

Economics 102 : Analysis of Economic Data Cameron U.C.-Davis
EXTRA QUESTION FOR MIDTERM 2 PREPARATION
MULTIPLE REGRESSION QUESTION
From Final Exam Question 4 Winter 2019

4.(a) Several ways to answer. A one year increase in education is associated with a 41.9 increase in outpatient spending which is about 2.5% of mean outpatient spending of 1629, so fairly small. Or a one standard deviation increase is associated with a $41.38 \times 3.066 = 126.9$ increase which is 7.7% of mean outpatient spending of 1629, so important. [This is a judgement call. In grading this what matters is the explanation].

(b) Yes, the five regressors are jointly significant at 5% since the F -statistic of overall fit equals 6.26 with $p = 0.0000 < 0.05$.

(c) Yes. As $F = 7.87$ with $p = 0.000 < 0.05$.

(d) Use adjusted R^2 as this penalizes larger models. Since $0.0133 > 0.0011$ the larger model fits better.

(Alternatively favor model with lower s_e^2 . Since $2241.8 < 225.6$ the larger model fits better.)