John Carroll University

The Journal of Economics and Politics

Volume 26 | Issue 1 Article 4

2021

A Battleground No More: Cosmopolitanism, the Culture Wars, and the Urban-Rural Divide in Ohio Elections, 2004-2020

Colin D. Swearingen
John Carroll University, cswearingen@jcu.edu

Thomas Lindstrom
John Carroll University, tlindstrom23@jcu.edu

Recommended Citation

Swearingen, Colin D. and Lindstrom, Thomas (2021) "A Battleground No More: Cosmopolitanism, the Culture Wars, and the Urban-Rural Divide in Ohio Elections, 2004-2020," *The Journal of Economics and Politics*: Vol. 26: Iss. 1, Article 4.
DOI: https://doi.org/10.59604/1046-2309.1046
Available at: https://collected.jcu.edu/jep/vol26/iss1/4

Introduction

The state of Ohio has long been considered the quintessential battleground state, playing a key role in deciding numerous presidential elections. In fact, using the concept of a "tipping point state", popularized by Nate Silver, Ohio has been the deciding state six times throughout American's history, second only to New York ("Tipping-Point State," 2021). Yet the Buckeye State's designation as a battleground is fading. After being a key battleground in President Obama's 2012 reelection campaign, Donald Trump won the state's two-party vote by over eight percent despite losing the national popular vote by more than two percent (Dave Leip's Atlas of U.S. Presidential Elections"). This state-national voting difference can be measured using Cook's partisan voting index (PVI). After having very little partisan lean throughout the second half of the twentieth century, Ohio had a three-point GOP lean after 2016 ("State PVIs"). This pro-GOP advantage only increased after Joe Biden's victory in 2020, when Trump once again won Ohio's vote by roughly eight percent despite losing the national popular vote by five percent ("Dave Leip's Atlas of U.S. Presidential Elections"). This increased Ohio's pro-GOP lean to six percent, which falls outside of the Cook Political Report's traditional battleground measure ("Introducing the 2021 Cook Political Report Partisan Voter Index").

The central question of this manuscript is what is behind these partisan shifts? We make a significant contribution to the literature by testing hypotheses from two strands within realignment theory in the context of a state that is undergoing significant partisan change: geo-cultural and socioeconomic/cosmopolitanism. The political science literature on realignments often focuses on each explanation singly. Cultural issues are driving partisan changes, especially issues such as abortion (Adams 1997), environmentalism (Lindaman & Haider-Markel, 2002), race (Valentino & Sears, 2005), and religion (Campbell et al., 2018). There is also a robust literature on the growing urban-rural divide (Gimpel, 2021; Johnston et al., 2019; Kelly & Lobao, 2019). Some of these studies include economic factors as control variables, but they do not delve into the nuance of shifting economic fortunes at the sub-county level. By studying the more than 1,500 communities across Ohio, we find evidence that both explanations are at work across the state. Specifically, both Democrats and Republicans made gains in their geographic strongholds, but Democrats have made larger inroads in more cosmopolitan communities. However, Republicans made huge gains along the cultural dimension, giving them a strong advantage throughout the state. These results have implications for not only future presidential campaigns and how they target Ohio's persuadable voters, but also for down ballot races in both the primary and general elections.

Realignment: Describing Partisan Change

It was in 1955 when V.O. Key conceptualized critical realignments as those elections in which public intensity is high and the outcome indicates a break from pre-existing cleavages. The result of these elections is a durable shift in the party system. As evidence, he pointed at the 1928 presidential election in New England, where the Democratic nominee, Al Smith, gained traction among low-income, Catholic, and immigrant voters (Key, 1955). Key's conceptualization was picked up by other scholars, who worked to build a coherent theory of national partisan change and identify which elections fit accordingly (see also Schattschneider, 1960; Burnham, 1971; Sundquist, 1983).

The idea of critical realignments, while appealing, has empirical and conceptual issues, perhaps best embodied by Mayhew's critiques (2000; 2008). Most relevant for this project is the idea that realignments are national in nature and are embodied by sudden change. In fact, it was V.O. Key himself, who in 1959 wrote about secular realignment, noting that we can better

understand party systems by considering decades-long shifts in party attachments among voters. He also considered that these changes could occur by voters experiencing a decay in, or a new development of, party attachments (Key, 1959).

Since Key's pivotal work in 1959, a plethora of scholars have explored secular realignments. Some have found, as Key hypothesized, that partisan changes occur when some voters convert from one political party to another (Ladd & Hadley, 1975). This happened in the South when the parties took distinct positions on race, culminating in the Republicans picking up several southern congressional seats in the 1994 midterm elections (Abramowitz & Saunders, 1998). In some instances, voters are demobilized, leaving the electorate for one reason or another (Shively, 1992), while others can be mobilized to enter the electorate (Campbell, 1985; Erikson & Tedin, 1981).

Another component of secular realignment is that it can be regional or even statewide rather than national (Bullock et al., 2006). A classic example of this is the post-New Deal realignment that occurred in the South, transitioning it from the Democratic Solid South to the Solid South that gave Republican presidential candidates all, or nearly all, of their electoral votes in 1972, 1980, 1984, 1988, 2000, and 2004 (Abramowitz & Saunders, 1998; Petrocik, 1987) and a majority of its congressional seats after 1994 (Bullock et al., 2005). Yet regional realignment was not confined solely to the South – Republicans made considerable gains in the Mountain West throughout the 1950s-1980s (Bullock, 1988), while Democrats were ascendant in the northeast throughout the early 2000s (Scala & Johnson 2017); Democrats made gains in the New Southern states of Virginia and North Carolina during the 2000s (McKee & Teigen, 2016), while the GOP increased their vote share in the Industrial Midwest in 2016 (Monnat & Brown, 2017).

As noted in the introduction, Ohio is not immune to these changes. Despite its long-time status as a battleground state, it is trending Republican. In addition, even when its partisan lean was stable, there were voting shifts throughout the state. Hackworth (n.d.) finds that significant changes were occurring not just in rural Ohio, but in its suburbs from the 1940s through the 1960s largely due to race. Such changes were present throughout the state over the past 30-plus years. Clark County (home of Springfield), which lies between Columbus and Dayton, was a Republican-leaning county (PVI of R+4) in 1988 before becoming dead even in the early 2000s; it is now solidly Republican with a PVI of R+12. On the other side of the spectrum is Franklin County, home of the state capital, Columbus. After the 2020 election, one GOP official stated that "there are two or three times as many Democrats here as there are Republicans" (Kovac, 2020). Yet this trend was anything but new: a Republican-leaning county after the 1988 election (R+6), it moved to a toss-up as early as 2000 and is now solidly Democratic (D+13).

Trends in suburban Ohio follow those seen nationally. The suburbs can be a bit of mix between old and new, cosmopolitanism and traditional values (Gimpel et al., 2020). In some cases, suburbs and exurbs are trending Republican (Scala & Johnson 2017). Yet, in others, the opposite is occurring. Gimpel et al. (2020) note that many suburbs across the nation are becoming more diverse as African American and Latino voters move away from central cities. In addition, those with the highest incomes are primarily located in the suburbs. These subtle distinctions and realignment nuances warrant in-depth theoretical and empirical analyses.

Culture vs. Economics: Explanations of Partisan Change

With a broad understanding of the realignment literature and an overview of the shifting partisan dynamics in Ohio, we now explore possible theoretical explanations for why the state is changing. Below we detail two concepts that will drive our empirical tests: geo-cultural and

socioeconomic/cosmopolitanism. These concepts are not mutually exclusive, but they are distinct enough to generate separate hypotheses.

Culture Wars and the Urban-Rural Divide

Political pundits talk about the culture wars on a regular basis. Culture wars may "break our democracy" (Stanton, 2021), have set the stage for "cancel culture" (Bump, 2021), are inevitably won by liberals (Prothero, 2016), and were supposed to end during Obama's first presidential term (Teixeira, 2009). Hyperbole and poor predictions aside, political scientists argue that the culture wars are an important concept in understanding partisan shifts (Highton, 2020; Valentino & Sears, 2005; Pierson, 2017).

Donald Trump's victory in 2016 brought greater scrutiny to this discussion, particularly in the context of urban versus rural voters. Articles featuring pig farmers in Wisconsin who loved Trump's pledge to "Make America Great Again" (Carey, 2016), high rural turnout in 2016 demonstrating that these voters wanted "revenge" (Evich, 2016), and how and why Trump bested Romney's 2012 performance in small town America (Shearer, 2016) were ubiquitous. The important thing to note, though, is that this partisan shift was not a sudden departure from the past. As Johnston et al (2020) observe, counties across America have become more polarized. In 1992, only 38 percent of counties were "landslide counties," or those that gave one party at least 60 percent of the vote; the rest were at least somewhat competitive. From 1992 to 2012, the share of landslide counties increased significantly, highlighting how much had shifted prior to Trump's election.

The link between cultural divisions and partisan change is rooted in Stimson's and Carmines's (1989) seminal work on issue evolution. Building on Key's theory of secular realignment, they argue that partisan shifts occur over long periods of time. As specific issues increase in salience on which the parties take distinct positions, the connection between a voter and their preferred party can be altered. The resulting shift in partisan coalitions is a two-step process: elites must take clear and differing stances on salient issues, to which the masses respond (Bawn et al., 2012). Which issues drive change? It depends on the era and party system. Miller and Schofield (2003; 2008) argue that during the New Deal coalition, economic issues cleaved the two parties. Democrats could maintain their governing majority as long as they minimized cultural issues, thus holding together their precarious coalition of the northern working class, minority, and immigrant voters, along with white southerners. Beginning in the 1960s, cultural issues – specifically race – split the Democratic Party. As these issues rose in prominence, the party coalitions reformed along a combination of economic and cultural issues. Populist, conservative Democrats shifted to the Republican Party, while highly educated, wealthy urban and suburban voters that had been New Deal Republicans began voting for Democratic candidates.

Race is certainly one cultural issue that divides voters, but it is not the only one. Adams (1997) identified abortion as a key cultural issue that led to a significant shift in party identification throughout the 1970s-1990s. A few years later, Lindaman and Haider-Markel (2002) examined others, including gay marriage, pornography, environmentalism, and gun control, finding that the latter two were a significant component of the long-term shift in party coalitions. Yet another aspect of culture is religion, as those with secular orientations have different political beliefs from those who are deeply religious (Campbell et al., 2018). In many ways, this difference is exemplified by the feeling among rural voters that their traditional way of life is being uprooted by a changing nation led by large cities.

Gimpel et al. (2020) describe the origins of this divide as well as the importance that distance plays in establishing different cultural identities. They note that until the 20th century, the urban population was not significant enough for there to be a political difference. As America became increasingly urban, the differences between the two geographic types developed. Urban living can create social isolation among individuals and can encourage deviation from traditional social morality. Rural communities, conversely, possess the characteristics of self-reliance and traditionalism. These identities are laid down because of distance: it isolates the cultures and determines social interaction. Cultural differences are thus the product of two populations being separate from one another.

The significant differences in how urban and rural America view politics allows us to generate multiple geo-culturally based hypotheses:

H_1: We hypothesize that a community's share of traditional populations has a positive relationship with GOP voting gains.

H_2: We hypothesize that a community's distance from a central city has a positive relationship with GOP voting gains.

It's the Economy, Stupid: Cosmopolitanism & Populism

The culture wars may lead to partisan change, but economics still plays a vital role in American politics. The two economic paradigms split American politics: cosmopolitanism and populism. Cosmopolitanism, which Jennings and Stoker (2017) define as encompassing a global orientation, tends to exist in more urbanized areas, but is not necessarily solely contingent on geography. Schueth and O'Loughlin (2008) find that cosmopolitan identification is strong among those who are environmentalists, youthful, less patriotic, higher educated, and living in areas with high immigrant populations — all typically characteristics of more urban populations. The preference for cosmopolitanism in urbanized areas arises largely out of economics. Gimpel et al. (2020) describe cities as "centers of innovation" with the best access to "information about the latest consumer products and technological innovations" — traits attractive to the cosmopolitan identity. Importantly, cosmopolitan preferences are not only held by young urban professionals, but often also by the working class on their immediate periphery (Jennings & Stoker 2017).

Jennings and Stoker (2017) identify a fragmentation of working-class groups along new and traditional occupations. As urban areas transition into post-industrial economies, the urban working class largely finds employment in the service sector attending to the needs of wealthier, urban professionals. In this way, urban workers participate more directly — even if tangentially – – in the cosmopolitan economy. In contrast, workers in agricultural and the diminishing industrial sectors, participate less visibly and more indirectly to the modern globalized economy dominated by urban professionals. This results in unequal access to the fruits of globalization, contributing to national populist, anti-cosmopolitan backlashes (Spicer, 2018). By nature of their work, these traditional workers often reside in less urbanized areas. Thus, geo-cultural dynamics described in the previous section compound and amplify the cosmopolitan-versus-populist dynamics of this section. One notable exception, which helps demonstrate the economic dimension of cosmopolitan identity, is rural areas near recreational amenities like natural landmarks, summer lakes, and ski areas. Residents of these places tend to work in recreational/service sector occupations rather than the agricultural/industrial sectors typical of rural areas. As such, they vote closer to urban, cosmopolitan voters than the rural voters that their geography may suggest (Scala & Johnson, 2017).

Cosmopolitan voters play an important role in recent partisan shifts in American politics. Miller and Schofield (2003) divide voters into four groups, with cosmopolitans being those who tend to be economically conservative but socially liberal. These voters' economic fortunes are intimately tied to the globalized, cosmopolitan economy. They were solidly Republican under the New Deal coalition but were critical to President Clinton's reelection in 1996. Subsequent moderation by the Democrats on economic issues and wariness of the GOP's increasing conservatism on social issues have continued this shift.

Of course, there is a natural tug-of-war in electoral politics, and as cosmopolitans were trending Democratic, populists who had been Democrats during the New Deal era were increasingly likely to support Republican candidates. These voters tend to think the immigration bill signed into law by President Reagan was a mistake (Miller & Schofield, 2008) and believe decisions made by political elites are resulting in declining communities (McQuarrie, 2017).

There is some overlap between the urban-rural divide and cosmopolitanism. As Miller and Schofield (2003; 2008) point out, there is a cultural dimension to cosmopolitanism — a social liberalism produced by the diversity of urban life complimentary to cosmopolitanism. Likewise, there is an economic component to the culture wars as voters in traditional occupations and rural communities feel left behind by the economy of the 21st century. But as the authors point out, culture and economics are two distinct dimensions in electoral politics; they manifest similarly in American politics (largely because of the pervasive influence of geography) but are causally distinct. The geo-cultural cleavage emerges chiefly out of the intrinsic differences between urban and rural social life as a function of remoteness and population density (Gimpel, 2020). Conversely, the cosmopolitan/populist cleavage emerges from the disparate regional impacts of globalization. Cosmopolitans, with their access to global capital and culture (often, but not always, by way of urban life) emerge as winners in the new economy. They benefit from generally conservative economic policies while pursuing socially liberal projects befitting of cosmopolitanized aesthetics of social egalitarianism. Meanwhile, workers in more traditional occupations, economically detached from the flow of global capital and culture, turn to the politics of reactionary populism and anti-elitism (Spicer, 2018).

With the distinctiveness of cosmopolitanism as a dimension of voting and the above rationale in place, we deduce the following hypothesis:

> H_3: We hypothesize that a community's level of cosmopolitanism has a negative relationship with GOP voting gains.

Data & Methods

With a variety of cultural/economic issues at play in American politics, the challenge is identifying how this plays out across the urban-rural divide in the aggregate. The above-referenced studies often conceptualize these issues at the individual-level of analysis. However, studying realignment among individual voters is difficult, requiring panel studies over not just years, but possibly even decades. Shifting the unit of analysis from the individual to the electorate can alleviate this problem (Highton, 2020). We choose to analyze realignment at the community level because it allows us to increase the number of observations; it also adds nuance to the analysis as communities vary widely in their election results, even within the same county.

Data

The unit of analysis for this study is each minor civil division (MCD), or community, in the state of Ohio. MCDs are one of the primary units of county subdivision designated by the U.S.

Census Bureau. Each MCD is composed of exactly one sub-county legal entity; in Ohio these entities are either townships, villages, or municipalities. As of 2020, Ohio's 88 counties contain 1,601 MCDs, although this includes a few dozen communities that span parts of two counties, some communities that have recently been combined, and some that have no population (such as islands in Lake Erie). These MCDs are also referred to as community subdivisions; hereafter, when we use the term "community", we are using it in this context.

Every year, the U.S. Census Bureau conducts the American Community Survey (ACS), which offers five-year estimates of more detailed demographic categories than is offered by the decennial census. This study allows us to compare a number of demographic variables from the ACS to election results at the presidential level from 2004 to 2020. The Ohio Secretary of State reports election results at the precinct level, typically smaller geographic entities than MCDs. For the purposes of comparison, precinct-level election data was aggregated to the MCD level.

Occasionally, MCDs are split by county lines. When this occurs, each split is reported as a separate entity in the ACS data. Wherever possible, precincts were aggregated to reflect these irregularities. Further, a single election precinct occasionally serves more than one MCD in some years. When this occurs, the precinct election data was split and weighted according to the population of each MCD. Lastly, yearly ACS data was sometimes missing for a small number of MCDs due to small sample sizes. Given these irregularities in the data, it was sometimes impossible to map MCD-level ACS data to corresponding election results. In the years that this was the case, the MCDs with missing election data were omitted from the statistical models. All told, our analyses include between 1,510 and 1,560 observations, depending on the election cycle and precinct overlap.

The key questions this paper centers around address changes in voting behavior across Ohio. To do this, we construct five dependent variables. The first four measure the GOP presidential vote share for each election from 2008 to 2020, which allows us to see how the cultural and socioeconomic factors have changed in importance over time. The final dependent variable measures the percent change in GOP presidential support from 2004 to 2020 and is calculated by subtracting the 2004 GOP vote share from the 2020 GOP vote share.

Our explanatory variables were selected to estimate the two dimensions of partisan realignment theorized above: geo-cultural and the cosmopolitan/socioeconomic. For the cultural dimension, we use native-born population, measured at the community level by the ACS. We test the geographic dimension in two ways, each with its own set of models. First, we use the urban-rural continuum created by the Office of Management and Budget (OMB) and used by Scala & Johnson (2017) which groups counties into categories based on population density. The continuum ranges from the most urban metropolitan core counties to the most rural outlying counties nonadjacent to any metropolitan or micropolitan area. In all, there are eight types; we include seven in our models, leaving micropolitan areas as the reference category, as can be seen in Figure 1.

Our second measure of geography stems from the Gimpel et al. (2020) theory based on distance and density. For these models, we calculated the distance between a community's centroid (geographic center) and the nearest city of at least 100,000 people. There are six such cities in Ohio: Columbus, Cleveland, Cincinnati, Toledo, Dayton, and Akron. Because the relationship between distance and presidential vote share is nonlinear, we use the natural log of distance in our models. Density was measured as the thousands of people per square mile of land in each community.

For the socioeconomic dimension we use four explanatory variables characteristic of cosmopolitan demographics outlined in the previous section: median household income (in

DOI: 10.59604/1046-2309.1046

$10,000s), the percent of the population with a bachelor's degree or higher, the percent of the population between 20 and 29 years old, and the percent population change between elections. Each of these variables are measured at the community level by the ACS. Two caveats are necessary: first, the 2020 ACS data are not yet available, so we use 2019 data; second, the inaugural five-year ACS estimates came in 2009, which we use for the 2008 election. We are confident that the data for these two cycles are valid because the five-year estimates are weighted toward the end of the time series and thus do not change dramatically from one year to the next.

Finally, we include the community's percent Black population, percent Latino population, and region within Ohio (as demarcated by the Ohio Secretary of State) as control variables. The Ohio Secretary of State splits the state into six regions; in our analyses, we include dummy variables for five regions (southwest, west, northeast, southeast, and central) and leave the northwest as the reference region.

Methods

Normally with continuous dependent variables, OLS regression would be an appropriate statistical method of analysis. However, whenever dealing with geography, *Tobler's First Law of Geography* must be considered: "Everything is related to everything else, but near things are more related than distant things" (ESRI N.D. *a*). Basically, communities and their associated data tend to be clustered together in space (ESRI N.D. *b*). In this manuscript, we detailed theoretical reasons for why communities and their presidential vote shares should be related to distance and geography. As such, we must test for the presence of spatial autocorrelation. Tables 3-5 provide evidence for the presence of spatial autocorrelation in the OLS models, as Moran's I test statistic is significant for each model. Ignoring the presence of spatial autocorrelation can introduce bias into our coefficients and their standard errors; to account for this we run spatial error regression models, which employ a spatial autoregressive error term to correct these biases (Anselin, 2005).

Results

As a whole, Ohio has voted increasingly Republican at the presidential level from 2004 to 2020. However, there are noticeable geographic differences in the vote shifts. Table 1 shows the average community-level GOP presidential two-party vote shares by region and geographic distinction. Southeastern, mostly Appalachian, Ohio shifted from an average of 56.42% Republican in 2004 to 76.82% in 2020, a remarkable 20-point shift. Northeast and Northwest Ohio experienced 8-point shifts in average GOP presidential vote shares; Central Ohio experienced just under a 7-point shift. Southwestern Ohio saw the most modest GOP gains, shifting only from 65.63% Republican to 69.6%. Notably, Northeast Ohio, despite seeing an 8-point increase in Republican vote share, remains the least strongly Republican region of the state at 58.33% Republican in 2020 — the only region to average less than 60% for Donald Trump's reelection.

However, examining the trends year to year, the swing Republican from 2004 to 2020 was not linear. Each region of the state saw *decreased* Republican vote shares in 2004 to 2008, as the state swung pivotally towards Barack Obama (although only in Northeast Ohio did the average community vote majority for Obama). In 2012, each region ticked very modestly back towards Republicans; until in 2016, with Trump's first election, each region swung heavily GOP. Each region except the Southwest and Northeast saw double-digit shifts in favor of the Republicans. The vote shares remained about stable between 2016 and 2020, inching slightly more Republican everywhere except in the Southwest.

Approaching the vote shifts by urban-rural continuum designation, regardless of region, offers further useful insights. From 2004 to 2020, each designation type shifted in the Republican

candidate's favor except the large metropolitan cores, which shifted about 8-points away from Republicans. GOP gains were largest in the most remote parts of the state. Both nonmetropolitan adjacent and nonadjacent saw about 17-point shifts towards the GOP. Large metropolitan suburbs and small metropolitan suburbs saw just under 7- and 13-point shifts, respectively — each substantially less than their corresponding core counties.

From 2004 to 2008, all designation types saw decreases in the Republican vote share; then, similarly to the regional breakdown, all but the large metropolitan core counties saw slight ticks back towards Republicans in 2012. Then, with the election of Trump in 2016, all but the large metropolitan core counties saw 10+ point shifts towards Republicans. Large metropolitan cores saw a further point shift away from Republicans. Again, the most remote counties saw the largest shifts towards Trump.

Figure 2 shows the change in two party presidential vote share between 2004 and 2020 at the MCD level. The five major cities labeled on the map reflect a continuation of strong Democratic support in the most urban areas. The cities themselves show small Democratic gains in Cincinnati and Columbus and small Republican gains in Cleveland, Dayton, Toledo, and Akron. But, given the starting point of strong Democratic support, a shift in either direction is marginal to the broader trend evident in Table 1: urban areas (and their immediate suburbs) are voting less and less Republican. Most MCDs adjacent metropolitan city cores show moderate to strong shifts towards Democrats. (MCDs directly adjacent city cores are generally treated as part of the city core for purposes of the urban-rural continuum.) As MCDs move further from city cores, (into small and large suburbs on the urban-rural continuum) shifts become more moderate and mixed. Generally, these MCDs experienced moderate Republican shifts, but a number experienced moderate Democratic shifts as well. These are some of the few remaining battlegrounds in the state. The places that saw the greatest shifts towards Republicans were the most remote parts of the state and (relatedly) the Appalachian regions of the state. The southeast and far east of the state experienced substantial shifts towards the GOP, providing strong evidence of realignment in these areas.

Table 2 shows descriptive statistics for the seven continuous variables. The number of each variable fluctuates slightly due to inconsistencies in the ACS data (median income data was not reported for some about 20 MCDs, for instance). The median Ohio community is 99.1% native (standard deviation of 2.87) and 96.7% white (standard deviation of 10.9) indicating a low rate of racial and ethnic diversity. Further, the median Ohio community saw a -0.85% decline in population. However, the standard deviation of population change was quite high at 17.94, indicating disparate impacts of the general trend of population decline. For instance, Lenox Township in Ashtabula County saw the highest percent population growth in the dataset at a 98% increase.

Figure 3 shows the two-party presidential vote share for just the 2020 election. It offers more support for the general trends in Figure 2 and one key additional insight. Figure 3 shows strong Democratic support in city cores and immediate suburbs with decreasing Democratic support moving outwards. What this map emphasizes, which is less evident in Figure 2, are two other micropolitan areas: Youngstown in the northeast and Athens in the southeast. The core MCDs of these micropolitan areas show moderately strong Democratic support but are unremarkable when looking only at Figure 2. This suggests a more stable, unchanging support for both Democratic and Republican candidates in micropolitan areas.

Moving to our multivariate models, Table 3 displays the results of the 2008-2020 presidential election results using the urban-rural continuum as the geographic explanatory

variables. The R-squared for each model is at least 0.72, and as indicated in the previous section, the Moran's I test of spatial autocorrelation is statistically significant. For each model, the Akaike info criterion (AiCc) is lower for the spatial error regression than for the OLS model, indicating that the former does a better job of explaining the dependent variable (Anselin 2005). Finally, the lambda spatial error term is statistically significant, which suggests that the model was improved overall by using the spatial error regression.

Taking each year in sequence, the 2008 election exhibited evidence of both geo-cultural and cosmopolitan differences across Ohio communities. First, the urban-rural divide was present as communities in large metro core counties, small metro core counties, and small metro suburbs were more favorable to Senator Obama than to Senator McCain, while the opposite was true among those in other metro and non-metro counties. In addition, the native-born percentage was both positive and significant, as hypothesized: each percentage of native-born population was expected to add 0.17 percent to McCain's vote share. For the median community (99.1 percent native-born), this equated to nearly 17 percent.

Three of the four cosmopolitan variables were statistically significant: the percentage with a college degree and share of young people were negative and statistically significant; median household income was positive and statistically significant. The first two variables, with low coefficients and medians, did not provide much substantive significance (each contributed an expected one percent to Obama). Median household income, on the other hand, was more substantively significant: communities at the median level of income (roughly $60,000) were expected to add just over 10 percent to McCain's vote share.

Four years later, when President Obama faced reelection, the story was much the same. Communities in large metro core, small metro core, and small metro suburban counties were expected to vote more Democratic, while those in other metro counties were expected to vote more Republican. In terms of the geographic variables, once again, other metro and non-metro countries were favorable to the Republican nominee, adding about five percent and two percent to his vote share, respectively. One deviation from the 2008 model was that communities in nonmetro adjacent counties were expected to add about two percent to Romney's vote share. The biggest difference was that the percent native-born was not statistically significant.

In terms of cosmopolitanism, three of the four variables were statistically significant, although this time it was median household income (positive), the percentage of young people (negative), and population change (positive). The last two were not substantively significant, but communities with a high median household income were generally staunchly Republican: the median community in terms of income gave Romney an additional 10.8 percent; those that were one standard deviation above average were expected to give him an additional 50 percent.

The 2016 presidential election saw slight changes to the model's results. Consistent with 2008 and 2012, large and small metro core communities were expected to be more favorable to Secretary Clinton, as were small metro suburbs. Trump did especially well in nonmetro adjacent communities as well as other metropolitan communities, once again showcasing the urban-rural divide. Culturally, the percent native-born was statistically significant as it was in 2008, but the coefficient was much higher (0.49 compared to 0.17). This means that Trump was expected to win nearly 49 percent of the vote in the typical community (which was 99.1 percent native-born) before adjusting for the other factors.

The cosmopolitan dimension was also present in 2016, perhaps in a more pronounced way than in 2008. Whereas in that year the percentage of a community with a college degree was statistically significant and negative but not substantively significant, 2016 saw a shift in the form

of a stronger coefficient. For each percent of the community with a degree, Clinton was expected to gain 0.38 percent. For the typical community (11.5 percent with a degree) this added up to a four percent increase; for the well-above average community (two standard deviations above the mean), this advantage grew to nearly 10 percent. Wealthier communities were more Trump-friendly, as an increase in median household income of $10,000 resulted in a two percent GOP gain. In the typical community, this meant a roughly 12 percent advantage for Trump, controlling for other factors.

The urban-rural divide continued to grow in 2020. Suburban Ohio was the only battleground, as the large and small metropolitan communities were Biden-friendly and the more rural areas were Trump strongholds. Notably, the coefficients for non-metro adjacent and non-metro other communities were the highest of the time series (2.21 and 2.29, respectively). Furthermore, the coefficient for a community's native-born population grew to 0.77. Again, with the typical community having a large native-born population, this portends to a large built-in GOP advantage.

The cosmopolitan dimension was also different in 2020 than in prior elections. The college degree percent coefficient was at its absolute largest (-0.46), as were the coefficients for young people (-0.16) and percent population change (0.33). Taken singly, a community with median education would have favored Biden by nearly five percent; a community with the typical share of young people would have favored Biden by just under two percent; and a community with average population growth would have favored Trump by less than one-half percent. Notably, the coefficient for median household income was its lowest (1.03), indicating that Trump's advantage in wealthier communities shrunk from 12 percent in 2016 to about 6.5 percent in 2020.

Table 4 shows how our second measurement of geography, distance and density, relates to presidential election results. As with the models in Table 3, those in Table 4 have a strong R-squared (at least 0.74) and are an improvement from the OLS models based on the AiCc and lambda coefficient. Importantly, the other explanatory and control variables are nearly identical in statistical and substantive significance; as a result, we will focus on the distance and density variables.

As hypothesized, the density variable is negative and statistically significant in each of the models, while the distance variable is positive and statistically significant in each. In 2008 and 2012, for each 1,000 people per square mile, Obama was expected to receive an additional two percent of the vote. Since most communities are small and relatively sparsely populated, this advantage is most prevalent in larger core cities and suburbs. Particularly densely populated communities (the top one percent) were expected to provide Obama with around a 4-6 percent advantage. This advantage did not hold for Clinton in 2016, as the density coefficient was -0.21. In 2020, however, the coefficient of -3.36 surpassed those for 2008 and 2012, suggesting that Biden gained a 7-8 percent advantage in Ohio's most densely populated communities. Using the natural log of distance makes the coefficient difficult to interpret, but the relationship is most significant in 2020, followed by 2016.

Finally, we examine the change in presidential vote share in Ohio communities from 2004-2020. The first column of Table 5 provides the results using the urban-rural continuum measure; the second uses the density and distance measure. As with the previous models, the spatial error regressions improve upon the OLS models as indicated by the lower AiCc's and significant and positive lambda coefficients. For both models, the R-squared is at least 0.74.

In the first model, we see strong evidence of the cosmopolitan dimension along with mixed evidence for the geo-cultural dimension. Starting with the latter, communities in large

metropolitan core counties were expected to shift about 2.4 percent more Democratic over the time frame, while communities in small metropolitan suburban counties were expected to move roughly 1.4 percent in the opposite direction. None of the other urban-rural continuum variables were statistically significant, indicating that there was not a significant amount of vote share shifting in these communities. However, the percent native-born variable was positive and significant. With a coefficient of 0.61, this suggests that many communities shifted strongly toward the GOP from 2004-2020, controlling for other factors.

Stronger evidence was exhibited for the cosmopolitan dimension in the first model. For each percent increase in college education, a community was expected to shift slightly more than one-half of a percent to the Democrats. In the typical community, this equates to an expected 5-6 percent Democratic advantage. For each $10,000 increase in a community's median household income, Democrats were expected to gain nearly one-third of a percent, equating to another 1-2 percent advantage. Combined with another 0.6 percent Democratic gain in the typical community in terms of percentage of young people, and cosmopolitan trends favored Democrats by over 7-8 percent. Still, while Democrats made gains in this dimension, the GOP gains in the cultural dimension were far greater.

The results were somewhat similar using the density and distance geographic measure. Every 1,000 people per square mile was expected to add about two percent to the Democratic vote share. However, the distance variable was not statistically significant. Democrats also made gains among those communities with higher education and income, but once again, these gains were more than offset by the cultural dimension: the coefficient of 0.54 for the native-born variable indicates strong movement in most communities to the GOP.

Conclusion and Discussion

Over the course of the 21st century, Ohio has transitioned from a battleground state in presidential elections to one with a distinct Republican lean. This realignment, whether secular or critical, has significant implications for the state's elections and national presidential campaigns. This manuscript attempts to understand the partisan shift in Ohio from 2004-2020. To do so, we examined voting trends within each region and by the OMB's urban-rural breakdown. We then ran multivariate spatial regressions using ACS data to determine the significant factors in GOP presidential vote shares across Ohio's communities for each cycle from 2008-2020 and for the shift in GOP presidential vote share from 2004-2020.

Our analysis provides a complex explanation for this realignment. The political science literature often focuses on two slightly overlapping theoretical viewpoints for political shifts: the geo-cultural lens focuses on urban-rural distinctiveness and culture. We find some evidence for the urban-rural divide being a driving force for Ohio's realignment. Yes, there is a huge difference between large metropolitan core communities and other communities: those in the large metropolitan core counties is where Trump performed his worst in both 2016 and 2020. Yet, those were also George W. Bush's weakest spots as well. It was not until 2020 that we saw the most rural communities vote significantly more Republican than others when controlling for other factors, despite the 20+ percent difference between them and large metropolitan core communities. When we examined density and distance instead of the urban-rural continuum, these results became clearer: density and distance are statistically significant, but substantively, they are not the most important factors in presidential election results.

If the biggest contributor is not geography, what is? Culture. The percent native-born population is the most substantial explanation for how a community votes in presidential elections and what is driving Ohio's realignment over the past 20 years. This is evidenced by the large

coefficients in the 2016 and 2020 models in Tables 3 and 4 as well as in the 2004-2020 change models in Table 5. The GOP advantage across the state is significant, considering that most Ohio communities are over 99 percent native-born. These GOP gains more than offset the Democrats advantage in large metropolitan core communities.

Despite the significance of the native-born percentage variable, it is important to note that Democrats have made inroads in more cosmopolitan communities. This is evidenced by their advantage in more highly educated communities and those with a higher share of young people. Democrats have also improved their performance in wealthy communities. While median household income is a significant and positive predictor of GOP vote share, we note that this advantage was more diminished in 2020 than in previous cycles. Furthermore, communities with higher incomes have seen a large shift in Democratic vote share between 2004-2020. Again, these pro-Democratic shifts were not enough to offset GOP gains in other communities.

All told, this evidence shows the complexities of political realignment. Newton's Third Law states that for every action there is an equal and opposite reaction. In political realignment, the opposite reaction may not be equal to the original action, but it is present nonetheless. The New Deal coalitions are shifting; some traditional Democratic strongholds in Northeast Ohio are quickly becoming solidly Republican; Figure 3 shows how manufacturing hubs such as Youngstown, Warren, Ashtabula, and Lorain are shifting; their surrounding communities are now Republican. At the same time, formerly reliable GOP areas in suburban Columbus, Cincinnati, and Cleveland are trending Democratic. As the multivariate models indicate, these are the battlegrounds in Ohio politics: neither party has an inherent advantage at this point and candidates looking for persuadable voters can find them in more cosmopolitan communities such as those along the wealthy State Route 91 corridor in Cuyahoga and Summit counties.

What does this mean for elections in Ohio? There are a few implications of this study. First, Ohio is a state that the GOP has a built-in advantage in the current political climate. The party's gains statewide did not just occur in the 2016 and 2020 presidential elections; Republican statewide candidates swept the partisan races in the 2018 midterm elections. This is noteworthy in that 2018 was such a strong year for Democrats in many places across the country. Does this mean that Democrats have no chance of winning a statewide presidential or state constitutional race? Not exactly. Despite the GOP's advantage due to the urban-rural divide and native-born population, Ohio only leans Republican. Just as Democrats have won in traditionally Republican states with a populist history (i.e., Kansas) and Republicans have won in traditionally Democratic strongholds with a cosmopolitan track record (Massachusetts), there are scenarios where Democrats could win statewide. It would require a race in which the Democratic candidate is strong in comparison to their Republican opponent and take place in a strong pro-Democratic cycle, but it is possible. Indeed, Democrats have won three of the past four state Supreme Court races across 2018 and 2020.

Second, our analysis only includes presidential elections. Realignment typically starts statewide before trickling down to legislative and local races (Bullock, 1988). In 2020, some suburban GOP state legislators, such as state senators Stephanie Kunze (Columbus suburbs) and Matt Dolan (Cleveland suburbs) held on to seats that were newly competitive. Since they are term-limited in 2024, it is very possible that Democrats could pick these seats. At the same, Republicans started picking up state legislative seats in areas previously strong for Democrats, such as Ashtabula, Trumbull, and Mahoning counties in the northeast. The result of any state legislative realignment may be that the GOP continues to have large majorities in Columbus, but such a majority could be increasingly rural and exurban.

Finally, we caution readers about extrapolating too much from prior elections. We do not know how much more - and at which rate - change will occur. Put differently, at some point the GOP will reach its ceiling in rural areas and its floor in urban/suburban communities. Given that Trump received roughly 70-80 percent in many communities outside of the large metropolitan core, it may be difficult for those margins to grow. Also, there is still a question as to how much Republican gains depend on Trumpism (however loosely defined). While it is unrealistic to expect our party coalitions to revert to their 1990s-2000s form, future electoral coalitions will differ from those in 2016 and 2020. As Miller and Schofield (2006, 2008) point out, each election cycle is unique in terms of the economic-cultural balance. No two elections are, or can be, identical. Future presidential contests will not completely be determined by those in the recent past; by the time 2024 and 2028 arrive, new issues and/or coalitions will emerge.

Our analysis also raises additional questions for research. First and foremost is the question of whether this realignment is secular or critical. While we do not formally test for this, there is an argument to be made for each. Trump performed well in communities where other GOP presidential nominees had done well, particularly George W. Bush in 2004. Romney's performance in some rural areas (nonmetro adjacent and other metro) was on par with Trump's performances in 2016 and 2020, controlling for other factors. The pro-GOP trend in the southeast corner of the state started prior to Trump's ascension to the presidency. This suggests secular realignment was taking place throughout the early part of the 21st century.

Yet there is evidence that 2016 marked a stark departure from previous elections. The GOP gains in Southeast Ohio accelerated in 2016; the same was true in other regions as well, even as Trump lost the national popular vote both times. In our multivariate models, the coefficients for education and native-born population jumped considerably in absolute terms in 2016. And while not a focal point of our analysis, the coefficient for Latino population decreased in absolute terms from 2008-2012 to 2016-2020. These observations point to the possibility of a critical realignment.

Future research should determine the strength of evidence for a critical versus secular realignment in Ohio. Using Nardulli's (1995) method to determine if a critical election occurred would be of particular value in a future analysis. Additional research should also probe the cultural dimension a bit further. While we have access to a significant amount of data thanks to the ACS, there are some limits; namely, the ACS does not ask any religion-based questions. Religiosity is a variable that was important in similar research. Even if we are unable to systematically explore it at the community-level, a case study or two would be valuable.

References

Abramowitz, A. I., & Saunders, K. L. (1998). Ideological realignment in the US electorate. *Journal of Politics*, 60 (3), 634–652.

Adams, G. D. (1997). Abortion: Evidence of an issue evolution. *American Journal of Political Science*, 718–737.

Anselin, L. (2005). Exploring spatial Data with GeoDa: A workbook. University of Illinois, Urbana-Champaign.

Bawn, K., Cohen, M. Karol, D., Masket, S., Noel, H., & Zaller, J. (2012). A Theory of Political Parties: Groups, Policy Demands and Nominations in American Politics. *Perspectives on Politics*, 10 (3), 571–97. https://doi.org/10.1017/S1537592712001624

Bullock, C. S. (1988). Regional realignment from an officeholding perspective. *Journal of Politics*, 50 (3), 553–74. https://doi.org/10.2307/2131458

Bullock, C. S., Hoffman, D. R., & Gaddie, R. K. (2005). The consolidation of the white southern congressional vote. *Political Research Quarterly*, 58 (2), 231–43. https://doi.org/10.2307/3595625

———. (2006). Regional variations in the realignment of American politics, 1944–2004*. *Social Science Quarterly*, 87 (3), 494–518. https://doi.org/10.1111/j.1540-6237.2006.00393.x

Philip, B. (2021). Analysis | How the culture-war divide in the U.S. compares to other democracies. *Washington Post*, May 7, 2021. https://www.washingtonpost.com/politics/2021/05/07/how-culture-war-divide-us-compares-other-democracies/

Burnham, W. D. (1971). *Critical elections: And the mainsprings of American politics*. W. W. Norton & Company.

Campbell, D., Layman, G. C, Green, J. C, & Sumaktoyo, N. G. (2018). Putting politics first: The impact of politics on American religious and secular orientations. *American Journal of Political Science*, 62 (3), 551–65. https://doi.org/10.1111/ajps.12365

Campbell, J. E. (1985). Sources of the New Deal realignment: The contributions of conversion and mobilization to partisan change. *Western Political Quarterly*, 38(3), 357–76. https://doi.org/10.1177/106591298503800304

Carey, N. (2016). In rural-urban divide, U.S. voters are worlds apart. *Reuters*, November 11, 2016, sec. Full coverage of the 2016 U.S. Election. https://www.reuters.com/article/us-usa-election-rural-idUSKBN13625Q

Dave Leip's Atlas of U.S. Presidential Elections. Retrieved July 27, 2021, from https://uselectionatlas.org/RESULTS/.

Erikson, R. S., & Tedin, K. L. (1981). The 1928–1936 partisan realignment: The case for the conversion hypothesis. *American Political Science Review*, 75(4), 951–962.

ESRI. Spatial Autocorrelation. From http://support.esri.com/en/knowledgebase/GISDictionary/term/spatial%20autocorrelation

———. Tobler's First Law of Geography. From http://support.esri.com/en/knowledgebase/GISDictionary/term/Tobler%27s%20First%20Law%20of%20Geography

Evich, H. B. (2016). Revenge of the rural voter. POLITICO, Retrieved November 13, 2016. From https://politi.co/2BAKpR6

Gimpel, J. (2021). The 2020 election campaign was over quickly. *Political Geography*, June, 102430. https://doi.org/10.1016/j.polgeo.2021.102430

Gimpel, J. G., Lovin, N. Moy, B., & Reeves, A. (2020). The urban–rural gulf in American political behavior. *Political Behavior*, 42(4), 1343–1368.

Hackworth, J. The myth of the moderate suburb: Exploring the spatiality of racial realignment in presidential voting patterns in Ohio, 1932-2016.

Highton, B. (2020). The cultural realignment of state white electorates in the 21st Century. *Political Behavior* 42(4), 1319–1341.

Introducing the 2021 Cook Political Report Partisan Voter Index. The Cook Political Report. Retrieved July 27, 2021, from https://cookpolitical.com/analysis/national/pvi/introducing-2021-cook-political-report-partisan-voter-index

Jennings, W. & Stoker, G. (2017). Tilting towards the cosmopolitan axis? Political change in England and the 2017 general election. *The Political Quarterly*, 88(3), 359–69. https://doi.org/10.1111/1467-923X.12403

Johnston, R., Manley, D., Jones, K., & Rohla, R. (2020). The geographical polarization of the American electorate: A country of increasing electoral landslides? *GeoJournal*, 85(1), 187–204.

Johnston, R, Rohla, R., Manley, D., & Jones, K. (2019). Voting for Trump and the electoral mosaics of US metropolitan areas: Exploring changing patterns of party support by neighborhood. *Cities* 86 (March), 94–101. https://doi.org/10.1016/j.cities.2018.12.011

Kelly, P. & Linda Lobao. (2019). The social bases of rural-urban political divides: Social status, work, and sociocultural beliefs. *Rural Sociology*, 84(4), 669–705. https://doi.org/10.1111/ruso.12256

Key, V.O. (1955). A theory of critical elections. *Journal of Politics*, 17(1), 3–18.

———. (1959). Secular realignment and the party system. *Journal of Politics*, 21(2), 198–210.

Kovac, M. (2020). Democrats' blue wave sweeps through Franklin County offices. *Columbus Dispatch*. November, 11, 2020. From https://www.dispatch.com/story/news/politics/county/2020/11/04/democrats-dominate-franklin-county-races/3745551001/.

Ladd, E. C. & Hadley, C. D. (1975). *Transformations of the American party system: Political coalitions from the New Deal to the 1970s*. WW Norton.

Lindaman, K. & Haider-Markel, D. P. (2002). Issue evolution, political parties, and the culture wars. *Political Research Quarterly*, 55(1), 91–110. https://doi.org/10.1177/106591290205500104

Mayhew, D. R. (2000). Electoral realignments. *Annual Review of Political Science*, 3(1), 449–74. https://doi.org/10.1146/annurev.polisci.3.1.449

———. (2008). *Electoral Realignments*. Yale University Press.

McKee, S. C. & Teigen, J. M.. (2016). The new blue: Northern in-migration in southern presidential elections. *PS: Political Science & Politics*, 49(02), 228–33. https://doi.org/10.1017/S1049096516000081

McQuarrie, M. (2017). The revolt of the rust belt: Place and politics in the age of anger. *British Journal of Sociology*, 68(S1), S120–52. https://doi.org/10.1111/1468-4446.12328

Miller, G. & Schofield, N. (2003). Activists and partisan realignment in the United States. *American Political Science Review*,97(02). https://doi.org/10.1017/S0003055403000650

———. (2008). The transformation of the Republican and Democratic Party coalitions in the U.S." *Perspectives on Politics* 6 (3): 433–50. https://doi.org/10.1017/S1537592708081218.

Monnat, S. M. & Brown. , D. L. (2017). More than a rural revolt: Landscapes of despair and the 2016 presidential election." *Journal of Rural Studies*, 55(October), 227–36. https://doi.org/10.1016/j.jrurstud.2017.08.010

Nardulli, P. F. (1995). The concept of a critical realignment, electoral behavior, and political phange. *American Political Science Review*, 89 (1), 10–22. https://doi.org/10.2307/2083071

Petrocik, J. R. (1987). Realignment: New party coalitions and the nationalization of the South. *Journal of Politics*, 49(2), 347–375.

Pierson, P. (2017). American hybrid: Donald Trump and the strange merger of populism and plutocracy. *British Journal of Sociology*, 68, S105–S119.

Prothero, S. (2016). Op-ed: Why liberals win culture wars and conservatives win elections. *Los Angeles Times*. February 14, 2016. From https://www.latimes.com/opinion/op-ed/la-oe-0214-prothero-culture-war-20160214-story.html

Scala, D. J. & Johnson, K. M. (2017). Political polarization along the rural-urban continuum? The geography of the presidential vote, 2000–2016. *ANNALS of the American Academy of Political and Social Science*, 672(1), 162–184.

Schattschneider, E. E. (1960). *The semisovereign people*. Holt, Rinehart and Winston.

Schueth, S. & O'Loughlin, J. (2008). Belonging to the world: Cosmopolitanism in geographic contexts. *Geoforum*, Conversations Across the Divide, 39(2), 926–41. https://doi.org/10.1016/j.geoforum.2007.10.002

Shearer, C. (2016). The small town-big city split that elected Donald Trump. *Brookings* (blog). November 11, 2016. From https://www.brookings.edu/blog/the-avenue/2016/11/11/the-small-town-big-city-split-that-elected-donald-trump/.

Shively, W. P. (1992). From differential abstention to conversion: A change in electoral change, 1864-1988. *American Journal of Political Science*, 36(2), 309-330.

Spicer, J. S. (2018). Electoral systems, regional resentment and the surprising success of Anglo-American populism | Cambridge Journal of Regions, Economy and Society | Oxford Academic. 2018. From https://academic.oup.com/cjres/article-abstract/11/1/115/4837314

Stanton, Z. (2021). How the 'culture war' could break democracy. POLITICO. May 20, 2021. Retrieved from https://www.politico.com/news/magazine/2021/05/20/culture-war-politics-2021-democracy-analysis-489900.

State PVIs. The Cook Political Report. Retrieved July 27, 2021, from https://cookpolitical.com/state-pvis.

Stimson, J. A. & Carmines, E. G. (1989). *Issue evolution: Race and the transformation of American politics*. Princeton University Press.

Sundquist, J. L. (1983). *Dynamics of the party system: Alignment and realignment of political parties in the United States*. Second edition. D.C: Brookings Institution Press.

Teixeira, R. (2009). The coming end of the culture wars. Center for American Progress. July 15, 2009. From https://www.americanprogress.org/issues/democracy/reports/2009/07/15/6454/the-coming-end-of-the-culture-wars/

Tipping-point state. (2021). From. https://en.wikipedia.org/w/index.php?title=Tipping-point_state&oldid=1033557154

Valentino, N. A. & Sears, D. O. (2005). Old times there are not forgotten: Race and partisan realignment in the contemporary South. *American Journal of Political Science*, 49(3), 672–88. https://doi.org/10.1111/j.1540-5907.2005.00136.x.

Table 1: GOP Presidential Vote Share by Region and Urban-Rural Continuum, 2004-2020

	2004	***2008***	***2012***	***2016***	***2020***	***Δ 04-20***	***N***
Central	65.44	62.11	62.55	72.33	72.36	6.92	287
Northeast	50.02	47.85	48.88	57.91	58.33	8.31	327
Northwest	64.8	58.4	61.22	72.47	73.17	8.37	273
Southeast	56.42	55.56	57.45	74.57	76.82	20.4	444
Southwest	65.63	62.95	64.59	70.51	69.6	3.97	258
Lrg Metro Core	49.06	45.03	44.84	43.43	41.19	-7.87	127
Lrg Metro Sub	62.26	59.2	59.93	69.49	69.24	6.98	311
Sml Metro Core	52.69	51.31	52.42	63.26	63.75	11.06	195
Sml Metro Sub	55.94	53.67	56.34	68.72	69.66	13.72	139
NonMetroAdj Micropol	62.42	59.36	61.04	74.57	75.86	13.44	547
NonMetroAdj Other	61.96	58.86	61.97	76.94	78.88	16.92	186
NonMetroNonAdj Micropol	68.79	67.69	70.15	81.64	82.22	13.43	28
NonMetroNonAdj Other	63.65	60.73	63.68	78.3	81.03	17.38	56

Table 2: Continuous Variable Descriptive Statistics, 2020

	Mean	***Median***	***s.d.***	***Min***	***Max***	***N***
White (%)	93.49	96.7	10.9	5.2	100	1577
Median Income ($10,000)	6.33	6.01	21.96	0.59	25.00	1565
College Grad (%)	13.34	11.5	8.24	0	49.1	1577
Young (%)	10.86	10.6	4.56	0	39	1581
Native (%)	98.12	99.1	2.87	79.5	100	1577
Density (1,000 people/mi^2)	0.2	0.037	0.39	0.00	3.5	1601
Distance	41.14	39.7	23.5	0.3	116	1601
Pop Change (%)	0.59	-0.85	17.94	-89.35	98	1532

Table 3: Factors Affecting Ohio Presidential Results, 2008-2020 (Urban-Rural Continuum)

Variable	2008	2012	2016	2020
Urban-Rural Continuum				
Large Metro Core	**-5.39*** (1.38)**	**-4.97*** (1.47)**	**-6.84*** (1.24)**	**-7.93*** (1.25)**
Large Metro Suburbs	-0.45 (0.86)	-0.51 (0.92)	-0.92 (0.78)	-0.28 (0.79)
Small Metro Core	**-3.37*** (0.84)**	**-3.57*** (0.89)**	**-3.29*** (0.77)**	**-3.59 (0.78)*** **
Small Metro Suburbs	**-2.43** (0.91)**	**-2.18* (0.97)**	**-1.45* (0.84)**	-1.33 (0.85)
Nonmetro Adjacent	0.66 (0.74)	**1.98* (0.79)**	**1.98** (0.69)**	**2.21 (0.69)** **
Other Metro	**4.12* (1.64)**	**4.87** (1.75)**	**4.53** (1.54)**	**3.09 (1.55)* **
Nonmetro Other	**1.92* (1.14)**	**2.01* (1.21)**	1.52 (1.06)	**2.29 (1.06)* **
Other Culture				
Native-born pct	**0.17* (0.093)**	0.14 (0.11)	**0.49*** (0.08)**	**0.79 (0.08)*** **
Cosmopolitanism				
College Degree pct	**-0.08* (0.03)**	-0.03 (0.04)	**-0.38*** (0.02)**	**-0.46 (0.03)*** **
Median HH Income	**1.59*** (0.14)**	**1.80*** (0.15)**	**2.00*** (.014)**	**1.03 (0.13)*** **
Young Population pct	**-0.12** (0.04)**	**-0.14*** (0.04)**	**-0.14*** (0.04)**	**-0.16 (0.04)*** **
Population Change pct	0.00 (0.00)	**-0.003* (0.001)**	0.01 (0.01)	**0.33 (0.06)*** **
Control Variables				
Black percent	**-0.55*** (0.02)**	**-0.55*** (0.02)**	**-0.58*** (0.02)**	**-0.59 (0.02)*** **
Latino percent	**-0.21** (0.07)**	**-0.30* (0.15)**	**-0.18*** (0.05)**	**-0.17 (0.05)*** **
Southwest	3.50 (2.27)	3.01 (2.47)	3.65 (1.92)	2.72 (1.98)
West	1.95 (1.69)	1.55 (1.82)	**3.14* (1.47)**	**3.05 (1.51)* **
Northeast	-3.20 (1.71)	-2.66 (1.86)	-2.01 (1.44)	-2.07 (1.49)
Southeast	-0.51 (1.89)	-0.48 (2.05)	-0.09 (1.62)	-0.53 (1.66)
Central	-1.54 (1.56)	-2.85 (1.69)	-0.14 (1.36)	0.41 (1.39)
Constant	**37.24*** (9.58)**	**40.51*** (10.72)**	**22.43** (8.56)**	-3.11 (7.86)
Lambda (spatial error)	**0.86*** (0.03)**	**0.88*** (0.02)**	**0.79*** (0.03)**	**0.80*** (0.03)**
Log Likelihood	-5,095	-5,196	-5,006	-5,062
R-Squared	0.72	0.73	0.82	0.83
n	1,546	1,548	1,548	1,560
Moran's I	**30.51*** **	**32.55*** **	**22.36*** **	**22.72*** **
AiCc (OLS regression)	10,713.9	10,979.6	10,349.5	10,477.1
AiCc (Spatial regression)	10,229.1	10,431.2	10,052.4	10,163.8

Dependent variable is the GOP nominee's share of the two-party vote. One-tailed test where hypothesized. Standard errors provided in the parentheses. Median household income measured in $10,000. Bolded coefficients indicate statistical significance, $p < 0.05$.

**$p < 0.05$, **$p < 0.01$, ***$p < 0.001$*

Table 4: Factors Affecting Ohio Presidential Results, 2008-2020 (Density & Distance)

Variable	2008	2012	2016	2020
Density & Distance				
Density (1,000/mi^2)	**-2.15*** (0.26)**	**-2.21*** (0.28)**	**-0.21*** (0.06)**	**-3.36*** (0.25)**
Distance (natural log)	**2.08*** (0.64)**	**2.68*** (0.69)**	**4.44*** (0.52)**	**2.69*** (0.54)**
Other Culture				
Native-born pct	**0.21* (0.09)**	0.09 (0.10)	**0.55*** (0.08)**	**0.72*** (0.08)**
Cosmopolitanism				
College Degree pct	-0.03 (0.04)	0.03 (0.04)	**-0.37*** (0.02)**	**-0.40*** (0.03)**
Median HH Income	**1.19*** (0.15)**	**1.36*** (0.15)**	**1.96*** (0.14)**	**0.58*** (0.11)**
Young Population pct	-0.05 (0.04)	**-0.08* (0.04)**	**-0.10** (0.04)**	**-0.06* (0.03)**
Population Change pct	0.001 (0.001)	**-0.003** (0.001)**	0.00 (0.01)	**0.29*** (0.06)**
Control Variables				
Black pct	**-0.50*** (0.02)**	**-0.50*** (0.02)**	**-0.57*** (0.02)**	**-0.53*** (0.02)**
Latino pct	**-0.14* (0.07)**	**-0.37* (0.15)**	-0.10 (0.05)	-0.08 (0.05)
Southwest	2.55 (2.20)	2.81 (2.37)	**3.70* (1.74)**	3.00 (1.72)
West	0.23 (1.64)	0.35 (1.76)	2.63 (1.38)	2.16 (1.35)
Northeast	**-3.96* (1.74)**	-3.58 (1.87)	**-3.50* (1.37)**	**-2.90* (1.34)**
Southeast	-1.99 (1.89)	-1.91 (2.03)	-2.29 (1.54)	-2.49 (1.51)
Central	-1.91 (1.54)	-2.77 (1.65)	-0.42 (1.28)	0.26 (1.25)
Constant	**27.78** (9.65)**	**37.57*** (10.72)**	0.98 (8.62)	-3.54 (7.87)
Lambda (spatial error)	**0.88*** (0.02)**	**0.89*** (0.02)**	**0.76*** (0.04)**	**0.77*** (0.03)**
Log Likelihood	-4,947	-5,043	-4,866	-4,843
R-Squared	0.74	0.75	0.82	0.85
n	1,511	1,510	1,510	1,519
Moran's I	**33.01*** **	**34.07*** **	**21.13*** **	**22.46*** **
AiCc (OLS regression)	10,485.5	10,708.4	10,032.2	10,012.4
AiCc (Spatial regression)	9,923.4	10,115.6	9,761.6	9,716.2

Dependent variable is the GOP nominee's share of the two-party vote. One-tailed test where hypothesized. Standard errors provided in the parentheses. Median household income measured in $10,000; density measured in people per square mile (1,000). Bolded coefficients indicate statistical significance, $p < 0.05$.

$*p < 0.05$, $**p < 0.01$, $***p < 0.001$

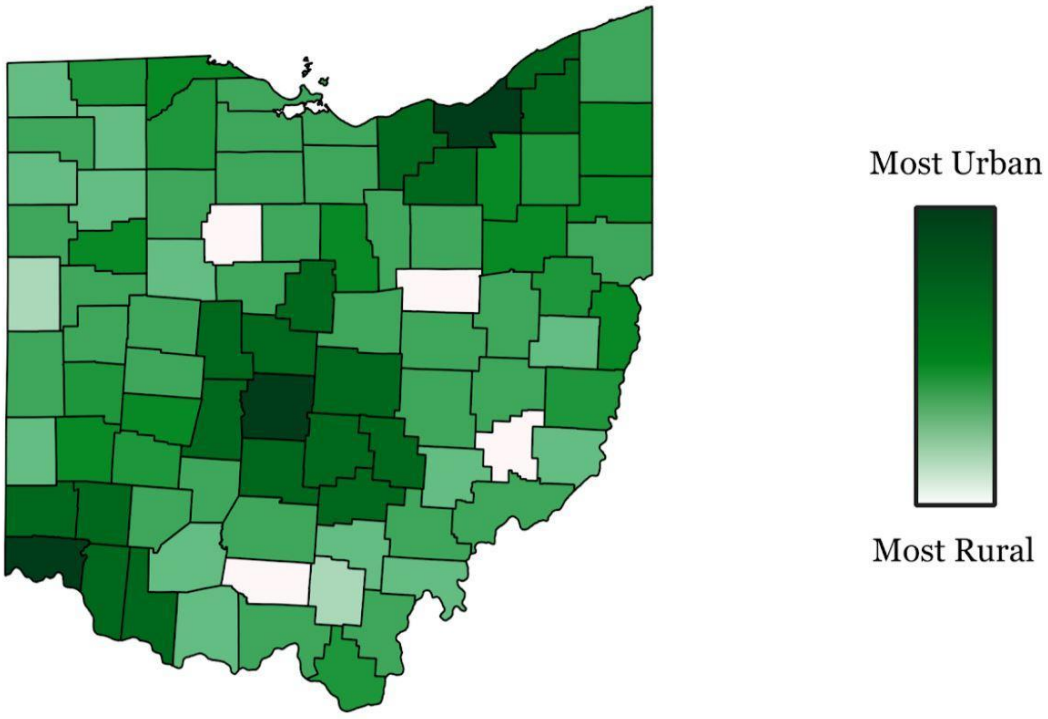
Table 5: Factors Affecting The Change in Ohio Presidential Results, 2004-2020

Variable	Urban-Rural Continuum	Density & Distance
Urban-Rural Continuum		
Large Metro Core	**-2.46* (1.18)**	--
Large Metro Suburbs	0.14 (0.73)	--
Small Metro Core	1.09 (0.72)	--
Small Metro Suburbs	**1.45* (0.79)**	--
Nonmetro Adjacent	0.82 (0.66)	--
Other Metro	-1.61 (1.44)	--
Nonmetro Other	0.49 (1.02)	--
Density & Distance		
Density (1,000/mi^2)	--	**-2.02*** (0.24)**
Distance (natural log)	--	0.22 (0.51)
Other Culture		
Native-born pct	**0.61*** (0.07)**	**0.54*** (0.07)**
Cosmopolitanism		
College Degree pct	**-0.53*** (0.03)**	**-0.48*** (0.03)**
Median HH Income	**-0.32** (0.10)**	**-0.62*** (0.11)**
Young Population pct	**-0.08* (0.03)**	-0.03 (0.03)
Population Change pct	0.00 (0.01)	0.00 (0.01)
Control Variables		
Black percent	**-0.16*** (0.02)**	**-0.13*** (0.02)**
Latino percent	-0.04 (0.05)	-0.00 (0.05)
Southwest	-1.26 (1.72)	-1.33 (1.60)
West	0.99 (1.34)	1.23 (1.28)
Northeast	**3.76** (1.31)**	**4.28*** (1.25)**
Southeast	**5.01*** (1.48)**	**4.77*** (1.41)**
Central	**4.07** (1.25)**	**3.79** (1.18)**
Constant	**-41.55*** (7.71)**	**-33.33*** (7.63)**
Lambda (spatial error)	**0.75*** (0.04)**	**0.74*** (0.04)**
Log Likelihood	-4,799	-4,799
R-Squared	0.74	0.75
n	1,510	1,519
Moran's I	**17.94***	**20.34***
AiCc (OLS regression)	9,856.8	9,877.23
AiCc (Spatial regression)	9,639.5	9,628.39

Dependent variable is the change in the GOP nominee's share of the two-party vote from 2004-2020. One-tailed test where hypothesized. Standard errors provided in the parentheses. Median household income measured in $10,000; density measured in people per square mile (1,000). Bolded coefficients indicate statistical significance, p < 0.05.

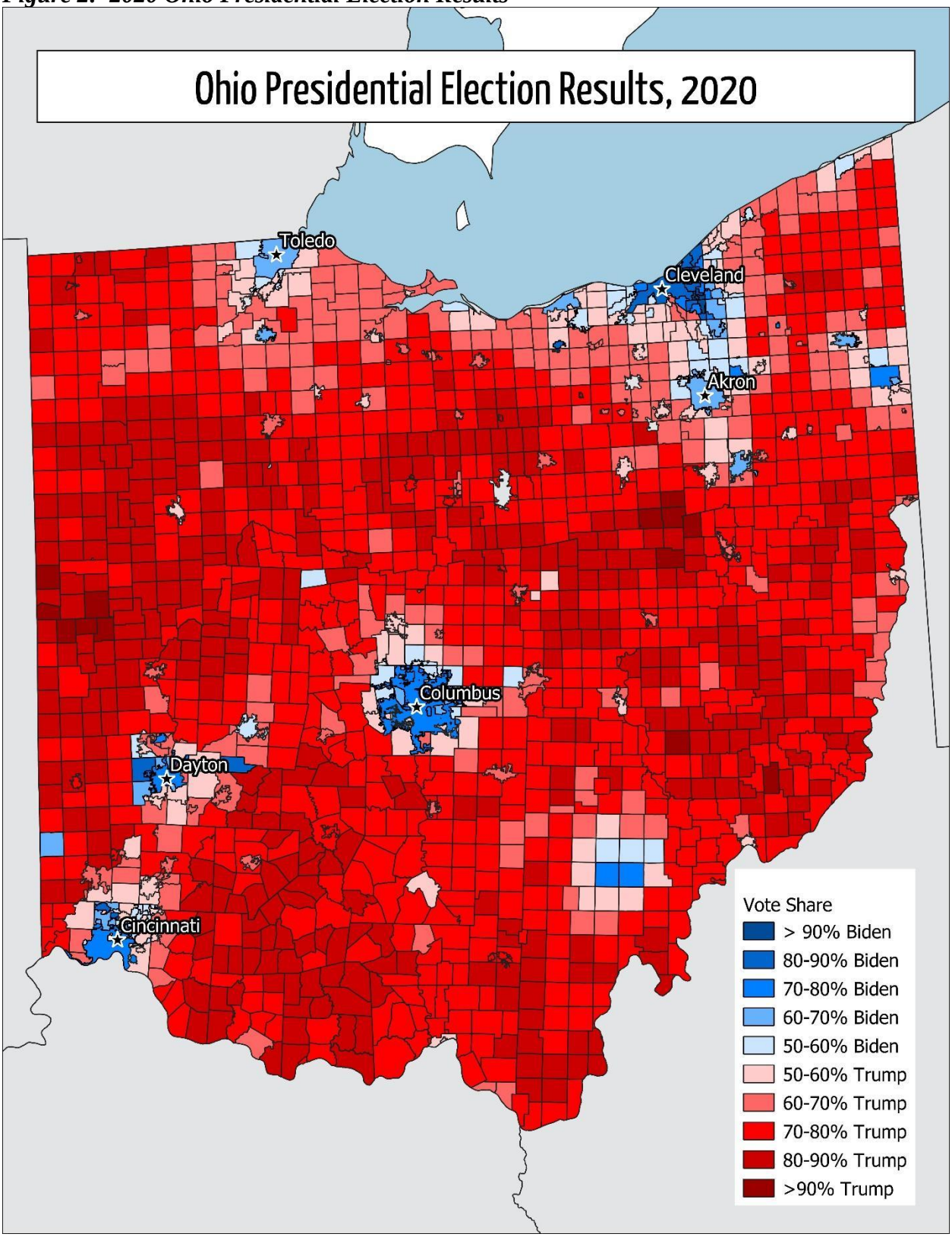
**p < 0.05, **p < 0.01, ***p < 0.001*

Figure 1: Urban-Rural Continuum Map



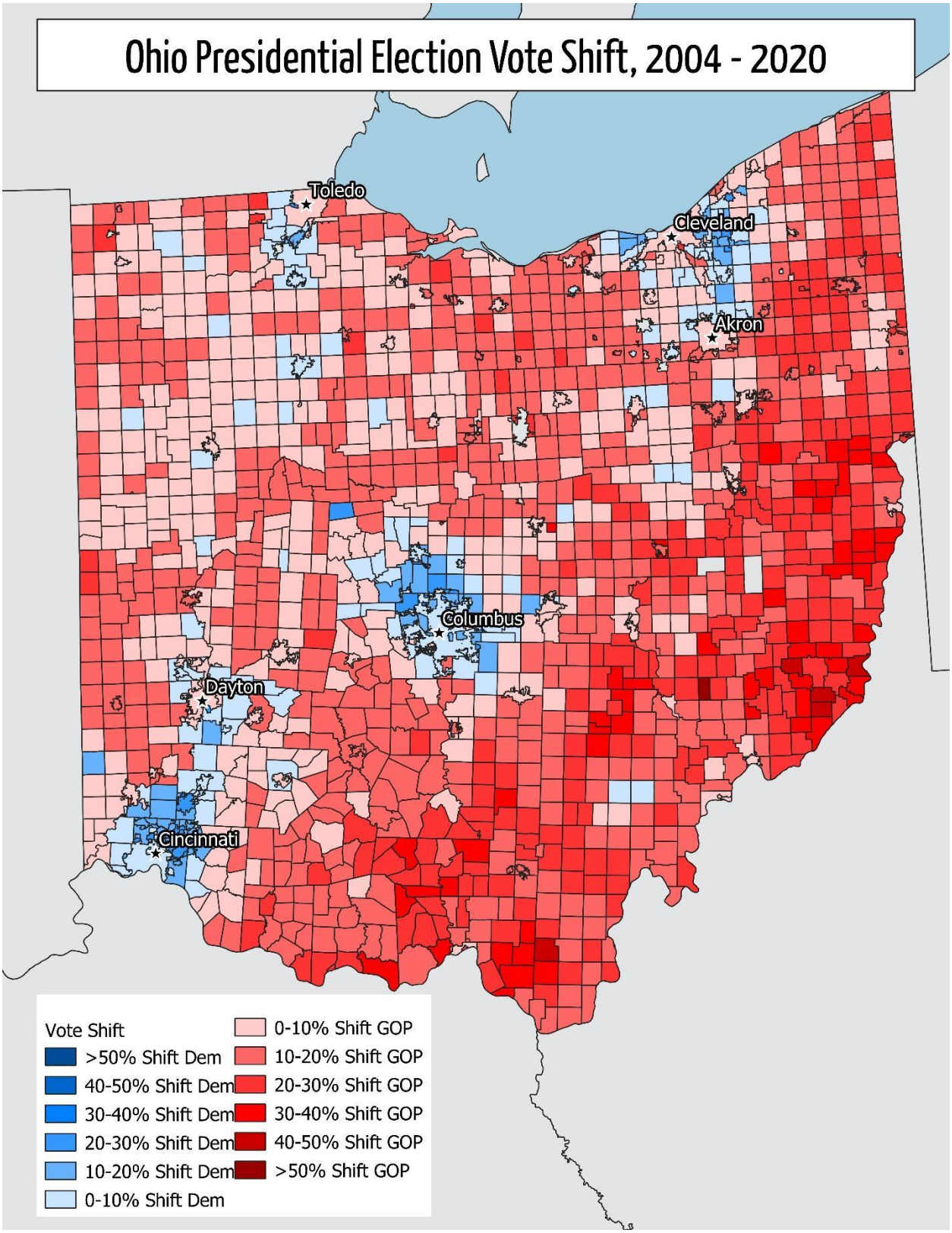
Map created by authors.

Figure 2: 2020 Ohio Presidential Election Results



Map created by authors

Figure 3: Shift in Presidential Voting in Ohio, 2004-2020



Map created by authors.

https://collected.jcu.edu/jep/vol26/iss1/4
DOI: 10.59604/1046-2309.1046