Introduction

Name: Etinosa Ekomwenrenren

Course: Data Science Immersive

Topic: Tableau Project

Outline

- Problem introduction
- Exploratory data analysis
- Answering real estate questions with visualizations
- Challenges and future directions

Problem Introduction

- Option 1 project type selected
- Answer pre-supplied questions relating to real estate prices and affordability in Canada
    - Explore dataset to deepen understanding
    - Create visualizations in Tableau to answer provided questions

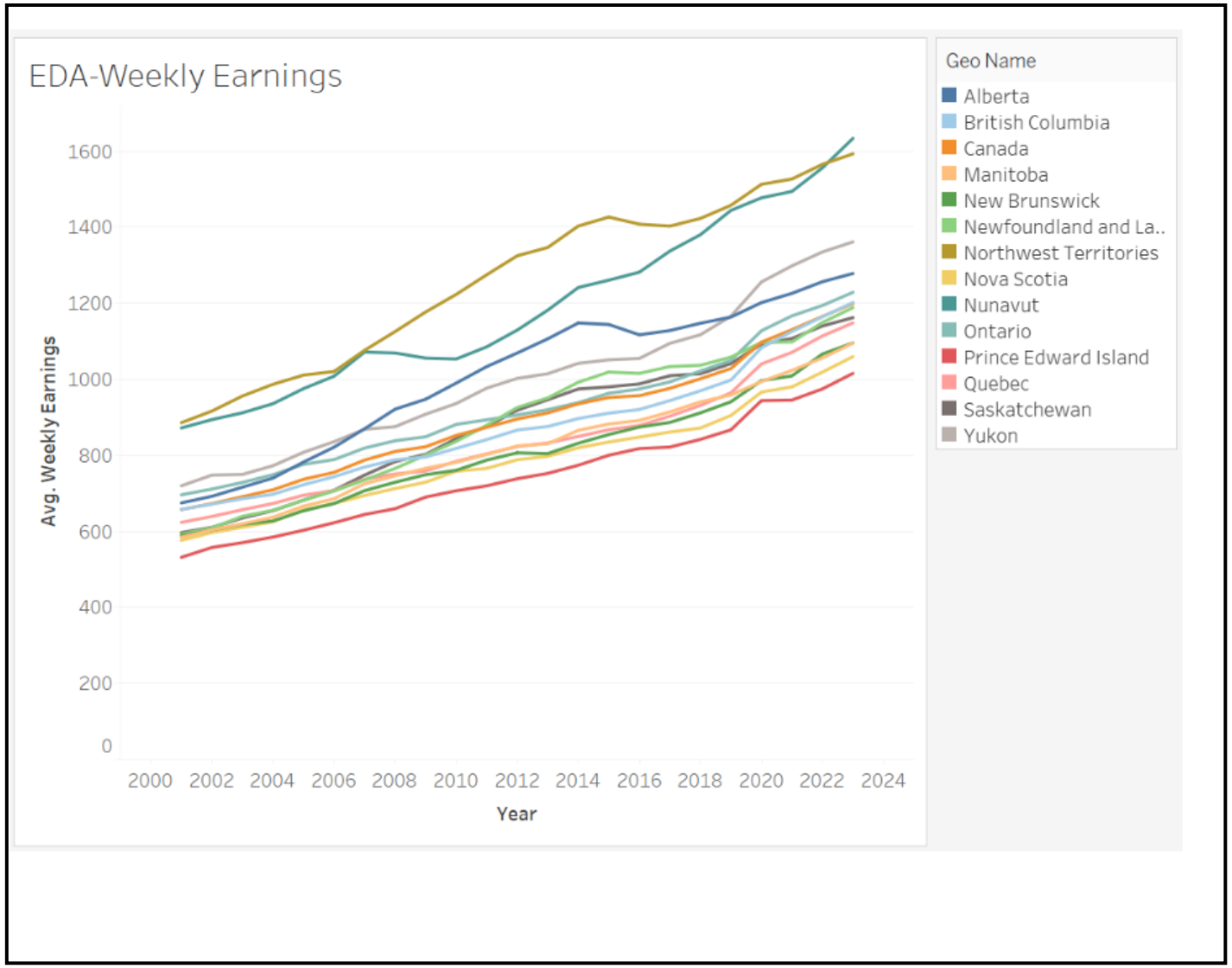
Learning Objectives

- Turning data into visual insights using Tableau
- Communicating insights with the appropriate visualizations

Exploring Datasets

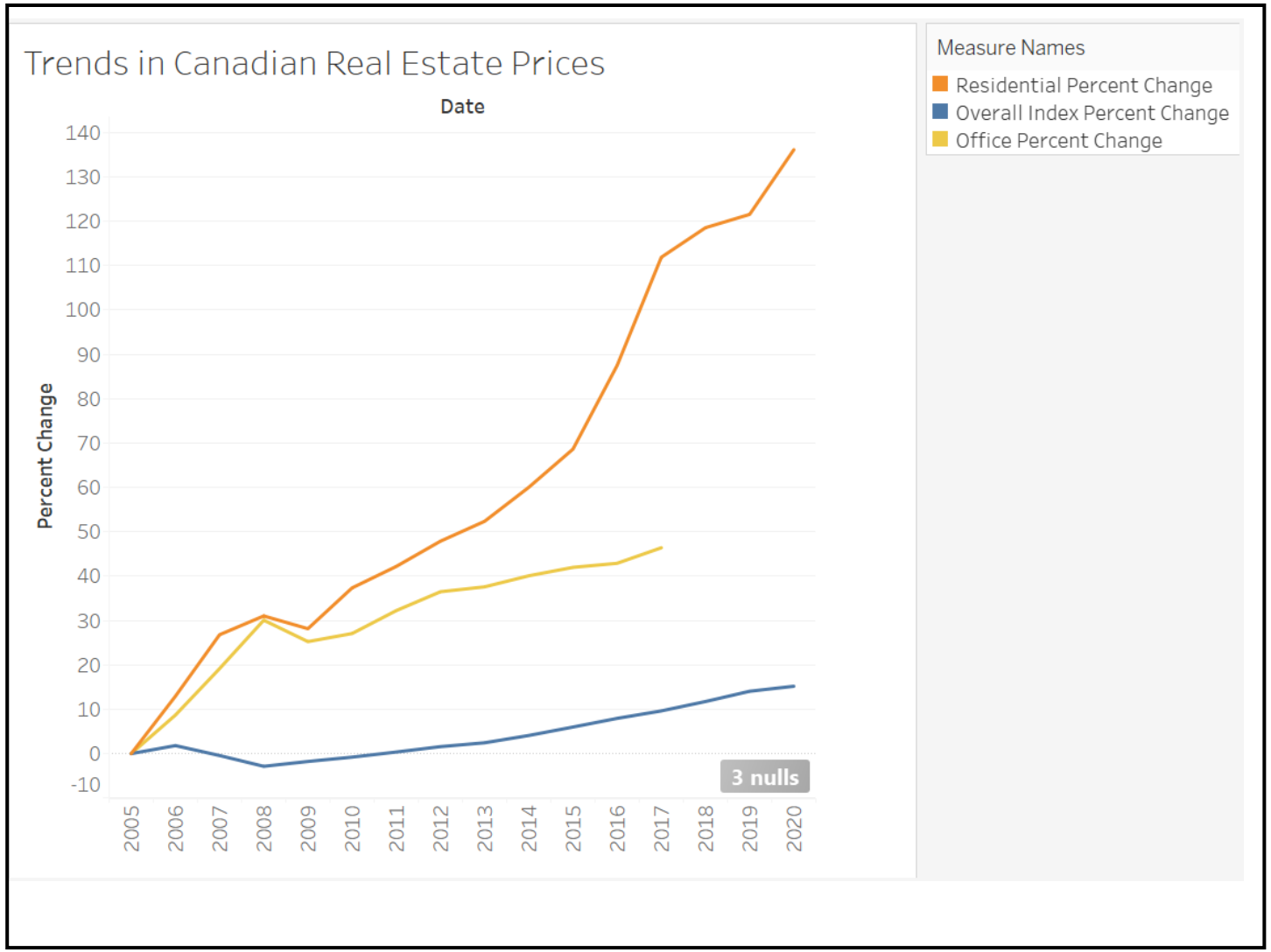
- Provided datasets include information about:
  - Residential house prices
  - Office building prices
  - Average weekly earnings
  - Inflation measured as a consumer price index
  - Housing constructions

- Interesting to note that the colder Northern provinces have higher average weekly earnings



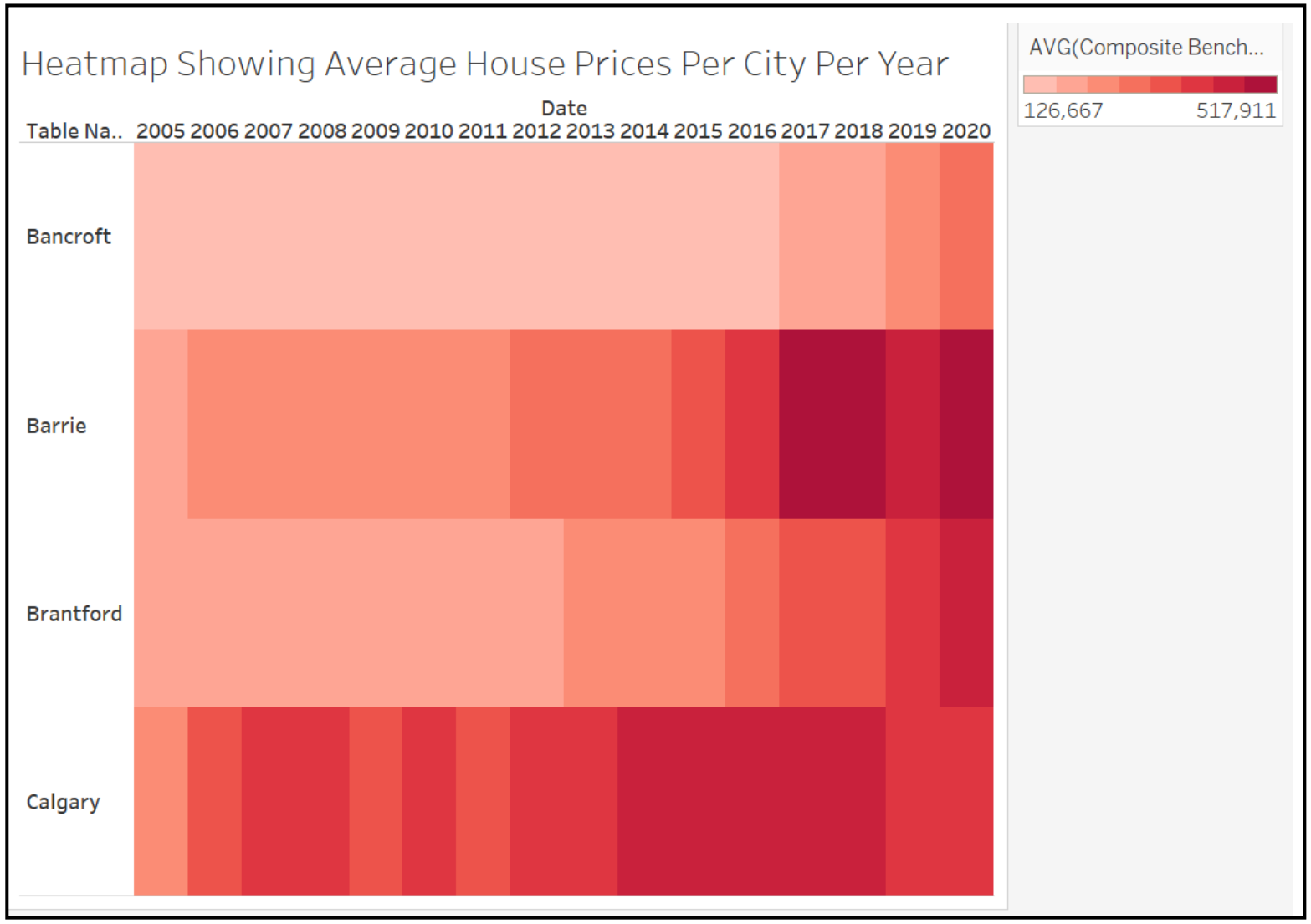
Should You Wait to Buy a House?

- Trend information are better capture with line charts
- 2005 is used a base year and data recalculated
- Residential house prices have been accelerating faster in comparison to the overall index and to office prices



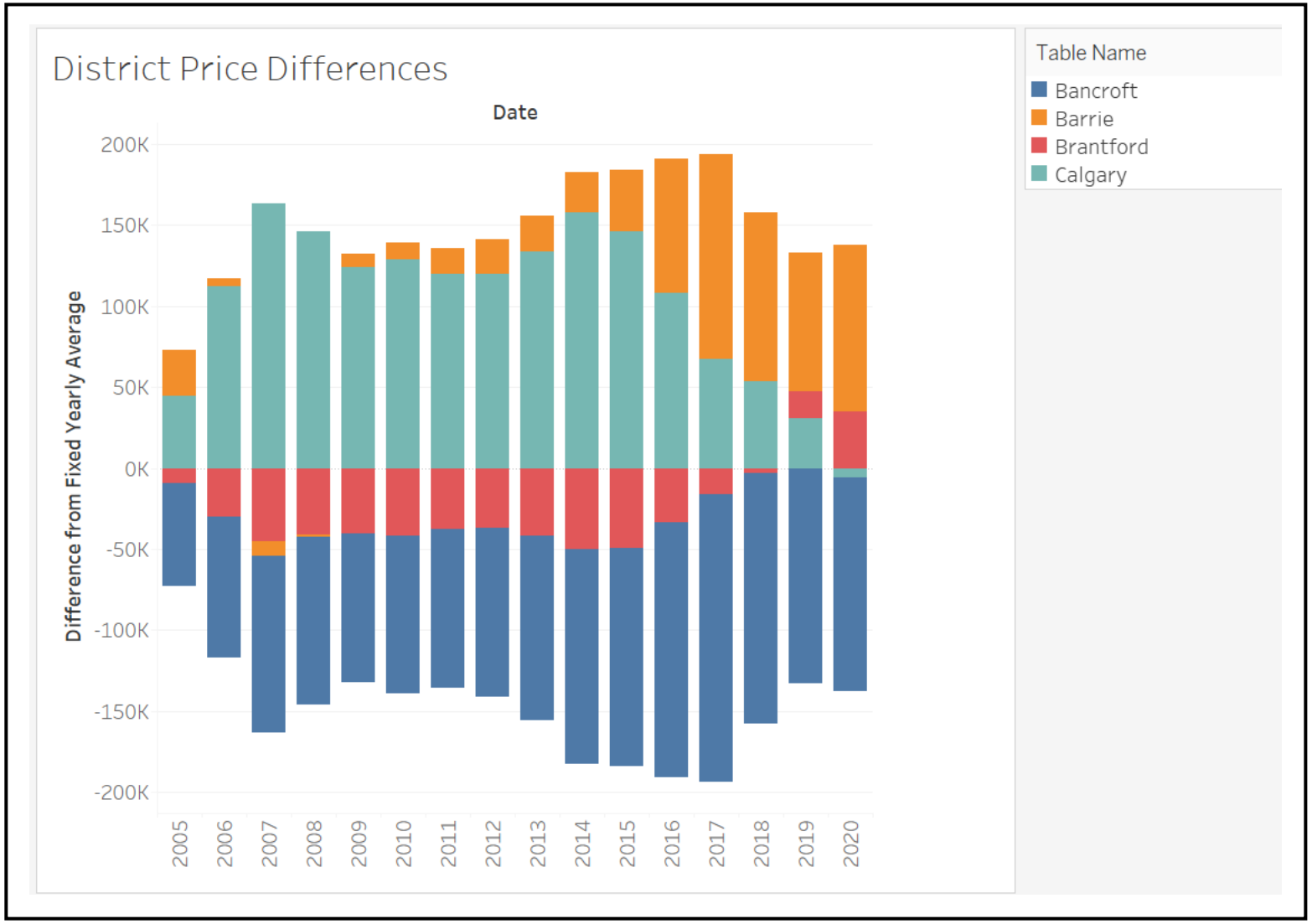
Are House Prices in Calgary More Expensive than Bancroft?

- Heatmaps are good for showing variation across multiple dimensions
- The two dimensions here are year and city.
- House prices in Calgary have been consistently more expensive than in Bancroft.



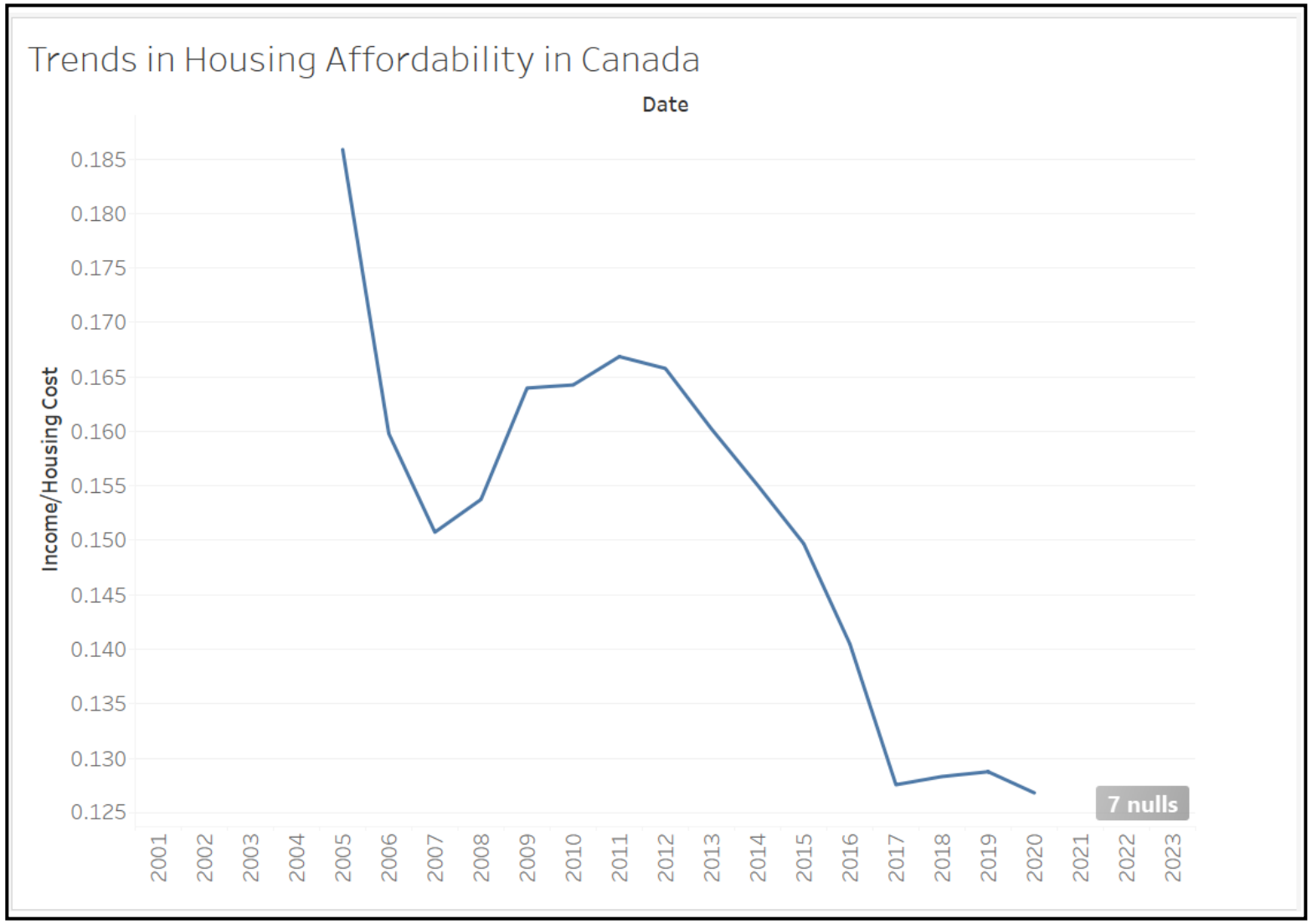
Are House Price Differences between the Cities Increasing?

- Diverging bar charts are good for showing differences across categories and an average
- Recently, the price differences between the cities have been decreasing as prices in Bancroft and Brantford catch up to the average



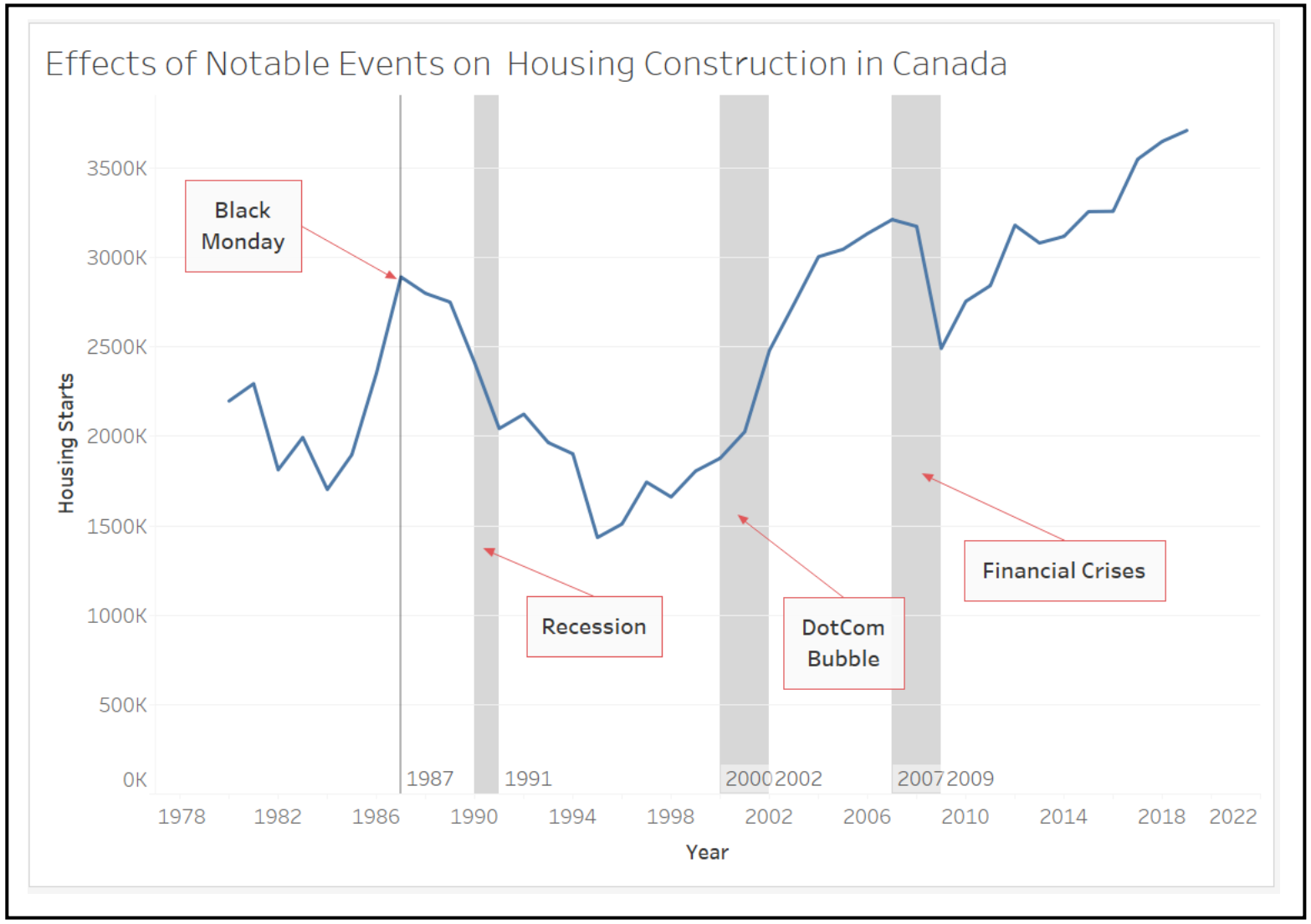
Are Houses More Affordable Than in the Past?

- Trends are better captured with line charts
- House prices have grown faster than the rate of increase in salaries/wages
- House prices are increasingly becoming more unaffordable



Do People Stop Building Houses When the Economy is Bad?

- Annotations using reference bands/lines are good for highlighting notable events
- Recessions that affect the broader economy lead to reduction in housing starts
- Events isolated to sectors – like the Dot Com Bubble – are less impactful on housing starts



Challenges and Future Directions

- The main challenge was in the provided files/datasets
- The weekly earnings json file was not usable. I had to re-source it.
- The housing index dataset is essentially a copy of the CPI dataset. I had to segment it and proceed with the file as is.
- With more time, it would be interesting to enrich the present dataset and get more geographic granularity into house prices across Canada.

Thank you