Final Paper

Chelsea Marlborough

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Contents

0.0.1 Tables and Figures

```
##
## Please cite as:

##  Hlavac, Marek (2018). stargazer: Well-Formatted Regression and Summary Statistics Tables.

##  R package version 5.2.2. https://CRAN.R-project.org/package=stargazer
```

% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Fri, Apr 17, 2020 - 22:56:27

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% Date and time: Fri, Apr 17, 2020 - 22:56:28

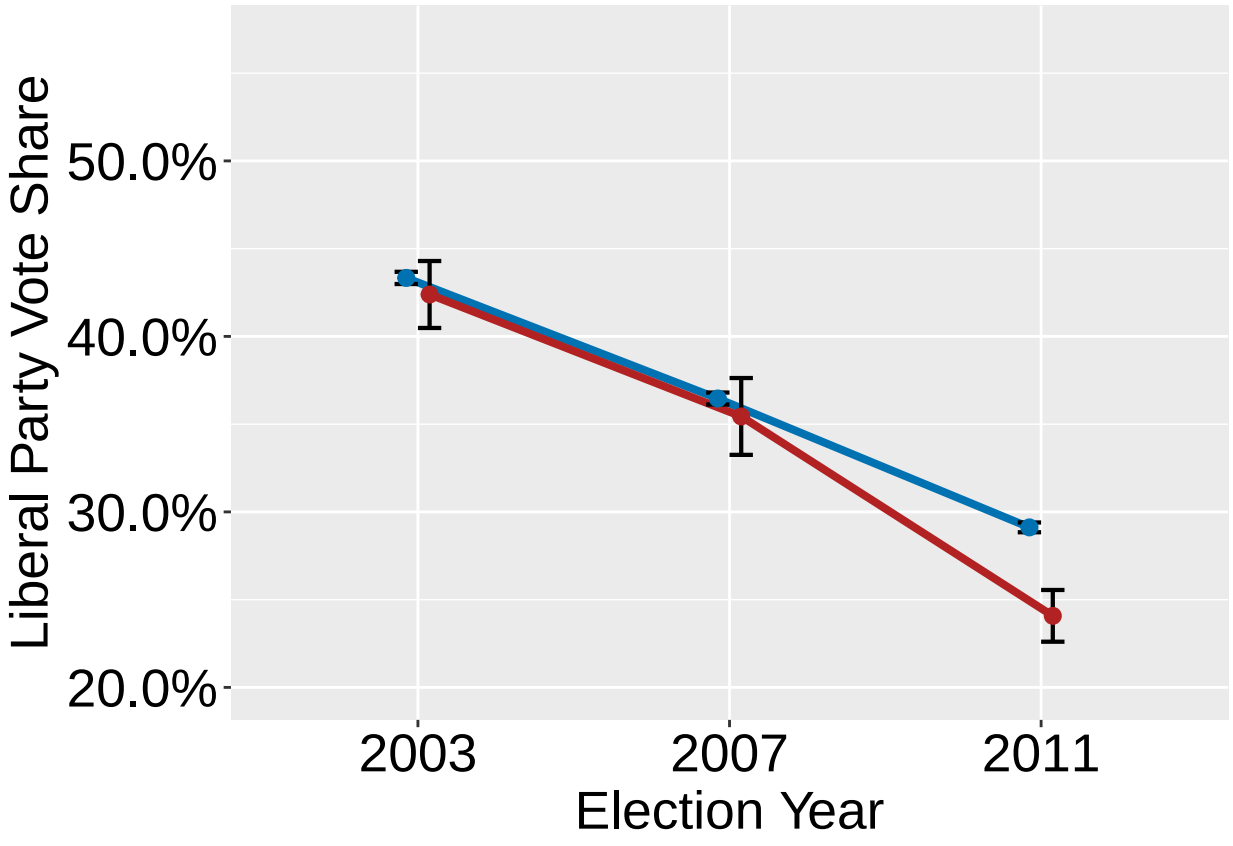


Table 1: Effects of Wind Turbines on Incumbent Party Vote Share in Precincts

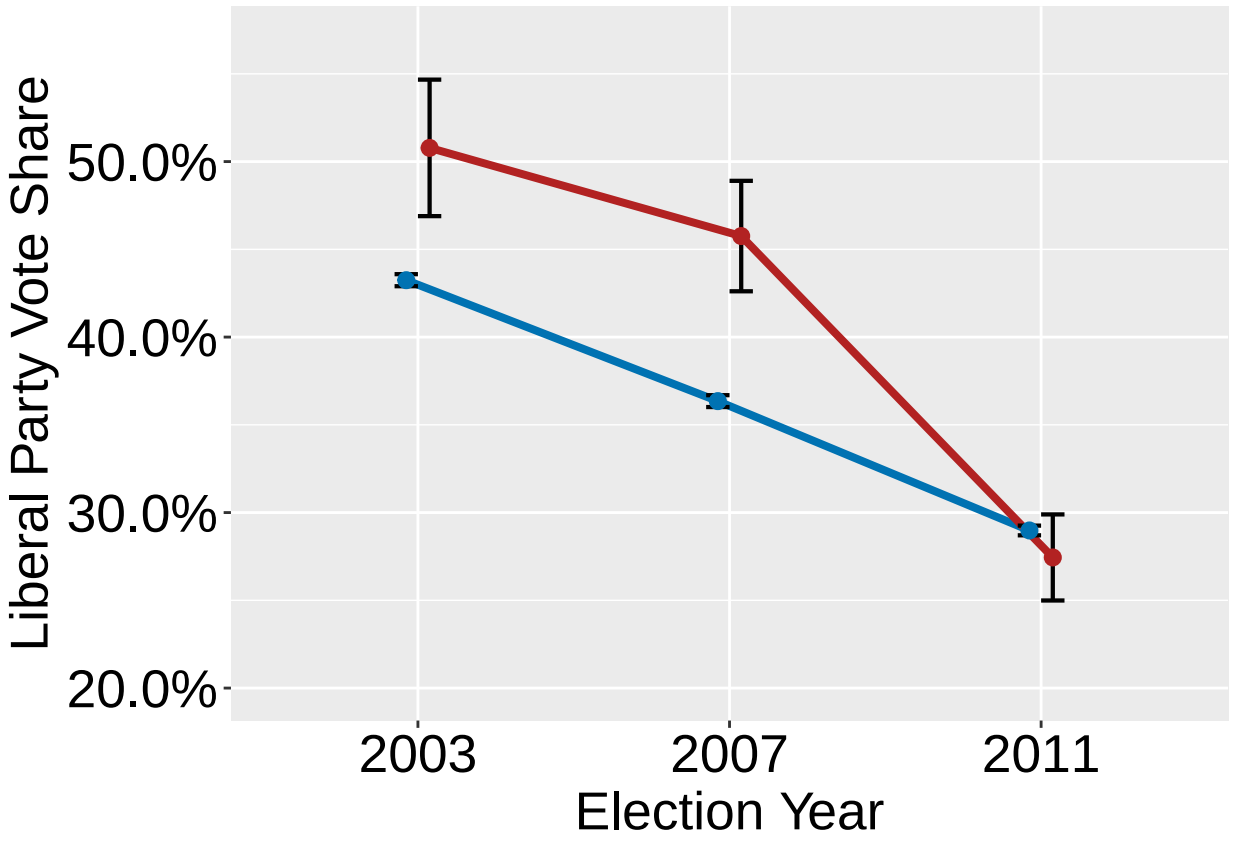
	Dependent variab			
				perc_lib
	(1)	(2)	(3)	
prop	−0.042***	−0.039***	−0.048***	
	(0.006)	(0.006)	(0.006)	
Y2003	0.142***	0.151***	0.130***	
	(0.001)	(0.002)	(0.002)	
Y2007	0.074***	0.072***	0.074***	
	(0.001)	(0.001)	(0.002)	
p_uni_degree		0.084***		
		(0.011)		
log_pop_denc		0.006***		
		(0.001)		
unemploy_rate		0.001***		
		(0.0002)		
log_median_inc		0.013***		
		(0.005)		
p_immigrant		0.074***		
		(0.018)		
Constant	−0.000	−0.000	−0.000	
	(0.001)	(0.001)	(0.001)	
Fixed effects?	Y	Y", Y	Y	
Observations	18,558	18,558	9,507	
R^2	0.409	0.415	0.404	
Adjusted R^2	0.409	0.415	0.404	
Residual Std. Error	0.070 (df = 18554)	0.070 (df = 18549)	0.066 (df = 9503)	0
F Statistic	4,281.461*** (df = 3; 18554)	1,647.926*** (df = 8; 18549)	2,151.167*** (df = 3; 9503)	831.0

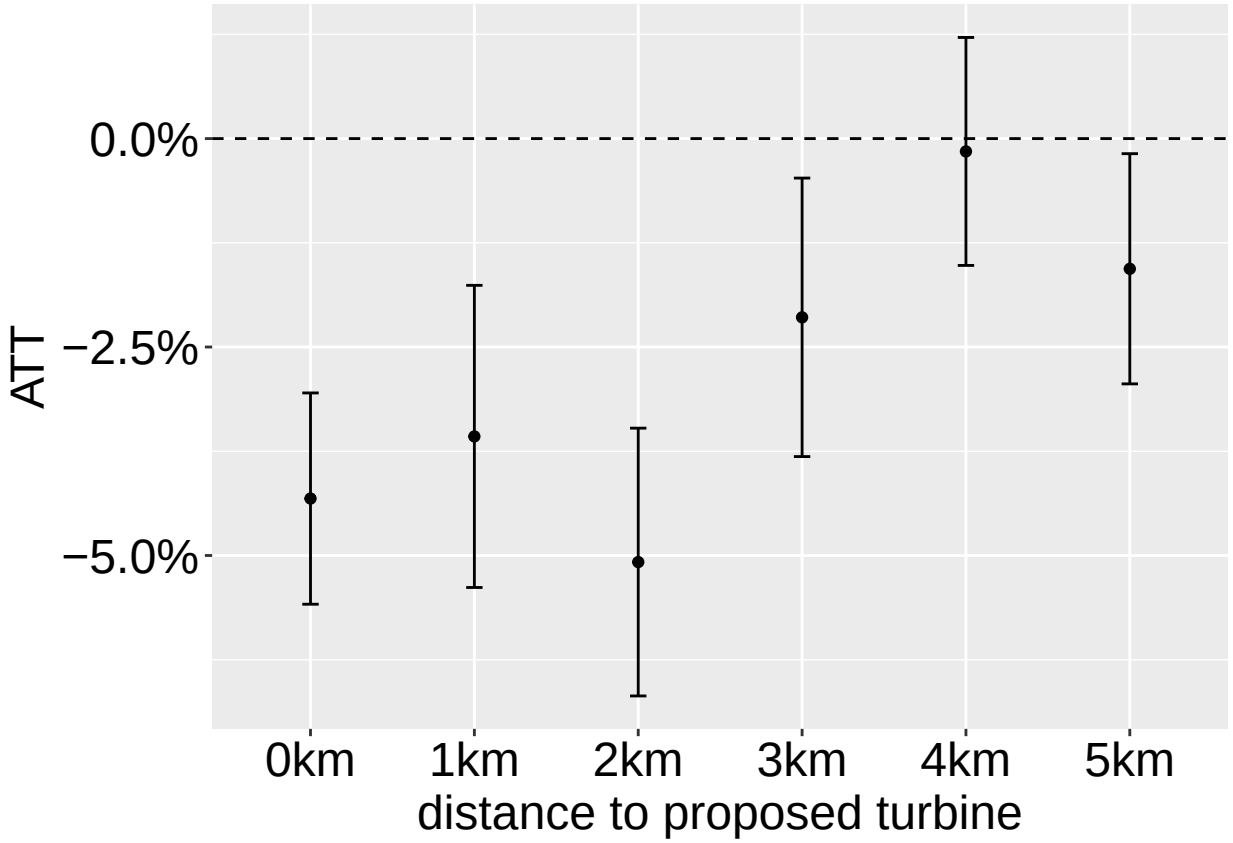
Note:

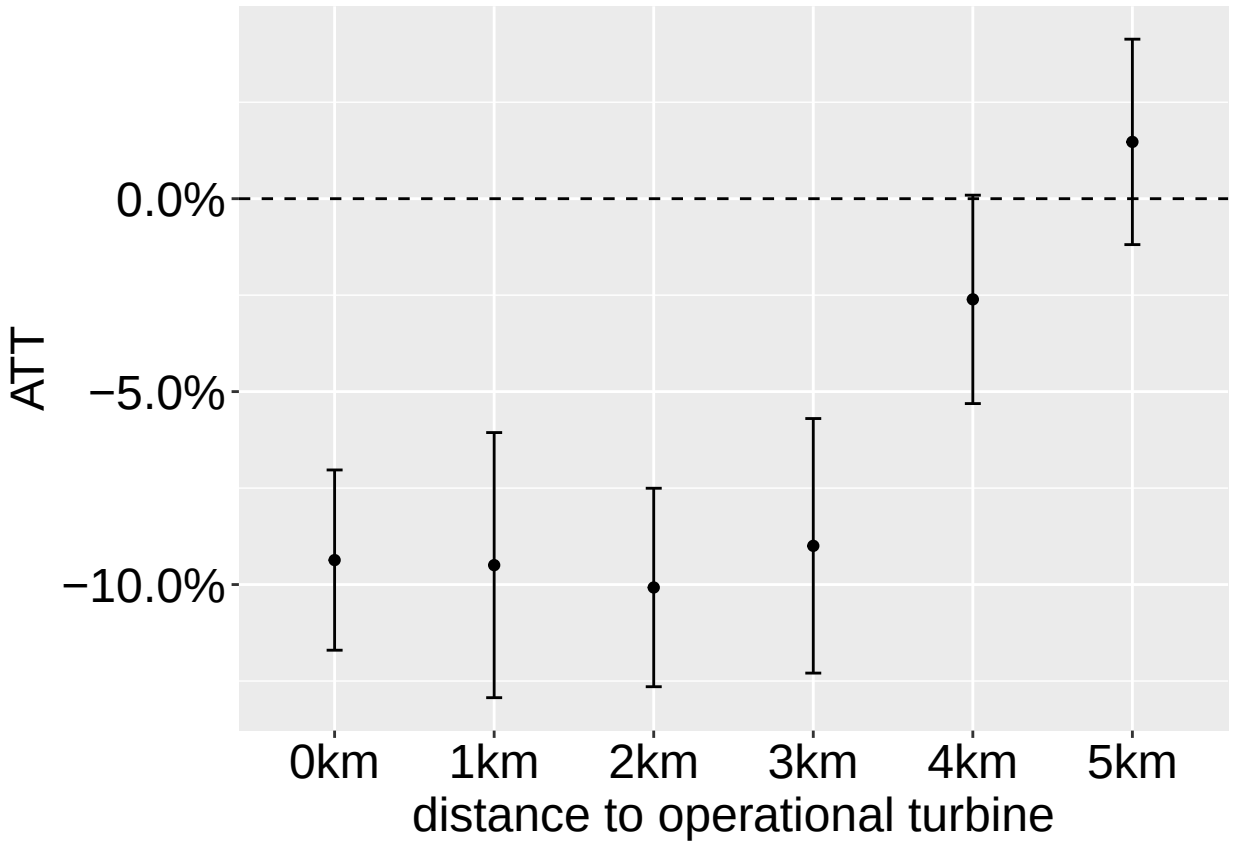
Table 2: Effects of Wind Turbines on Incumbent Party Vote Share in Precincts

	Dependent variab			
				perc_lib
	(1)	(2)	(3)	
op	−0.093***	−0.092***	−0.099***	
	(0.012)	(0.012)	(0.011)	
Y2003	0.143***	0.151***	0.131***	
	(0.001)	(0.002)	(0.002)	
Y2007	0.074***	0.072***	0.075***	
	(0.001)	(0.001)	(0.002)	
p_uni_degree		0.084***		
		(0.011)		
log_pop_denc		0.006***		
		(0.001)		
unemploy_rate		0.001***		
		(0.0002)		
log_median_inc		0.013***		
		(0.005)		
p_immigrant		0.075***		
		(0.018)		
Constant	−0.000	−0.000	−0.000	
	(0.001)	(0.001)	(0.001)	
Fixed effects?	Y	Y", Y	Y	
Observations	18,558	18,558	9,507	
R^2	0.410	0.416	0.405	
Adjusted R^2	0.410	0.416	0.405	
Residual Std. Error	0.070 (df = 18554)	0.070 (df = 18549)	0.066 (df = 9503)	0
F Statistic	4,291.600*** (df = 3; 18554)	1,652.490*** (df = 8; 18549)	2,160.208*** (df = 3; 9503)	835.2

Note:


Liberal Party Vote Share
50.0%
40.0%
30.0%
20.0%
2003
2007
2011
Election Year


ATT
0.0%
−2.5%
−5.0%
0km
1km
2km
3km
4km
5km
distance to proposed turbine



0.0.2 Extension

```
## stan_glm
##  family:       gaussian [identity]
##  formula:      perc_lib ~ prop + Y2003 + Y2007
##  observations: 18558
##  predictors:   4
## ------
##             Median MAD_SD
## (Intercept)  0.000  0.001
## prop        -0.042  0.006
## Y2003        0.142  0.001
## Y2007        0.074  0.001
##
## Auxiliary parameter(s):
##       Median MAD_SD
## sigma 0.070  0.000
##
## ------
## * For help interpreting the printed output see ?print.stanreg
## * For info on the priors used see ?prior_summary.stanreg
```

```
## stan_glm
##  family:       gaussian [identity]
##  formula:      perc_lib ~ op + Y2003 + Y2007
##  observations: 18558
```

```
##  predictors:   4
## ------
##             Median MAD_SD
## (Intercept)  0.000  0.001
## op          -0.093  0.012
## Y2003        0.143  0.001
## Y2007        0.074  0.001
##
## Auxiliary parameter(s):
##       Median MAD_SD
## sigma 0.070  0.000
##
## ------
## * For help interpreting the printed output see ?print.stanreg
## * For info on the priors used see ?prior_summary.stanreg

## stan_glm
##  family:       gaussian [identity]
##  formula:      perc_lib ~ prop + Y2003 + Y2007 + p_uni_degree + log_pop_denc +
##     unemploy_rate + log_median_inc + p_immigrant
##  observations: 18558
##  predictors:   9
## ------
##                Median MAD_SD
## (Intercept)     0.000  0.001
## prop           -0.039  0.006
## Y2003           0.151  0.002
## Y2007           0.072  0.001
## p_uni_degree    0.084  0.011
## log_pop_denc    0.006  0.001
## unemploy_rate   0.001  0.000
## log_median_inc  0.013  0.005
## p_immigrant     0.073  0.018
##
## Auxiliary parameter(s):
##       Median MAD_SD
## sigma 0.070  0.000
##
## ------
## * For help interpreting the printed output see ?print.stanreg
## * For info on the priors used see ?prior_summary.stanreg

## stan_glm
##  family:       gaussian [identity]
##  formula:      perc_lib ~ op + Y2003 + Y2007 + p_uni_degree + log_pop_denc +
##     unemploy_rate + log_median_inc + p_immigrant
##  observations: 18558
##  predictors:   9
## ------
##                Median MAD_SD
## (Intercept)     0.000  0.001
## op             -0.092  0.012
## Y2003           0.151  0.002
## Y2007           0.072  0.001
```

```
## p_uni_degree    0.084  0.012
## log_pop_denc    0.006  0.001
## unemploy_rate   0.001  0.000
## log_median_inc  0.013  0.005
## p_immigrant     0.075  0.018
##
## Auxiliary parameter(s):
##       Median MAD_SD
## sigma 0.070  0.000
##
## ------
## * For help interpreting the printed output see ?print.stanreg
## * For info on the priors used see ?prior_summary.stanreg
```

```
## stan_glm
##  family:       gaussian [identity]
##  formula:      perc_lib ~ prop + Y2003 + Y2007
##  observations: 9507
##  predictors:   4
## ------
##             Median MAD_SD
## (Intercept)  0.000  0.001
## prop        -0.048  0.006
## Y2003        0.130  0.002
## Y2007        0.075  0.002
##
## Auxiliary parameter(s):
##       Median MAD_SD
## sigma 0.066  0.000
##
## ------
## * For help interpreting the printed output see ?print.stanreg
## * For info on the priors used see ?prior_summary.stanreg
```

```
## stan_glm
##  family:       gaussian [identity]
##  formula:      perc_lib ~ op + Y2003 + Y2007
##  observations: 9507
##  predictors:   4
## ------
##             Median MAD_SD
## (Intercept)  0.000  0.001
## op          -0.099  0.011
## Y2003        0.131  0.002
## Y2007        0.075  0.002
##
## Auxiliary parameter(s):
##       Median MAD_SD
## sigma 0.066  0.000
##
## ------
## * For help interpreting the printed output see ?print.stanreg
## * For info on the priors used see ?prior_summary.stanreg
```

```
## stan_glm
##  family:       gaussian [identity]
##  formula:      perc_lib ~ prop + Y2003 + Y2007 + p_uni_degree + log_pop_denc +
##     unemploy_rate + log_median_inc + p_immigrant
##  observations: 9507
##  predictors:   9
## ------
##                Median MAD_SD
## (Intercept)     0.000  0.001
## prop           -0.046  0.006
## Y2003           0.135  0.002
## Y2007           0.073  0.002
## p_uni_degree    0.054  0.016
## log_pop_denc    0.007  0.001
## unemploy_rate   0.000  0.000
## log_median_inc  0.008  0.006
## p_immigrant     0.085  0.026
##
## Auxiliary parameter(s):
##       Median MAD_SD
## sigma 0.066  0.000
##
## ------
## * For help interpreting the printed output see ?print.stanreg
## * For info on the priors used see ?prior_summary.stanreg

## stan_glm
##  family:       gaussian [identity]
##  formula:      perc_lib ~ op + Y2003 + Y2007 + p_uni_degree + log_pop_denc +
##     unemploy_rate + log_median_inc + p_immigrant
##  observations: 9507
##  predictors:   9
## ------
##                Median MAD_SD
## (Intercept)     0.000  0.001
## op             -0.098  0.012
## Y2003           0.137  0.003
## Y2007           0.073  0.002
## p_uni_degree    0.057  0.016
## log_pop_denc    0.007  0.001
## unemploy_rate   0.000  0.000
## log_median_inc  0.008  0.006
## p_immigrant     0.088  0.024
##
## Auxiliary parameter(s):
##       Median MAD_SD
## sigma 0.066  0.000
##
## ------
## * For help interpreting the printed output see ?print.stanreg
## * For info on the priors used see ?prior_summary.stanreg

## stan_glm
##  family:       gaussian [identity]
```

```
##  formula:      perc_lib ~ prop + Y2003 + Y2007
##  observations: 18558
##  predictors:   4
## ------
##             Median MAD_SD
## (Intercept)  0.000  0.000
## prop        -0.041  0.006
## Y2003        0.142  0.001
## Y2007        0.074  0.001
##
## Auxiliary parameter(s):
##       Median MAD_SD
## sigma 0.070  0.000
##
## ------
## * For help interpreting the printed output see ?print.stanreg
## * For info on the priors used see ?prior_summary.stanreg
```

```
## stan_glm
##  family:       gaussian [identity]
##  formula:      perc_lib ~ op + Y2003 + Y2007
##  observations: 18558
##  predictors:   4
## ------
##             Median MAD_SD
## (Intercept)  0.000  0.001
## op          -0.093  0.012
## Y2003        0.143  0.001
## Y2007        0.074  0.001
##
## Auxiliary parameter(s):
##       Median MAD_SD
## sigma 0.070  0.000
##
## ------
## * For help interpreting the printed output see ?print.stanreg
## * For info on the priors used see ?prior_summary.stanreg
```

```
## stan_glm
##  family:       gaussian [identity]
##  formula:      perc_lib ~ prop + Y2003 + Y2007 + p_uni_degree + log_pop_denc +
##     unemploy_rate + log_median_inc + p_immigrant
##  observations: 18558
##  predictors:   9
## ------
##                Median MAD_SD
## (Intercept)     0.000  0.001
## prop           -0.039  0.006
## Y2003           0.151  0.002
## Y2007           0.072  0.001
## p_uni_degree    0.083  0.011
## log_pop_denc    0.006  0.001
## unemploy_rate   0.001  0.000
## log_median_inc  0.013  0.005
```

```
## p_immigrant     0.074  0.018
##
## Auxiliary parameter(s):
##       Median MAD_SD
## sigma 0.070  0.000
##
## ------
## * For help interpreting the printed output see ?print.stanreg
## * For info on the priors used see ?prior_summary.stanreg
```

```
## stan_glm
##  family:       gaussian [identity]
##  formula:      perc_lib ~ op + Y2003 + Y2007 + p_uni_degree + log_pop_denc +
##     unemploy_rate + log_median_inc + p_immigrant
##  observations: 18558
##  predictors:   9
## ------
##                Median MAD_SD
## (Intercept)     0.000  0.001
## op             -0.092  0.012
## Y2003           0.151  0.002
## Y2007           0.072  0.001
## p_uni_degree    0.084  0.011
## log_pop_denc    0.006  0.001
## unemploy_rate   0.001  0.000
## log_median_inc  0.013  0.005
## p_immigrant     0.075  0.018
##
## Auxiliary parameter(s):
##       Median MAD_SD
## sigma 0.070  0.000
##
## ------
## * For help interpreting the printed output see ?print.stanreg
## * For info on the priors used see ?prior_summary.stanreg
```

By running a Bayesian regression on their model, I was able to find that their test was more robust than they may have expected. Not only did the coefficients match up from the lm() and stan_glm() models, the median absolute deviation also matches with the clusters of standard deviation found earlier. I was unable to run the cluster function on the Bayesian models and am planning to explore this futher.