CLOSUP Student Working Paper Series
Number 73

April 2021

# Vote Share Analysis Findings

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This paper is available online at http://closup.umich.edu



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# Vote Share Analysis Findings

By Chris Campbell, April 2021

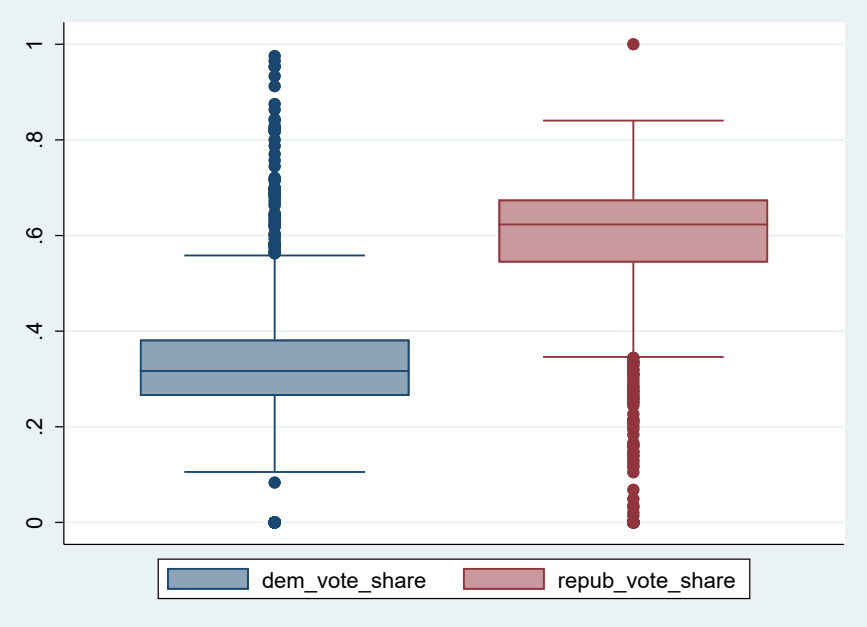
Each spring, the Michigan Public Policy Survey (MPPS) asks officials from Michigan's cities, townships, counties and villages about a range of topics concerning their jurisdictions' administrative, fiscal, and social health, as well as other relevant issues such as COVID-19, functioning of democracy, and the decennial Census.

We have merged MPPS responses with city and township-level data containing 2016 presidential vote to test the hypothesis that correlations exist between measures of partisanship and political homogeneity (that is, if the Democratic or Republican candidate won a overwhelming share of the vote) and how much faith MPPS respondents express in local, state, and federal election administration and the state of democracy overall. These summary statistics and basic regressions only demonstrate overall trends, but can help guide future inquiry and higher-level econometric analysis.

**Partisanship and Vote Share Data:**

Our dataset merges MPPS responses with 2016 presidential vote shares from each city and township within Michigan. Thus, our analysis is limited to MPPS respondents representing cities and townships – counties and villages are excluded.

Far more jurisdictions reported Republican majorities than Democratic districts. Because of this, Democratic vote shares are represented heavily by a few outliers where the party won more than 66% of the vote. This represents about 14% of all jurisdictions, while Republicans won more than two thirds of the vote in 29% of jurisdictions. Although total votes for each party were roughly even, the overall rural-urban partisan divide means Republican dominance in the numerous but lightly-populated rural districts will skew MPPS results more conservative than the state's overall politics would suggest.




Indeed, a breakdown of the MPPS's 7-point partisanship scale shows Republicans heavily represented among survey respondents, with "Strong Republican" the most common identification.

| 7-point partisanship scale | Freq. | Percent | Cum. |
|---|---|---|---|
| Strong Republican | 276 | 27.54 | 27.54 |
| Weak Republican | 173 | 17.27 | 44.81 |
| Independent leaning Republican | 124 | 12.38 | 57.19 |
| Independent | 155 | 15.47 | 72.65 |
| Independent leaning Democrat | 90 | 8.98 | 81.64 |
| Weak Democrat | 76 | 7.58 | 89.22 |
| Strong Democrat | 108 | 10.78 | 100.00 |
| Total | 1,002 | 100.00 | |

Additionally, about 14 percent of respondents identified with the minority party in their district. Democrats representing Republican-won jurisdictions constituted 12.04 percent of the entire sample. Republicans representing Democrat-won jurisdictions were much less common, as they constituted only 1.77 percent of the entire sample. These respondents may differ systematically in their opinions on democratic processes than their fellow partisans and warrant further exploration.

Democrats representing Republican-won jurisdictions

| d_rep_r | Freq. | Percent | Cum. |
|---|---|---|---|
| 0 | 1,592 | 87.96 | 87.96 |
| 1 | 218 | 12.04 | 100.00 |
| Total | 1,810 | 100.00 | |

Republicans representing Democrat-won jurisdictions

| r_rep_d | Freq. | Percent | Cum. |
|---|---|---|---|
| 0 | 1,778 | 98.23 | 98.23 |
| 1 | 32 | 1.77 | 100.00 |
| Total | 1,810 | 100.00 | |

**Political Homogeneity:**

Using vote share data, we can construct a six-point "homogeneity index" that equals 0 if neither party won more than 55 percent of the vote in a jurisdiction, 1 if one party won between 55 and 60 percent, two between 60 and 70 percent, three between 70 and 80 percent, and so forth. After eliminating entries without vote share data, we can see that 19 percent of jurisdictions are closely divided between the two parties. Meanwhile, one party dominated with over 90 percent of the vote in nearly 13 percent of jurisdictions, making them almost completely homogenous.

| hom_index | Freq. | Percent | Cum. |
|---|---|---|---|
| 0 | 344 | 19.01 | 19.01 |
| 1 | 280 | 15.47 | 34.48 |
| 2 | 695 | 38.40 | 72.87 |
| 3 | 233 | 12.87 | 85.75 |
| 4 | 28 | 1.55 | 87.29 |
| 5 | 230 | 12.71 | 100.00 |

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      Total |      1,810      100.00
```

**Demographic Characteristics:**

We can find the percentage of each jurisdiction's population that identifies as "white" by dividing its total 2010 population by the number of white residents in 2010. The median jurisdiction was over 96% white, and just over 1% of jurisdictions were majority-minority. This demonstrates the MPPS's heavily rural skew and the tendency for nonwhite residents to cluster in cities.

```
                          pct_white
-------------------------------------------------------------
      Percentiles      Smallest
 1%     .4349033       .0140554
 5%     .7423862       .0698346
10%     .8293022       .1061368       Obs               1,353
25%     .9317469       .2047381       Sum of Wgt.       1,353

50%     .9608276                      Mean           .9266779
                        Largest       Std. Dev.      .1004189
75%     .9722617       .9967213
90%     .9801604              1
95%     .9841076              1
99%     .9902572              1
```

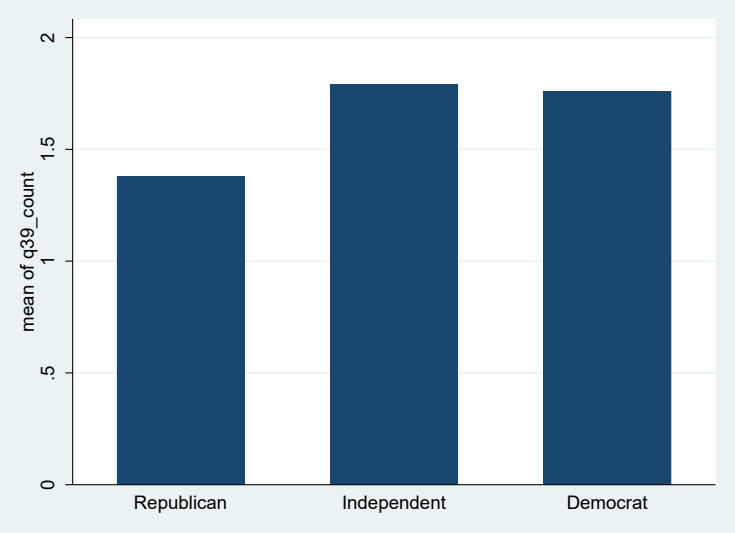
On the other hand, Black people comprise 14 percent of the state's population but the median jurisdiction is just 0.4% Black. Fewer than 1 percent of all jurisdictions are majority Black, and there are only three jurisdictions in the entire state that are more than 75% Black.

```
                          pct_black
-------------------------------------------------------------
      Percentiles      Smallest
 1%            0              0
 5%            0              0
```

| | | | | |
|---|---|---|---|---|
| 10% | 0 | 0 | Obs | 1,353 |
| 25% | .0018078 | 0 | Sum of Wgt. | 1,353 |
| 50% | .0045962 | | Mean | .0270166 |
| | | Largest | Std. Dev. | .0814992 |
| 75% | .0121894 | .7319563 | | |
| 90% | .0617876 | .8269053 | Variance | .0066421 |
| 95% | .1330911 | .8918111 | Skewness | 6.154237 |
| 99% | .455746 | .9532865 | Kurtosis | 50.19004 |

**Census Participation:**

Question 39 on the MPPS asks respondents about which of seven specific actions their jurisdictions are taking to encourage residents to complete the 2020 U.S. Census. We can construct a count variable to measure the aggregate level of effort each jurisdiction has put into Census promotion. After eliminating "Don't Know" responses, Republican-led jurisdiction took fewer actions on average than Independent and Democratic-leaning jurisdictions.




An OLS regression finds a significant negative relationship between Republican vote shares and the number of Census participation actions taken, holding political and racial homogeneity constant, as well as population density, constant. Political and racial homogeneity do not appear to have a consistent effect on q39_count, but more densely populated jurisdictions are likely to have taken more actions than lightly-populated jurisdictions, even after controlling for partisanship.

| q39_count | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| repub_vote~e | -2.333935 | .6180786 | -3.78 | 0.000 | -3.546986 | -1.120885 |
| pct_white | -.4280667 | .630254 | -0.68 | 0.497 | -1.665013 | .8088793 |
| pop_density | .8257878 | .0686538 | 12.03 | 0.000 | .6910469 | .9605286 |
| hom_index | .0979027 | .0846053 | 1.16 | 0.248 | -.068145 | .2639504 |
| _cons | 1.922746 | .5030296 | 3.82 | 0.000 | .9354928 | 2.91 |

**Confidence in own election administration:**

Question 25 measures respondents' confidence in five areas on a four point scale ranging from "Very Confident" to "Not Confident At All", plus "Don't Know". After eliminating the Don't Know responses, we can construct a "confidence index" in local election administration on a 15-point scale, with higher scores representing less overall faith.

Overall, jurisdictions displayed high confidence in their own election administration. 52% received a score of 0, reflecting full faith across all five areas. Only two jurisdictions recorded a score of 15, reflecting "No Confidence at All" across all five areas.

| confidence_ index | Freq. | Percent | Cum. |
|---|---|---|---|
| 0 | 452 | 52.56 | 52.56 |
| 1 | 69 | 8.02 | 60.58 |
| 2 | 103 | 11.98 | 72.56 |
| 3 | 39 | 4.53 | 77.09 |
| 4 | 38 | 4.42 | 81.51 |
| 5 | 105 | 12.21 | 93.72 |
| 6 | 17 | 1.98 | 95.70 |
| 7 | 18 | 2.09 | 97.79 |
| 8 | 6 | 0.70 | 98.49 |
| 9 | 5 | 0.58 | 99.07 |
| 10 | 4 | 0.47 | 99.53 |
| 11 | 2 | 0.23 | 99.77 |
| 15 | 2 | 0.23 | 100.00 |

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      Total |        860      100.00
```
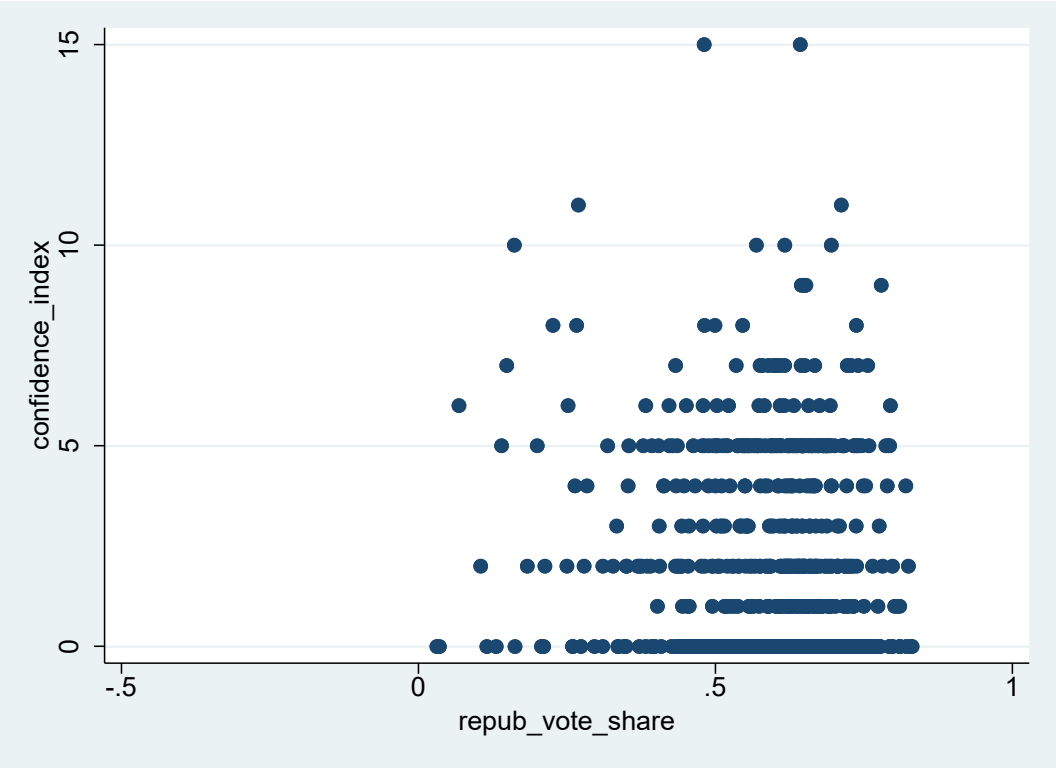

Looking at confidence index scores graphed against the Republican presidential vote share, neither partisanship nor political homogeneity seem to have a large effect on confidence in local election administration.



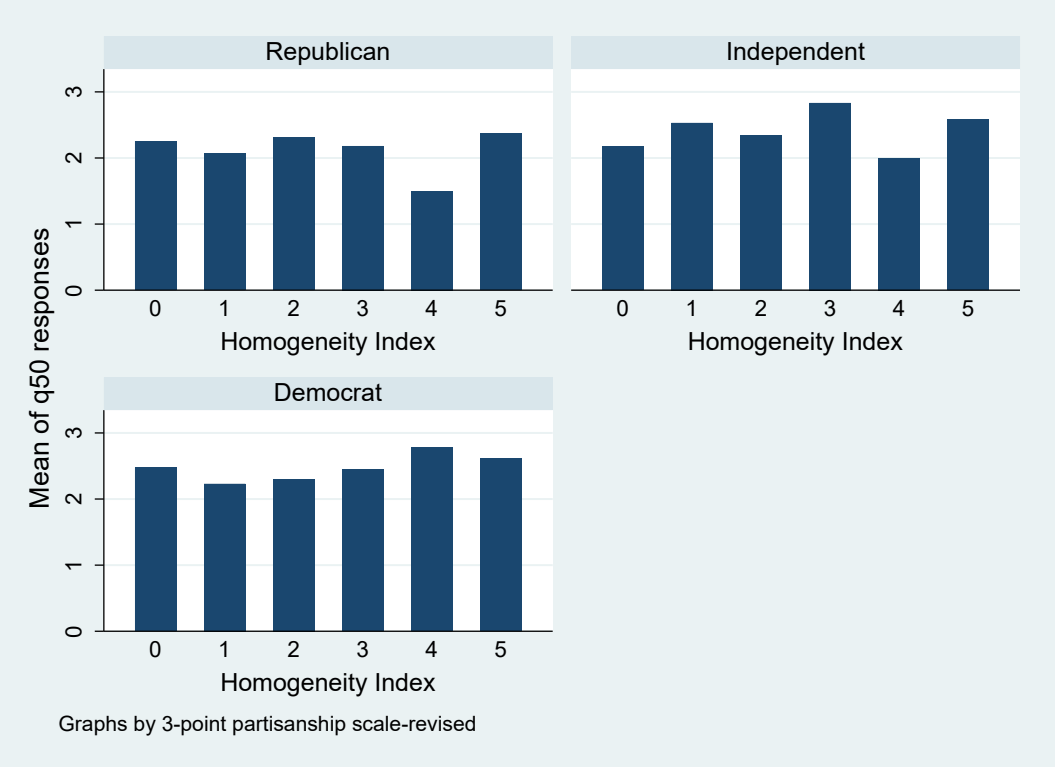

An OLS regression bears this out – controlling for political and racial homogeneity, as well as partisanship of the respondent, the only significant variable appears to be population density, with denser areas less likely to express confidence.

```
Linear regression                               Number of obs     =        819
                                                F(4, 814)         =       2.58
                                                Prob > F          =     0.0360
                                                R-squared         =     0.0118
                                                Root MSE          =     .49587

------------------------------------------------------------------------------
```

| | Robust | | | | |
|---|---|---|---|---|---|
| q25_veryco~t | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. Interval] |
| hom_index | -.0215106 | .029029 | -0.74 | 0.459 | -.0784912 .03547 |
| threepty | -.0098807 | .0211219 | -0.47 | 0.640 | -.0513406 .0315791 |
| pop_density | -.0711861 | .0234293 | -3.04 | 0.002 | -.117175 -.0251972 |
| pct_white | -.3022261 | .1779561 | -1.70 | 0.090 | -.6515331 .0470808 |
| _cons | .8700783 | .1944349 | 4.47 | 0.000 | .4884255 1.251731 |

**Faith in Citizens to be responsible participants in democracy**

Question 50 asks respondents to rate their confidence in citizens of their jurisdiction to be responsible participants in democracy on a 1-5 scale. Higher scores reflected less confidence. There does not appear to be a clear relationship between political homogeneity and confidence in citizens, although Republicans across the scale tended to be slightly more trusting than their Independent and Democratic counterparts.

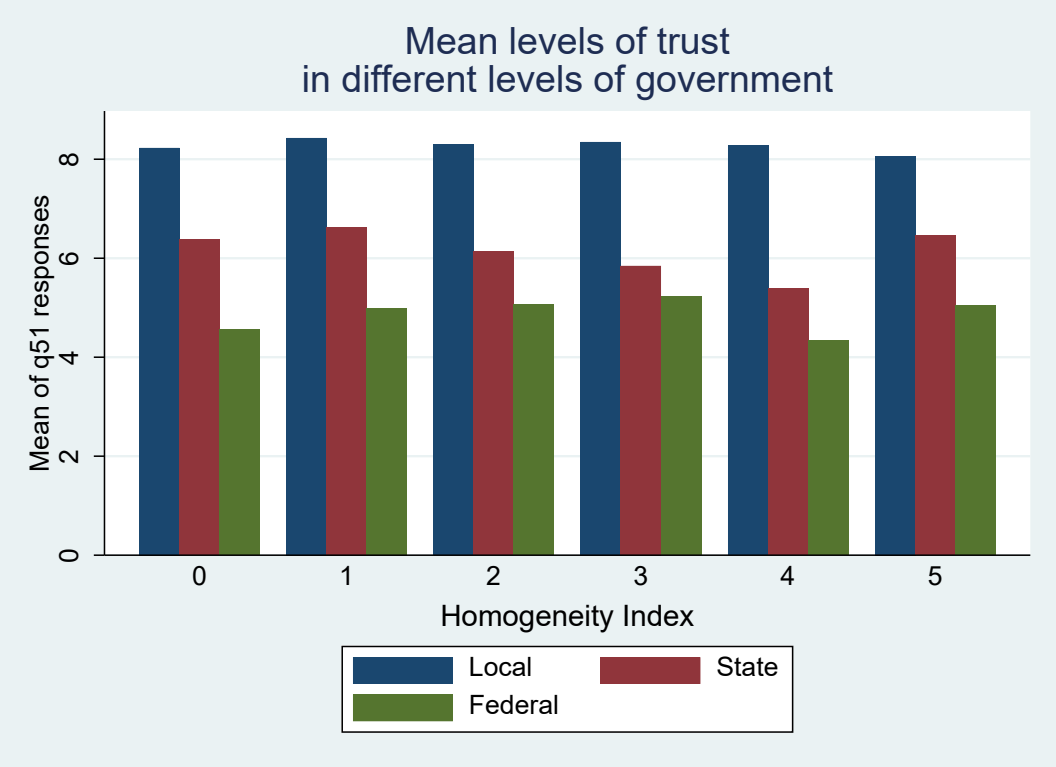


In an OLS regression, no measure of political or racial homogeneity, nor population density, figure significantly into a respondent's confidence in citizens.

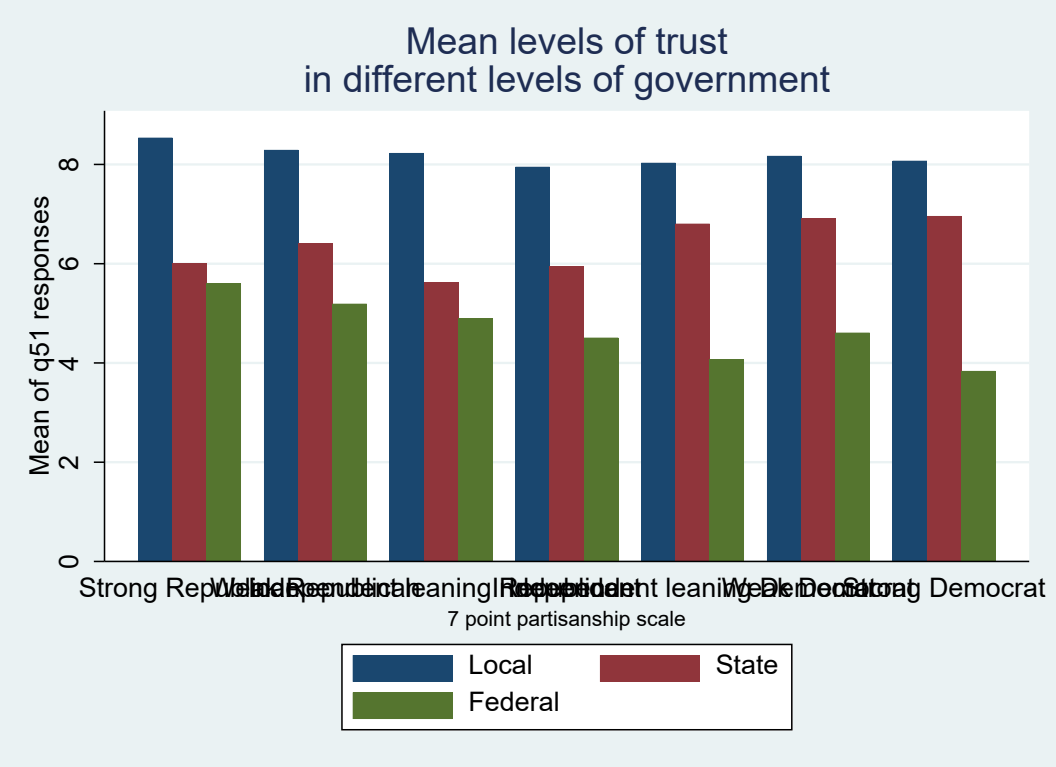
```
Linear regression                               Number of obs     =        978
                                                F(4, 973)         =       0.32
                                                Prob > F          =     0.8659
                                                R-squared         =     0.0009
                                                Root MSE          =     .90577

------------------------------------------------------------------------------
             |               Robust
         q50 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
repub_vote~e |   .2300711   .3523392     0.65   0.514    -.4613611    .9215034
   hom_index |  -.0231919     .03101    -0.75   0.455    -.0840462    .0376623
   pct_white |  -.2629785   .3359788    -0.78   0.434    -.9223049     .396348
 pop_density |  -.0232258    .041792    -0.56   0.579    -.1052386     .058787
       _cons |   2.465666    .286681     8.60   0.000     1.903082    3.028251
------------------------------------------------------------------------------
```

**Functioning of Democracy across different levels of government.**

Question 51 asks respondents to rate the functioning of democracy across local, state, and federal levels on a 1-10 scale, with 1 representing a "total breakdown of democracy" and 10 representing a "perfectly function democracy." The homogeneity index appears to have little bearing on confidence in any of the three levels:




Partisan affiliation (measured by partyid in the survey) affects results according to leadership, with Democrats more confident in state government and Republicans more confident in federal government. Local confidence remains high across all categories, although perhaps slightly higher among Strong Republicans.




Finally, jurisdictions across the urban-rural spectrum display similar levels of confidence across all three levels of government, with the exception of "Urban Clusters," smaller towns in rural areas which tend to display slightly lower levels of confidence.