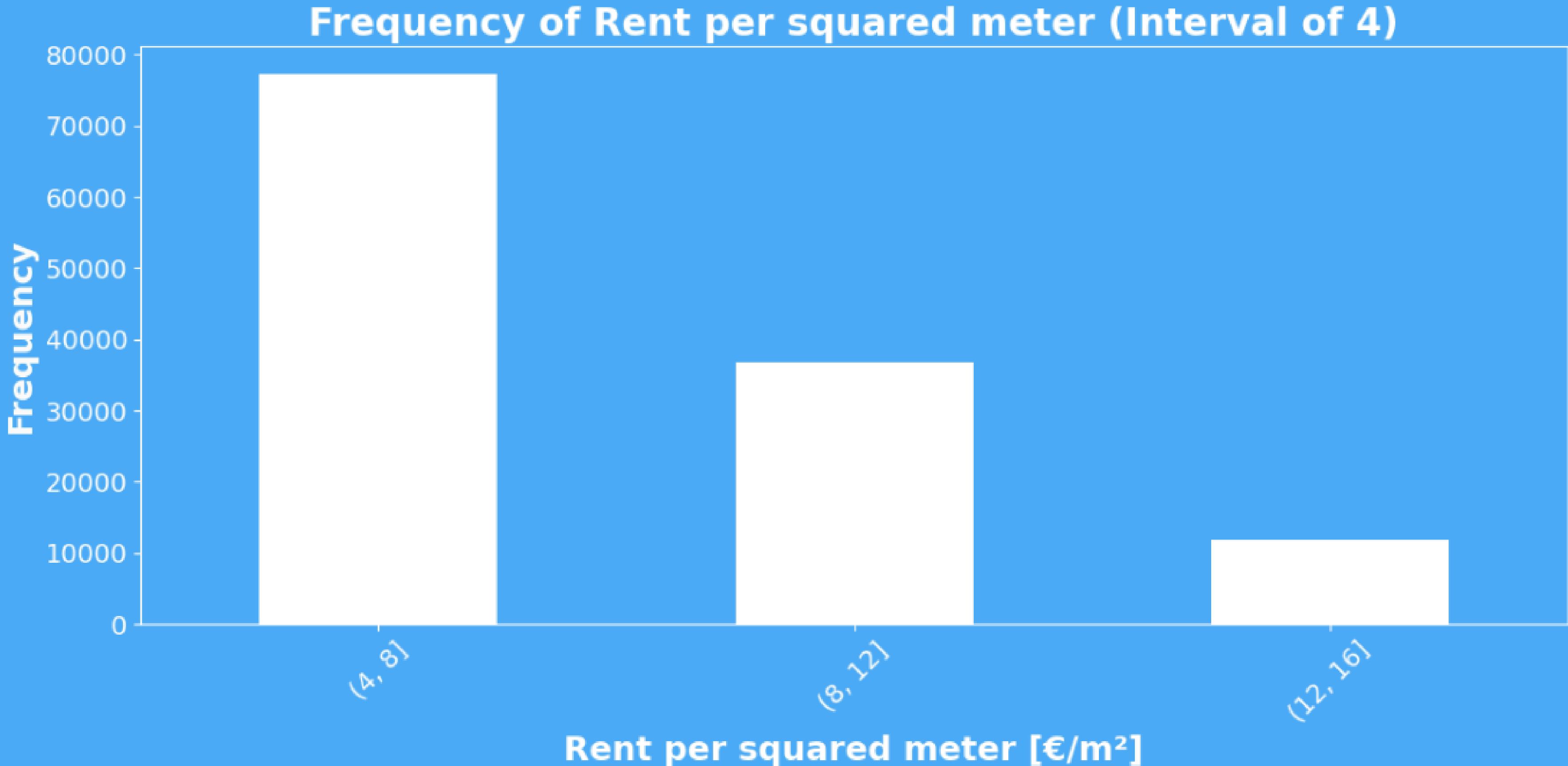
- Removed duplicate columns
- Standardised data values
- Checked % of null values in every column
- **Removed outliers**
- Created range buckets
- Created new dataframes with aggregations for various values



Cleaning & Wrangling Outliers Based on Living Space



Cleaning & Wrangling Outliers Based on Rental Price Per Square Meter

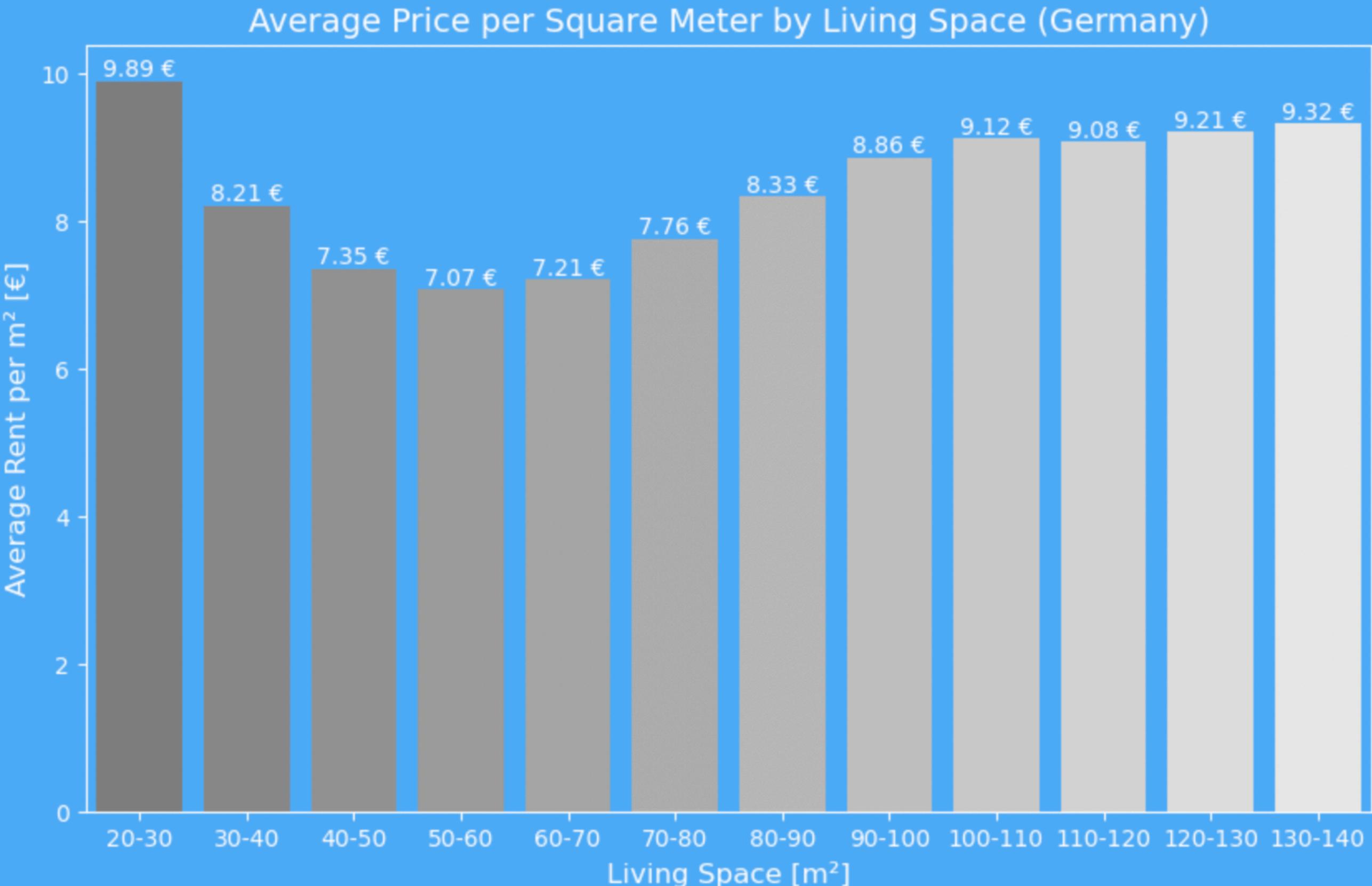


Hypothesis 1

The larger the living space the cheaper the rent per meter squared.

Average price per m^2 is highest at 9.89 € for those living spaces that ranged between 20 m^2 to 30 m^2 .

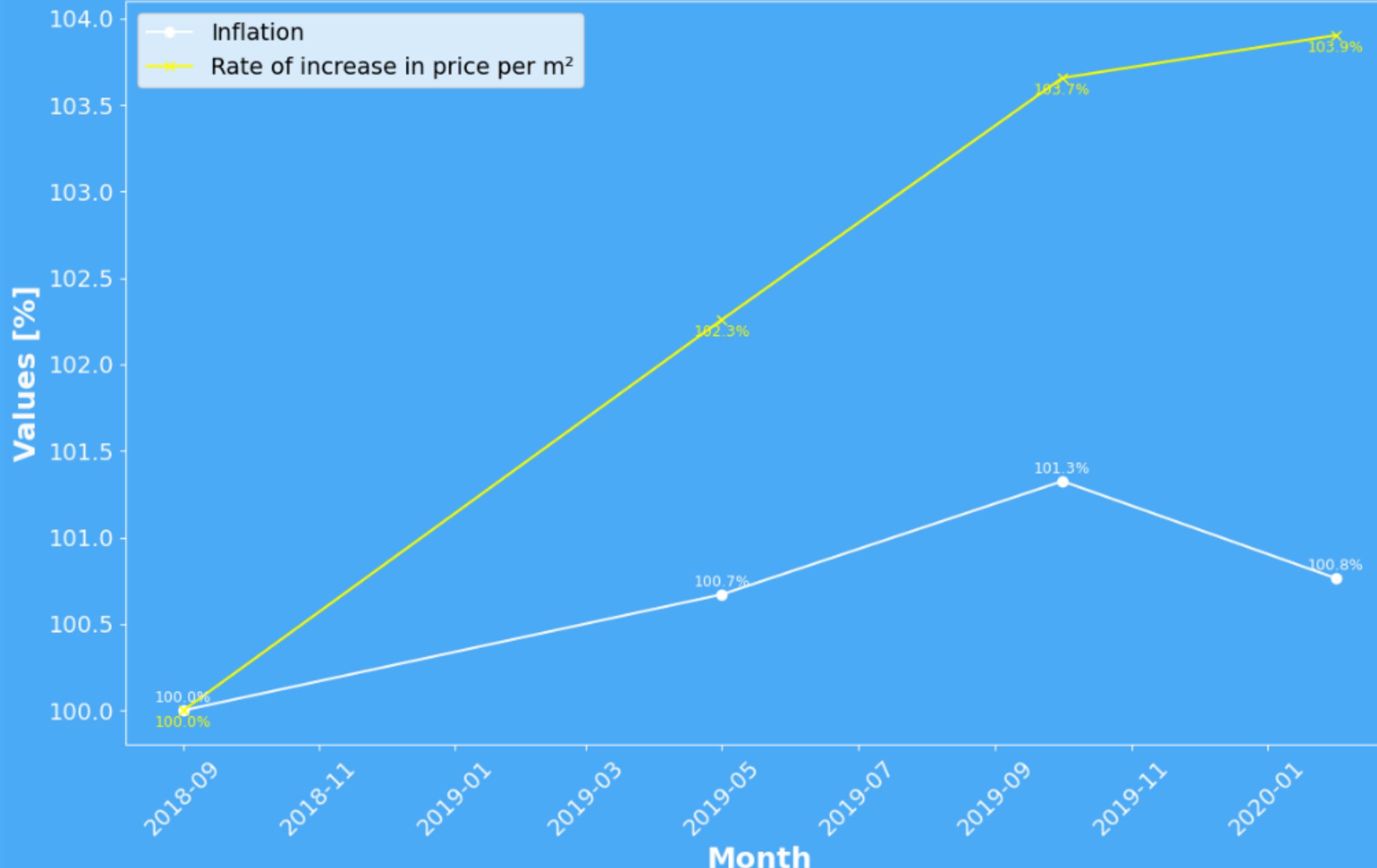
Initially the average price has a downwards trend up until 60 m^2 and then increases steadily.



Hypothesis 2

Rental price rates increase more aggressively than inflation rates

Inflation and Rate of increase in price per m² Comparison Over Time in Germany

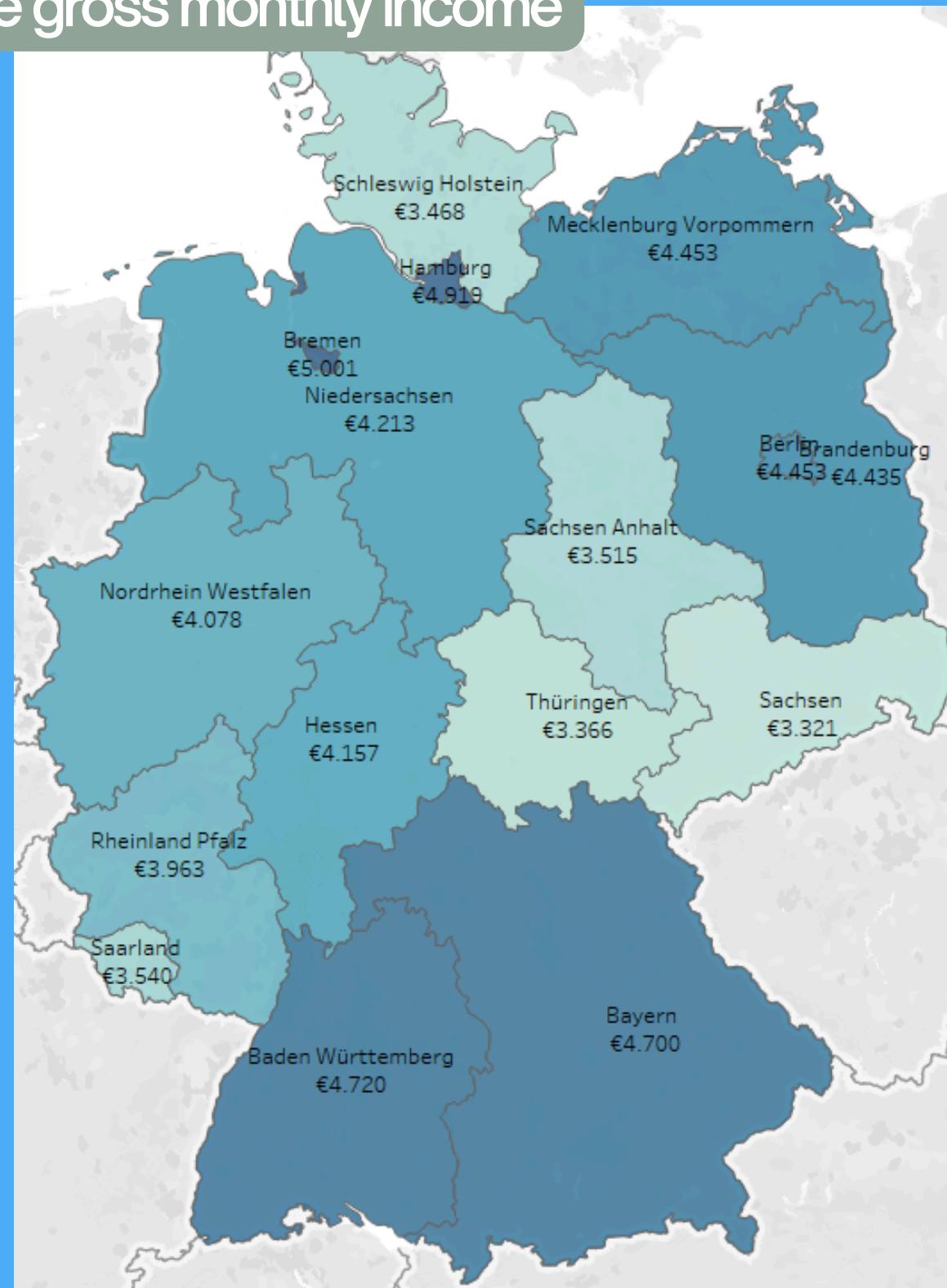


Between the period September 2018 and February 2020 the price increase of available rents is higher than the general price increase of the German economy.

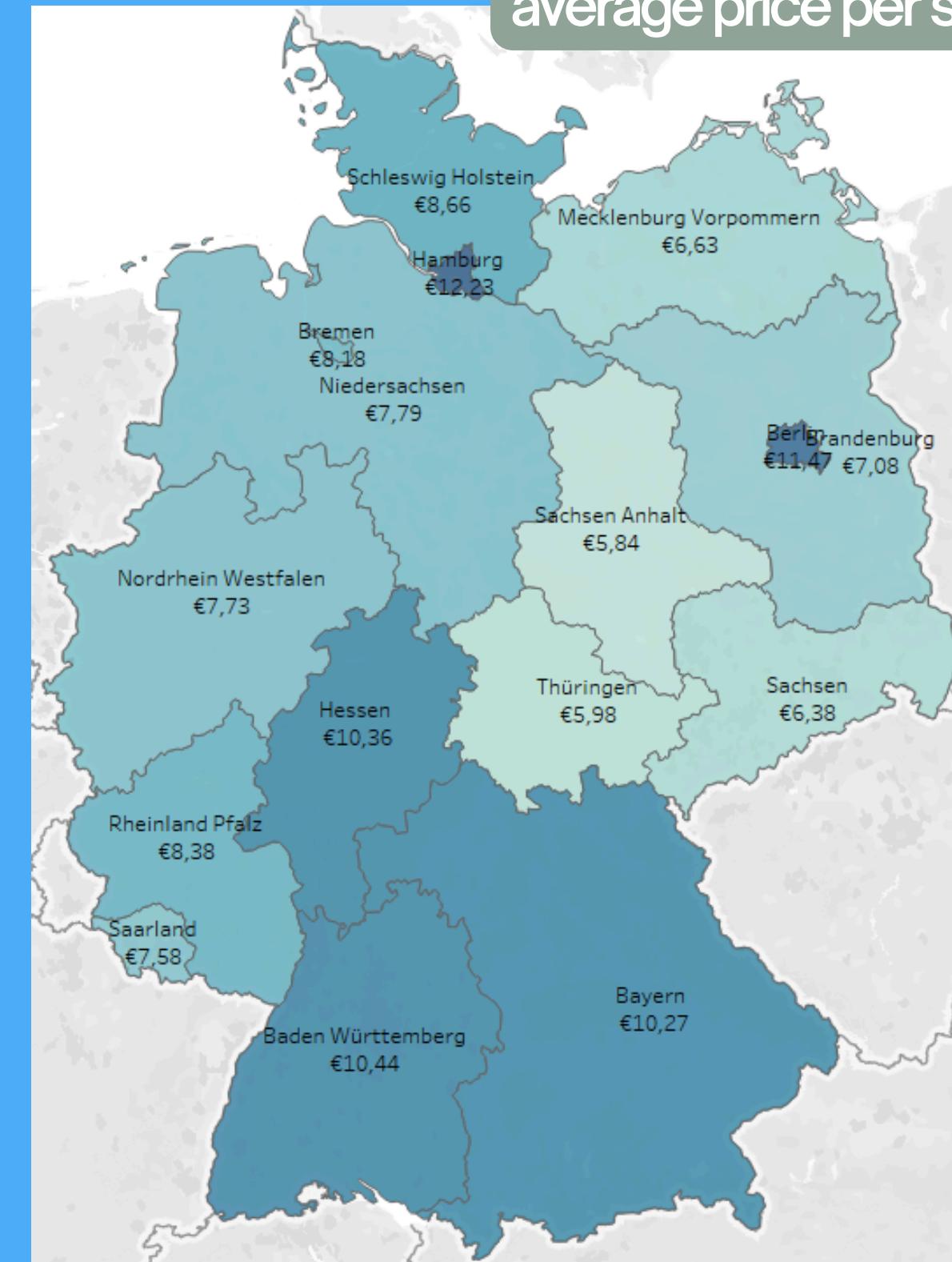
Hypothesis 3

The cost of rent is higher in regions with higher incomes

average gross monthly income

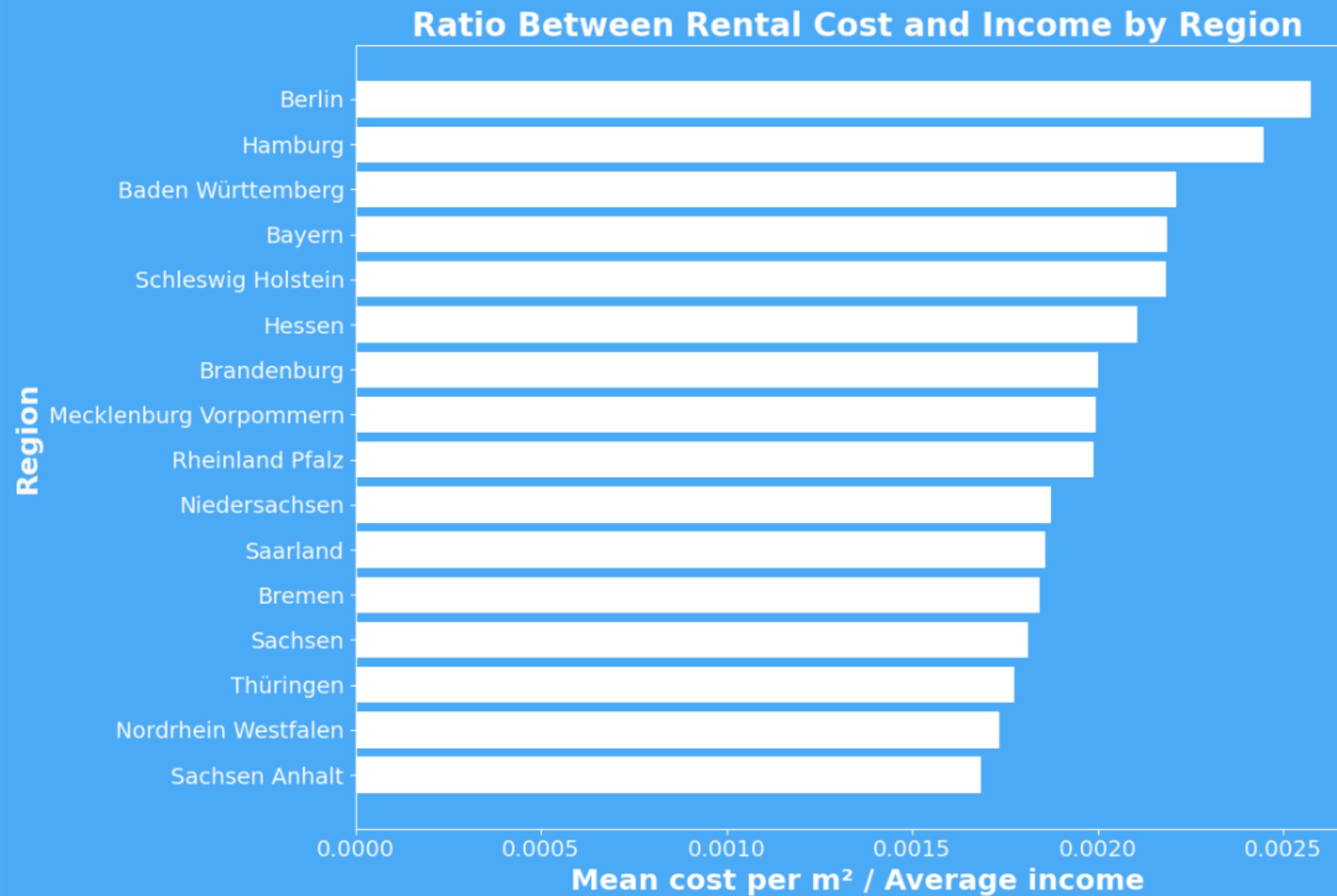


average price per square meter



Hypothesis 3

The cost of rent is higher in regions with higher incomes



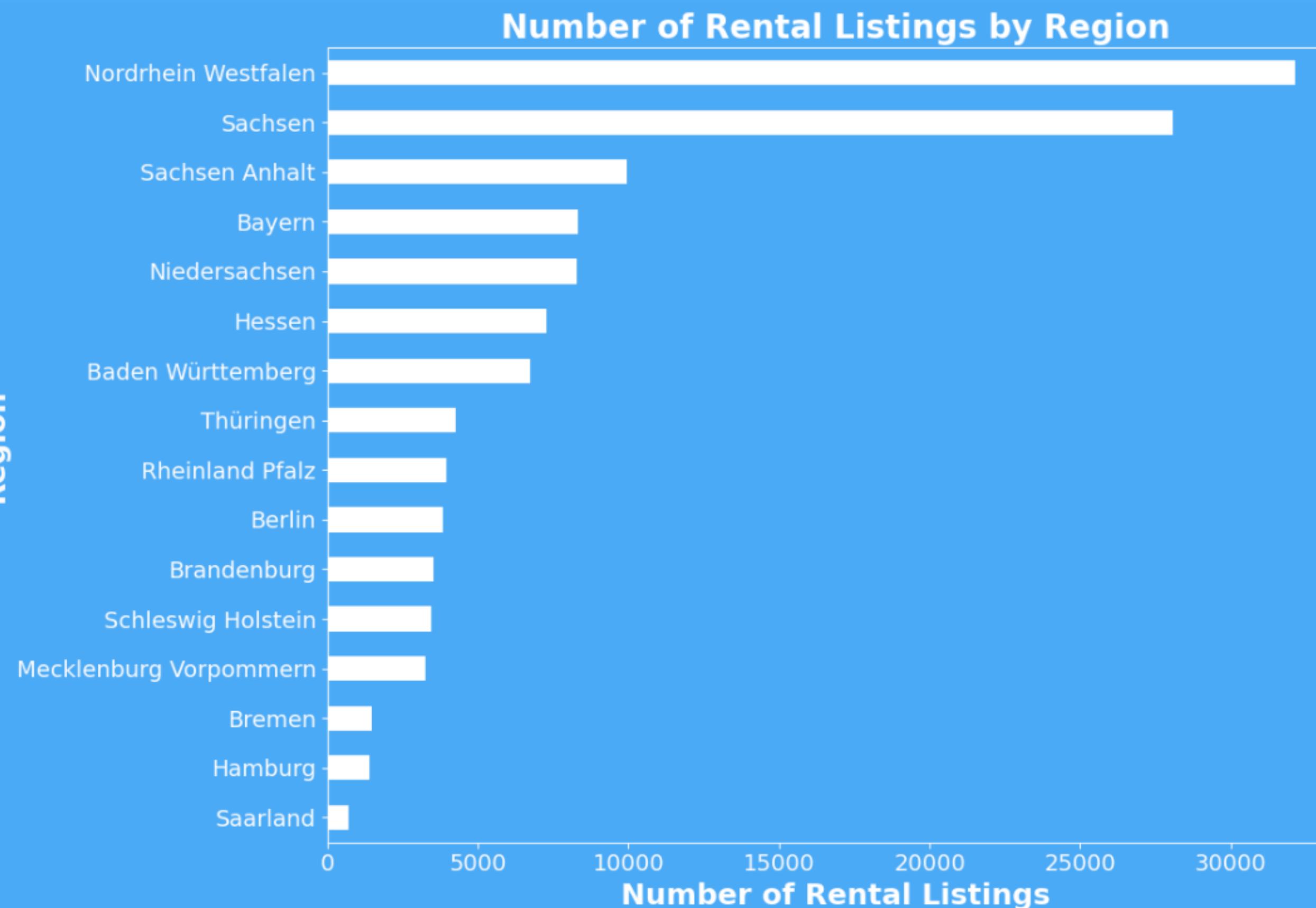
Ratio between rental cost per square meter and average income

Regions in which people pay more rent as a proportion of income:

- Berlin
- Hamburg
- Baden Württemberg
- Bayern

Hypothesis 3

The cost of rent is higher in regions with higher incomes

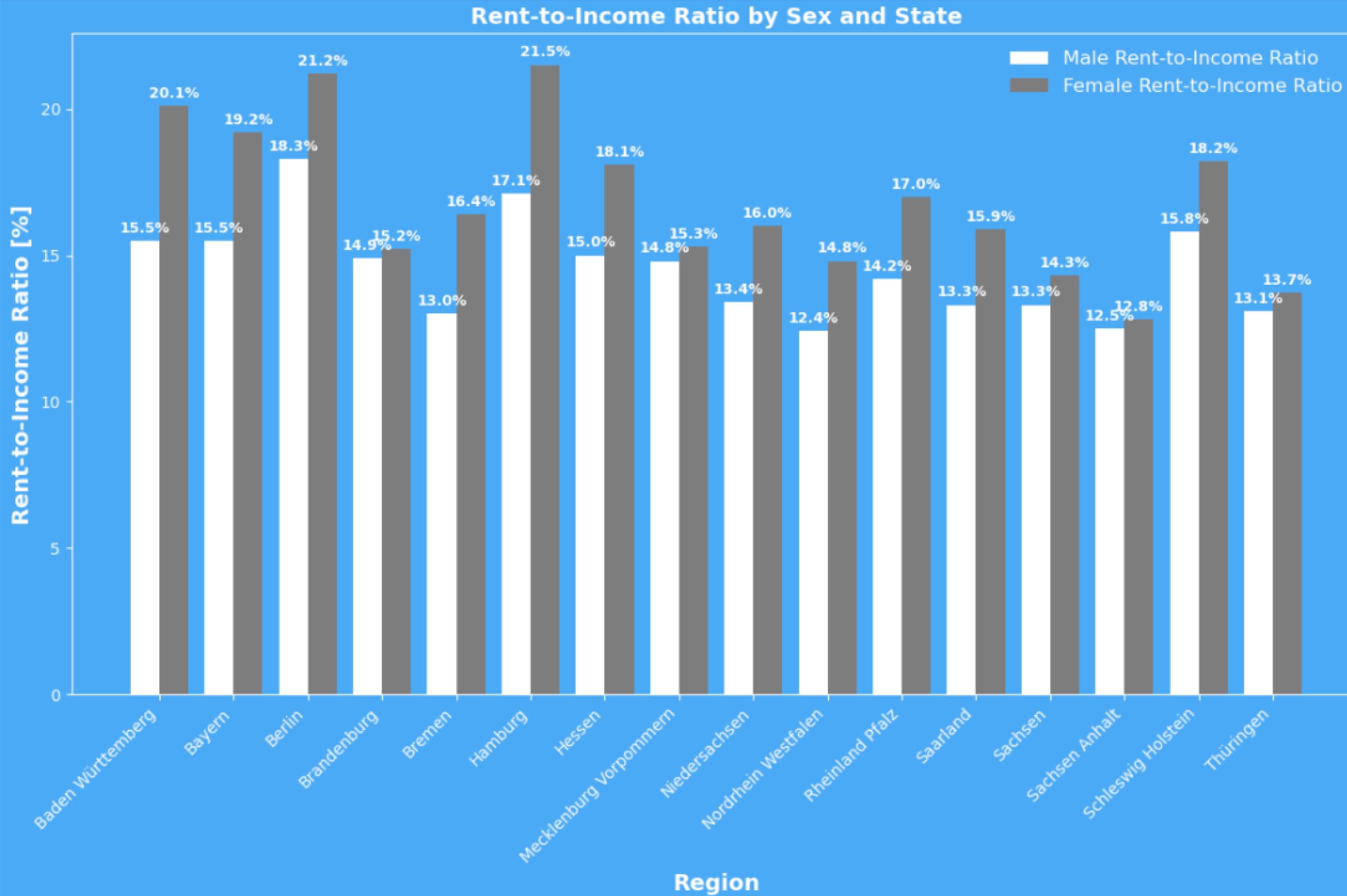


Total properties available for rent.

Those regions with a greater supply of properties have lower prices, reinforcing the idea that the greater the supply the lower the cost.

Hypothesis 4

Females pay a higher percentage of their income on rent in comparison to men.



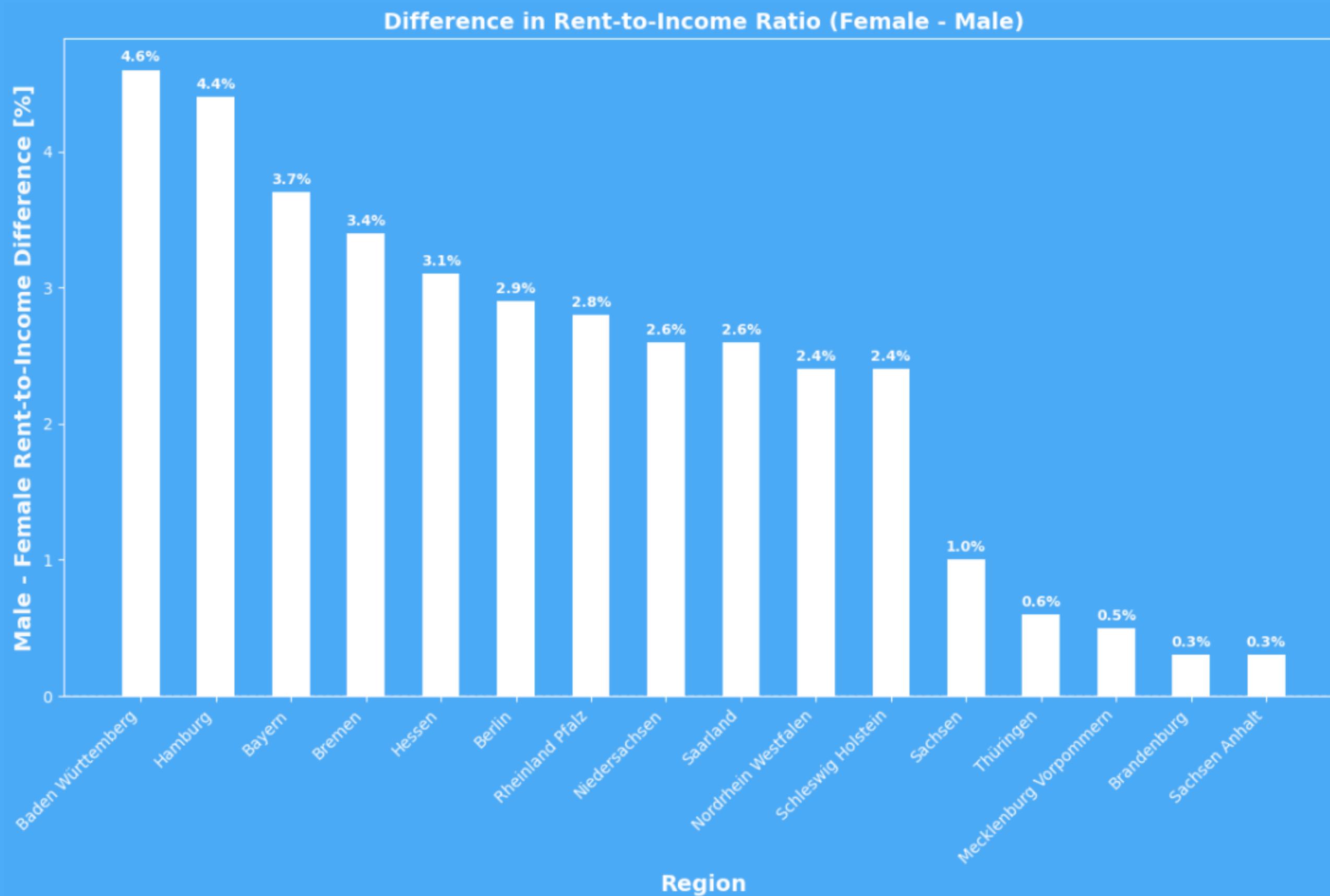
Across all regions, Females are on average paying more of their salary towards rent than Males.

This can largely vary from 12.4% to 21.5%.

*price per square meter was based off apartments 75m²

Hypothesis 4

Females pay a higher percentage of their income on rent in comparison to Males



Difference: ranges anywhere from 0.3 to 4.6%

Regions with the highest difference:

- Baden Württemberg
- Hamburg
- Bayern

FINDINGS & CONCLUSION



Hypothesis 1

The larger the living space the cheaper the rent per meter squared

FALSE

Hypothesis 2

Rental price rates increase more aggressively than inflation rates

TRUE

Hypothesis 3

The cost of rent is higher in regions with higher incomes

TRUE

Hypothesis 4

Females pay a higher percentage of their income on rent in comparison to Males

TRUE

QUESTIONS?

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Questions

