BUAN 6357 (Johnston)
Homework 6b (update 2)
Due: 21April 2019 (11:59PM)

The number of points available for this homework assignment is large.

This assignment builds on the results from HW 6A by analyzing the various regression coefficient values. If you did not get full credit for HW6A you may use the posted R code found in eLearning after the HW 6A due date. I suggest you generate the results from HW 6A and use save.image() to store them all for use in answering HW 6B. You will not need to turn in code for this assignment but will need to do some programming.

Basically, you generated these results – now what can we do with them?

For this assignment you will need the package "data.table". You will not need any additional packages but may use any package(s) you choose.

You will need to generate several measures: parametric and non-parametric CI (90%, 75%, and 50%) and the proportion of designated bootstrap estimates which fall inside a particular CI (i.e., the observed coverage). You may want to write simple functions to implement these procedures (this is not a requirement). You may also wish to explore different ways of displaying designated bootstrap estimates such as scatter plots with lines delimiting CI intervals and other graphics including but not limited to boxplots. This is not a requirement for this assignment.

General guideline: treat the bootstrap estimates for each term (covariate) from each deliverable as a fundamental group and be prepared to answer questions about each.

Hint: user written functions from HW 5B may also be useful here in HW 6B.

Comment: We are looking for observed confidence intervals from the bootstraps to compare with the asymptotic intervals for the baseline model.

Comment: The “actual coverage proportion” requested in some questions is the proportion of bootstrap estimates which are inside the asymptotic CI resulting from the baseline model (full sample). Given the sample sizes involved, Z values should be used rather than Student’s *t*-values.