Assignment-I

(ECON F342: Applied Econometrics)

Total Marks: 50

Weightage in Total: 10%

Date of Submission: 23rd of February' 2020

General Instructions:

- Each group has to work on their assigned dataset. Please collect the data from K-213 between 11 am to 1 pm on **February 8, 2020**.

- If you are not part of any group then meet me between 11 am to 1 pm on February 8, 2020 (K-213).

- Use RStudio for this assignment

- As part of your final submission, upload single PDF document on CMS, answering the relevant questions. The PDF should be titled "AI-Group Leader", where the group leader is the name of the group leader.

- Also, please send the R Script & Workspace of your analysis.

- Also note that your individual evaluation will also depend on your performance in the viva/ presentation schedule on **February 25, 2020**.

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1. Run an econometric regression model on your dataset giving proper justification for selection of the variables. Interpret the coefficients of your variable appropriately. [Marks will only be given if you give correct justification for variable and interpretation for variables]

   [10 Marks]

2. Prepare Graph Matrix for your dataset. Comment on the association between dependent variable & independent variables of your dataset. **[5 Marks]**

3. Plot the predict Y and discuss the accuracy of your model. **[5 Marks]**

4. For regression model fit in Question 1, run the tests for checking following OLS assumptions and interpret your results. **[4*3 = 12 Marks]**
   a. Heteroscedasticity
   b. Multicollinearity
   c. Normality of the error term
   d. Omitted-Variable Bias

5. Based on results of Question 4, use the remedies to address the issues identified and alter your model suitably. **[4*3 = 12 Marks]**

6. For your model, run two joint tests (F-test) giving justification for the same. Interpret the results. **[2*3 = 6 Marks]**