Multifactorial Analysis of Demographic, Economic, and Educational Influences on U.S. Voting Patterns, 2016-2020

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Research Question

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How did the relationship between county-level demographic factors, education levels, and unemployment rates and the Democratic vote share change between the 2016 and 2020 presidential elections?

Literature Review

Literature Review

Racial composition has been a strong predictor of voting behavior, with changing demographics linked to **shifts in party allegiance** (Abrajano & Hajnal, 2015; Frey, 2018)

Economic indicators, such as unemployment rates and median household income, have historically **influenced political preferences** (Wright, 2012; Gelman et al., 2010).

Educational attainment has become increasingly **predictive of voting behavior**, giving rise to a notable "diploma divide" in recent elections (Sides et al., 2018; Tyson \& Maniam, 2016).

Interaction between race and education has gained prominence in **predicting voting behavior**, while economic factors interact with demographic characteristics to influence political preferences (Schaffner et al., 2018; Bartels, 2016).

Hypotheses

Hypotheses

{H1} Counties with increasing racial diversity will show a positive change in Democratic vote share from 2016 to 2020.

{H2} The impact of education levels on Democratic vote share will vary across income groups, with a stronger positive relationship in higher-income counties.

{H3} Counties experiencing higher unemployment rates in 2016 will show a negative change in Democratic vote share in 2020, reflecting dissatisfaction with economic conditions.

{H4} There will be significant interaction effects between education levels and racial demographics, with the impact of education on Democratic vote share differing across racial groups.

Datasets

Datasets

{demographic_data} Racial composition and median household income

{education_data} Educational attainment for individuals 25 and older

{unemployment_2012, unemployment_2016} County-level unemployment rates for 2012 and 2016

{election_data} Democratic vote share in the 2016 and 2020 presidential elections

Results and Analysis

Hypothesis 1

Results

Impact of Racial Diversity on Democratic Vote Share Change

Diversity index shows a very slight positive relationship with changes in Democratic vote share

Relationship is **not statistically significant** (p > 0.05)

Confidence interval crosses zero, cannot rule out the possibility of no effect or even a slight negative effect

Do not have strong evidence to support H1

Racial diversity **alone** may **not be a reliable predictor** of changes in Democratic vote share at the county level

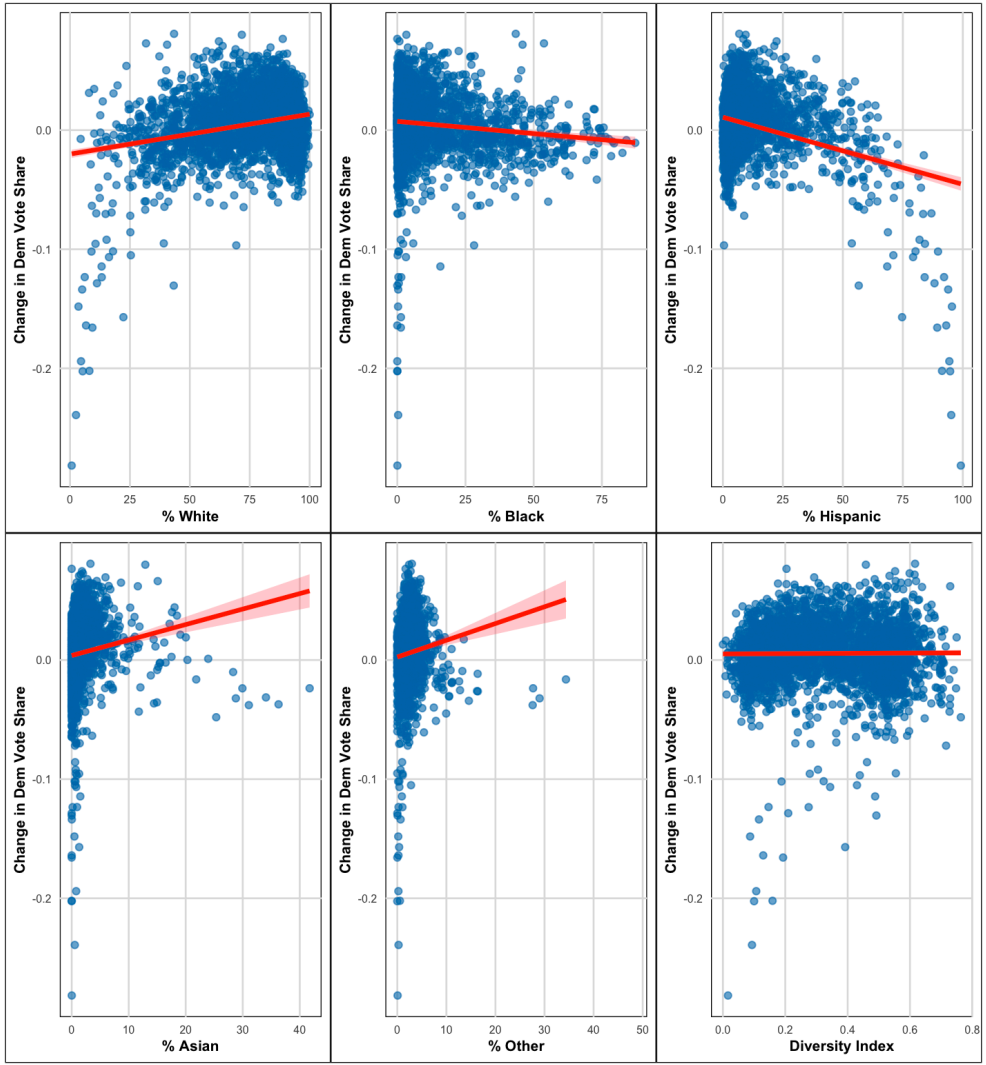
Coefficient	Estimate	Std. Error	CI Lower	CI Upper	P-Value
Estimate	0.001 199 228	0.002 536 833	−0.003 774 809	0.006 173 265	0.636

Results

Impact of Racial Diversity on Democratic Vote Share Change

Nearly flat line for the diversity index plot (bottom right)

While the overall diversity index shows little effect, the individual racial group plots reveal interesting patterns (e.g., positive trend for % White, negative for % Hispanic)



Results

Impact of Racial Diversity on Democratic Vote Share Change

X-axis: Percentage with Bachelor's Degree

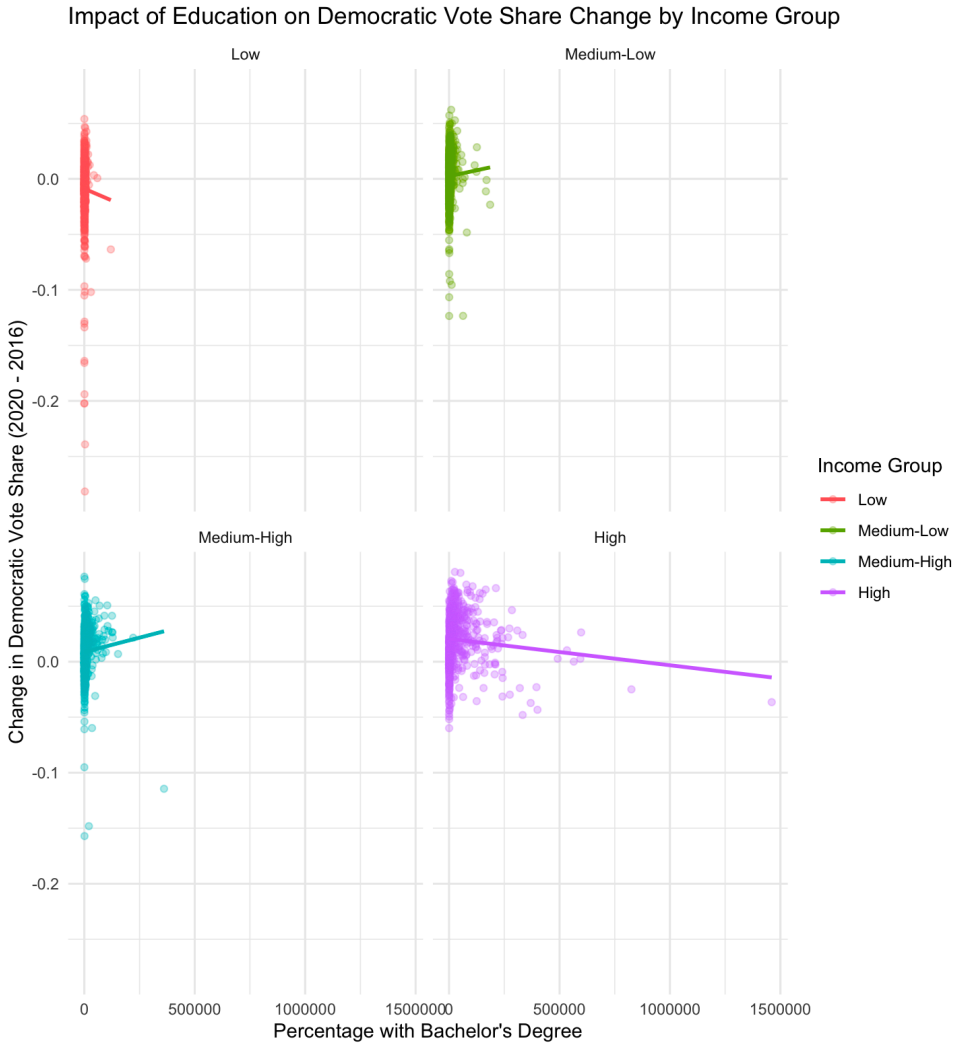
Y-axis: Change in Democratic Vote Share (2020 - 2016)

Varying relationships observed across income groups

Positive trend for Medium-Low income group

Negative trend for High income group

Mixed results for Low and Medium-High income groups



Hypothesis 2

Results
Interactions: Diversity, Education, and Income

Significant interactions between diversity and both education and income

Model explains 19.7% of variance in Democratic vote share change (R-squared: 0.197)

All predictors and interactions are statistically significant (p < 0.001)

Negative interaction terms suggest:

Diversity effect decreases as education/income increase
Education/income effects decrease as diversity increases

Variable	Estimate	Std. Error	t value	p-value
Intercept	-0.0467	0.0038	-12.363	$<2 \times 10^{-16}$
Diversity Index	0.0370	0.0088	4.217	2.54×10^{-5}
Bachelor's Degree	4.211×10^{-7}	5.590×10^{-8}	7.532	6.49×10^{-14}
Median Household Income	9.479×10^{-7}	7.075×10^{-8}	13.398	$<2 \times 10^{-16}$
Diversity Index:Bachelor's Degree	-6.996×10^{-7}	8.680×10^{-8}	-8.060	1.08×10^{-15}
Diversity Index:Median Household Income	-6.721×10^{-7}	1.616×10^{-7}	-4.160	3.27×10^{-5}

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

Residual standard error: 0.0231 on 3106 degrees of freedom

Multiple $R^2 = 0.197$, Adjusted $R^2 = 0.1957$

F-statistic: 152.4 on 5 and 3106 DF, p-value: $< 2.2 \times 10^{-16}$

Results

Impact of Education on Democratic Vote Share Change Across Income Groups

Low and High income groups show slight negative slopes

Medium-Low and Medium-High groups show slight positive slopes

Only the High income group shows a statistically significant relationship ($p < 0.01$)

Income Group	Intercept	Slope	p-value
Low	$-0.008\,87$	-8.54×10^{-8}	0.648
Medium-Low	$0.002\,34$	4.31×10^{-8}	0.377
Medium-High	$0.008\,73$	5.17×10^{-8}	0.108
High	0.0206	-2.38×10^{-8}	$0.007\,89$

Results

Impact of Education on Democratic Vote Share Change Across Income Groups

Interaction Model Summary

Significant differences in intercepts across income groups

Interaction terms (bachelor_degree:income_group) are not statistically significant

Income group itself has a significant effect on Democratic vote share change

Term	Estimate	Std. Error	t value	p-value
Intercept	-8.866×10^{-3}	8.948×10^{-4}	-9.908	$<2 \times 10^{-16}$
bachelor_degree	-8.545×10^{-8}	1.537×10^{-7}	-0.556	0.578
income_groupMedium-Low	1.120×10^{-2}	1.267×10^{-3}	8.841	$<2 \times 10^{-16}$
income_groupMedium-High	1.759×10^{-2}	1.275×10^{-3}	13.800	$<2 \times 10^{-16}$
income_groupHigh	2.946×10^{-2}	1.288×10^{-3}	22.872	$<2 \times 10^{-16}$
bachelor_degree:income_groupMedium-Low	1.285×10^{-7}	1.633×10^{-7}	0.787	0.431
bachelor_degree:income_groupMedium-High	1.372×10^{-7}	1.579×10^{-7}	0.869	0.385
bachelor_degree:income_groupHigh	6.166×10^{-8}	1.539×10^{-7}	0.401	0.689

Results

Impact of Education on Democratic Vote Share Change Across Income Groups

ANOVA Results

Both bachelor_degree and income_group are significant predictors

The interaction between bachelor_degree and income_group is not significant (p = 0.1398)

Income group explains more variance than education level

Term	Df	Sum Sq	Mean Sq	F value	Pr(>F)
bachelor_degree	1	0.010 62	0.010 616	19.1081	1.276×10^{-5}
income_group	3	0.327 68	0.109 228	196.6098	$< 2 \times 10^{-16}$
bachelor_degree:income_group	3	0.003 05	0.001 016	1.8283	0.1398
Residuals	3104	1.724 45	0.000 556		

Results

Impact of Education on Democratic Vote Share Change Across Income Groups

Correlation: Income and Education's Impact on Vote Share

Weak positive correlation between income and education's impact on Democratic vote share

Statistically significant, but small effect size

Suggests a slight tendency for education to have a stronger positive effect in higher-income areas

$$\text{Correlation} = 0.1716,\ p < 2.2 \times 10^{-16},\ 95\%\ \text{CI: } [0.137, 0.206]$$

Hypothesis 3

Results

Impact of Unemployment on Democratic Vote Share Change

2016 Unemployment Rate vs. Democratic Vote Share Change

Significant negative relationship ($p < 0.001$)

For every 1% increase in 2016 unemployment, Dem share decreased by 0.44%

R-squared: 0.09926 (9.93% of variance explained)

Highly significant F-statistic (p-value: 2.2e-16)

Variable	Estimate	Std. Error	t value	Pr(> |t|)
Intercept	0.0284	0.0013	21.65	$<2 \times 10^{-16}$
Unemployment Rate 2016	−0.0044	0.0002	−18.51	$<2 \times 10^{-16}$

R-squared: 0.09926, Adjusted R-squared: 0.09897

F-statistic: 342.7 on 1 and 3110 DF, p-value: ¡ 2.2e-16

Results

Impact of Unemployment on Democratic Vote Share Change

Change in Unemployment Rate (2012-2016) vs. Democratic Vote Share Change

Weak negative relationship ($p < 0.05$)

For every 1% increase in unemployment change, Dem share decreased by 0.05%

Model explains only 0.13% of the variance in Dem vote share change

Variable	Estimate	Std. Error	t value	$\Pr(>\|t\|)$
Intercept	0.0042	0.0008	5.172	2.47×10^{-7}
Change in Unemployment Rate	−0.0005	0.0003	−2.036	0.0418

R-squared: 0.001331, Adjusted R-squared: 0.00101

F-statistic: 4.146 on 1 and 3110 DF, p-value: 0.04182

Results

Impact of Unemployment on Democratic Vote Share Change

Correlation: 2016 Unemployment and Democratic Vote Share Change

Correlation coefficient: -0.3150572

Moderate negative correlation

Highly significant (p < 2.2e-16)

95% CI: [-0.3463595, -0.2830541]

Statistic	Value
Correlation coefficient	-0.3151
95% CI lower bound	-0.3464
95% CI upper bound	-0.2831
p-value	¡ 2.2e-16

Results
Unemployment Rate Changes by County (2012-2016)

County-level map of unemployment rate changes

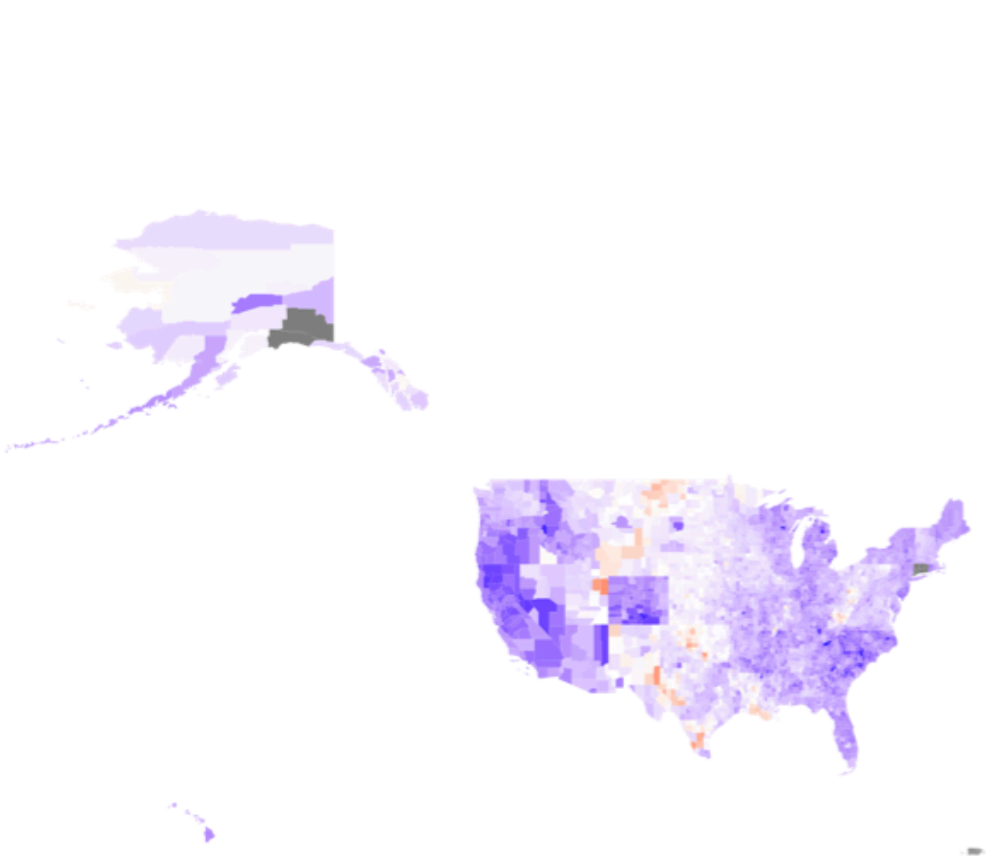
Blue areas: Decreased unemployment

Red areas: Increased unemployment

Significant regional variations evident

Midwest shows improvement

Energy-producing regions faced challenges



Results

Impact of Unemployment on Democratic Vote Share Change

Regional Variations in Unemployment Impact

Significant regional differences in unemployment effect

Strongest negative effect in the Northeast

Weakest effect in the West

Model explains 16.28% of the variance in Dem vote share change

Variable	Estimate	Std. Error	t value	$\Pr(>\|t\|)$
Intercept	0.0188	0.0023	8.336	$<2 \times 10^{-16}$
Unemployment Rate 2016	−0.0029	0.0005	−6.019	1.96×10^{-9}
Region Northeast	0.0357	0.0070	5.076	4.09×10^{-7}
Region South	0.0127	0.0031	4.149	3.43×10^{-5}
Region West	0.0132	0.0037	3.615	0.000 305
Unemployment: Northeast	−0.0040	0.0014	−2.896	0.003 807
Unemployment: South	−0.0027	0.0006	−4.590	4.60×10^{-6}
Unemployment: West	−0.0002	0.0007	−0.317	0.750 940

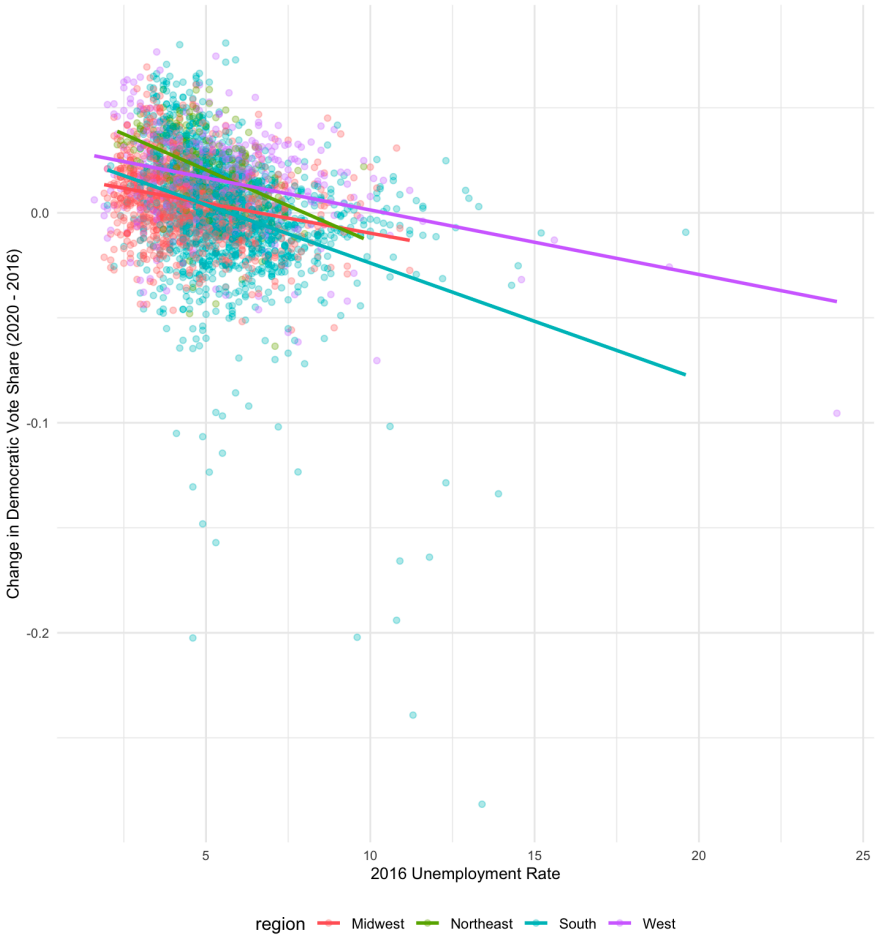
R-squared: 0.1628, Adjusted R-squared: 0.1609

F-statistic: 86.25 on 7 and 3104 DF, p-value: ¡ 2.2e-16

Results

Impact of Unemployment on Democratic Vote Share Change

Unemployment Rate vs. Democratic Vote Share Change by Region



Hypothesis 4

Results
Main Interaction Model Results

All variables and interactions are statistically significant ($p < 0.05$)

Negative main effects for bachelor's degree and all racial/ethnic percentages

Positive interaction effects between bachelor's degree and racial/ethnic percentages

Strongest negative main effect: Hispanic percentage (-8.944×10^{-4})

Strongest positive interaction: Bachelor's degree and Hispanic percentage (6.905×10^{-9})

Intercept is positive and significant (3.870×10^{-2})

Variable	Estimate	Std. Error	t value	Pr(>|t|)
Intercept	3.870×10^{-2}	5.417×10^{-3}	7.144	1.12×10^{-12}
bachelor_degree	-7.639×10^{-7}	9.095×10^{-8}	−8.399	$<2 \times 10^{-16}$
pct_white	-2.965×10^{-4}	5.679×10^{-5}	−5.220	1.90×10^{-7}
pct_black	-5.419×10^{-4}	6.149×10^{-5}	−8.813	$<2 \times 10^{-16}$
pct_hispanic	-8.944×10^{-4}	6.447×10^{-5}	−13.874	$<2 \times 10^{-16}$
bachelor_degree:pct_white	1.304×10^{-8}	1.085×10^{-9}	12.016	$<2 \times 10^{-16}$
bachelor_degree:pct_black	5.005×10^{-9}	1.146×10^{-9}	4.366	1.31×10^{-5}
bachelor_degree:pct_hispanic	6.905×10^{-9}	1.195×10^{-9}	5.779	8.27×10^{-9}

Results
Robust Standard Errors

All variables remain statistically significant ($p < 0.05$)

Main effects still negative for bachelor's degree and racial/ethnic percentages

Interaction effects remain positive

Strongest negative main effect: Hispanic percentage (-8.944 x 10^-4)
Strongest positive interaction:

Bachelor's degree and White percentage (1.304 x 10^-8)

Some changes in significance levels, but overall conclusions hold

Variable	Estimate		Std. Error		t value	Pr(>|t|)
Intercept	3.870	$\times 10^{-2}$	6.710	$\times 10^{-3}$	5.767	8.852×10^{-9}
bachelor_degree	−7.639	$\times 10^{-7}$	1.310	$\times 10^{-7}$	−5.831	6.061×10^{-9}
pct_white	−2.965	$\times 10^{-4}$	6.868	$\times 10^{-5}$	−4.316	1.636×10^{-5}
pct_black	−5.419	$\times 10^{-4}$	7.037	$\times 10^{-5}$	−7.701	1.806×10^{-14}
pct_hispanic	−8.944	$\times 10^{-4}$	1.146	$\times 10^{-4}$	−7.807	7.971×10^{-15}
bachelor_degree:pct_white	1.304	$\times 10^{-8}$	1.560	$\times 10^{-9}$	8.358	$< 2 \times 10^{-16}$
bachelor_degree:pct_black	5.005	$\times 10^{-9}$	1.842	$\times 10^{-9}$	2.717	0.006 621
bachelor_degree:pct_hispanic	6.905	$\times 10^{-9}$	1.914	$\times 10^{-9}$	3.608	0.000 313

Results
ANOVA Results - Model Comparison

Bachelor's degree: Significant (F = 19.1081, p < 0.0001)

Income group: Highly significant (F = 196.6098, p < 2e-16)

Interaction (bachelor's degree:income group): Not significant (F = 1.8283, p = 0.1398)

Income group explains the most variance (Sum Sq = 0.32768)

Bachelor's degree contributes less (Sum Sq = 0.01062)

Interaction term adds minimal explanatory power

Term	Df	Sum Sq	Mean Sq	F value	Pr(>F)
bachelor_degree	1	0.010 62	0.010 616	19.1081	1.276×10^{-5}
income_group	3	0.327 68	0.109 228	196.6098	$<2 \times 10^{-16}$
bachelor_degree:income_group	3	0.003 05	0.001 016	1.8283	0.1398
Residuals	3104	1.724 45	0.000 556		

Results
Standardized Coefficients Model

All variables statistically significant ($p < 0.05$)

Bachelor's degree: Strong positive main effect (0.017140)

Racial/ethnic percentages: Negative main effects

Strongest: Hispanic (-0.011071)
Followed by: Black (-0.006815), White (-0.002331)

Positive interaction effects between bachelor's degree and racial/ethnic percentages

Strongest: White (0.013283)
Followed by: Hispanic (0.004824), Black (0.003639)

Variable	Estimate	Std. Error	t value	$\Pr(>\|t\|)$
Intercept	0.007 559 2	0.000 429 4	17.604	$<2 \times 10^{-16}$
bachelor_degree	0.017 140 0	0.000 946 4	18.111	$<2 \times 10^{-16}$
pct_white	−0.002 331 1	0.001 123 2	−2.075	0.038
pct_black	−0.006 814 9	0.000 861 0	−7.915	3.40×10^{-15}
pct_hispanic	−0.011 070 8	0.000 863 0	−12.828	$<2 \times 10^{-16}$
bachelor_degree:pct_white	0.013 283 1	0.001 105 5	12.016	$<2 \times 10^{-16}$
bachelor_degree:pct_black	0.003 638 8	0.000 833 4	4.366	1.31×10^{-5}
bachelor_degree:pct_hispanic	0.004 823 9	0.000 834 8	5.779	8.27×10^{-9}

Results
Models for Majority White/ Black/Hispanic Counties

Majority White Counties:

Positive intercept
Positive effect of bachelor's degree
Both highly significant

Majority Black Counties:

Negative intercept
Positive effect of bachelor's degree
Both significant

Majority Hispanic Counties:

Negative intercept
Positive effect of bachelor's degree
Intercept significant, bachelor's degree not significant

Variable	Estimate	Std. Error	t value	$\Pr(>\|t\|)$
Majority White Counties				
Intercept	6.260×10^{-3}	4.097×10^{-4}	15.28	$<2 \times 10^{-16}$
bachelor_degree	1.916×10^{-7}	1.308×10^{-8}	14.65	$<2 \times 10^{-16}$
Majority Black Counties				
Intercept	-9.135×10^{-3}	1.822×10^{-3}	−5.013	2.51×10^{-6}
bachelor_degree	1.999×10^{-7}	7.618×10^{-8}	2.624	0.0101
Majority Hispanic Counties				
Intercept	-4.956×10^{-2}	6.476×10^{-3}	−7.653	1.32×10^{-11}
bachelor_degree	3.497×10^{-8}	1.285×10^{-7}	0.272	0.786

Results
Interaction Effects of Education and Racial Demographics

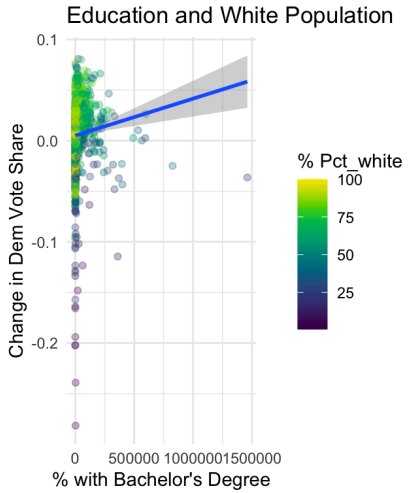
Positive relationship between education and Democratic vote share across all racial groups

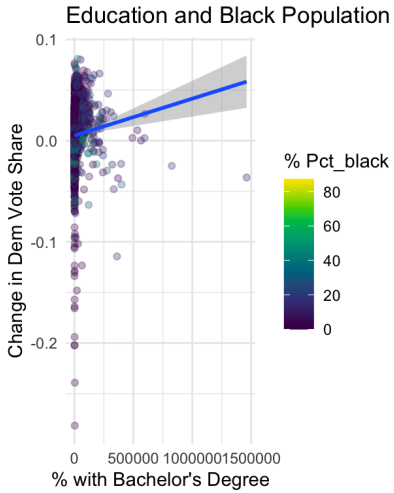
Education and White population Hispanic population shows steeper positive slope than Black population

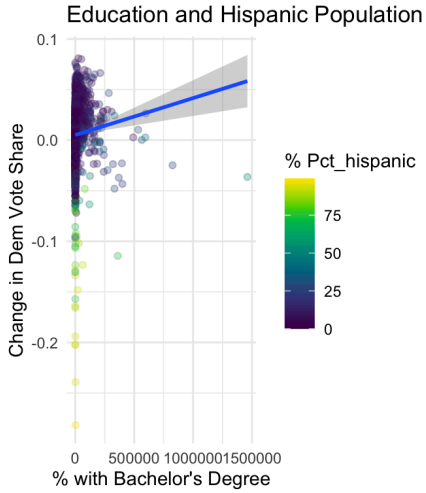
Higher variability in vote share changes for counties with lower education levels

Counties with high % of White population and low education show largest negative changes

Most positive changes occur in highly educated counties across all racial groups







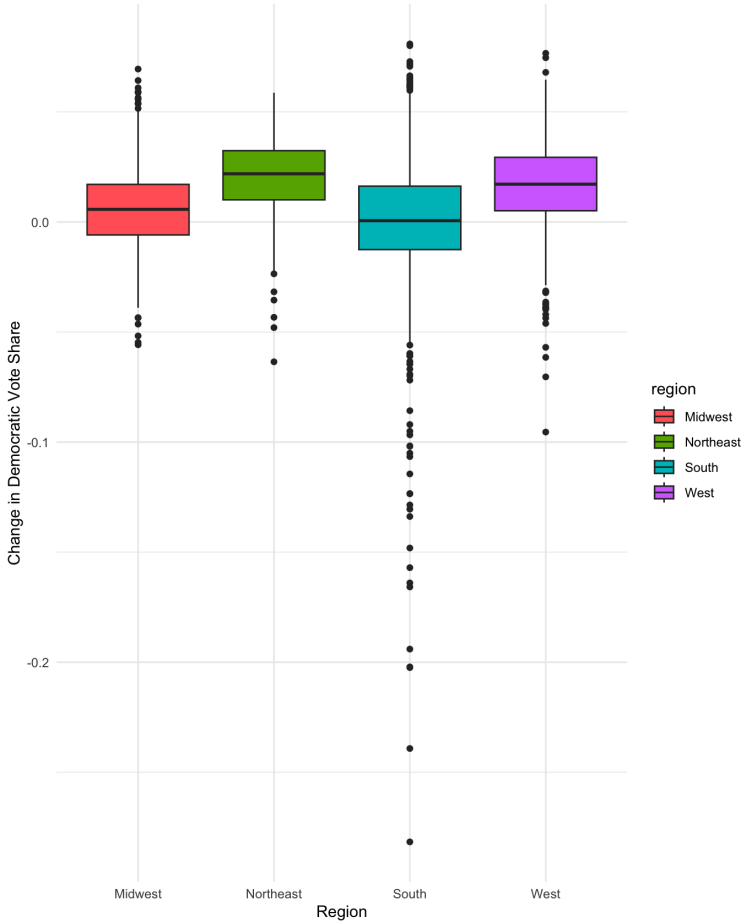
Results
Change in Democratic Vote Share by Region

West shows the largest spread in vote share changes

Northeast has the highest median increase in Democratic vote share

South shows the smallest median change

Midwest appears to have a slight negative median change



Results
Regional Differences in Key Variable Effects

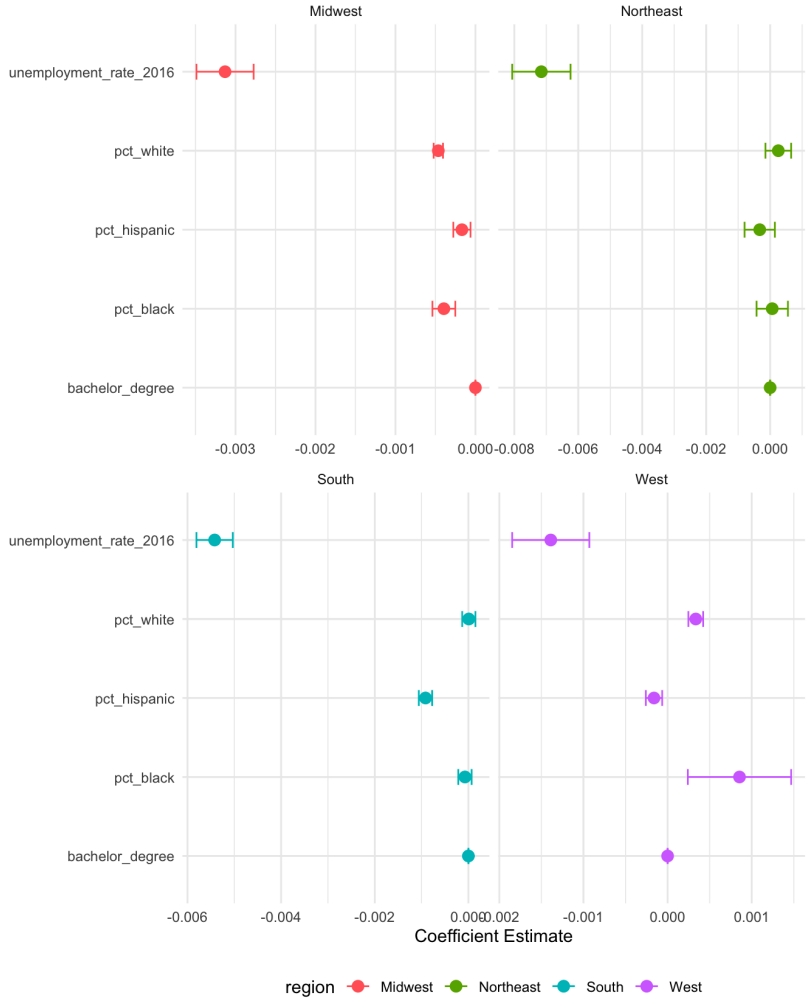
Unemployment rate consistently negative across all regions

Education (bachelor_degree) effect varies by region: Positive in Midwest and South, Negative in Northeast and West

Racial demographics show varied effects: White percentage: negative in Midwest, positive in West

Black percentage: negative in Midwest, positive in West

Hispanic percentage: negative across all regions, strongest in South



Results

Average Change in Democratic Vote Share by State

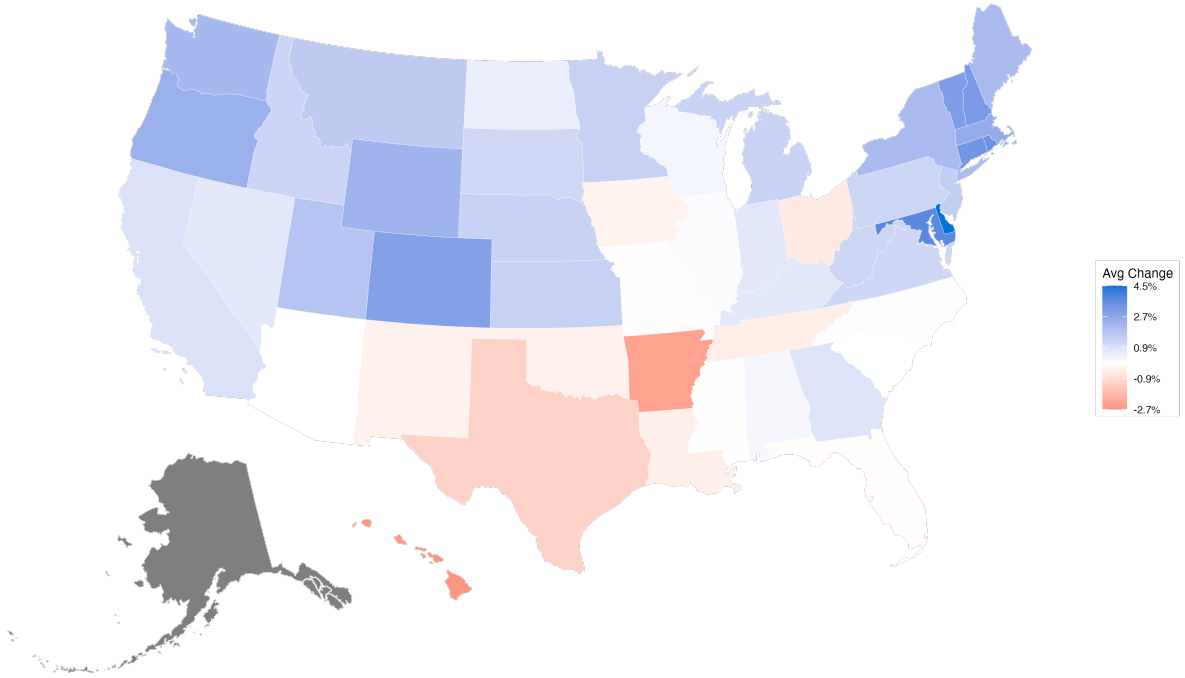
Northeastern states show mostly positive changes

Many Southern states show negative changes

Western states show a mix of positive and negative changes

Midwest states generally show small changes

Range of changes: -2.75% to +4.54%



Results
Regional Model Results

Significant regional variations in effects of variables

Unemployment consistently negative across all regions

Education (bachelor's degree) shows mixed effects

Racial demographics have varying impacts by region

Region	Variable	Estimate	Std. Error	P-value
Midwest	pct_white	−0.000 464	0.000 058 5	5.37×10^{-15}
	pct_black	−0.000 395	0.000 143	5.93×10^{-3}
	pct_hispanic	−0.000 169	0.000 107	1.17×10^{-1}
	bachelor_degree	5.22	1.76	2.98×10^{-3}
	unemployment_rate_2016	−0.003 13	0.000 357	7.89×10^{-18}
Northeast	pct_white	0.000 255	0.000 402	5.26×10^{-1}
	pct_black	0.000 065 0	0.000 491	8.95×10^{-1}
	pct_hispanic	−0.000 326	0.000 473	4.91×10^{-1}
	bachelor_degree	−4.27	2.50	8.95×10^{-2}
	unemployment_rate_2016	−0.007 15	0.000 912	2.10×10^{-13}
South	pct_white	8.81	0.000 141	9.50×10^{-1}
	pct_black	−7.29	0.000 142	6.08×10^{-1}
	pct_hispanic	−0.000 916	0.000 143	1.81×10^{-10}
	bachelor_degree	1.66	1.99	1.49×10^{-16}
	unemployment_rate_2016	−0.005 42	0.000 388	1.33×10^{-41}
West	pct_white	0.000 335	0.000 087 7	1.56×10^{-4}
	pct_black	0.000 854	0.000 614	1.65×10^{-1}
	pct_hispanic	−0.000 161	0.000 097 1	9.72×10^{-2}
	bachelor_degree	−1.89	1.12	9.24×10^{-2}
	unemployment_rate_2016	−0.001 39	0.000 458	2.60×10^{-3}

Results
Interaction Effects between Variables and Regions

Key variables: race/ethnicity, education, unemployment, geographic region

Statistically significant interactions found for several variable-region pairs

Largest effects seen for racial composition and unemployment across regions

Education (bachelor's degree) shows varying impact by region

Some interactions not statistically significant (e.g. Hispanic population in Northeast/West)

Variable	Estimate	Std. Error	P-value
Intercept	6.224×10^{-2}	7.528×10^{-3}	$<2 \times 10^{-16}$
pct_white	-4.640×10^{-4}	7.254×10^{-5}	1.82×10^{-10}
pct_black	-3.947×10^{-4}	1.775×10^{-4}	0.026 28
pct_hispanic	-1.688×10^{-4}	1.333×10^{-4}	0.205 52
bachelor_degree	5.224×10^{-8}	2.177×10^{-8}	0.016 46
unemployment_rate_2016	-3.131×10^{-3}	4.434×10^{-4}	2.04×10^{-12}
regionNortheast	-2.369×10^{-2}	5.298×10^{-2}	0.654 87
regionSouth	-2.278×10^{-2}	1.371×10^{-2}	0.096 64
regionWest	-6.075×10^{-2}	1.219×10^{-2}	6.57×10^{-7}
pct_white:regionNortheast	7.192×10^{-4}	5.574×10^{-4}	0.197 06
pct_white:regionSouth	4.729×10^{-4}	1.406×10^{-4}	0.000 78
pct_white:regionWest	7.990×10^{-4}	1.201×10^{-4}	3.38×10^{-11}
pct_black:regionNortheast	4.596×10^{-4}	6.976×10^{-4}	0.510 01
pct_black:regionSouth	3.218×10^{-4}	2.149×10^{-4}	0.134 43
pct_black:regionWest	1.249×10^{-3}	6.929×10^{-4}	0.071 52
pct_hispanic:regionNortheast	-1.576×10^{-4}	6.643×10^{-4}	0.812 47
pct_hispanic:regionSouth	-7.472×10^{-4}	1.804×10^{-4}	3.54×10^{-5}
pct_hispanic:regionWest	7.330×10^{-6}	1.703×10^{-4}	0.965 66
bachelor_degree:regionNortheast	-9.491×10^{-8}	4.070×10^{-8}	0.019 76
bachelor_degree:regionSouth	1.138×10^{-7}	2.758×10^{-8}	3.78×10^{-5}
bachelor_degree:regionWest	-7.113×10^{-8}	2.496×10^{-8}	0.004 41
unemployment_rate_2016:regionNortheast	-4.023×10^{-3}	1.329×10^{-3}	0.002 49
unemployment_rate_2016:regionSouth	-2.290×10^{-3}	5.533×10^{-4}	3.60×10^{-5}
unemployment_rate_2016:regionWest	1.742×10^{-3}	6.681×10^{-4}	0.009 15

Robustness Checks

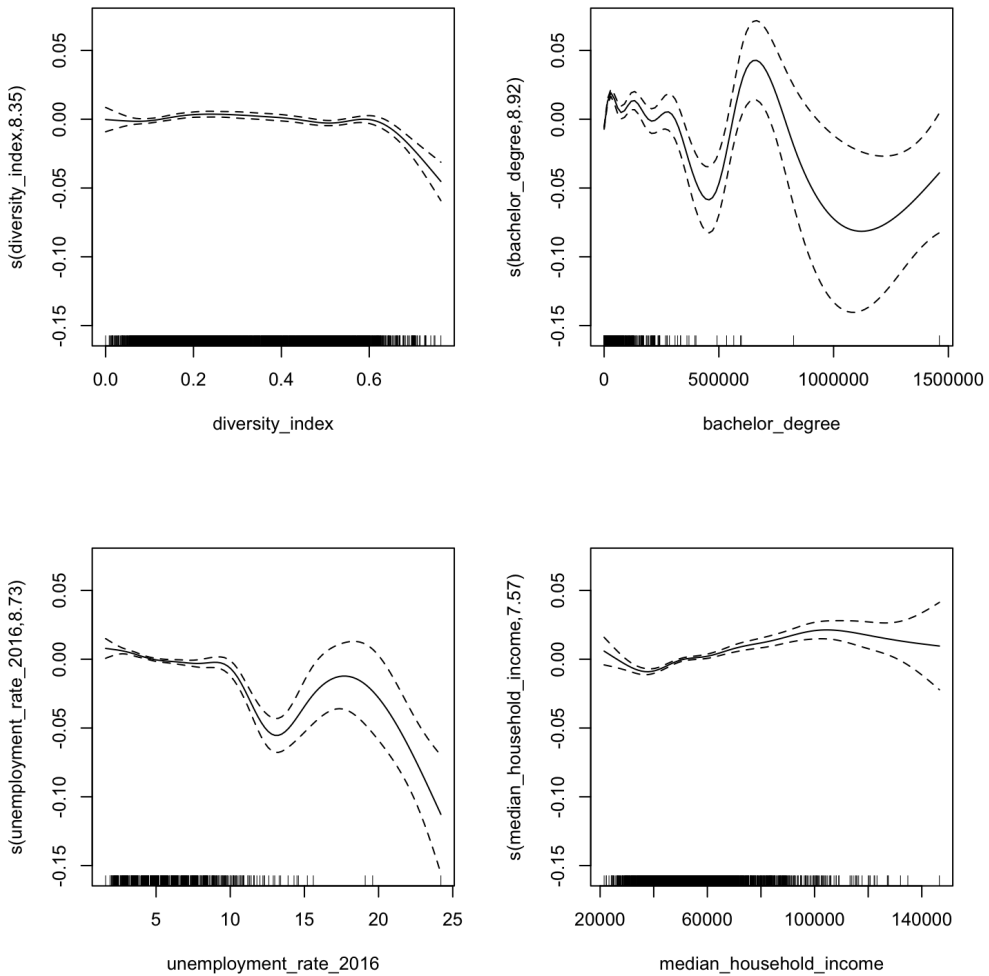
Results
Robustness Checks

Non-linear Effects on Change in Democratic Vote Share

All variables show **significant non-linear relationships** ($p < 0.001$)
Model explains 30.6% of deviance in Democratic vote share change
Adjusted R-squared: 0.299

Variable Effects:
Bachelor's Degree (edf: 8.920)
Unemployment Rate 2016 (edf: 8.728)
Diversity Index (edf: 8.350)
Median Household Income (edf: 7.572)

Simple linear models may not capture the full complexity of voting behavior



Conclusion

H1 Assessment

Hypothesis: Counties with increasing racial diversity will show a positive change in Democratic vote share

Overall relationship: **Weak positive, not statistically significant**

Diversity Index coefficient: 0.001199 (p-value: 0.636)

R-squared: 0.0001 (0.01% variance explained)

Quantile regression reveals varying effects:

Negative effect in lower quantiles

Positive effect in higher quantiles

Individual racial demographics more predictive than overall diversity

H2 Assessment

H2 is **not strongly supported** by the data

The impact of education on Democratic vote share **does not significantly vary** across income groups

There is a **weak positive correlation** between income and education's impact on vote share

H3 Assessment

H3 is **largely supported** by the data

Higher 2016 unemployment rates **are associated with** decreased Democratic vote share in 2020

The effect varies by region, local economic contexts matter

2016 unemployment level is a **stronger predictor** than change in unemployment from 2012-2016

Models explain less than 20% of variance, other factors are also important

H4 Assessment

Hypothesis: Significant interaction effects between education levels and racial demographics

Main Interaction Model Results:

Education * White: Positive (coef: 1.304e-08, $p < 0.001$)
Education * Black: Positive (coef: 5.005e-09, $p < 0.001$)
Education * Hispanic: Positive (coef: 6.905e-09, $p < 0.001$)

H4 Assessment

Separate Models for Majority Racial Groups:

White majority: Positive effect (coef: 1.916e-07, $p < 0.001$)
Black majority: Positive effect (coef: 1.999e-07, $p < 0.05$)
Hispanic majority: Non-significant (coef: 3.497e-08, $p = 0.786$)

Machine Learning: Confirms complex interactions
Regional variations in interaction effects observed

Notes

Due to time constraints, I couldn't cover all our findings today.

Refer to the full slides for a comprehensive view of all the findings!

Links

Links

Code & data: https://github.com/suzzukiw/democratica

Poster: https://repo.fufoundation.co/research/po399-democratica/poster.pdf

Presentation:

1. Today's presentation: https://repo.fufoundation.co/research/po399-democratica/slides-0628.pdf
2. Complete one: https://repo.fufoundation.co/research/po399-democratica/slides.pdf

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Questions?