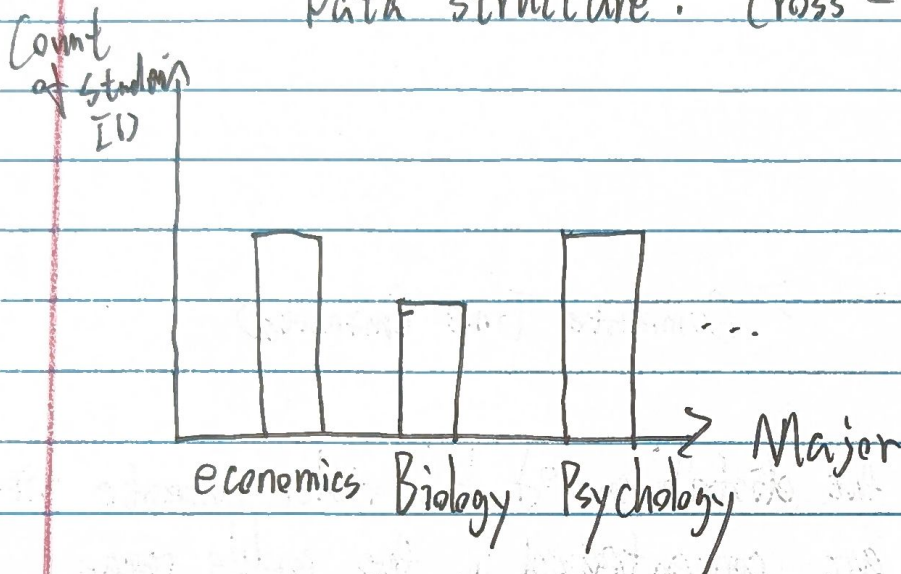


Q1 a. Index Variable(s): Student - ID

Meaning Variable Type: Categorical

Data structure: Cross-sectional

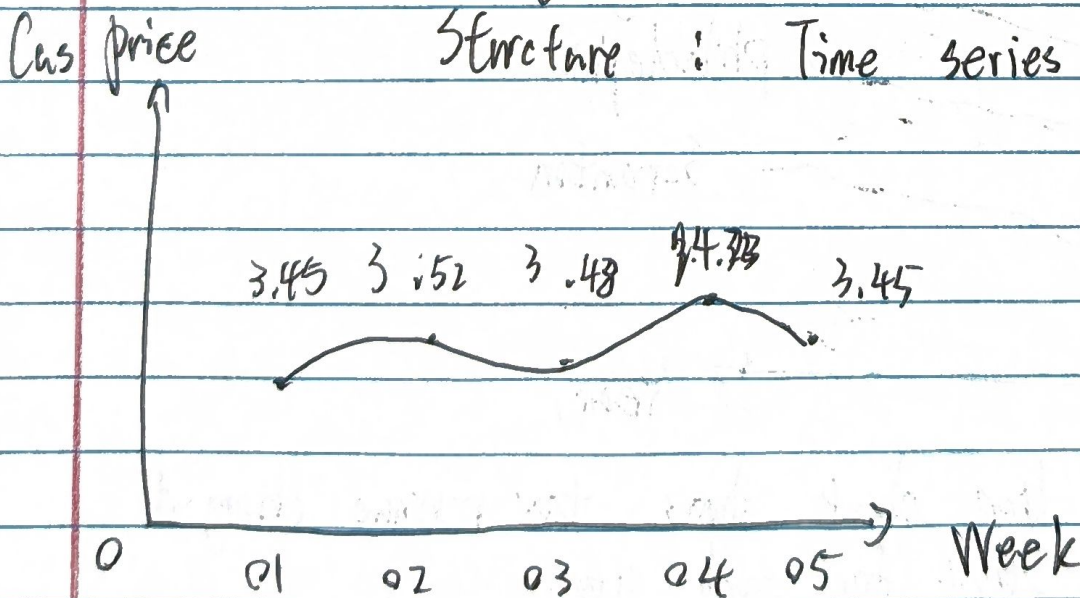


b. The bar chart shows the Economics and Psychology are tied for the highest number of students.

Q2 a. Index Variable(s): Week

Meaning: Numerical (Continuous)

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.

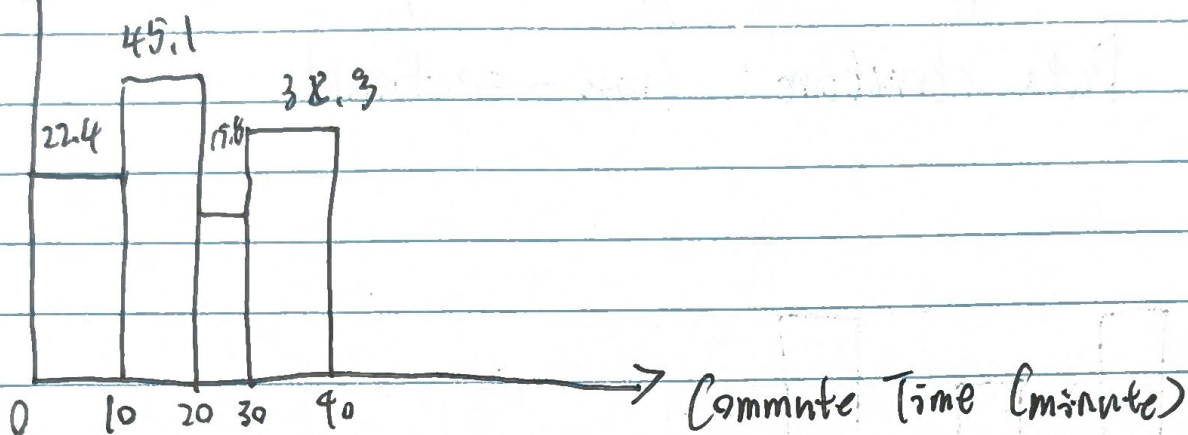
Q3. a.

Index Variable: Rider - ID

Meaningful: Numerical (continuous)

Structure: Cross-sectional

Frequency



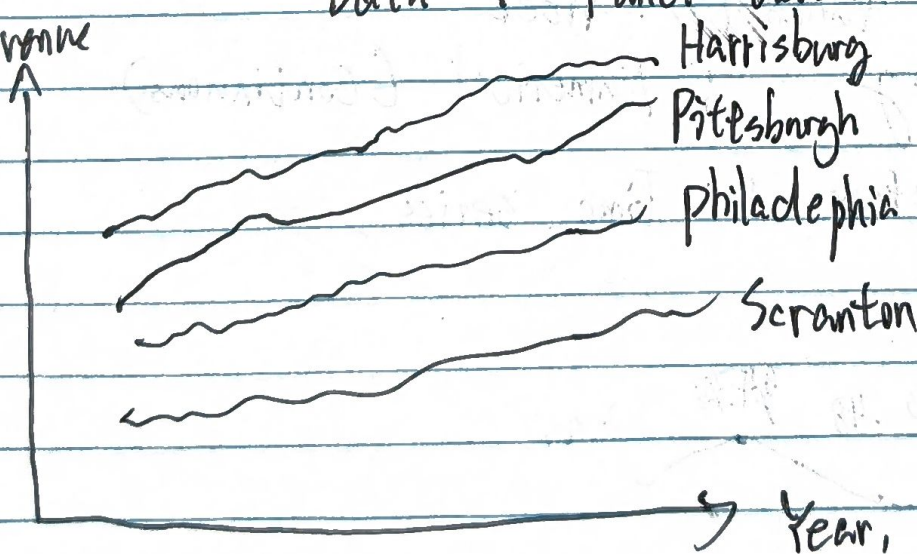
- b. The histogram shows the distribution of bus rider commute times. Most commute times are concentrated in the middle range, with fewer very short and long trips.

Q4. a.

Index variable: Year, City

Data: Panel data

Tax Revenue

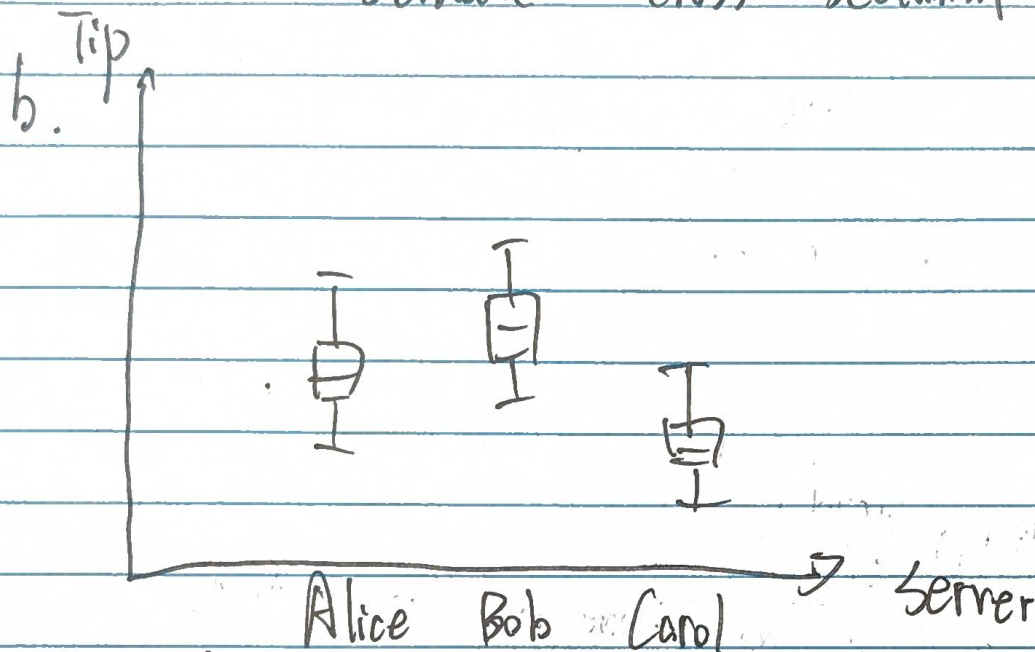


- b. The multiple line chart shows tax revenue changed from 2020 to 2024 for each city. All cities show an increase in tax revenue overtime.

Ruixuan Li

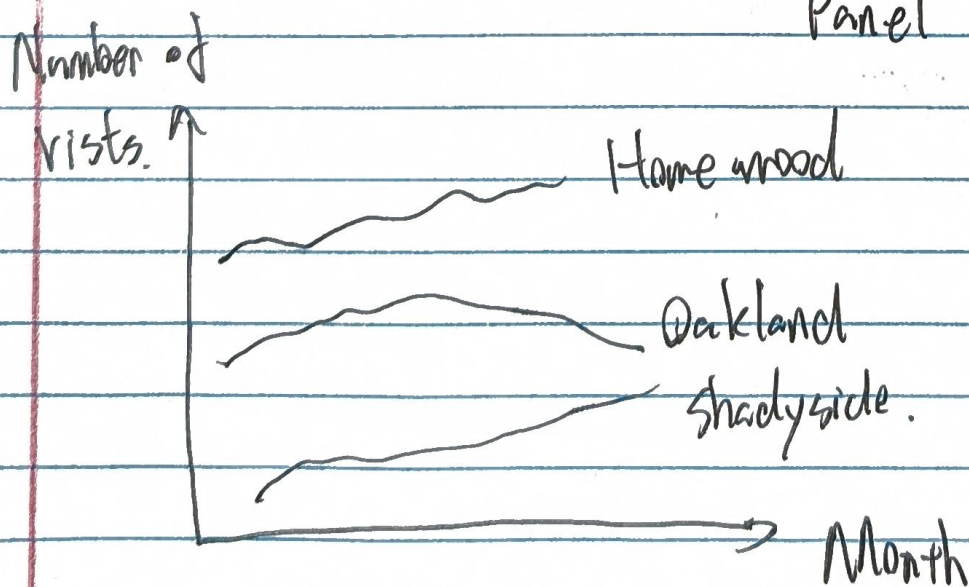
4681348

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



The box plots show the distribution of tips for each server.

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



The multiple line chart shows the trend in food items