**Assignment 8**

For my dataset, I constructed two different models that used a teacher’s salary amount as the dependent variable. Model 1 analyzed teacher salary amounts against regressors that dealt specifically with teacher characteristics: teacher’s gender, teacher’s age and teacher’s minority status. Model 2 analyzed teacher salary amounts against regressors that included teacher characteristics (mentioned previously) and school characteristics: school location/urbanicity, poverty status and minority student representation.

When running a test on collinearity for both Model 1 and Model 2 (using *estat vif*), no collinearity seemed to be present as all the variables in both models returned VIF numbers well below 10—averaging a VIF of 1.00 for Model 1 and a VIF of 1.50 for Model 2.

When running a test on heteroscedasticity for both Model 1 and Model 2 (using the Breusch-Pagan test), the results presented a chi2 of 11,466.70 with a probability less than 0.05 for Model 1 and a chi2 of 11,849.54 with a probability less than 0.05 for Model 2. This indicates that there is a high chance of heteroscedasticity present in both models. Therefore, I re-ran regressions with robust standard errors to account for the inconsistent variance. Due to the use of the robust standard errors, there were slight changes to the t-statistics for my independent variables in both models.

Due to the program I am currently using (Accre), I was unable to pull the graphs from the system. However, I have included my code.