**OM 386**

**Assignment #2**

*Please paste your answers within this file and save it as “HW2\_eid1\_eid2\_eid3” (Where eids refer to your group members’ EIDs) on Canvas at appropriate place. If you used MS Excel or any other software to arrive at your answers, please submit the relevant files/annotated code as well.*

**Write the names of your team members here**:

**Q1: Use Two-Stage Regression to Test/Overcome Endogeneity**

The Omitted\_Variable\_Price-Demand\_Dataset excel file posted on Canvas provided the historical demand and price data points of a product. A data analyst suspected that besides the price, there are other independent factors that influence the demand and the price data is related to these factors. Unfortunately, such data are unavailable. The data analyst claimed that s/he uncovered two so-called instrument variables that s/he believes are related to the price, and can be related to the demand of the product only through the price (and thus not related to the unobservable factors).

Your team was approached to conduct the analysis following the data analyst’s claim. Report your procedure (step 1, 2, …) and results concisely:

1. check whether both of the claimed instrumental variables are related to the price and demand;
2. run regression of D over P directly and report the estimates;
3. conduct two stages IV regressions and report the estimates;
4. check whether both of the claimed instrumental variables are useful.

(The true model is but the data of L are missing.)