Milestone 4

Drake Deuel

2/28/20

I plan to replicate **Impact of a public transit strike on public bicycle share use: An interrupted time series natural experiment study** a paper by Fuller et al. (2019) published in the June 2019 volume of the Journal of Transport & Health. The paper can be found here.

This paper uses Philadelphia's transit workers strike from November 1-7th, 2016, to generate a natural experiment in which other means of transit are interrupted to study the impact on bikeshare ride usage. The paper looked at control cities in Washington DC, Boston, and Chicago which are similar in size and in the development of bikeshare infrastructure. They also attempted to control for the temperature and precipitation levels as variables that would also affect bikeshare ride usage. The study found that bikeshare usage went up in Philadelphia during this transit strike when other options were limited, but that after the strike bikeshare usage returned to the pre-strike baseline. They concluded that while interventions directed to incentivize bikeshare usage would likely work given the flexibility shown by Philidelphia commuters, these interventions would need to be long term in order to change habits in the long term.

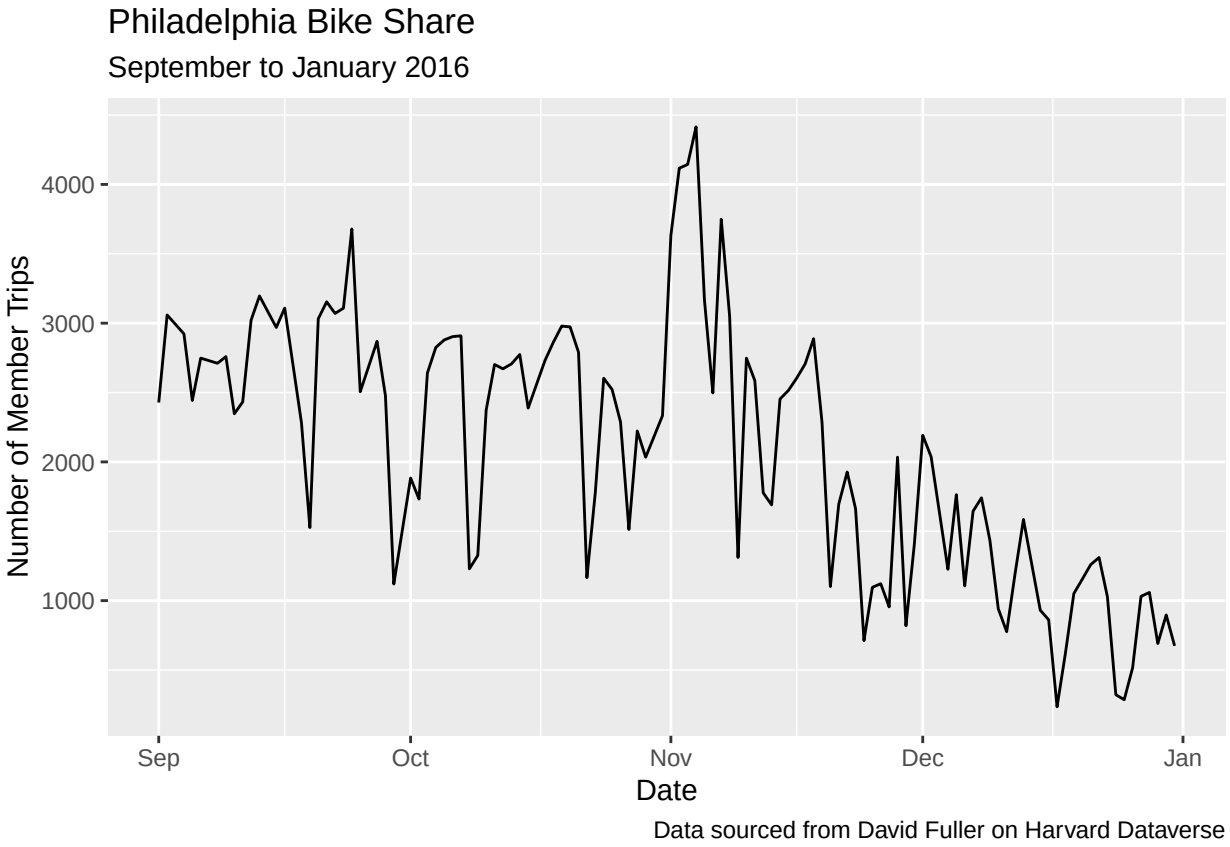
Check out my Github project repository[1]

city	month	day	year	number_trips
Philly	11	1	2016	3633
Philly	11	2	2016	4117
Philly	11	3	2016	4144
Philly	11	4	2016	4415
Philly	11	5	2016	3167
Philly	11	6	2016	2497
Philly	11	7	2016	3749

Characteristic	**Beta**	**95% CI[1]**	**p-value**
day	-5.8	-35, 23	0.7

[1]CI = Confidence Interval

[1]Github project repository link



References:

Fuller, Daniel, Hui Luan, Richard Buote, and Amy H. Auchincloss. 2019. "Impact of a Public Transit Strike on Public Bicycle Share Use: An Interrupted Time Series Natural Experiment Study." *Journal of Transport & Health* 13: 137–42. https://doi.org/https://doi.org/10.1016/j.jth.2019.03.018.