


# US. Starbucks Locational Analysis Through the Lense of Time

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Question to explore:

Over time, why did Starbucks choose the locations they chose?

## Set-Up:

- 1) 'Accidental' random sample
- 2) After web-scraping about  $\frac{1}{3}$  of sample...



2a) I was banned from the website.



The sample does contain:

- ❖ Starbucks Locations from 49 states

- ❖ Opening Dates Ranging from 1989 to present

- ❖ For Sample: ~ half cities have just 1 location...4 cities sampled over 40 locations



MOTIVATING QUESTION FOR THIS ANALYSIS:

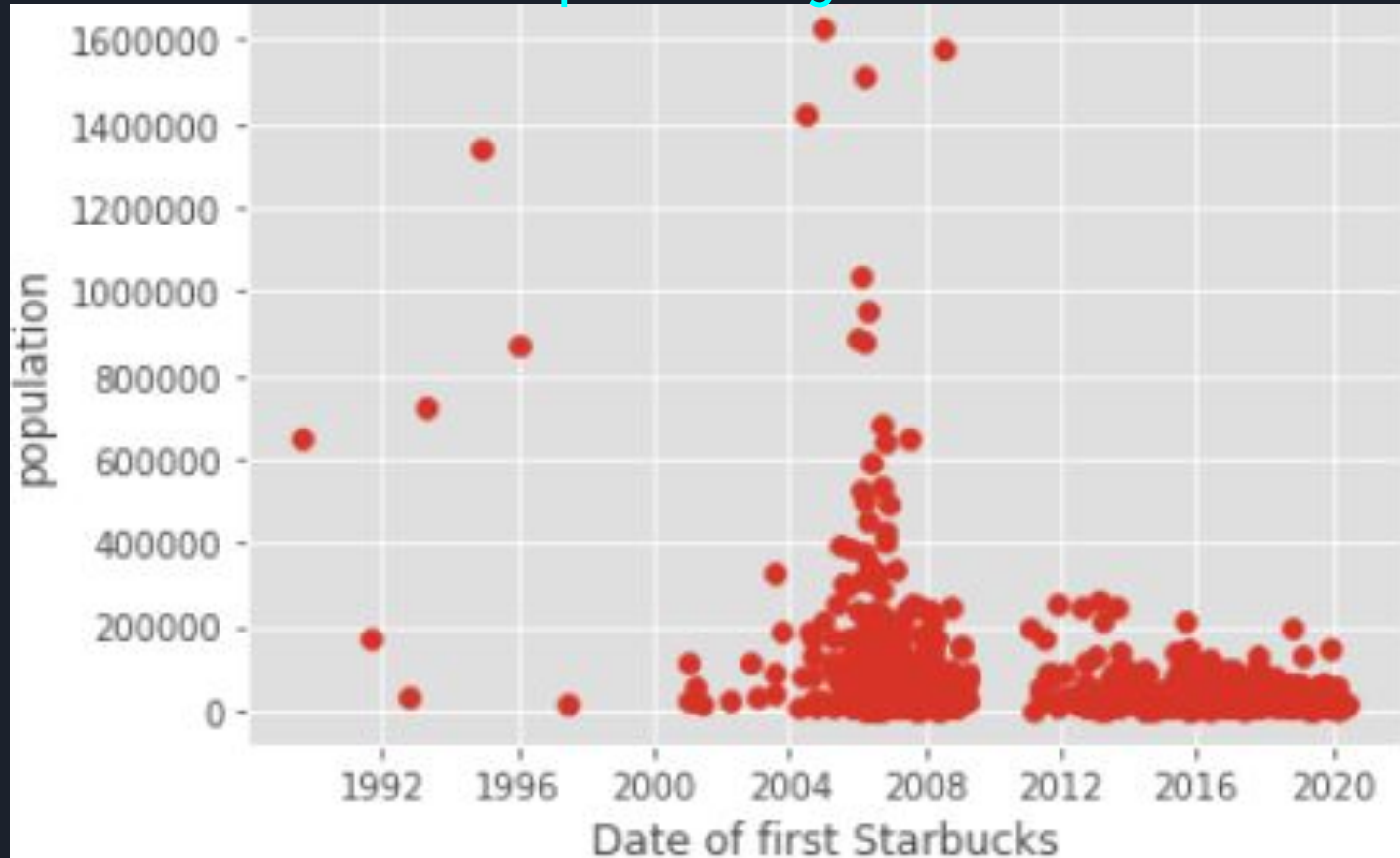
When did the first  
starbucks location open in  
different cities?

*And what was the underlying  
motivation for these  
location choices?*

# First Opening Date vs. Population Size for Each Sample City

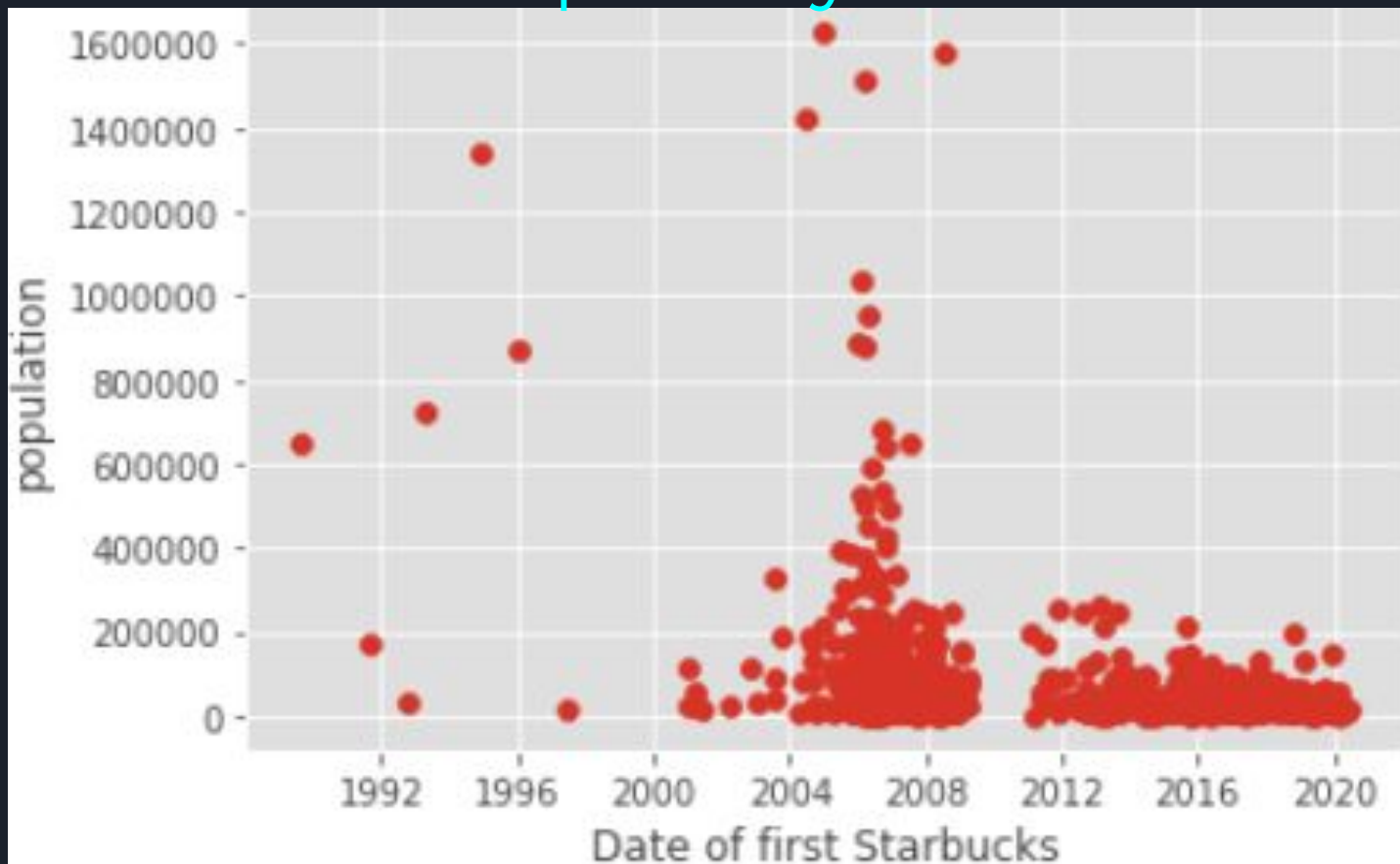
The top 4 cities in the sample, population wise, all opened their first Starbucks within a 5 year period.

~2004 - 2009



# First Opening Date vs. Population Size for Each Sample City

From the sample, the vast majority of cities with a Starbucks have a population under 250,000.





Context for our first graphic:

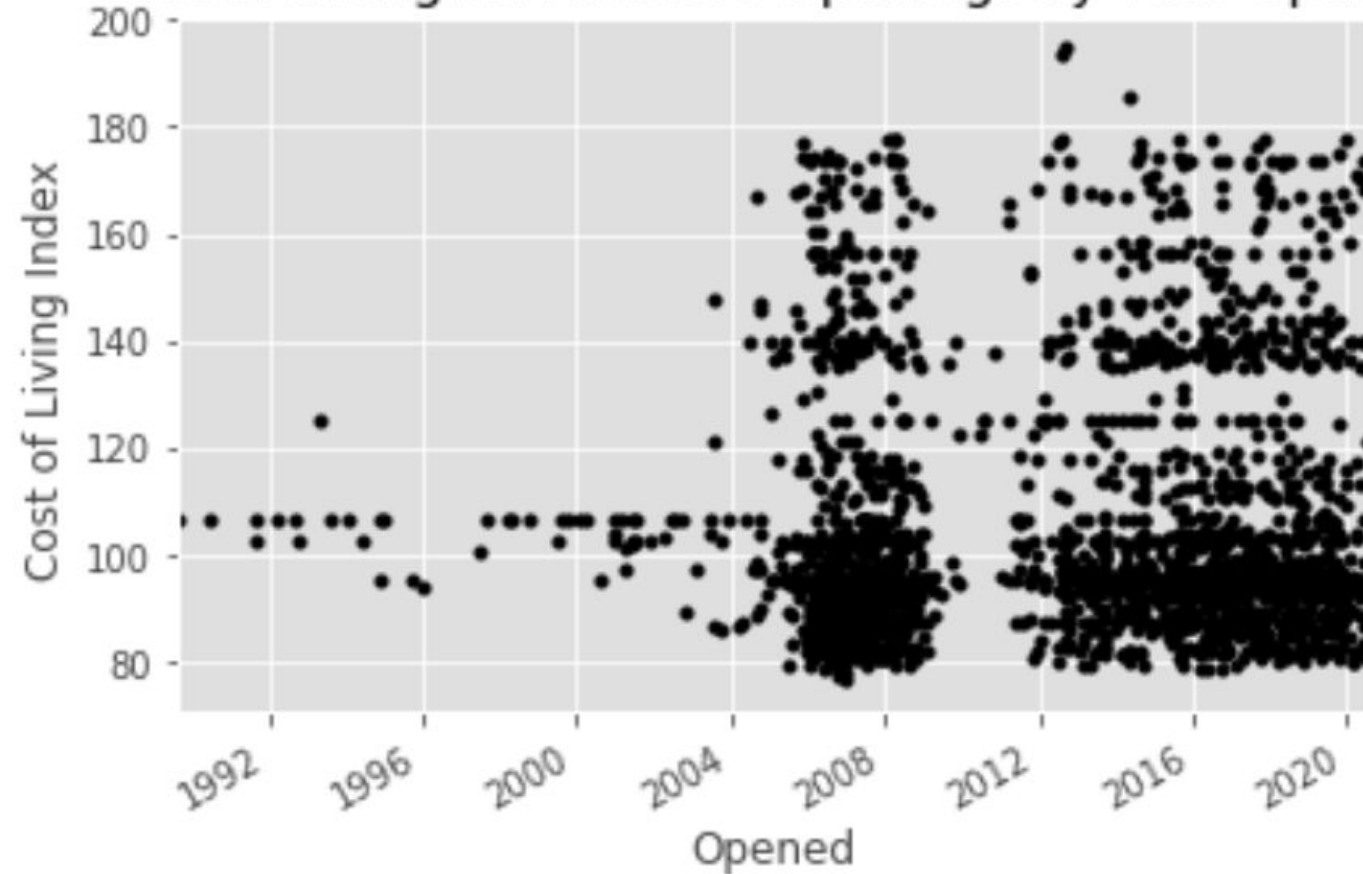
What is the COST OF LIVING INDEX?

The **cost-of-living index** is a theoretical **price index** measuring relative **cost of living** for each state.

The average cost-of-living index score is always set to 100

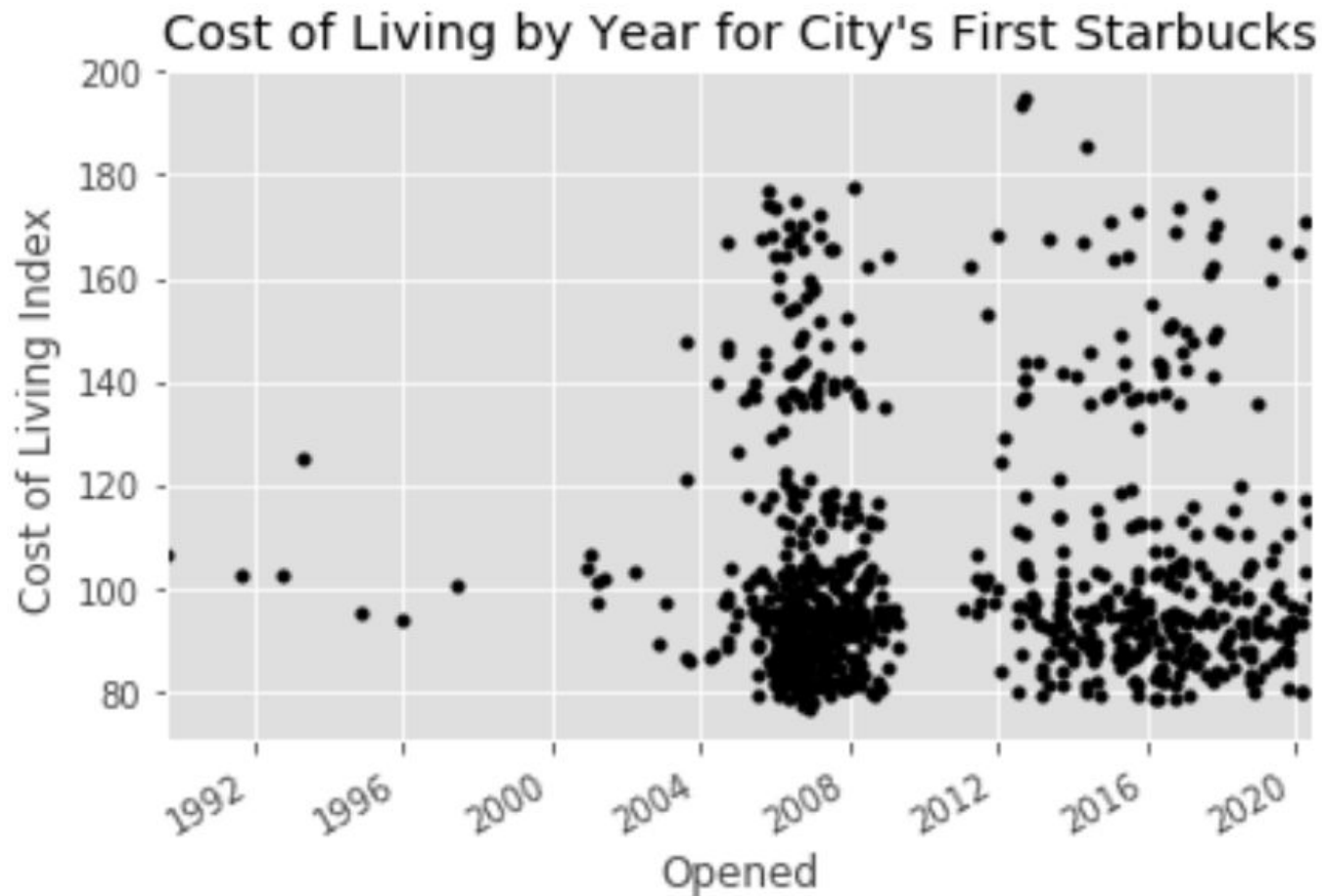


Cost of Living for All Store Openings by Year Opened



COST OF  
LIVING  
INDEX

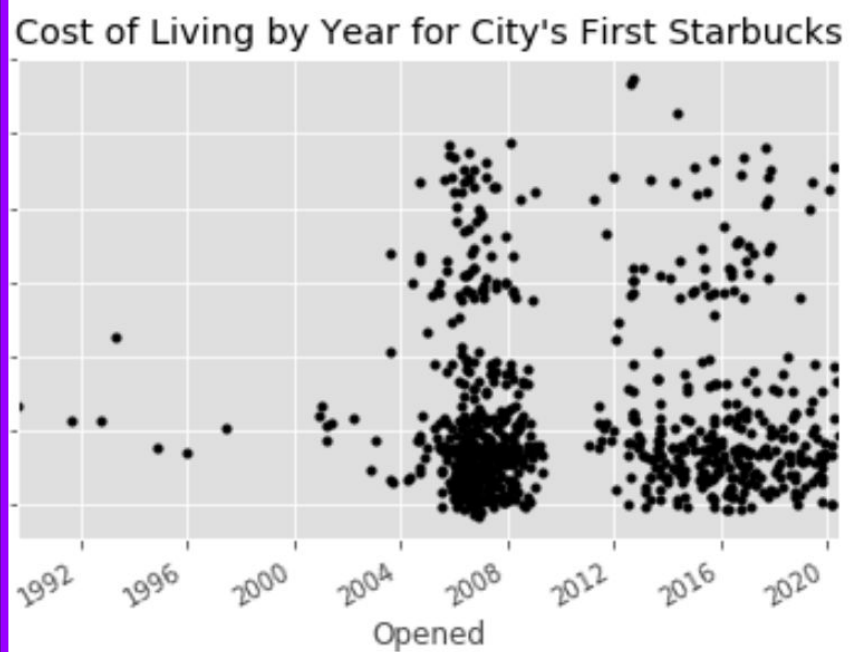
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FOR ALL  
STORES  
IN  
SAMPLE



COST OF  
LIVING  
INDEX

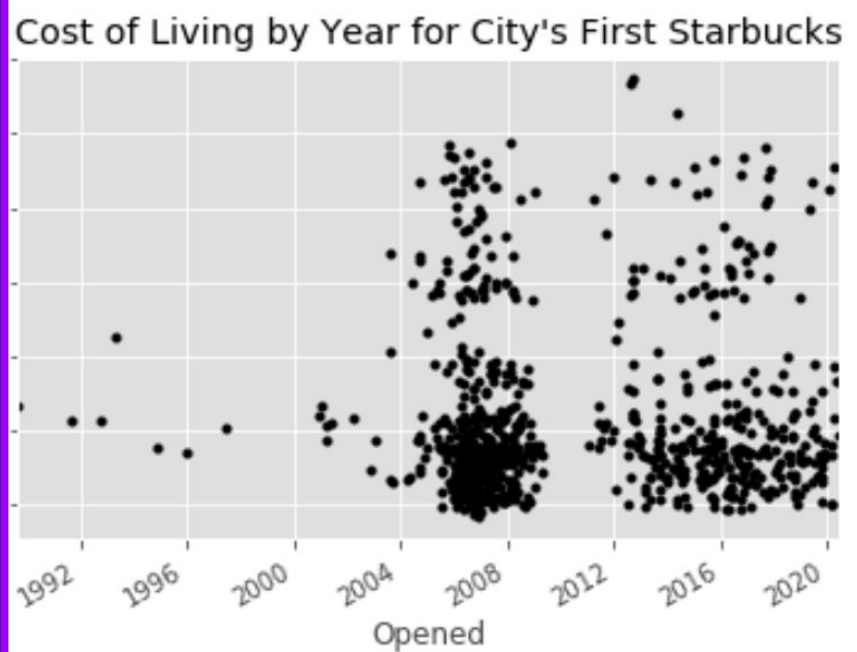
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CITY'S  
FIRST  
STORE  
IN  
SAMPLE

# SIDE-BY-SIDE COMPARISON



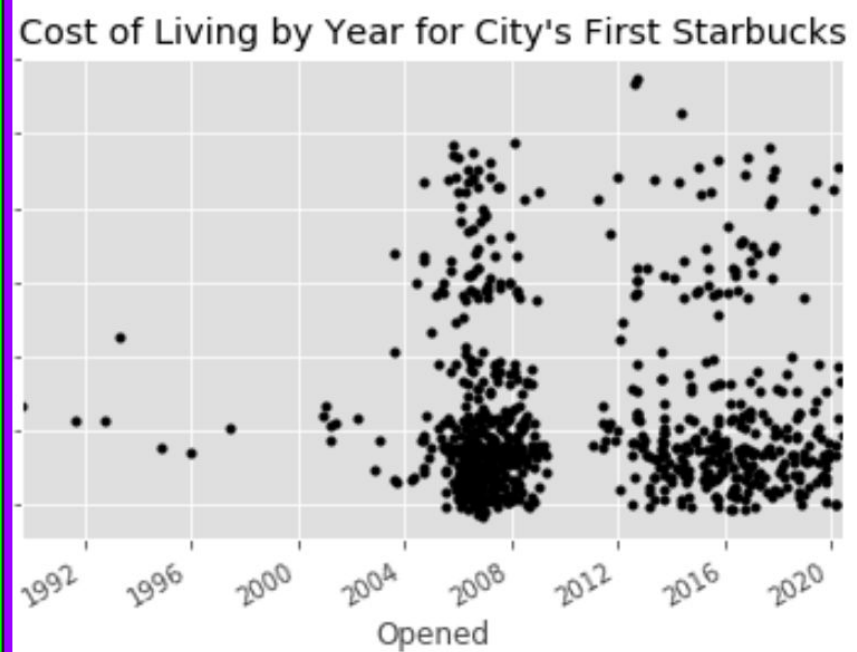
There was a surge of store openings that kicked off around the year 2004.

# SIDE-BY-SIDE COMPARISON



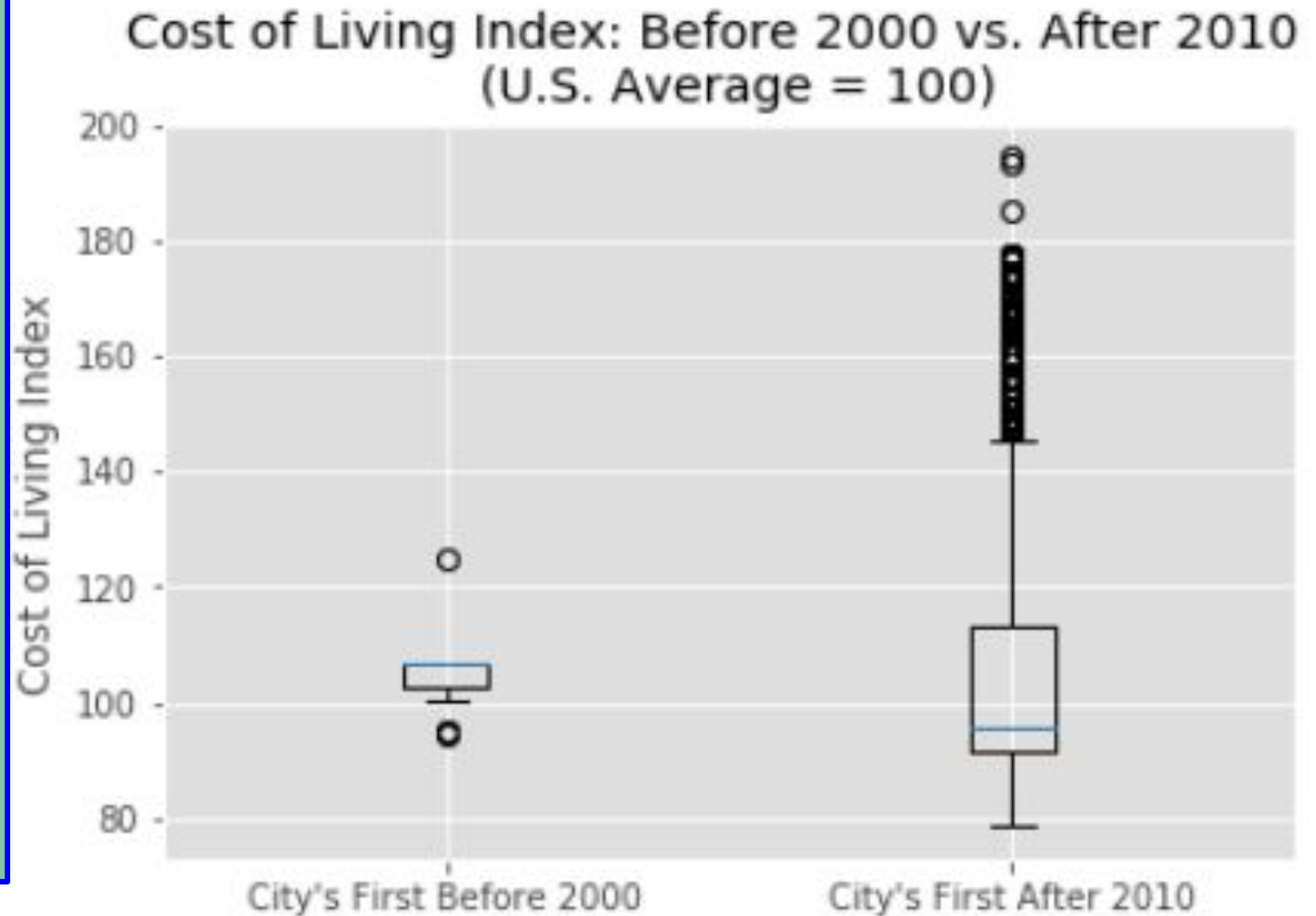
Around the time of the economic downturn called the “Great Recession,” there was a short, but temporary, store opening lull.

# SIDE-BY-SIDE COMPARISON



**Interestingly,** initial store locations Cost of Living Index Scores general fell around the average score of 100. **But the surge** stores ran the spectrum...with scores really high and really low.

This  
boxplot  
highlights  
the  
significant  
difference  
in the Cost  
of Living  
pre- and  
post-surge



.....

# CONCLUSIONS:

To emulate Starbucks growth pattern  
**through the lense of time:**

1. Start middle of the road.  
Open locations in places where  
Cost of Living is about average.
2. Middle of the road for city population too.  
Save the little towns and populous cities for later.
3. Once you've figured out your model...

**SURGE....and saturate the market.**







# Lessons I Learned as a Coder and Project Completer:

Docstrings/notes are not just for functions!...

I wish I would have wrote more comments explaining what I was doing / trying to do.

(I'll probably be really tired later and will require very explicit instructions.



# Lessons I Learned as a Coder and Project Completer:

Version Control is important!

Even with Jupyter Notebook...  
Save and Checkpoint!

Much time was lost trying to get back  
to a previous version of my code.



# Lessons I Learned as a Coder and Project Completer:

Keep variables clear and purposeful

Try not to reuse the same name,  
so its meaning is not lost.  
(I ended up with 3 variables all  
standing for the same thing)



## **Lessons I Learned as a Coder and Project Completer:**

Keep variables clear and purposeful...try not to reuse the same name, so its meaning is not lost.