

ECON7103HW2

Sedat Ors

22 January 2023

1 Python

1. See Table 1 for regression results. There is significant difference in electricity usage between two groups.
2. See Figure 1 for distribution of electricity usage for treated and control groups
3. See Table 2 and Table 3 for regression results

2 Stata

1. See table 4
2. See table 5
3. See figure 2

		Control Mean (Std dev)	Treat Mean (Std dev)	p-value
electricity	0	1181.33	1086.75	0.00
	1	454.31	423.96	
sqft	0	1633.05	1657.55	0.57
	1	682.90	686.27	
temp	0	79.89	79.89	0.99
	1	2.16	1.97	

Table 1: Regression results with heteroskedasticity-robust standard errors.

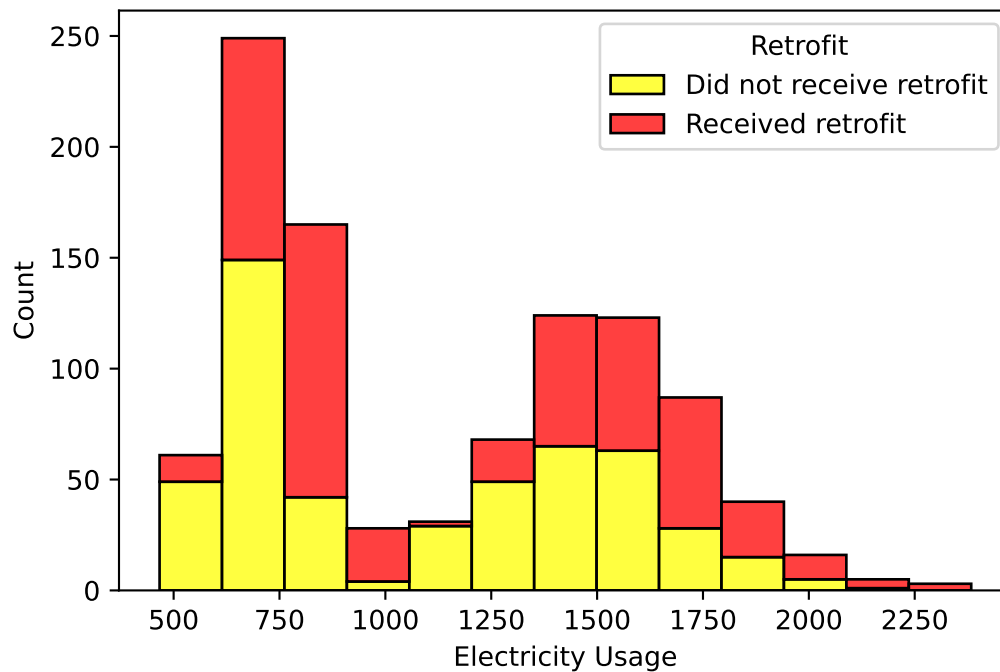


Figure 1: Electricity usage

Estimates	
Constant	-83.602758
sqft	0.615339
temp	3.255075
retrofit	-109.666176

Table 2:

Estimates	
sqft	0.62
retrofit	-109.67
temp	-83.60
Observations	1000.00

Table 3:

	Control mean/sd	Treatment mean/sd	Comparison b
electricity	1181.33	1086.75	94.58***
	454.31	423.96	
sqft	1633.05	1657.55	-24.50
	682.90	686.27	
temp	79.89	79.89	-0.00
	2.16	1.97	
Observations	501	499	1000

Table 4: *t*-test for Treatment, Control and Difference

	(1)
VARIABLES	model1
sqft	0.615*** (0.006)
retrofit	-109.666*** (7.948)
temp	3.255* (1.924)
Constant	-83.603 (154.360)
Observations	1,000
R-squared	0.919
Standard errors in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Table 5: Regression results with heteroskedasticity-robust standard errors.

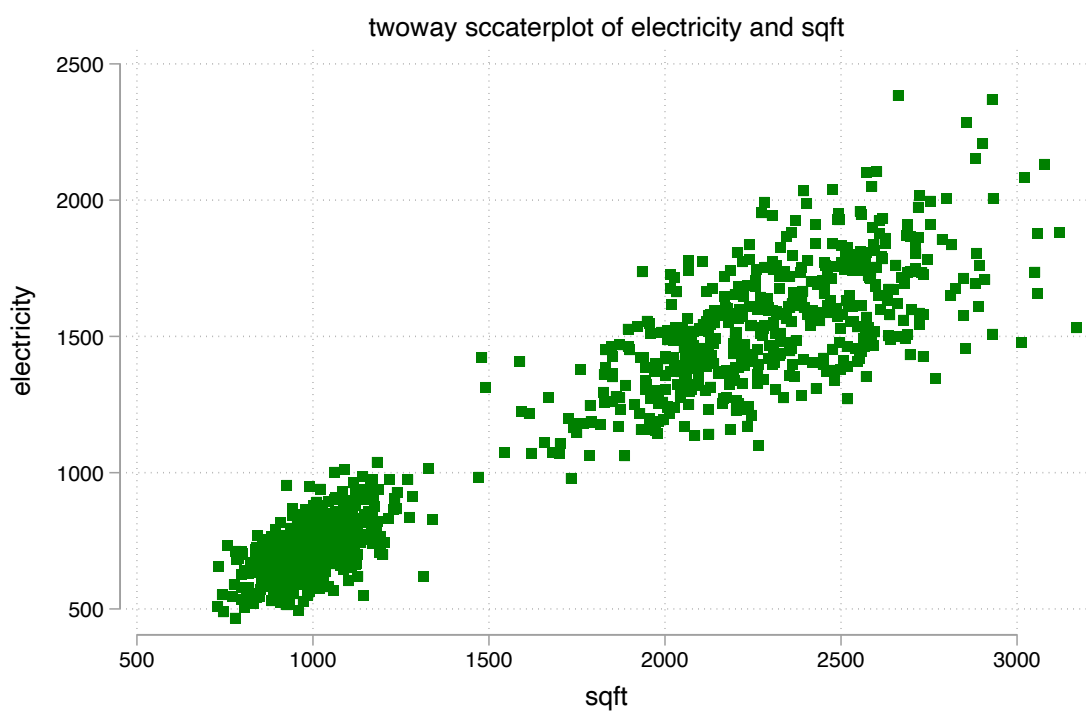


Figure 2: Scatterplot of electricity usage and home size