Econometrics assignment 5a

*Joost Bouten, SNR: 1265889  
Twan Vissers, SNR: 1266283  
Fons Strik, SNR: 1257943*

The commands and output of all questions can be found in the log-file included below. (Many lines and thus not compatible to include within some questions)

1. 1. We find that the mean of the main outcome variable is equal to 10.29

Command + output:



* 1. We find there are 65 garbage routes (unique values).

Command + output:



* 1. In the dataset there are 52 calendar weeks of data (unique values).

Command + output:



* 1. Scatter graph of the outcome variable per calendar week.

Command:   
graph twoway (scatter residual\_weight calendar\_week), by( route)

Output:  


* 1. Scatter graph of the outcome variable per calendar week, pre- and post-treatment.

Command:   
graph twoway (scatter residual\_weight calendar\_week if TreatmentOngoing==0&TreatmentCompleted==0) (scatter residual\_weight calendar\_week if TreatmentOngoing==1| TreatmentCompleted==1) if route<200, by( route)

Output:   
If the blue and red scattered dots are compared, we cannot clearly observe a difference. So, we do not clearly see a clear change in the weight of residual waste pre- and post-treatment. Thus, the raw data do not indicate that something is going on as of the date that the announcement letter was sent out.

1. 1. Commands + output:



* 1. See log-file below



1. As we ignored the time variation in the treatment, we are likely to overestimate the treatment effect since the short run treatment effect is likely greater than the long run treatment effect as can be concluded from the graph above. This can be seen from the upward trend of the scatter plot after treatment towards the null hypothesis of no change. When we do not cluster by route we can see that ….