

Econ 3040 - Assignment 2

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In this assignment, you will estimate the slope of a demand curve, using data on the quantity consumed, and price, of “spirits” (hard liquor). The data is referenced in the textbook, and is originally from Prest (1949).

Due date: February 20th, 2020. Worth 3% of your final grade.

Instructions:

- Submit your assignment in the “Assignment 2” drop box on UM Learn. Include your name and student number.
- You must complete your assignment individually.
- Submit relevant R code for each question in your assignment.
- Do not copy and paste output from R. Format your results nicely.

Now, here is the assignment for you to work through.

The data can be found at:

<http://home.cc.umanitoba.ca/~godwinrt/3040/data/spirits.csv>

1. Type out the population model, and explain the purpose of the study, in your own words. You may want to refer to page 42 of the textbook.
2. Report the sample mean, variance, and covariance for the variables in the data set.
3. Estimate the population model by least squares. Report your results, and interpret the economic meaning of the estimated slope.
4. Report, and interpret, the R^2 for your estimated model.
5. Look at equation (4.10) in the textbook. Use two of the numbers from Question 2 (divide one by the other) in order to get the same result for the estimated slope that you got in Question 3.
6. Plot the data, adding your estimated line to the plot. This plot should be included in your assignment.