Is it Still the Economy Stupid?

A Spatial Regression Analysis of the 2016 Presidential Election Using the American Community Survey Data and Other Materials

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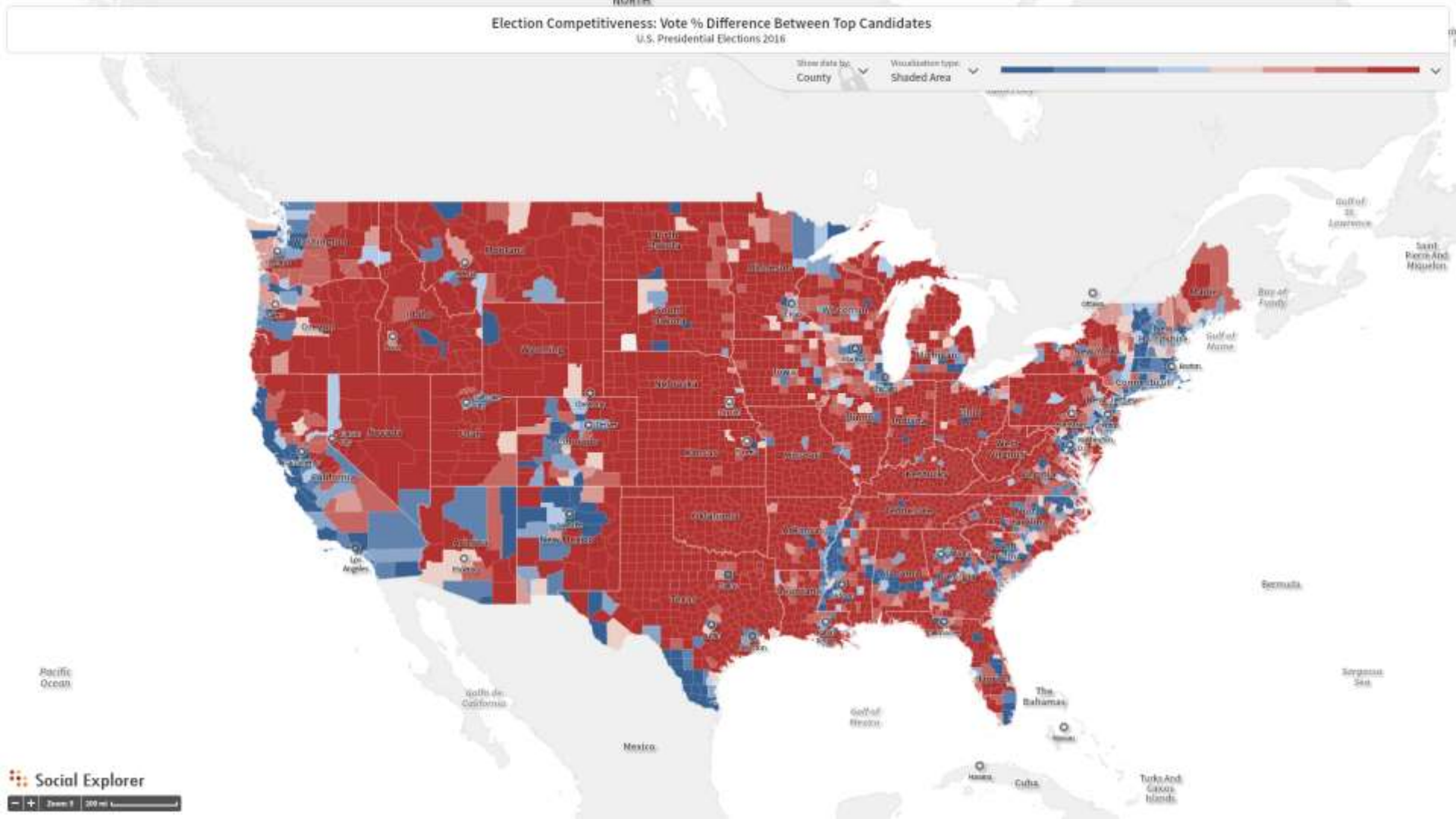
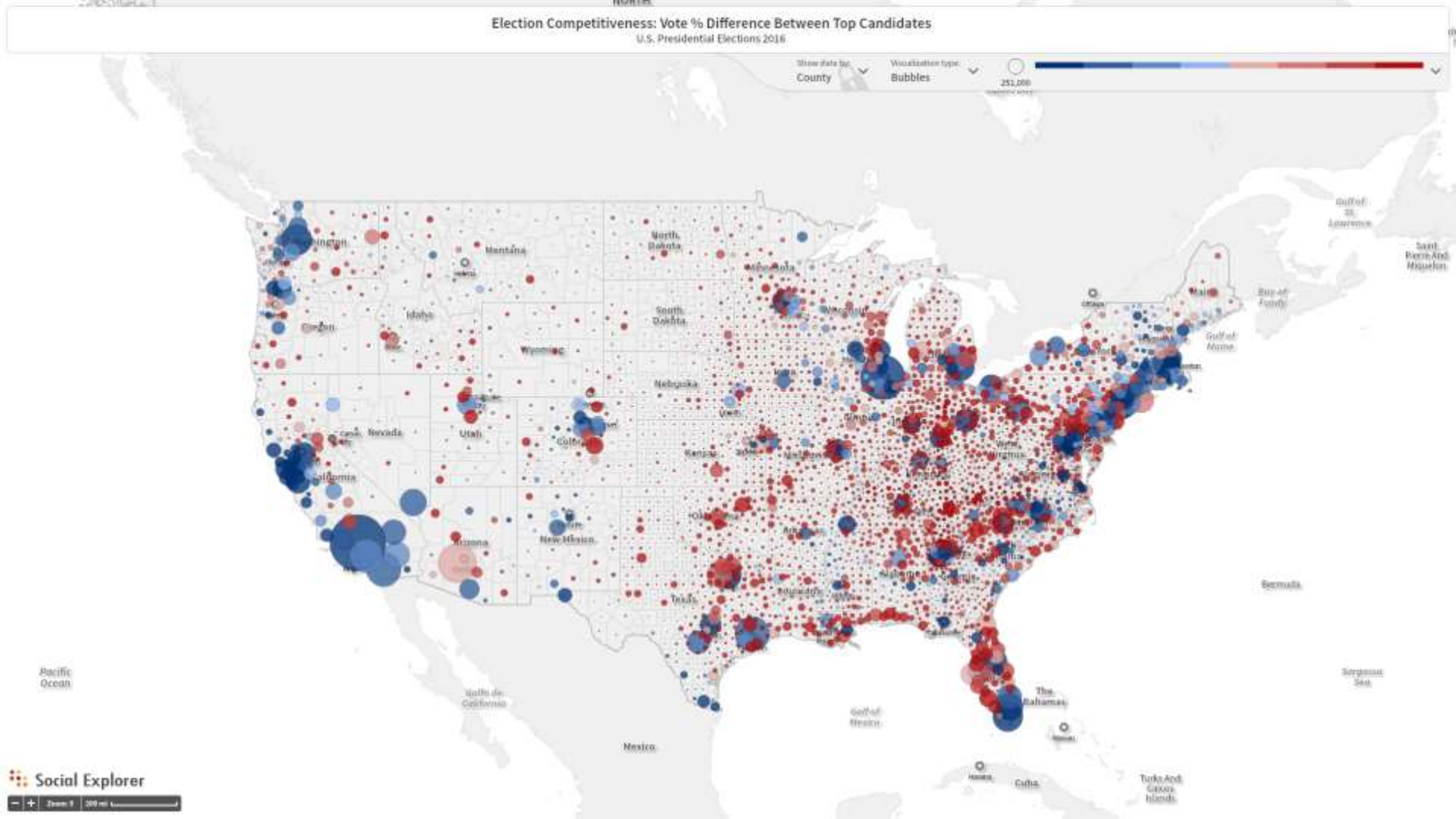
Unexpected Victor Led to Many Hypotheses

- Decline of the White Working Class
  - Decline of Rural Economy (e.g., coal)
  - Rising Mortality Rates of Whites or White Males
  - Opioid and other Drug Use
- Racism and Sexism
- Weak Campaign of Clinton in Some Swing and “Blue Wall” States
  - Too Much Emphasis on Identity Politics (Gender, LGBT, Minorities)
  - Not Enough Emphasis on Issues Affecting Economy
  - Revolt of the Bernie Bros
- Targeted Social Media


Election Competitiveness: Vote % Difference Between Top Candidates
U.S. Presidential Elections 2016
Show data by:
County
Visualization type:
Shaded Area
Pacific Ocean
Mexico
Gulf of Mexico
Bermuda
The Bahamas
Cuba
Social Explorer


Election Competitiveness: Vote % Difference Between Top Candidates
U.S. Presidential Elections 2016
Show data by:
County
Visualization type:
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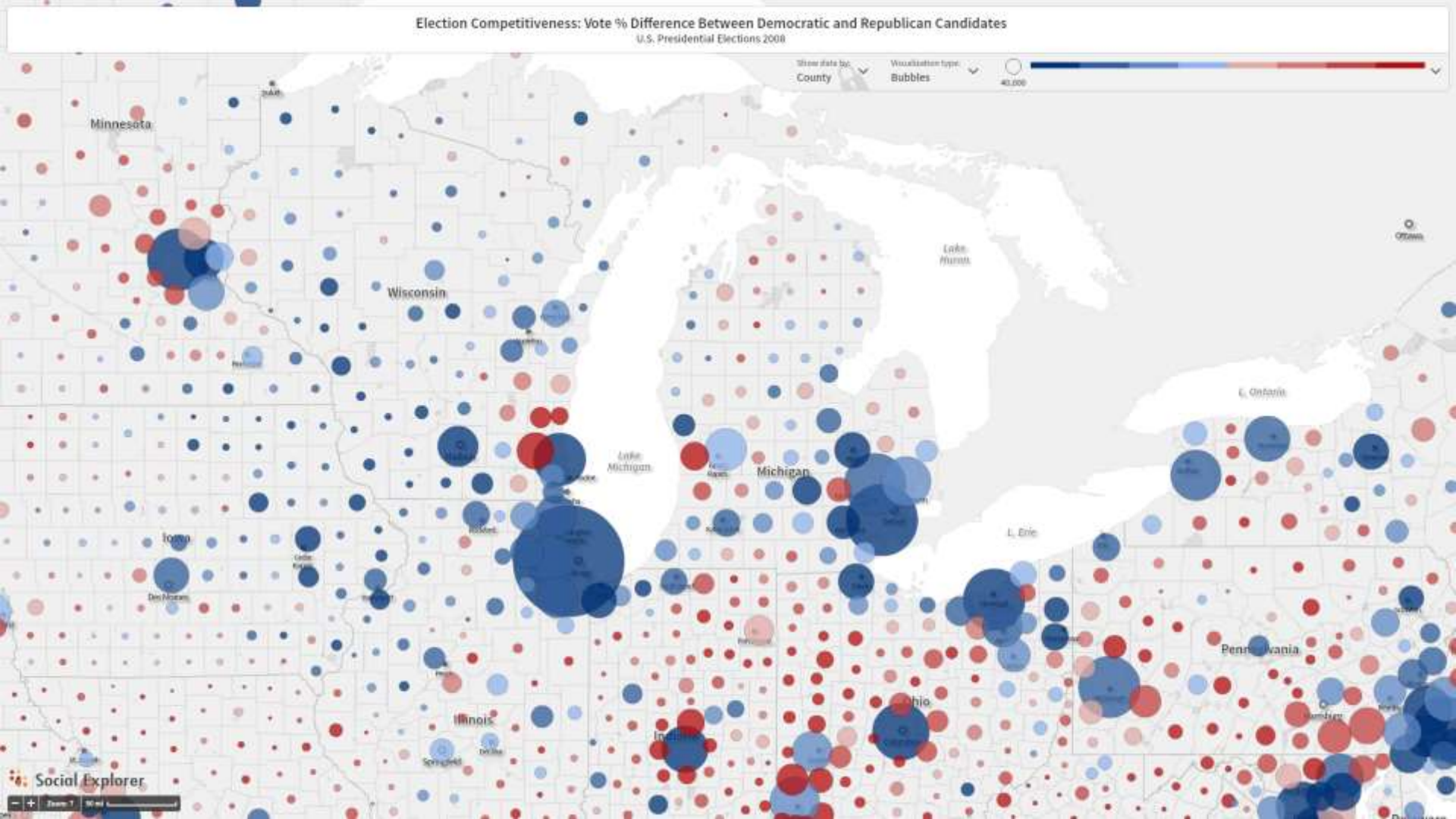
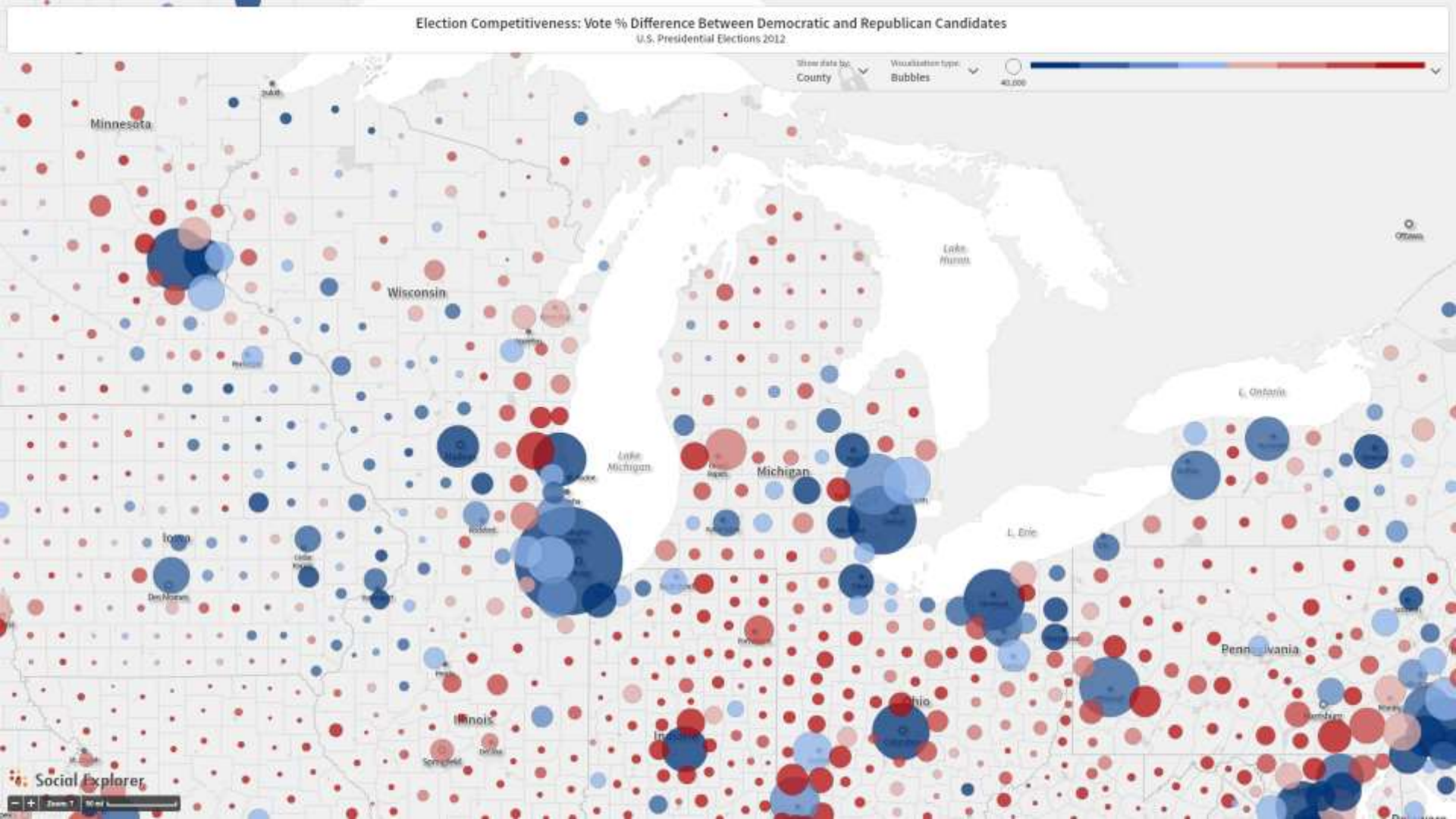
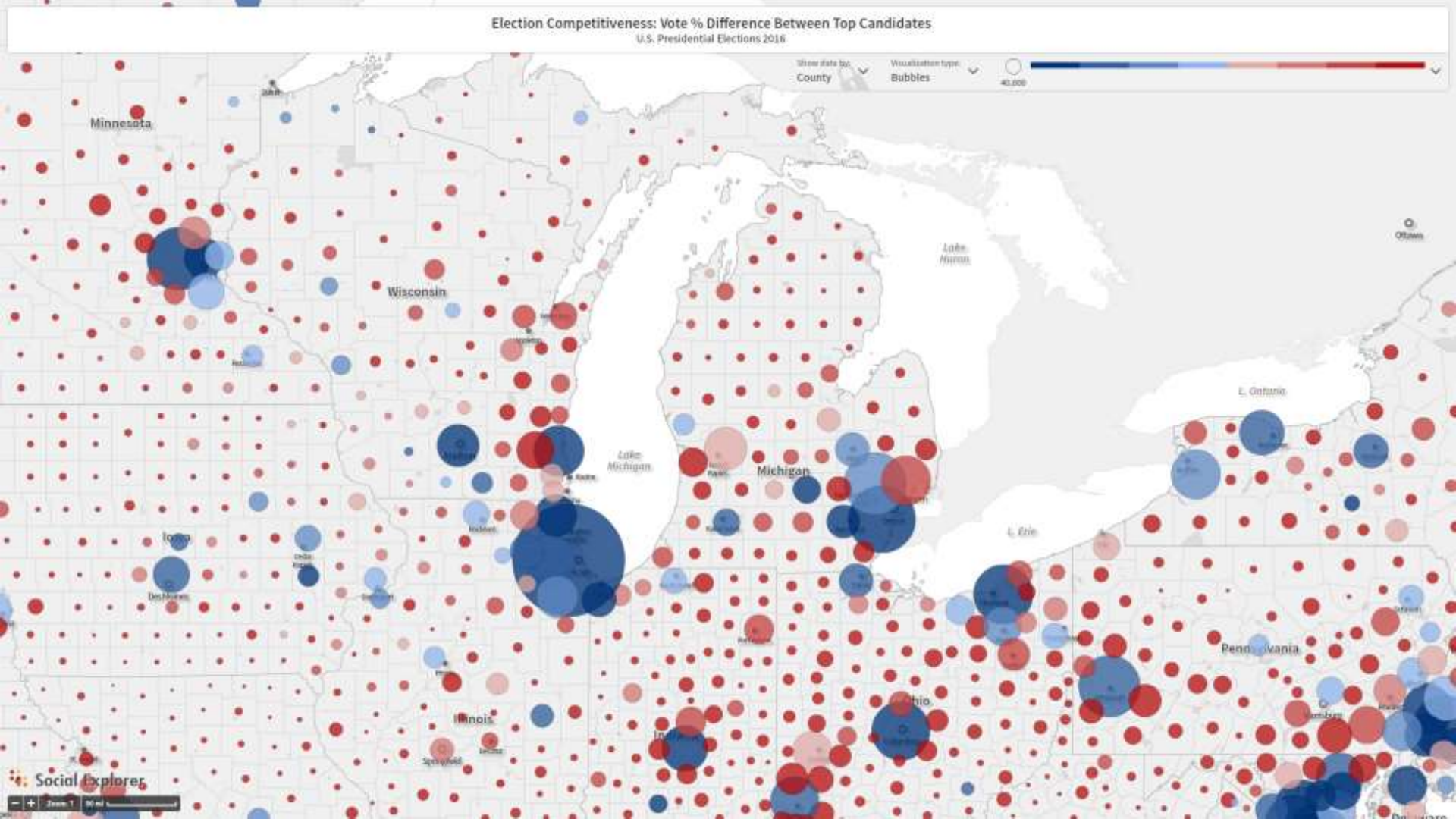
Montana
North Dakota
South Dakota
Nebraska
Idaho
Wyoming
Nevada
Utah
Colorado
Kansas
California
Arizona
New Mexico
Texas
Oklahoma
Arkansas
Louisiana
Mississippi
Alabama
Georgia
Florida
South Carolina
North Carolina
Virginia
Tennessee
Kentucky
Indiana
Ohio
Michigan
Wisconsin
Minnesota
Iowa
Missouri
Illinois
Maine
Ottawa
Gulf of St. Lawrence
Saint Pierre And Miquelon
Bay of Fundy
Gulf of Maine
Bermuda
Pacific Ocean
Gulf of California
Mexico
Gulf of Mexico
The Bahamas
Cuba
Turks And Caicos Islands
Sargasso Sea
Social Explorer


Election Competitiveness: Vote % Difference Between Democratic and Republican Candidates
U.S. Presidential Elections 2008
Show data by:
County
Visualization type:
Bubbles
40,000
Minnesota
Wisconsin
Lake Huron
Ottawa
L. Ontario
Lake Michigan
Michigan
L. Erie
Iowa
Illinois
Ohio
Social Explorer


Election Competitiveness: Vote % Difference Between Democratic and Republican Candidates
U.S. Presidential Elections 2012
Show data by:
County
Visualization type:
Bubbles
40,000
Minnesota
Wisconsin
Lake Huron
Ottawa
L. Ontario
Lake Michigan
Michigan
L. Erie
Iowa
Illinois
Ohio
Social Explorer


Election Competitiveness: Vote % Difference Between Top Candidates
U.S. Presidential Elections 2016
Show data by:
County
Visualization type:
Bubbles
40,000
Minnesota
Wisconsin
Lake Huron
Ottawa
L. Ontario
Lake Michigan
Michigan
L. Erie
Iowa
Illinois
Pennsylvania
Ohio
Social Explorer

Modelling the Election Using ACS and Voting Data

- Since the ACS is released yearly it is a better proxy for the demographic of a given area
- The file prepared by the Census Redistricting Office for Citizen of Voting Age Population very helpful
- The many social and demographic variables make it possible to test a variety of hypotheses
- The only drawback is vintage. We use the 2011 to 2015 (which centers on 2013) for demographics.

Preliminary Analysis of Election at the County Level—Using Spatial Regression

- Much Analysis of the 2016 and earlier elections uses simple comparisons of some factors with turnout and vote in various areas (often states or counties)
- Here we report a spatial regression analysis (at the county level) of the Trump victory, as a first step towards a more nuanced analysis
- Here we will compare the difference in results based upon a ordinary least squares regression and a spatial regression

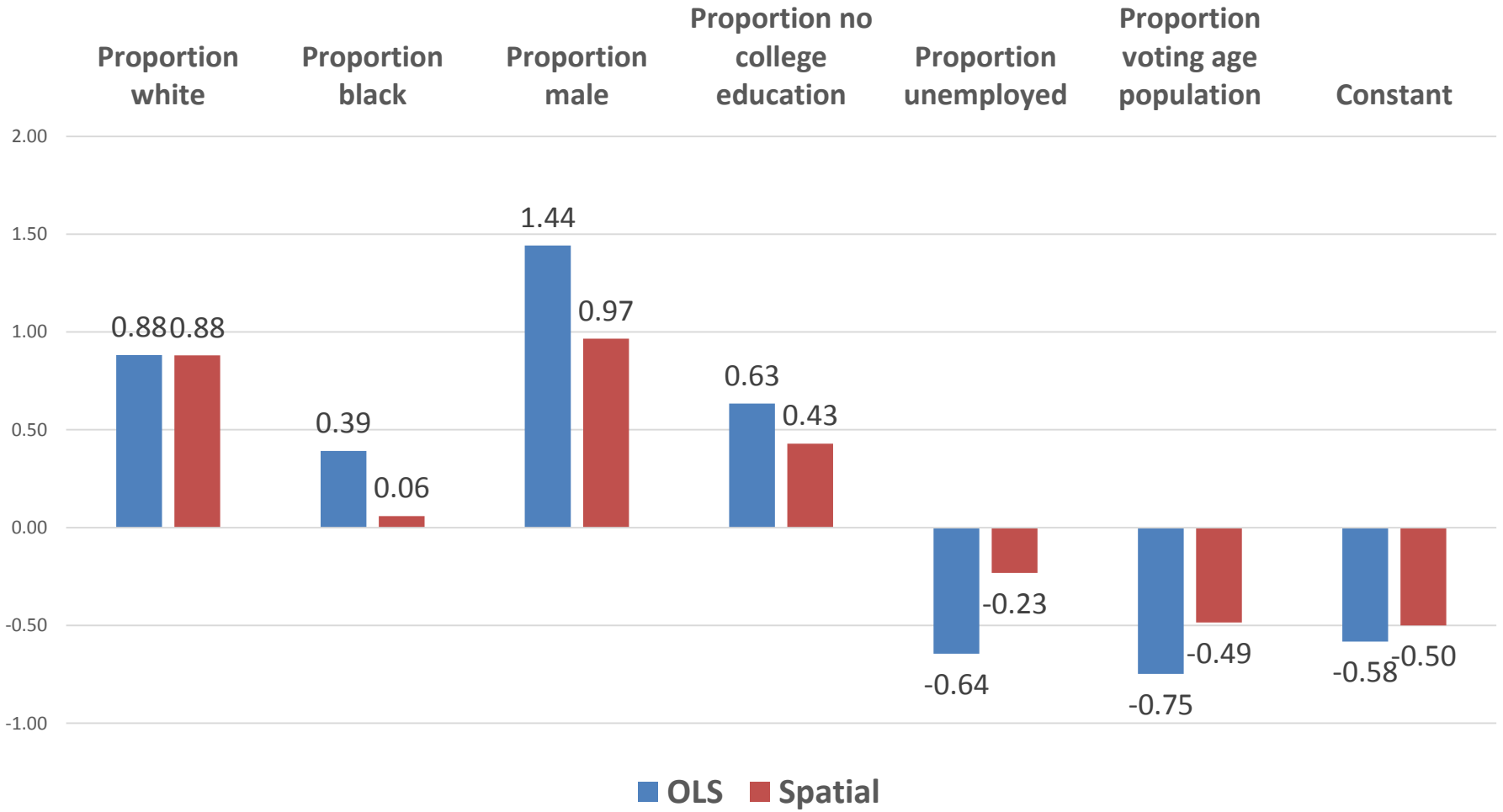
Major Hypotheses and Assertions about the Election

- Trump's victory revolved around shifting six states from Obama's win in 2012 (Iowa, Wisconsin, Michigan, Ohio, Pennsylvania, and Florida)
- Common assertion is that it is non-college educated white men, who turned the tide
- This is seen as related to economic distress of such whites
- Here we test this for the all US counties
- We use both an Ordinary Least Squares and Spatial Error Regression Model

Voting for Trump (Model 1)

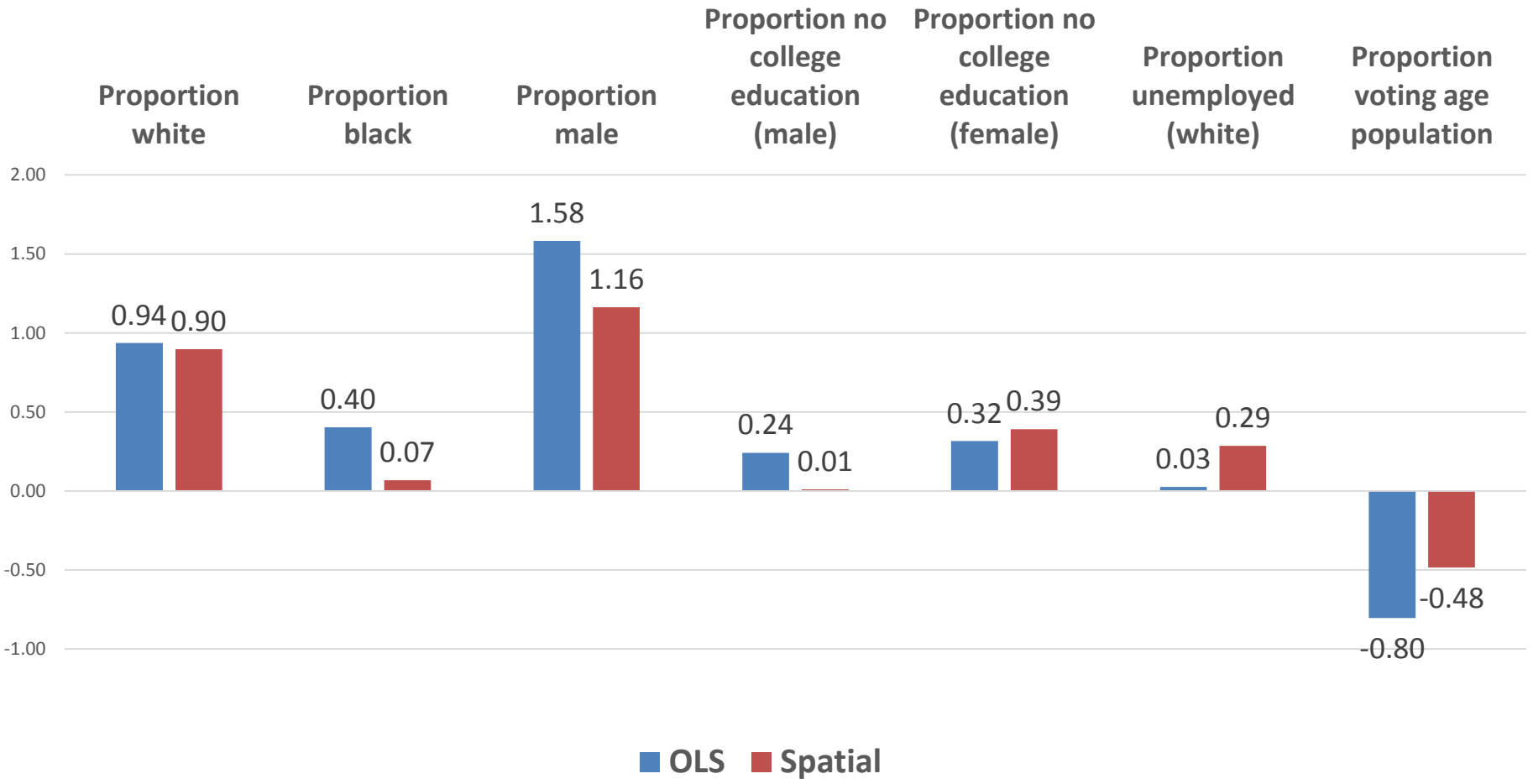
	OLS	*Spatial Error*
Proportion white	0.882***	0.880***
	-0.019	-0.018
Proportion black	0.392***	0.059*
	-0.023	-0.024
Proportion male	1.442***	0.966***
	-0.156	-0.107
Proportion no college education	0.634***	0.429***
	-0.022	-0.019
Proportion unemployed	-0.644***	-0.231**
	-0.088	-0.087
Proportion voting age population	-0.748***	-0.485***
	-0.066	-0.056
Constant	-0.582***	-0.500***
	-0.095	-0.063
Observations	3,107	3,107
Note:	p<0.05; p<0.01; p<0.001	

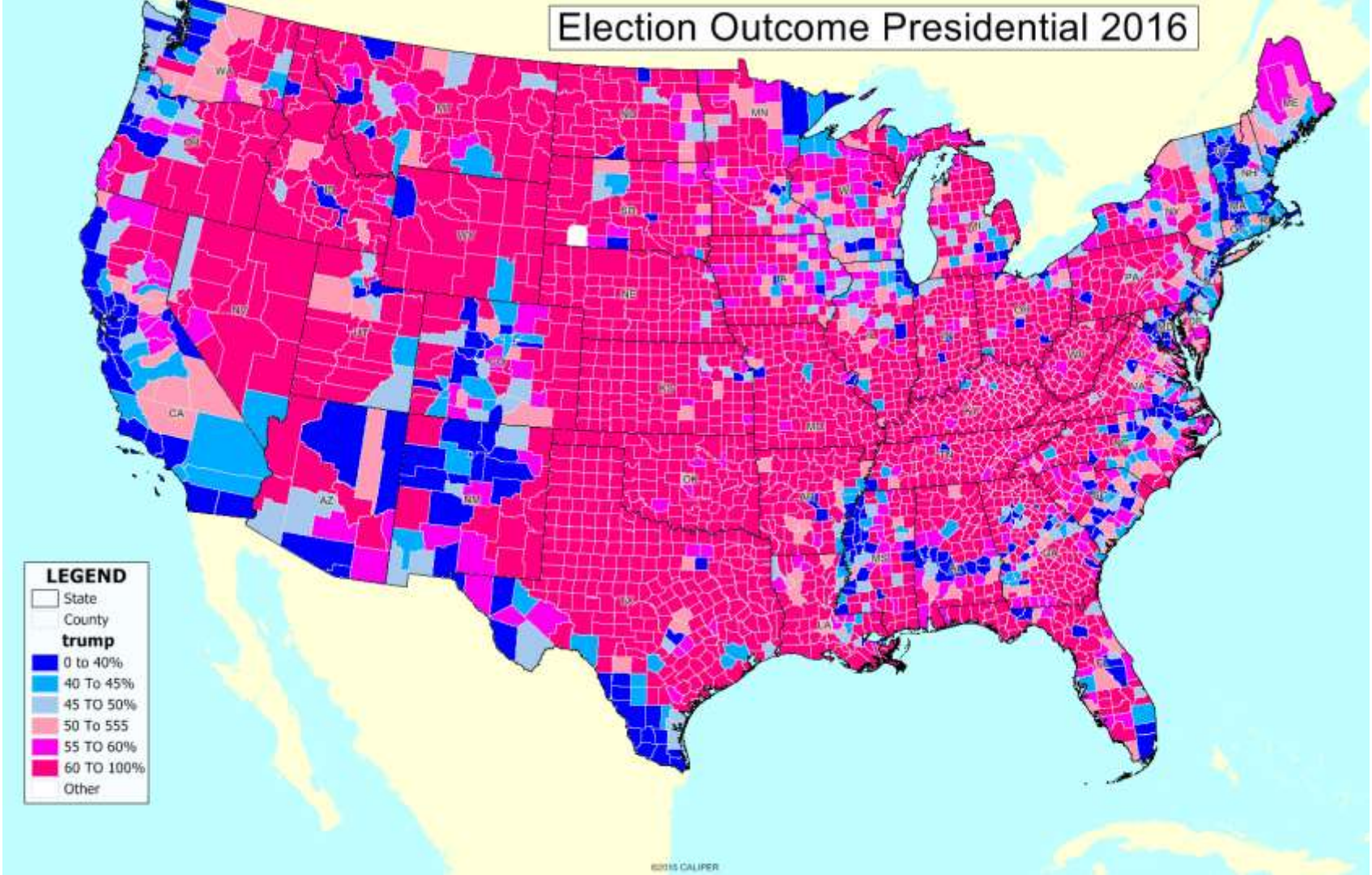
Comparison of OLS and Spatial Regression Model 1



Voting for Trump (Model 2)		
	OLS	*Spatial Error*
Proportion white	0.937***	0.897***
	-0.019	-0.018
Proportion black	0.403***	0.068**
	-0.025	-0.024
Proportion male	1.582***	1.162***
	-0.166	-0.112
Proportion no college education (male)	0.242***	0.01
	-0.069	-0.052
Proportion no college education (female)	0.316***	0.391***
	-0.08	-0.061
Proportion unemployed (white)	0.026	0.285**
	-0.096	-0.09
Proportion voting age population	-0.804***	-0.484***
	-0.095	-0.063
Constant	-0.679***	-0.641***
	-0.102	-0.068
Observations	3,107	3,107
Note:	p<0.05; p<0.01; p<0.001	

Comparison of OLS and Spatial Regression Model 2




Election Outcome Presidential 2016
LEGEND
State
County
trump
0 to 40%
40 To 45%
45 TO 50%
50 To 555
55 TO 60%
60 TO 100%
Other
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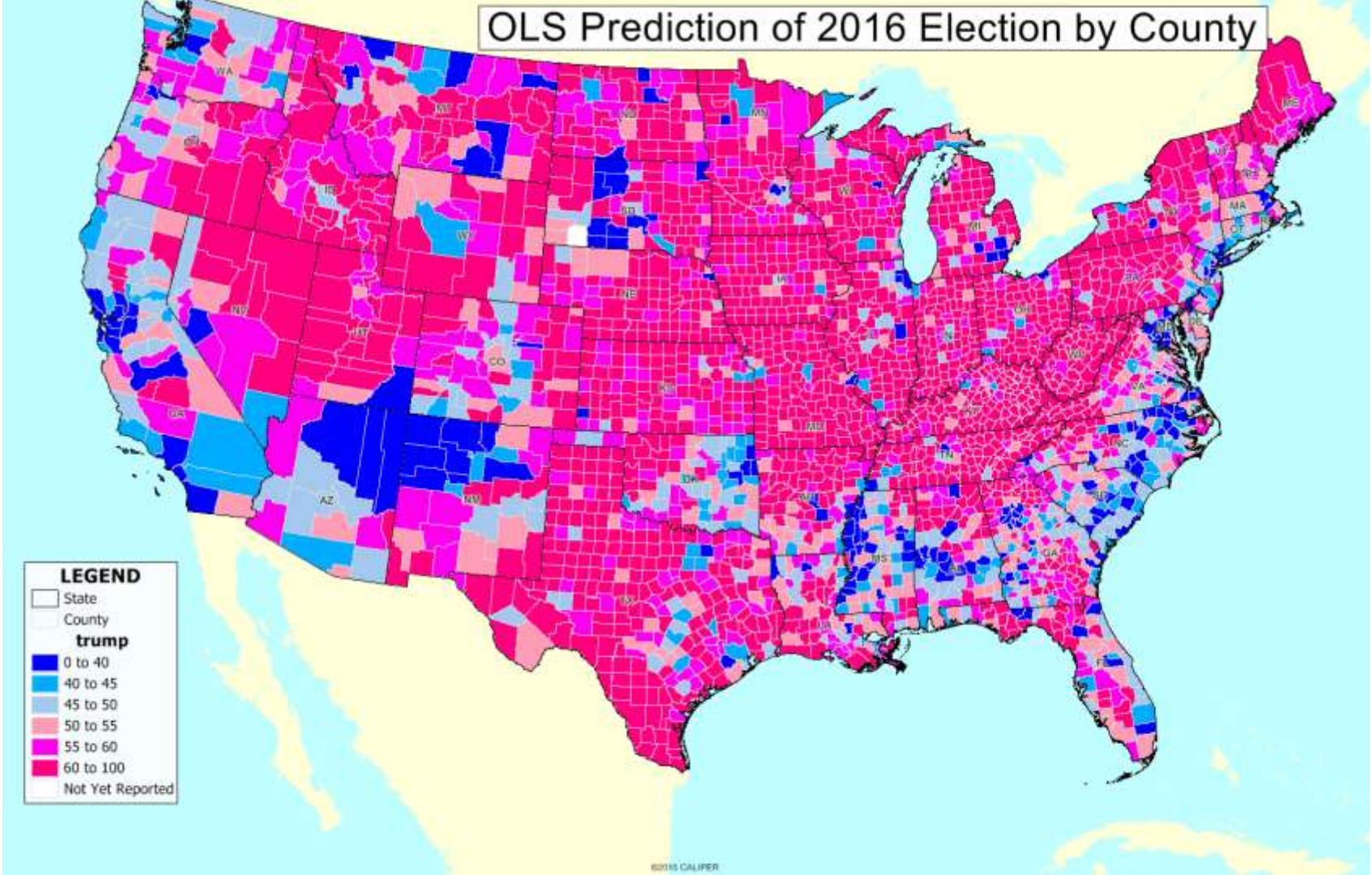
OLS Prediction of 2016 Election by County
LEGEND
State
County
trump
0 to 40
40 to 45
45 to 50
50 to 55
55 to 60
60 to 100
Not Yet Reported
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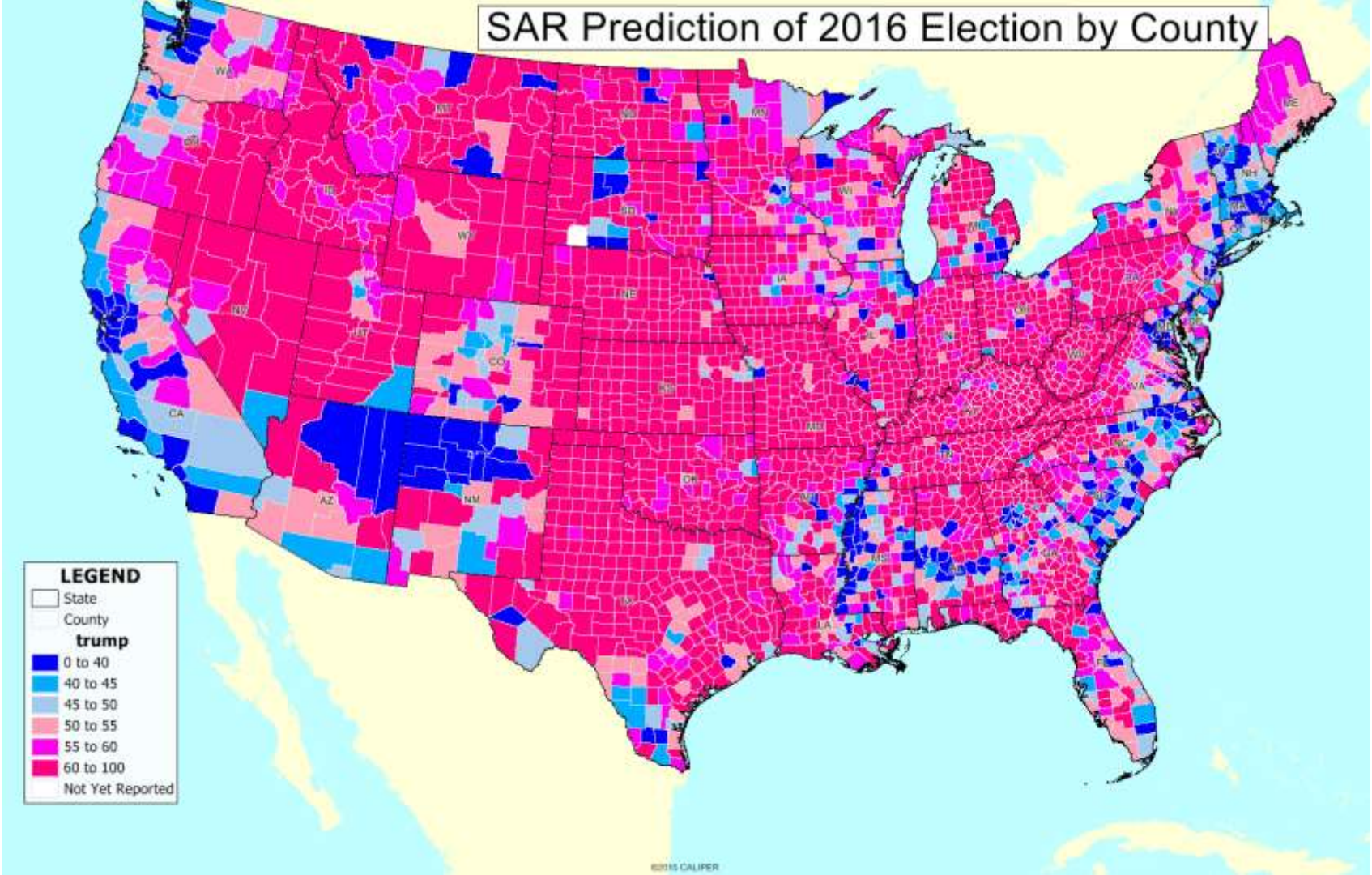
SAR Prediction of 2016 Election by County
LEGEND
State
County
trump
0 to 40
40 to 45
45 to 50
50 to 55
55 to 60
60 to 100
Not Yet Reported
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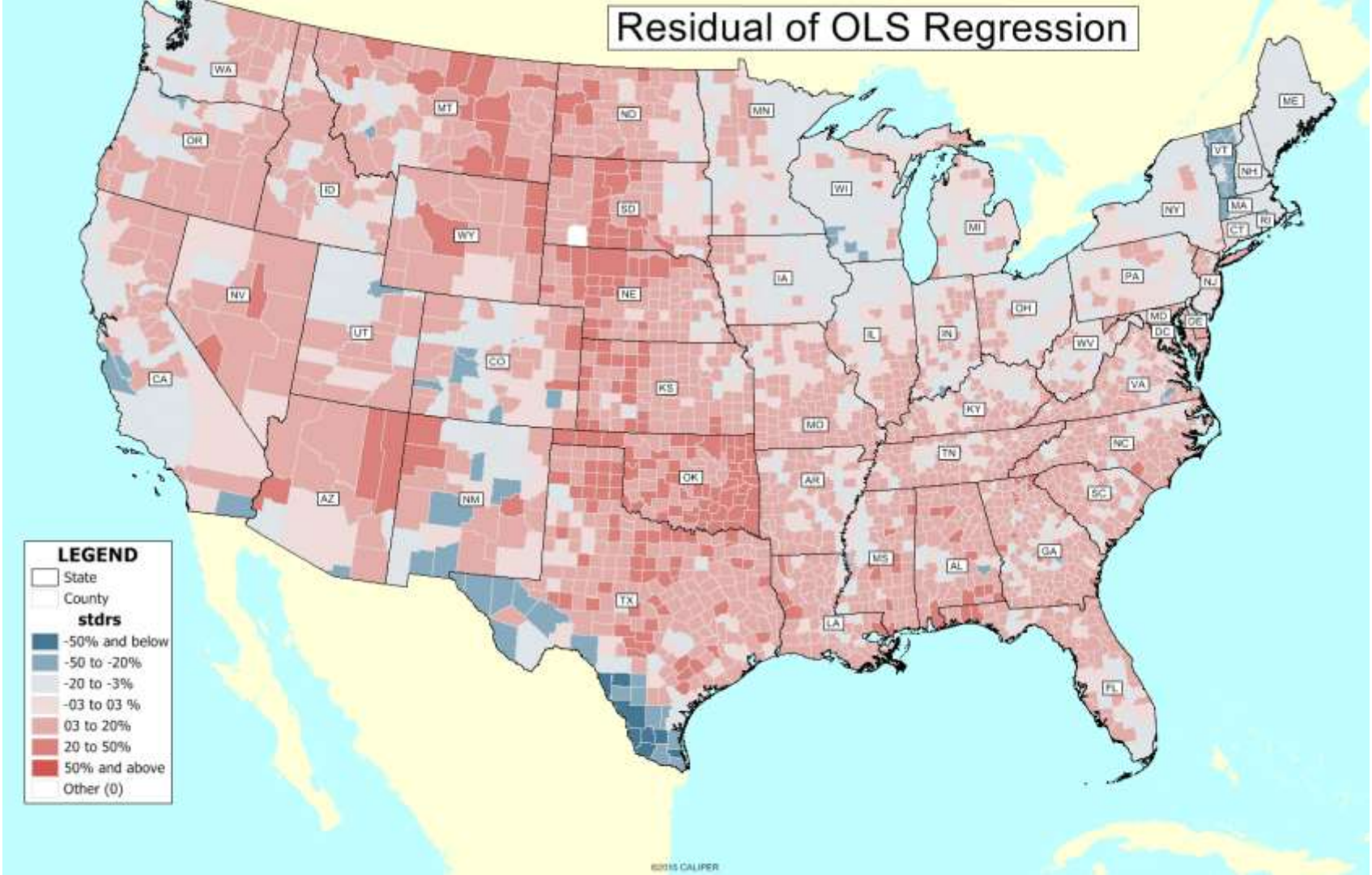
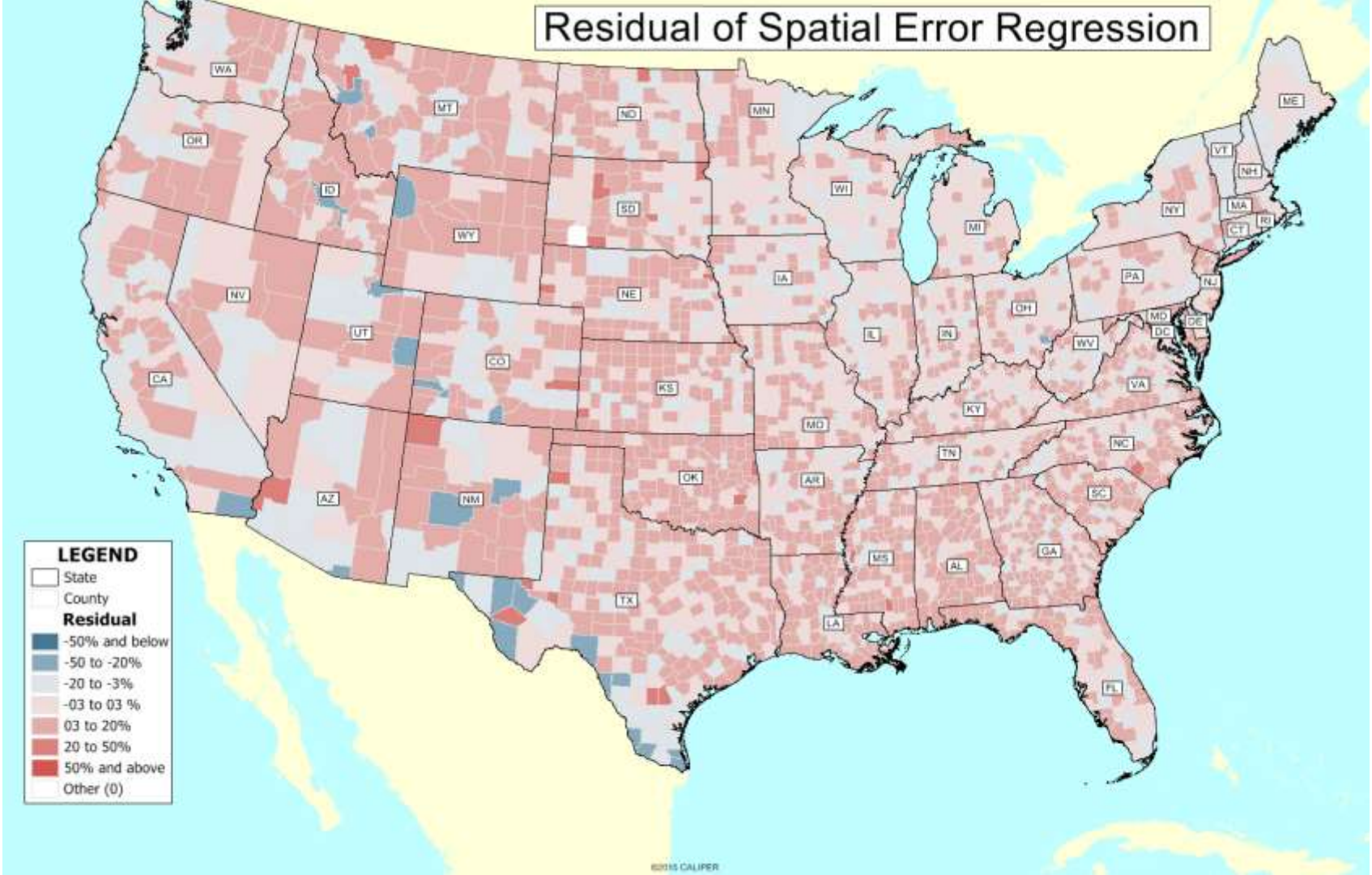

Residual of OLS Regression
LEGEND
State
County
stdrs
-50% and below
-50 to -20%
-20 to -3%
-03 to 03 %
03 to 20%
20 to 50%
50% and above
Other (0)
WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
IA
MO
AR
LA
WI
IL
MS
MI
IN
KY
TN
AL
OH
WV
GA
FL
SC
NC
VA
PA
NY
MD
DC
DE
NJ
CT
RI
MA
VT
NH
ME


Residual of Spatial Error Regression
LEGEND
State
County
Residual
-50% and below
-50 to -20%
-20 to -3%
-03 to 03 %
03 to 20%
20 to 50%
50% and above
Other (0)
WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
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MA
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NH
ME
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Results of this Preliminary Analysis

- There is a strong spatial association of voting in the election, beyond the simple OLS results
- There is a strong relationship of proportion white on voting for Trump
- There is no association with the proportion of non-college white males, rather the association is with non-college white females
- The association of unemployment among whites is strong

Plans for Further Analysis

- Adding other years to see if the patterns are similar over time
- Using other data, include campaign activity and evidence of social media use (at the state level) to see if “swing state” patterns are different
- In all of this, the ACS and the Census Long Form (we plan to go back to 1980) are crucial
- We plan to deploy both a fixed effects and a mixed model strategy