

# State Level Analysis

4/7/2021

## Initial Set-Up and (Some) EDA.

state	year	month	datetime	population	num_below_fpl	tanf_fams	percap_num_below_fpl	unemp_
Alabama	2001	1	2001-01-01	4467634	6737	18623	0.001508	
Alabama	2001	2	2001-02-01	4467634	6737	18385	0.001508	
Alabama	2001	3	2001-03-01	4467634	6737	18234	0.001508	
Alabama	2001	4	2001-04-01	4467634	6737	18137	0.001508	
Alabama	2001	5	2001-05-01	4467634	6737	18200	0.001508	
Alabama	2001	6	2001-06-01	4467634	6737	18035	0.001508	

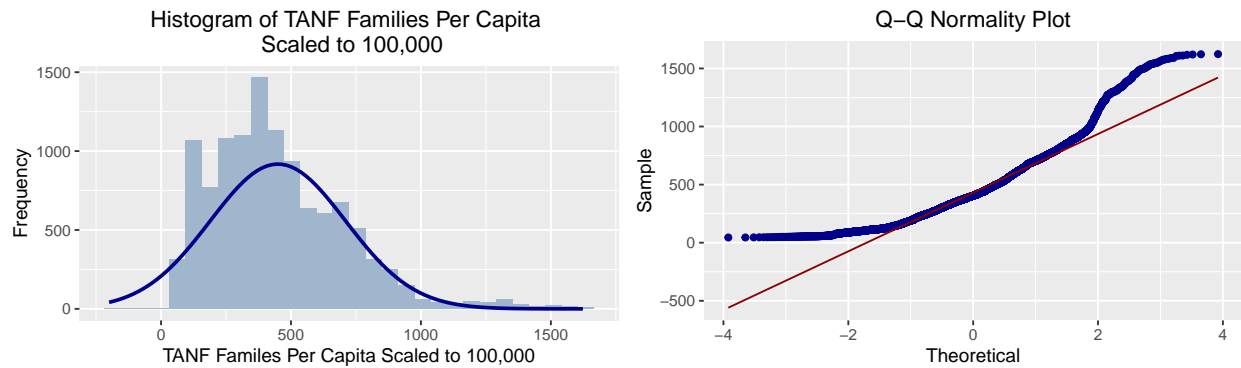
## Missing Data.

```
#Missing variables.
#Code is taken from https://jenslaufer.com/data/analysis/visualize_missing_values_with_ggplot.html (for
MISSINGVALS <- final %>%
  gather(key = "key", value = "val") %>%
  mutate(is.missing = is.na(val)) %>%
  group_by(key, is.missing) %>%
  summarise(num.missing = n()) %>%
  filter(is.missing == T) %>%
  dplyr::select(-is.missing) %>%
  arrange(desc(num.missing))
```

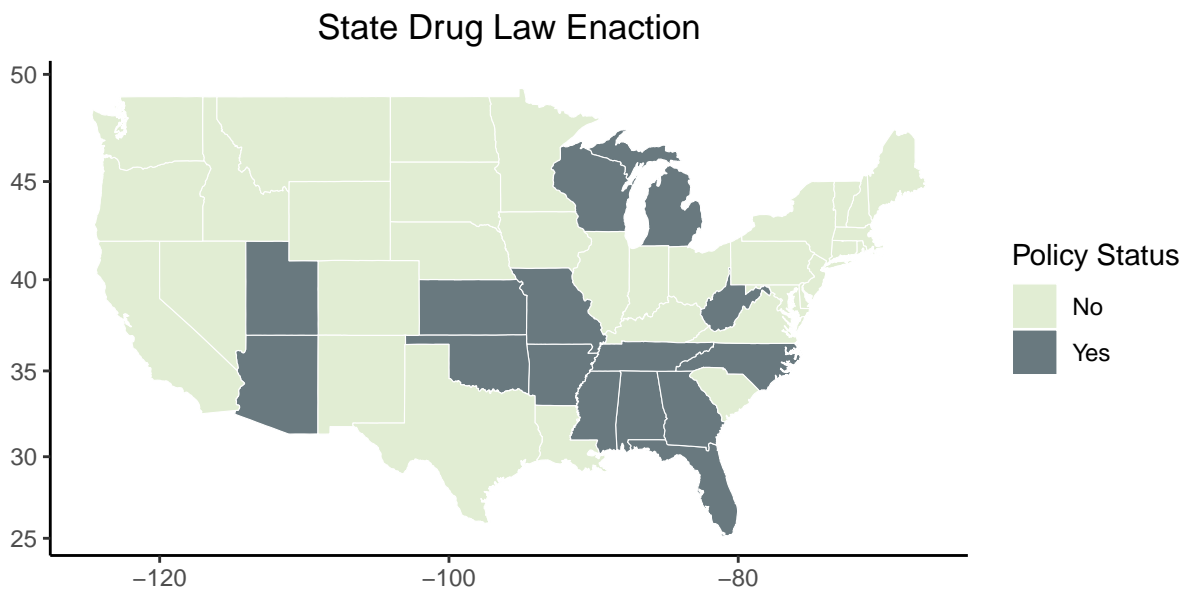
MISSINGVALS

```
# A tibble: 3 x 2
# Groups:   key [3]
  key          num.missing
<chr>          <int>
1 percap_tanf_fams      3
2 scale_tanf_fams       3
3 tanf_fams             3
```

## Distribution of Outcome Variable of Interest:



## Identification of Policy States.

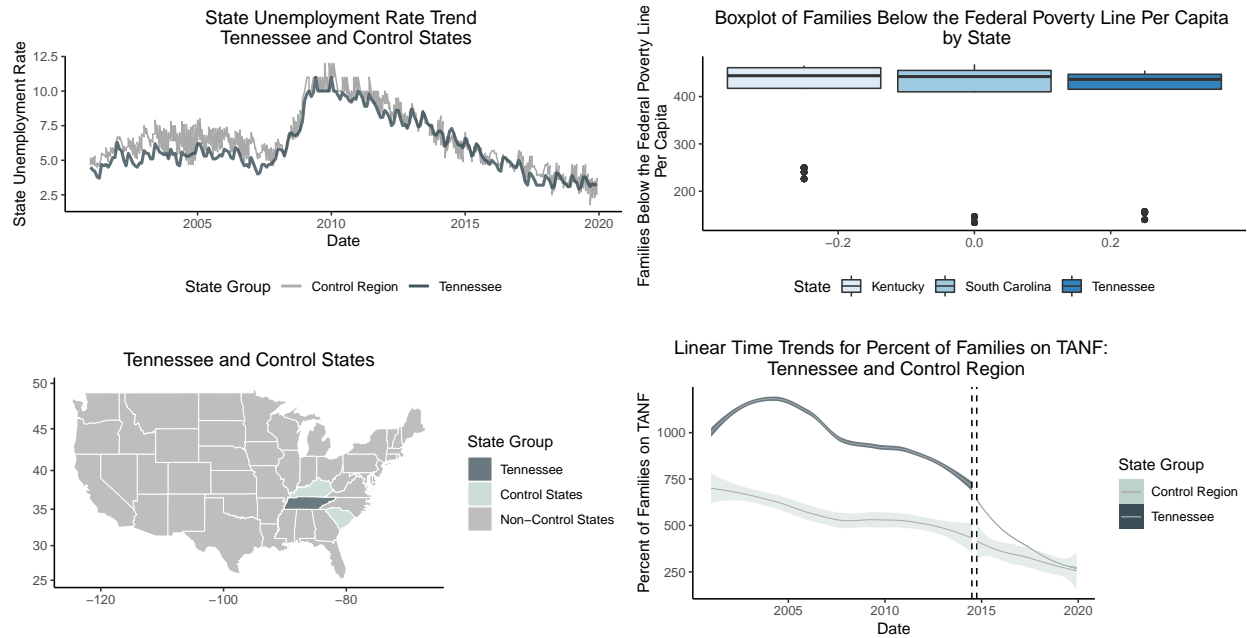


## State Level Analysis.

Case: Tennessee.

Policy Date: 07/2014.

Control Region: Kentucky, South Carolina.



Call:

```
felm(formula = scale_tanf_fams ~ drug_law + Post_Ind + scale_num_below_fpl + unemp_rate + drug_law1:Post_Ind1, data = data)
```

Residuals:

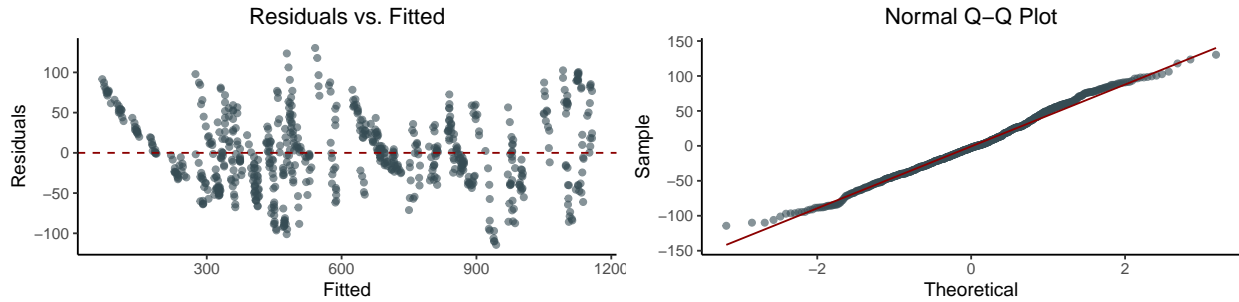
	Min	1Q	Median	3Q	Max
Residuals	-114.319	-30.623	-2.943	29.079	130.360

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
drug_law1	-112.8508	10.2769	-10.981	< 2e-16 ***
Post_Ind1	48.2562	16.2413	2.971	0.00307 **
scale_num_below_fpl	0.2953	0.1048	2.818	0.00498 **
unemp_rate	-9.5473	2.7796	-3.435	0.00063 ***
drug_law1:Post_Ind1	-260.8579	11.3184	-23.047	< 2e-16 ***

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

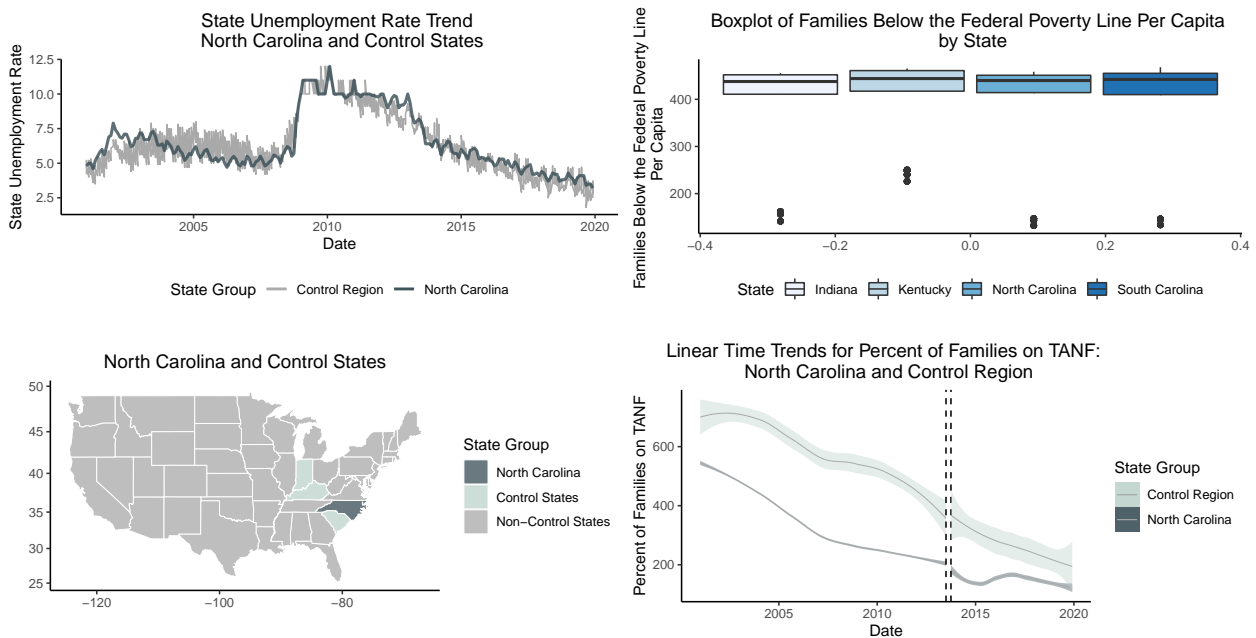
Residual standard error: 46.34 on 658 degrees of freedom  
Multiple R-squared(full model): 0.9762 Adjusted R-squared: 0.9753  
Multiple R-squared(proj model): 0.7446 Adjusted R-squared: 0.7349  
F-statistic(full model): 1079 on 25 and 658 DF, p-value: < 2.2e-16  
F-statistic(proj model): 383.6 on 5 and 658 DF, p-value: < 2.2e-16



Case: North Carolina.

Policy Date: 07/2013.

Control Region: Kentucky, South Carolina, Indiana.



Call:

```
felm(formula = scale_tanf_fams ~ drug_law + Post_Ind + scale_num_below_fpl + unemp_rate + drug_l
```

Residuals:

	Min	1Q	Median	3Q	Max
	-167.335	-50.779	-1.475	53.500	205.957

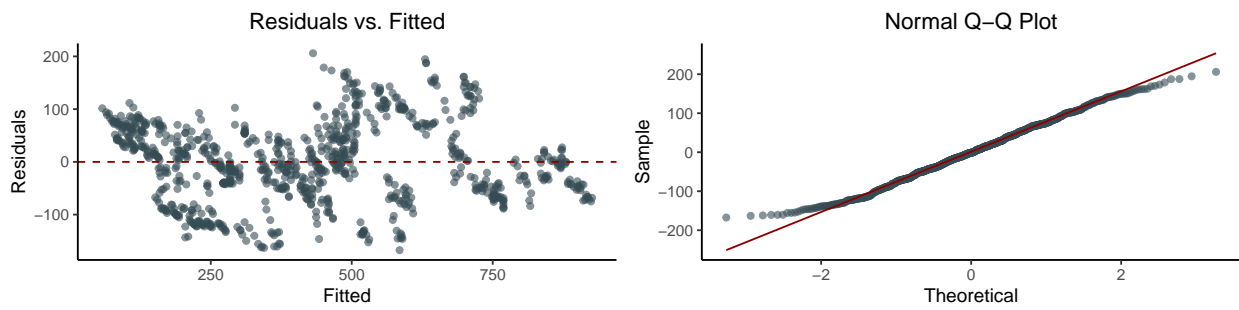
Coefficients:

	Estimate	Std. Error	t value	Pr(> t )	
drug_law1	63.5920	18.2823	3.478	0.000529	***
Post_Ind1	-50.6942	23.2307	-2.182	0.029356	*
scale_num_below_fpl	-0.6486	0.1597	-4.062	5.30e-05	***
unemp_rate	-17.2655	3.9253	-4.399	1.22e-05	***
drug_law1:Post_Ind1	74.4534	19.1906	3.880	0.000112	***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

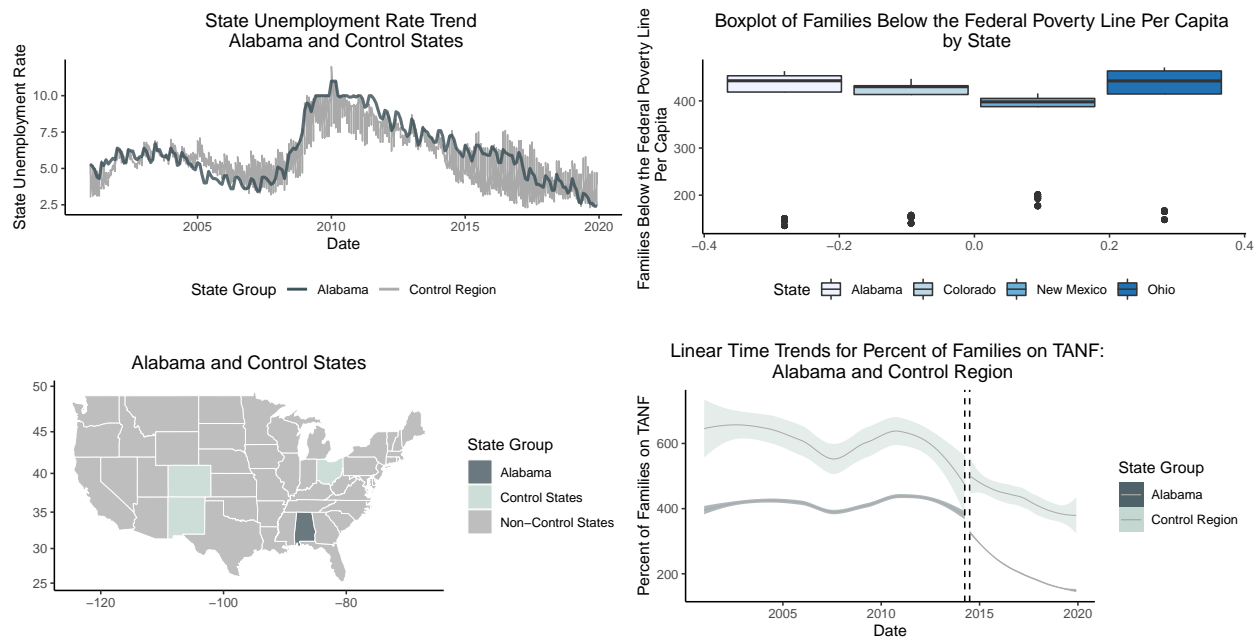
Residual standard error: 75.74 on 885 degrees of freedom  
 Multiple R-squared(full model): 0.9009 Adjusted R-squared: 0.898  
 Multiple R-squared(proj model): 0.1318 Adjusted R-squared: 0.1063  
 F-statistic(full model):309.6 on 26 and 885 DF, p-value: < 2.2e-16  
 F-statistic(proj model): 26.88 on 5 and 885 DF, p-value: < 2.2e-16



## Case: Alabama.

Policy Date: 04/2014.

Control Region: Colorado, New Mexico, Ohio.



Call:

```
felm(formula = scale_tanf_fams ~ drug_law + Post_Ind + scale_num_below_fpl + unemp_rate + drug_law
```

Residuals:

Min	1Q	Median	3Q	Max
-----	----	--------	----	-----

-237.535 -45.716 -4.557 40.886 212.110

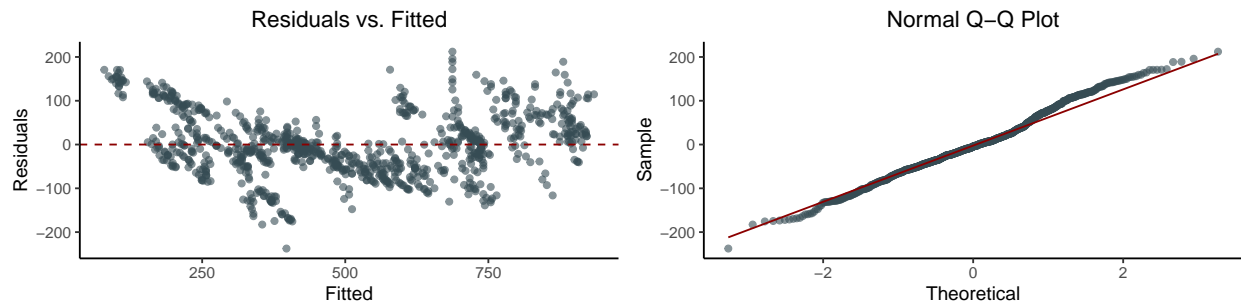
Coefficients:

	Estimate	Std. Error	t value	Pr(> t )	
drug_law1	44.5337	15.8501	2.810	0.00507	**
Post_Ind1	-8.8800	22.7942	-0.390	0.69694	
scale_num_below_fpl	1.1465	0.1627	7.044	3.74e-12	***
unemp_rate	-25.6607	2.8416	-9.030	< 2e-16	***
drug_law1:Post_Ind1	-72.7136	17.0939	-4.254	2.33e-05	***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 72.79 on 885 degrees of freedom  
Multiple R-squared(full model): 0.9085 Adjusted R-squared: 0.9058  
Multiple R-squared(proj model): 0.142 Adjusted R-squared: 0.1168  
F-statistic(full model): 338 on 26 and 885 DF, p-value: < 2.2e-16  
F-statistic(proj model): 29.3 on 5 and 885 DF, p-value: < 2.2e-16



Save

[1] "done"