

EE 325 Section 2 Take home quiz 6 (Total 10 points) Due April 24th, 2012

In order to receive points from the following questions, students must submit your STATA output table. No photocopy of STATA output table will be accepted.

Demand function for automobile in the United States. You are given the data in Table 10.14,

where Y = new passenger cars sold (thousand), seasonally unadjusted

X_2 = new cars, Consumer price index, 1967=100, seasonally unadjusted

X_3 = Consumer price index, all items, all urban consumers, 1967=100, seasonally unadjusted

X_4 = the personal disposable income, billions of dollars, unadjusted for seasonal variation

X_5 = the interest rate, finance company paper placed directly, percent

X_6 = the employed civilian labor force (thousands), unadjusted for seasonal variation

Now consider and estimate the following model

$$Y_t = \beta_1 + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \beta_5 X_{5t} + \beta_6 X_{6t} + u_t$$

- (2.5 points) Estimate the parameters of this model using the data
- (5 points) Do you expect to face the multicollinearity problem? Why?
- (2.5 points) If you do expect to face the multicollinearity problem, how will you go about resolving the problem?