

Ruixuan Li

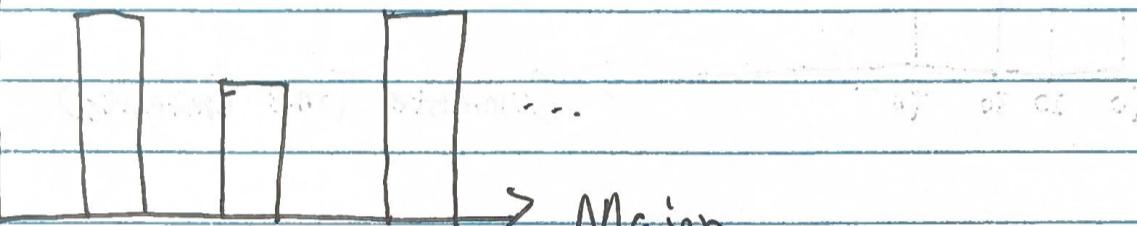
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Q1. a. Index Variable(s): Student-ID

Meaning Variable Type: Categorical

Data structure: Cross-sectional

Count  
of students  
ID



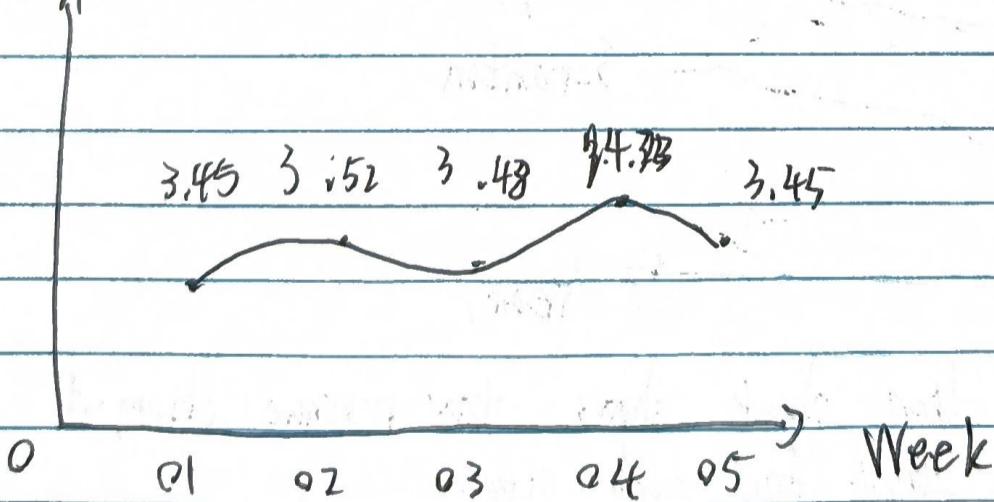
economics Biology Psychology  $\rightarrow$  Major

b. The bar chart shows the Economics and Psychology are tied for the highest number of students.

Q2 a. Index Variable(s): Week

Meaning : Numerical (Continuous)

Gas price Structure : Time series



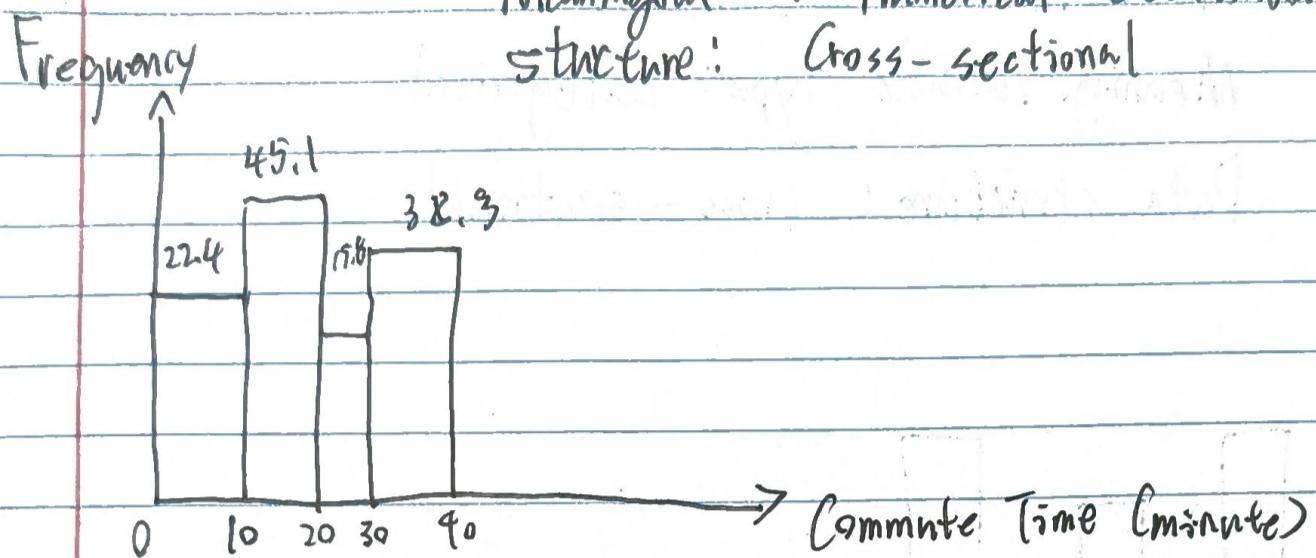
b. The line chart shows how gas price have changed over time.

Gas price fluctuated across weeks, showing overall change over the observed period.

Q3.a. Index Variable : Rider-ID

Meaningful : Numerical (continuous)

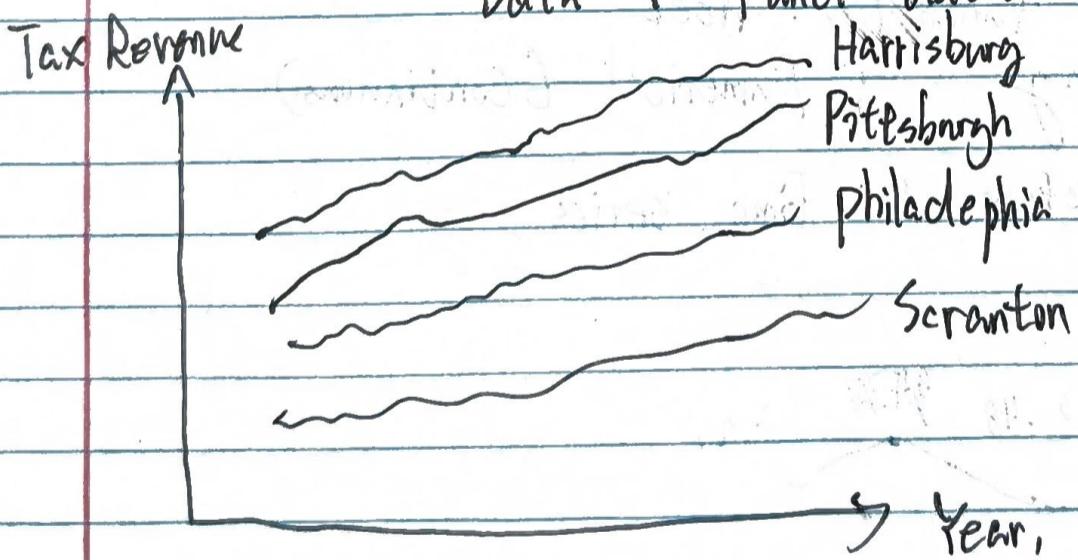
Structure : Cross-sectional



- b. The histogram shows the distribution of bus rider commute times. Most commute time are concentrated in the middle range, with fewer very short and long trips.

Q4.a. Index variable : Year, City

Data : Panel data



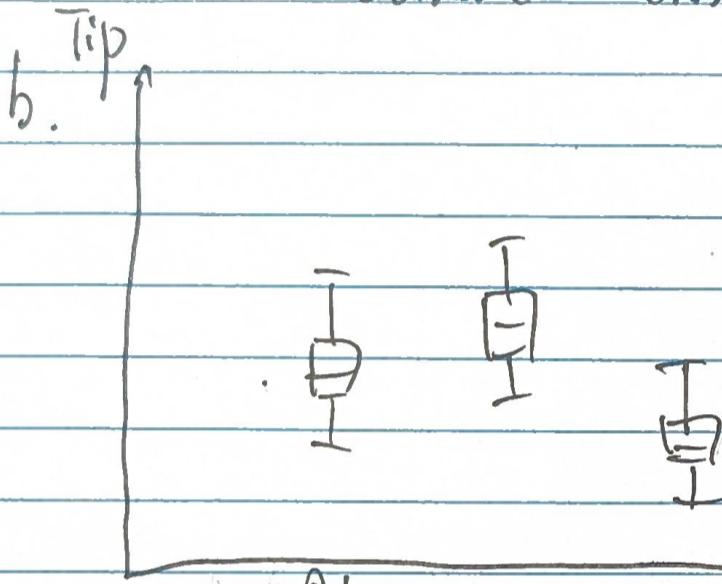
- b. The multiple line chart shows tax revenue changed from 2020 to 2024 for each city.

All city show an increase in tax revenue overtime.

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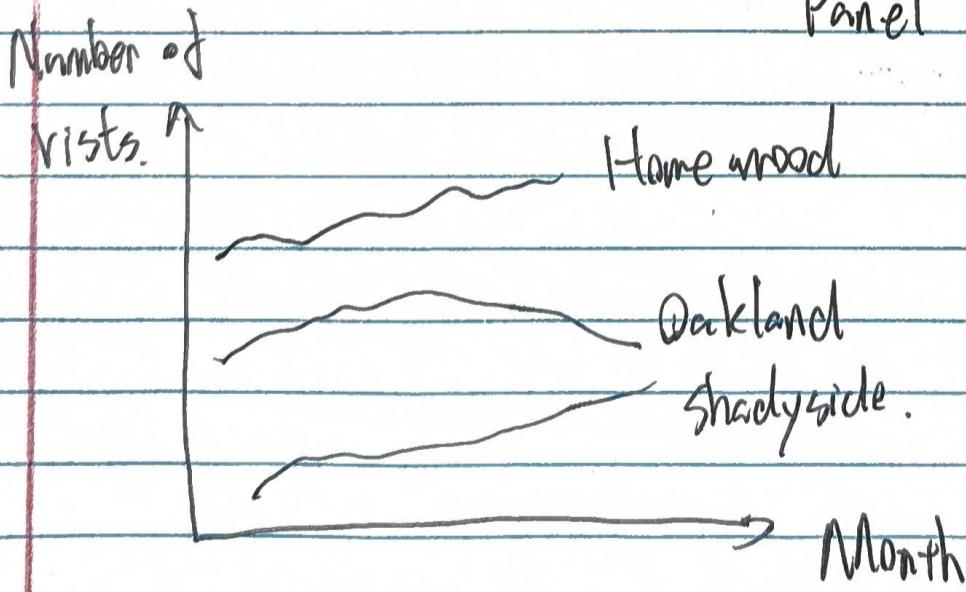
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Q5.a. Index Variable: Transaction-ID  
Meaning: Numerical (Continuous)  
Structure: Cross-sectional



Alice Bob Carol Server  
The box plots show the distribution of tips for each server.

Q6.a. Index Variable: Month, neighborhood.  
: Numerical (Discrete)  
Panel data



The multiple line chart shows the trend in food bank