

# CANADIAN HOUSING

## Project/Goals

Work with data from the Canadian Open Data portal using the following datasets and provide visualization on Tableau

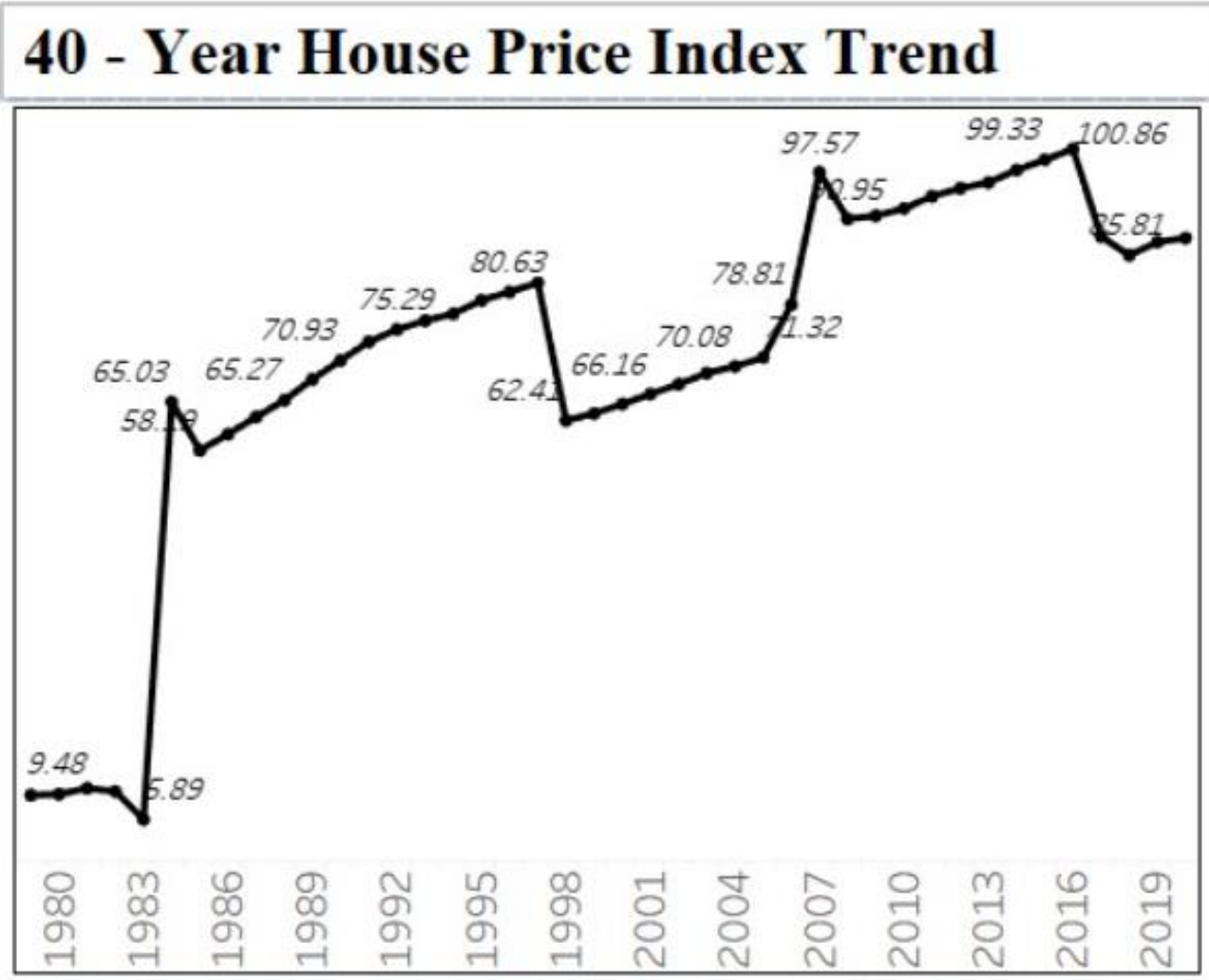
- Weekly earnings from 1.1.2001 to 15.4.2015 (weekly\_earnings - JSON)
- Housing constructions from 1955 to 2019 (real\_estate\_numbers - CSV)
- House prices from 1.1.2005 to 1.9.2020 (real\_estate\_prices - EXCEL)
- Housing\_price\_index from November 1979 to September 2020
- Office\_realestate\_index from November 1979 to September 2020
- Consumer index from November 1979 to September 2020

## Process

- **Data Sourcing** - utilized the 6 datasets provided
- **Data Cleaning** - changed datatype from string to date to be able to project a time series chart; reviewed the dataset and ensured only necessary fields are maintained
- **Data Transformation** - parsed json file (weekly earnings) into csv via pandas and created calculated columns in Tableau for monthly earnings
- **Data Analysis** - added new data sources and created relationships in Tableau using date column
- **Data Visualization** - created visualization for data-driven insights

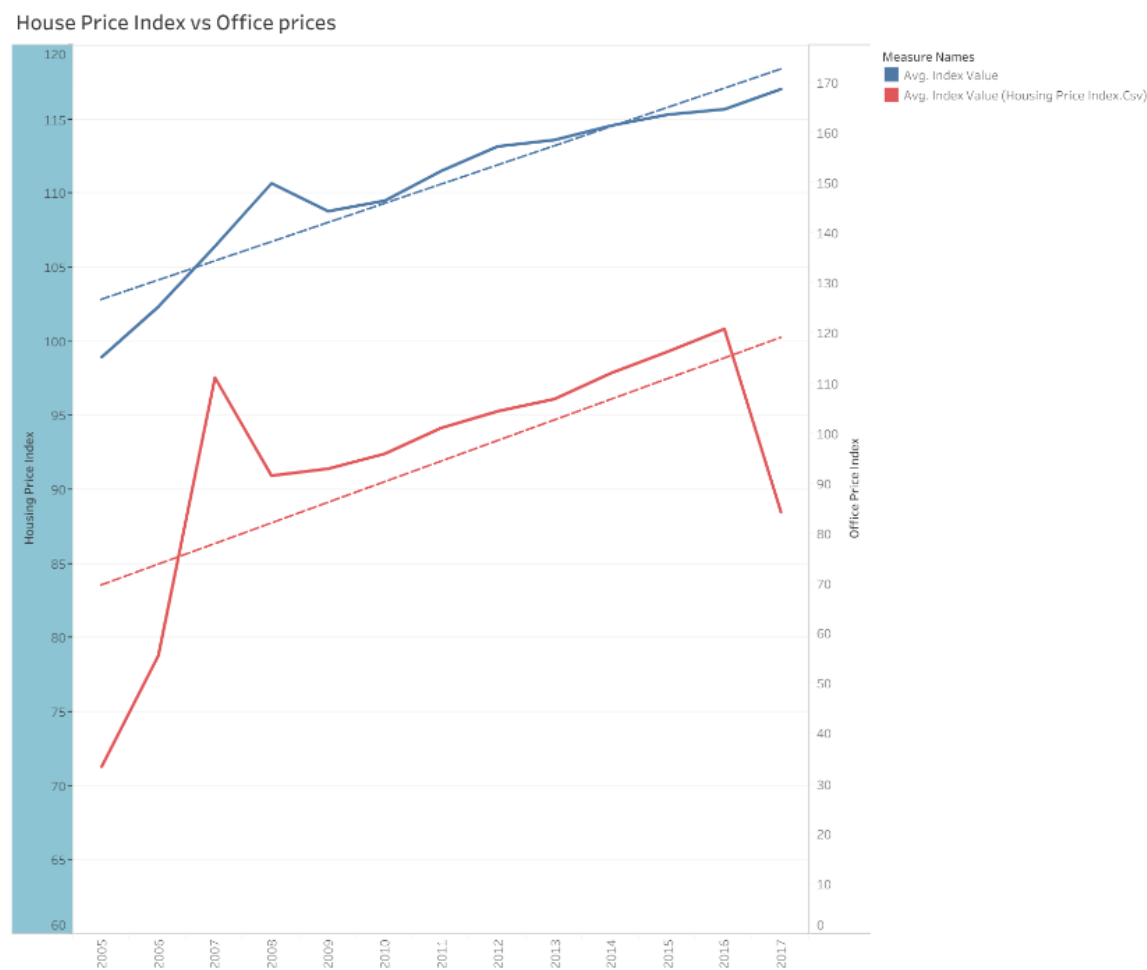
# Results

There has been an upward trend in Canada house prices in the last 40 years with a sharp rise in 1983.



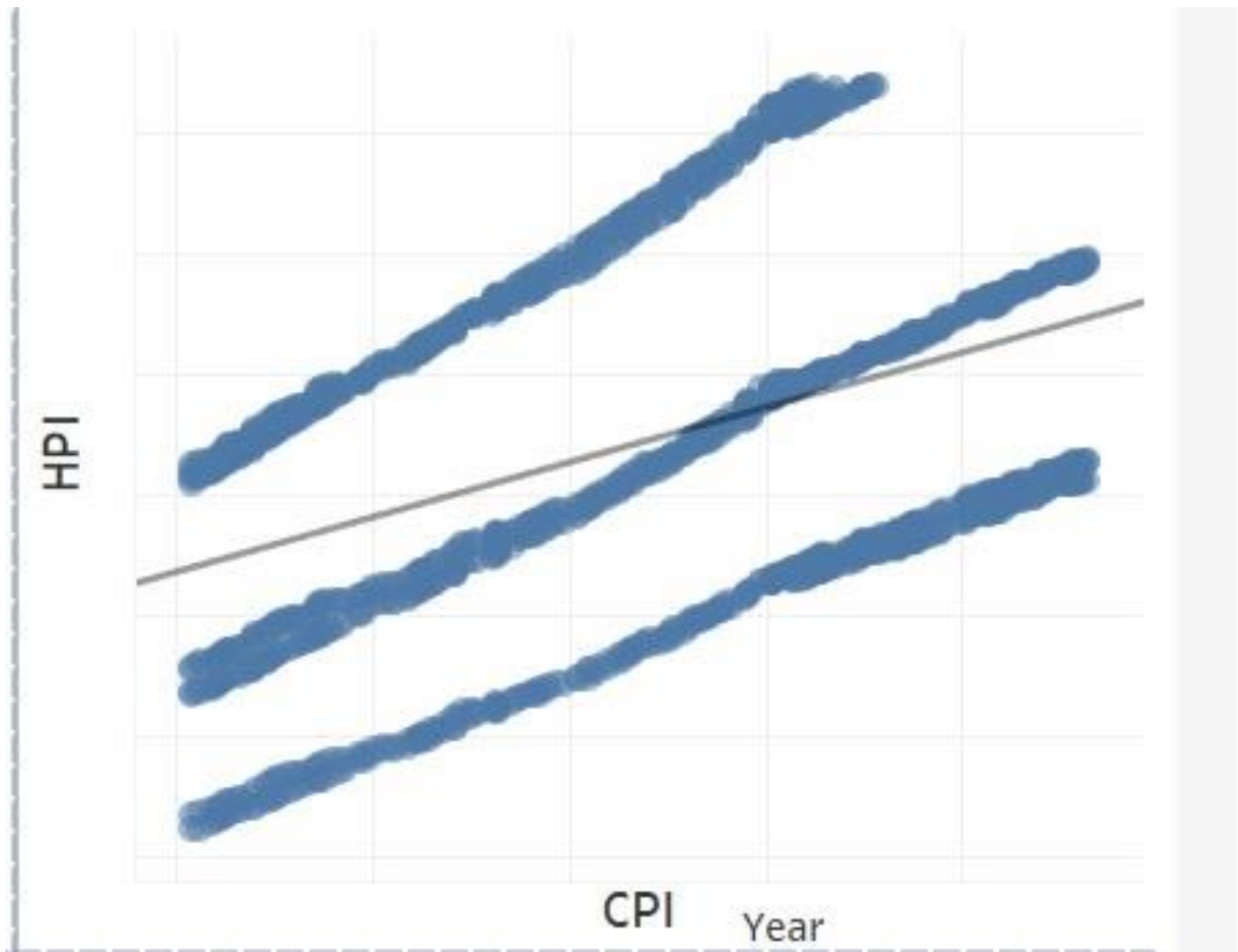
# HOUSE PRICE Vs OFFICE PRICE

When comparing House price trend with Office price trend, it becomes apparent that office space demonstrates a steeper incline or a more rapid increase compared to housing prices. Therefore, it can be inferred that office space is experiencing a higher rate of price escalation.



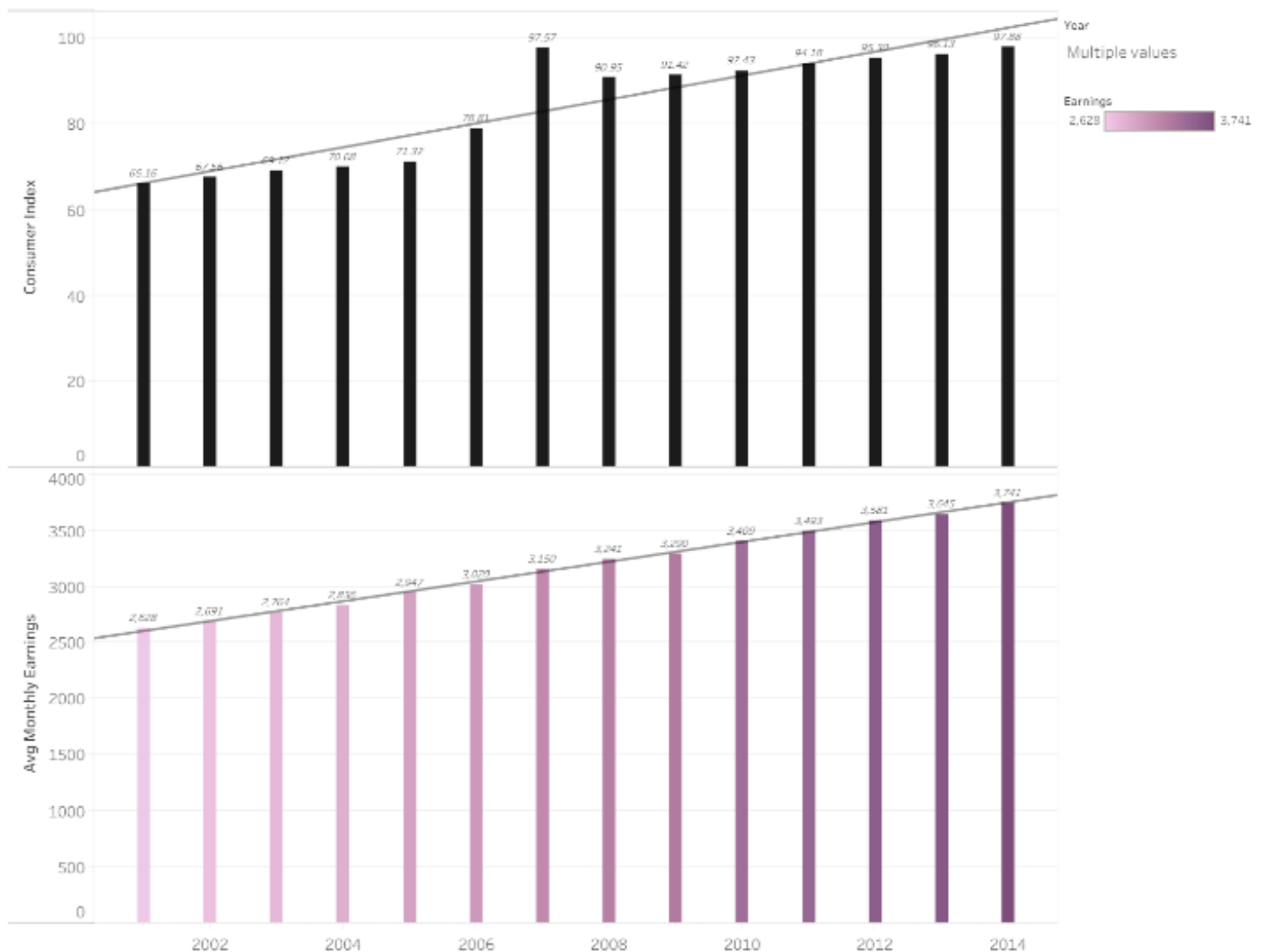
## HOUSE PRICE Vs CONSUMER PRICE INDEX

There is a linear relationship between house prices and consumer prices and this may be attributable to Inflation.



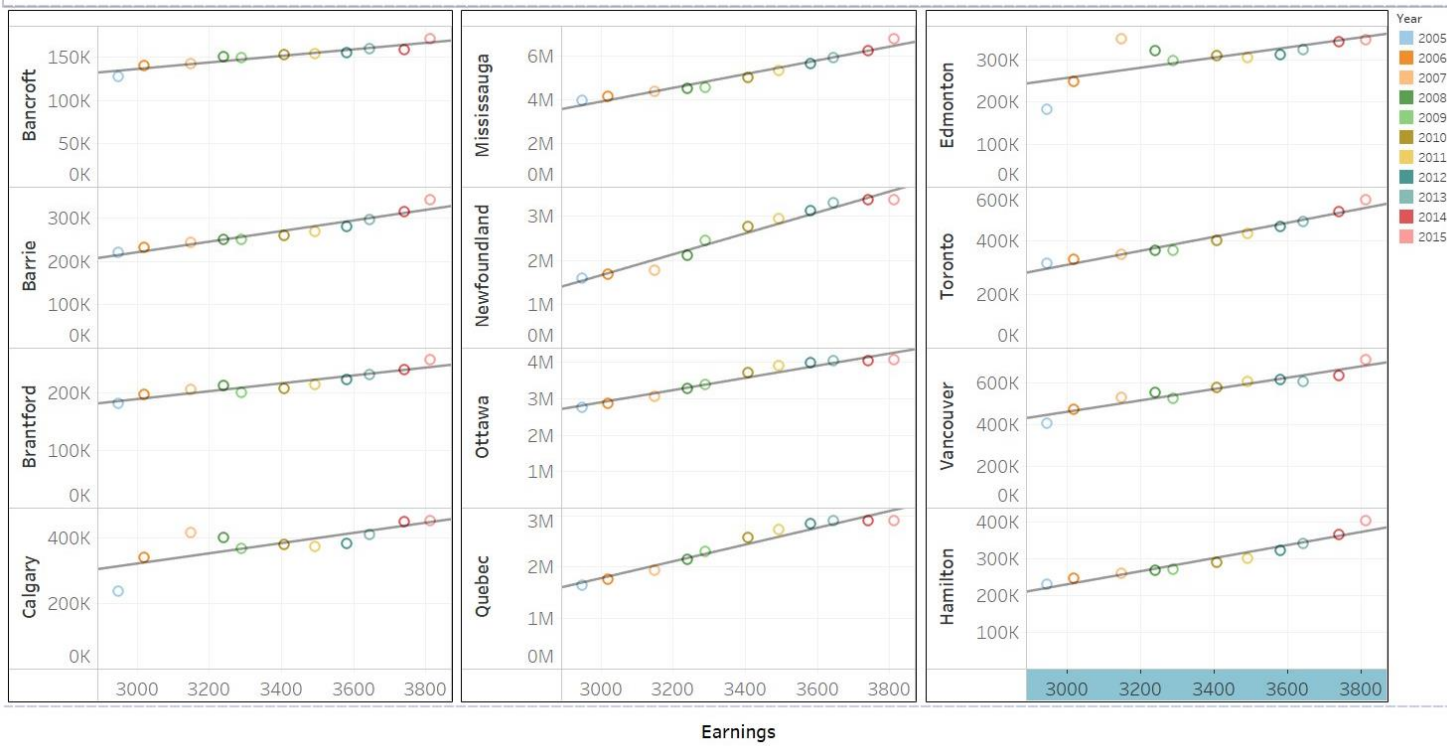
# CONSUMER PRICE INDEX Vs EARNINGS

When the CPI increases, indicating a rise in the overall cost of goods and services, earnings also tend to increase. This can suggest that individuals' incomes are adjusting to keep pace with the rising prices of goods and services, ensuring their purchasing power remains relatively stable. 2007 is an outlier where earnings could not keep pace.



# HOUSE PRICE INDEX Vs EARNINGS

Just like CPI earnings seems to keep pace with house prices in several locations depicted below. This suggests that individuals' incomes are rising in line with the escalating costs of housing. It indicates that individuals' purchasing power in relation to housing is relatively stable or improving, as their earnings align with the rising costs of housing.



## HOUSE PRICE INDEX PER STATES IN CANADA

Mississauga has the highest house price index and Okanagan Valley has the lowest. This visualization gives insight into house prices per different states in Canada and helps to decide on real estate investment.

