

ECON F342: Applied Econometrics
Assignment-I
[Cross-sectional data]
Total Marks: 50
Weightage in Total: 10%
Date of Submission: March 4, 2024

General Instructions:

- This is a **group assignment** with each group consisting of 8-9 students.
 - Each group has to select one cross-sectional dataset. Please make sure that it has sufficient number of variables as well as observations.
 - For data, you can select any dataset from any widely used sources like NSSO, NFHS, IHDS, World bank among others. In case of any problem, please reach out to me.
 - After selecting the data & the research problem, the group leader will update the given Google spreadsheet **by entering their selection and also mail me the same**. Each group must work on unique research problem. The link for spreadsheet is:
https://docs.google.com/spreadsheets/d/10_uBHw0xBYIZN-c1EbXE0Sqwxt2GxwYMU9iljFzfvXM/edit?usp=sharing
 - Group leader is supposed to give the details of their selected data, their research problem and also their team members by **February 24, 2024**.
 - Use R 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 group leader is the name of group leader.
 - Also, please send the R Script & Workspace of your analysis.
 - Please note that your individual evaluation will also depend on your performance in the viva/ presentation scheduled on **March 6 or March 7, 2024**.
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1. As part of this assignment, you have to select one cross-sectional dataset and one research problem. The research problem can be anything that you find interesting based on your reading of literature, or newspapers or your coursework. The final report should have following sections:
 - a. **Introduction**: Give a brief background of your study and the research question.
[5M]
 - b. **Literature Review**: Discuss some literature related to your research problem.
[5M]
 - i. Review at least 5 research articles related with your research problem.
 - ii. You can use Google scholar to select the relevant literature.

- c. Data & Methodology: In this section, discuss your data, variables used and the econometric model that you are going to use. **[10M]**
- i. Start with giving a description of your dataset
 - ii. Discuss the model that you are using along with all the required steps that you will take to check the validity of the model.
 - iii. Give justification for the selection of the dependent & independent variables.
 - iv. Use Graph Matrix to justify the relationship between the variables (linear vs non-linear)
- d. Results & Discussion: In this section, discuss your results. **[25M]**
- i. Start with summary statistics of the selected variables in your model.
 - ii. Estimate and interpret the model. Discuss the findings from your estimated model.
 - iii. Finally, use regression diagnostic to check for all the required assumptions and take remedial measures in case, any of the required assumptions are not satisfied.
- e. Conclusion: Conclude your research by highlighting the main points from your analysis. **[3M]**
- f. References: List all the references used in the report. **[2M]**