ECN 102: Analysis of Economics Data

Final Practice

Remy Beauregard

Practice exercises come from *Analysis of Economics Data* (2022) by Colin Cameron. Exercises appear at the end of each chapter. Answers to odd exercises appear at the end of the textbook. Answers to even exercises appear below. These questions have been selected to help prepare you for the final.

Chapter 1:

- Q2
- Q3

Chapter 2:

- Q2
- Q9
- Q12

Chapter 3:

- Q3
- Q5

Chapter 4:

- Q9
- Q10

Chapter 5:

- Q9
- Q10

Chapter 6:

- Q1
- Q10

Chapter 7:

- Q5
- Q13

Chapter 9:

- Q3
- Q5

Chapter 10:

- Q11 (not parts d, e)
- Q14 (not part d)

Chapter 11:

- Q5
- Q13

Chapter 12:

- Q1 (not part c)
- Q21
- Q23

Chapter 14:

- Q1
- Q7

Chapter 15:

- Q1 (not parts b, e)
- Q3 (not part b)

Even Question Answers

Chapter 1

- Q2:

a) Numerical, cross-section

b) Categorical (y/n), time series

c) Numerical, cross-section

d) Numerical, time series

e) Numerical, panel

Chapter 2

- Q2:

a) $\sum_{i=1}^{6} 2 = 2 \times 6 = 12$

b) $\sum_{i=1}^{4} \frac{2}{i} = \frac{2}{1} + \frac{2}{2} + \frac{2}{3} + \frac{2}{4} = 2 + 1 + 0.5 + 0.\overline{66} = 4.1\overline{66}$

c) $\sum_{i=1}^{3} 3i^3 = 3 + (3 \times 2^3) + (3 \times 3^3) = 108$

d) $\sum_{i=4}^{6} i = 4 + 5 + 6 = 15$

e) $\sum_{i=1}^{4} (5 + 2i) = 5 \times 4 + 2(1) + 2(2) + 2(3) + 2(4) = 40$

- Q12:

a) Positive skew

b) Positive skew

c) Not enough information

d) Positive skew

Chapter 4

- Q10:

$80 \pm \frac{60}{\sqrt{100}} \times t^*_{100-1,0.025}$

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di invttail(99,0.025)
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1.984217
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$80 \pm \frac{60}{\sqrt{100}} \times 1.98 = (68.12, 91.88)$

Chapter 5

- Q10:

a) $r_{xy} = \frac{Cov(x,y)}{s_x s_y} = \frac{40}{\sqrt{400} \times \sqrt{16}} = 0.5$

b) $b_2 = \frac{Cov(x,y)}{Var(x)} = \frac{40}{400} = 0.1$

c) $s_x, s_y = 1 \rightarrow b_2 = r_{xy} \frac{s_y}{s_x} = r_{xy} \times 1 \rightarrow b_2^{standardized} = 0.5$

Chapter 6

- Q10:

a) True

b) False

c) True

Chapter 10

- Q14:

a) False

b) True

c) True