Changing geographies of voter turnout: Michigan and the urban/rural divide

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Voter turnout is a key measure of the legitimacy of any given democracy. A government elected in a high-turnout contest has a strong mandate from the state's citizens to make key decisions on their behalf. Low turnout raises questions about why citizens have chosen not to participate in the decision-making process, and about the representativeness of the elected government. Often, changes in levels of engagement and in the geography of participation are relatively small, but they may be decisive in key competitive elections. Using the state of Michigan as a case study, this brief commentary considers the changing geographies of participation in U.S. Presidential elections from 2012 to 2020. In Michigan, a notable voter-turnout upsurge in what traditionally had been low-turnout rural areas had a significant bearing on the victory of Donald Trump in 2016. This upsurge in rural support for Trump continued in the 2020 contest but was counteracted by a more positive (though not overwhelming) level of turnout in urban centres. After explaining these trends, this commentary briefly compares the case of Michigan with the Republic of Ireland in general elections from 2007 to 2016 to highlight the importance of urban-rural distinctions in competitive electoral settings.

In recent U.S. presidential contests, election margins have become tighter in so-called 'blue wall' (i.e. reliably Democratic) states like Michigan, Minnesota, and Wisconsin, than in traditional swing states like Iowa and Ohio. This has largely been a matter of voter turnout. In Michigan, the 2020 Election saw a record level of statewide voter turnout—the highest since the election of 1960—partly on account of voter access to mail-in ballots and same-day-registration amidst the Covid-19 pandemic. But this was no landslide. The partisan margin in the 2020 contest was very tight between Trump (47.8 percent) and Biden (50.6 percent), though not as tight as the previous 2016 contest between Trump (47.3 percent) and Clinton (47 percent), which saw Michigan vote Republican for the first time since 1988.

The frequently observed urban/rural electoral split in the USA was especially evident in the 2020 election (Shelley, 2021). When considering the urban and rural differences, I am using the Office of Management and Budget's 2013 classification system at the county level.

This classification distinguishes between 'metropolitan' urban cores with at least 50,000 people, which are home to 81.6 percent of the adult population in 2020 (+1.8 percent from 2012), 'micropolitan' counties with an urban core of 10,000 to 50,000 people, which contain 11.5 percent of the adult population in 2020 (+0.05 percent from 2012), and 'non-core' counties that do not meet these thresholds and may be considered rural with just 6.9 percent of the adult population in 2020 (−1.9 percent from 2012). Overall, Michigan's rural areas are losing population while metropolitan areas are growing (Fig. 1). While some metropolitan cores, like the City of Detroit in Wayne County, have continually declined in population, surrounding and nearby metropolitan counties—Oakland County, Macomb County, and Washtenaw County—demonstrate strong levels of population growth. The growth in population has largely been accompanied by growth in Democratic support in these metropolitan areas. The same trend is reflected in cities such as Holland and Grand Rapids in Ottawa and Kent Counties, respectively, and in Grand Traverse County. In these cases, irrespective of whether the area voted predominately Democratic or Republican in the most recent contest, an increase in population coincided with an increase in voter turnout and an increase in the Democratic share of the vote in the period from 2012 to 2020. An exception to this general pattern is Macomb County in the Detroit metro area, which has a whiter and more middle-class population than neighbouring counties.

Despite the increase in the Democratic share of votes in growing urban areas, voting margins have been very tight in the past two elections. At the county level, a distinct geography of participation helps to explain Michigan's new status as a 'battleground state' (Fig. 2). County-level turnout in 2020 ranges from a low of 52 percent in Isabella County in central Michigan, a largely rural area outside of the college town of Mt. Pleasant, to a high of 93.7 percent in Leelanau County, a mostly rural area with some suburban development on the outskirts of the Traverse City micropolitan area. The application of Anselin Local Moran's I Cluster and Outlier Identification to the data, based on Anselin's LISA method (Anselin, 1995), allows a more nuanced picture of the geography of participation within the state. This method identifies groups or
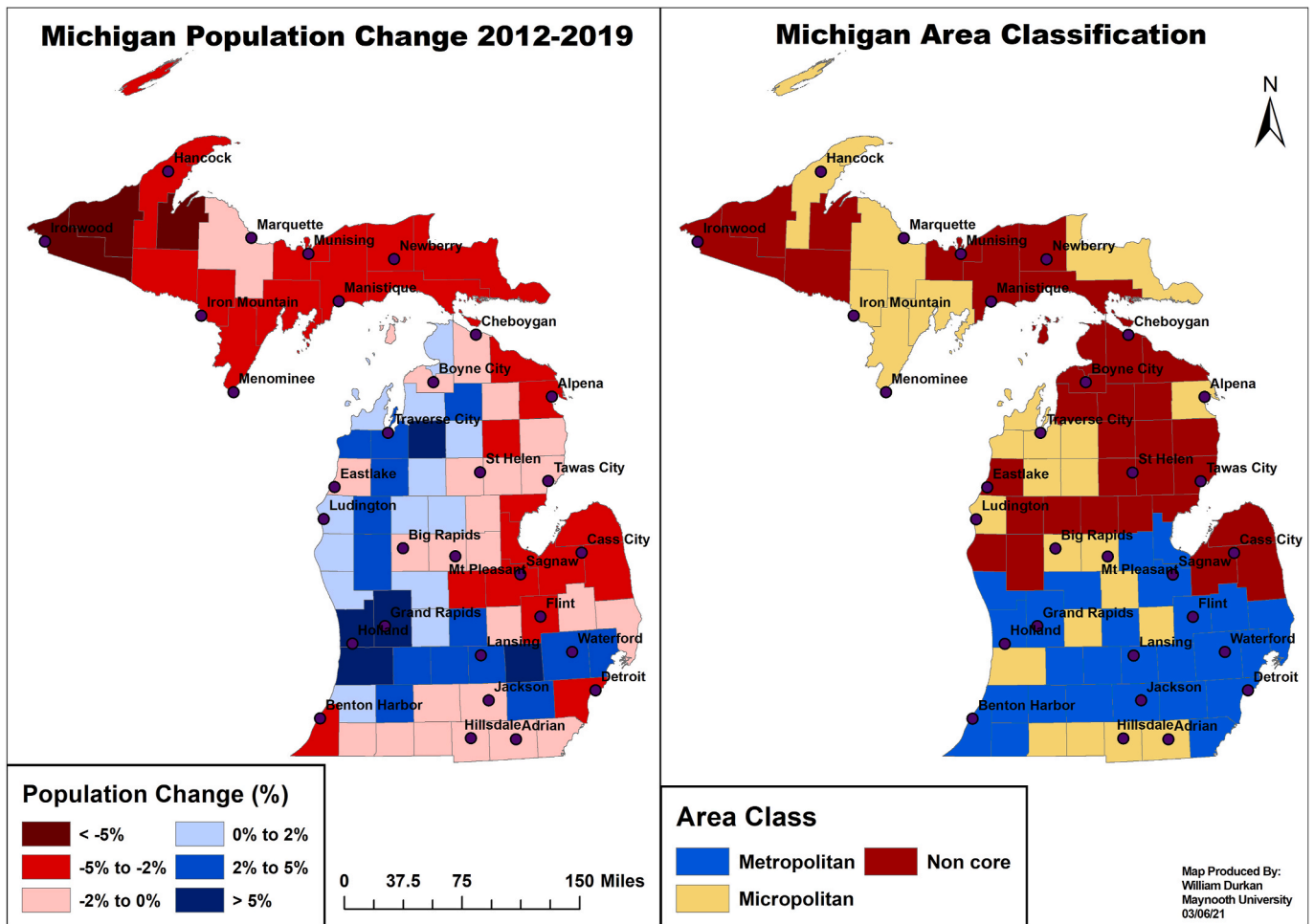
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Fig. 1. Population change from 2012 to 2019 (Left) and county urban/rural classification (Right) in Michigan state.
Source: Data sourced from the United States Census Bureau (2012–2019) and the Office of Management and Budget (2013)

clusters of counties as constituting a statistically 'high' or 'low' level of voter turnout in the dataset. Further to this, the method identifies counties that may be considered as 'high' or 'low' outliers in terms of turnout in comparison to their surrounding values.

When this method is applied, there is a distinct cluster of high voter turnout in the area that stretches from Eastlake to Cheboygan, a popular summer-tourist destination in north-western Michigan; this area has very low population density (under 100 people per square mile), with the exception of the micropolitan area centred on Traverse City, which has over 15,000 residents. This stretch of Northern Michigan voted predominantly for Donald Trump in both 2016 and 2020, with the exception of Leelanau County in 2020. There is also a distinct low-turnout cluster in the Harrison and aforementioned Mt. Pleasant area in the Trump-dominated central Michigan region, and a smaller cluster of low values in Hillsdale County (micropolitan), Branch County (micropolitan) and Calhoun County (metropolitan) in the south of the state. All these low-turnout counties voted Republican in both 2016 and 2020, but the Republican margin of victory was much wider in the micropolitan areas. Democratic stronghold Wayne County, home of Detroit, is also a lower-value outlier compared with surrounding (metropolitan) counties, though the higher turnout in growing Democratic-leaning counties near Detroit compensates for relatively low-turnout in Detroit itself.

A distinct geography of turnout appears not just in the 2020 data, but also in comparisons between the 2012 and 2016 contests. Voter turnout, for instance, increased substantially between 2012 and 2016 in the Eastlake-Cheboygan region (Fig. 3). While turnout increased in every

county between 2016 and 2020, this increase was again more pronounced in select areas (Fig. 3)—namely, in the area stretching from Tawas City, a predominantly rural area with most of the population along the shores of Lake Huron, to Alpena, a micropolitan core and one of the largest population centres in Northern Michigan. There were also significant turnout increases in rural areas on the Upper Peninsula, which are some of the most remote regions in the state. It is worth noting that all these counties voted Republican in both 2016 and 2020 except for micropolitan Marquette County, which swung more Democratic in 2020 despite approximately 2000 additional votes for Trump.

Perhaps the most notable trend is the large area of below-average turnout increase throughout the predominantly metropolitan southern part of the state. Despite a lower percentage of increase in turnout in the Democrat-dominated metropolitan areas, the increased number of raw votes in these regions counteracted the increased turnout observed in many rural areas. The below-average turnout increase in more urban areas may be observed in the cluster of smaller increases stretching from Waterford, in the Detroit metro area, and the city of Flint in the southeast, to Benton Harbor on Michigan's southwest coast. This lower-than-average increase is observed throughout the region in both relatively high-turnout environments such as Waterford and Grand Rapids, and in relatively low-turnout environments such as Detroit and Wayne County. In this respect, the statewide turnout increase in 2020 appears to be less pronounced in urban centres, regardless of whether the area had a relatively high or low turnout in the previous 2016 contest. In some instances, poorer counties that tend to have relatively low turnout, such as Wayne County (Detroit) and Genesee County (Flint), had a more
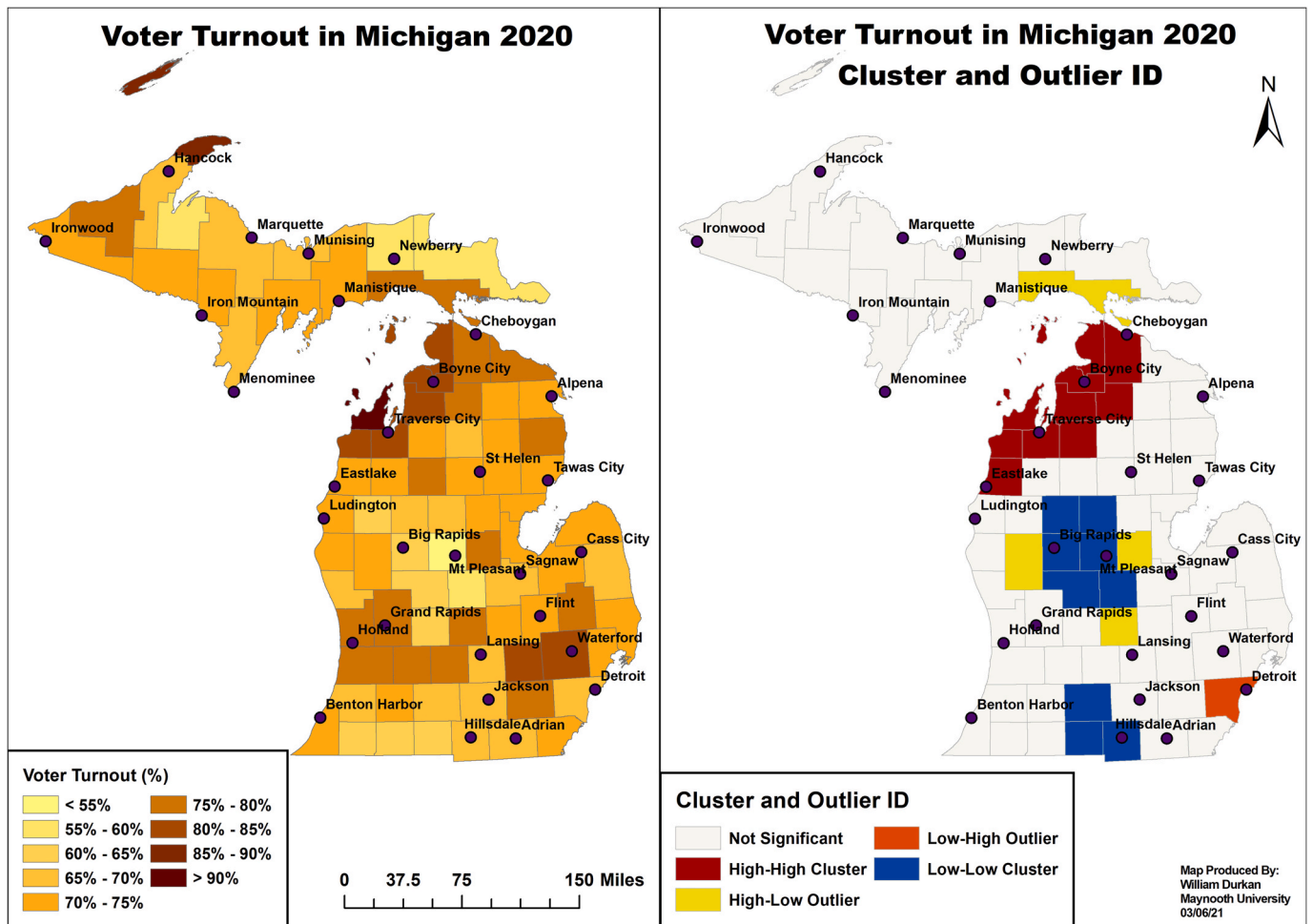
Fig. 2. Voter turnout in Michigan state in the 2020 presidential election at county level.
Source: Data sourced from the United States Census Bureau (2012–2019) and Politico (2020)

muted turnout increase in 2020 compared with more economically well-off areas, such as Waterford in Oakland County. In these examples, despite Trump increasing his number of raw votes in 2020, increased voter turnout in metropolitan counties outside of core cities ensured a larger growth for the Democratic Party, with Biden winning almost 100,000 more votes in Oakland County than Hilary Clinton did in 2016, while Trump gained just over 35,000. The application of linear correlation testing to rates of turnout change in relation to population density further demonstrates the more significant turnout increase in rural areas in recent contests, highlighting this urban/rural divide (Fig. 4).

The classification of areas as 'metropolitan', 'micropolitan', and 'non-core' provides a more detailed view of the geographical divides in voting trends and voter turnout levels (Fig. 5). The urban/rural divide in voter turnout levels can be observed as narrowing from 2012 up to and including the 2020 contest. Significant changes in the geography of voter turnout may be observed in the period from 2012 to 2016, in which voter turnout decreased slightly in the more urban areas, while increasing in both micropolitan and rural contexts, a change associated with a significant swing towards the Republican party. While metropolitan areas have had a higher level of voter turnout than micropolitan areas or non-core areas in all contests, this gap is notably smaller in 2020, with rural areas turning out in almost the same proportions as urban centres. Associated with these trends is a widening of the

difference in support between the two main candidates. As the turnout gap narrows between urban and rural areas within the state, rural areas have tended to lean more towards the Republican party, while the Democrats' level of support in urban centres reached near Obama-era highs in 2020.

Thus, while Trump won more votes across all area classes in 2020 than he did in 2016, the larger volume of voters in the 2020 contest in growing urban areas with higher turnout than in 2016 proved decisive for the Democrats. As the significance of voter turnout becomes clear, it is no surprise that political strategy focuses increasingly on voter registration. Republican legislators in Michigan have introduced legislation to tighten voter registration requirements—a move Democrats interpret as voter suppression. These requirements may have an adverse impact in areas like Detroit, which, due to historical patterns of 'white flight', are dominated by African Americans (Nagel, 2021). The battle-lines for future elections are therefore being drawn not only along spatial/regional lines but also racial lines in many instances (Bishop, 2009; Johnston, Manley, Jones, & Manley, 2020; Nagel, 2021).

The significance of geographical shifts in voter turnout is not restricted to Michigan, or even to the USA. In the case of the Republic of Ireland, for instance, the historically observed pattern of higher voter turnout levels in more rural communities has faded in recent contests, and the turnout gap between rural and urban places is narrowing. This
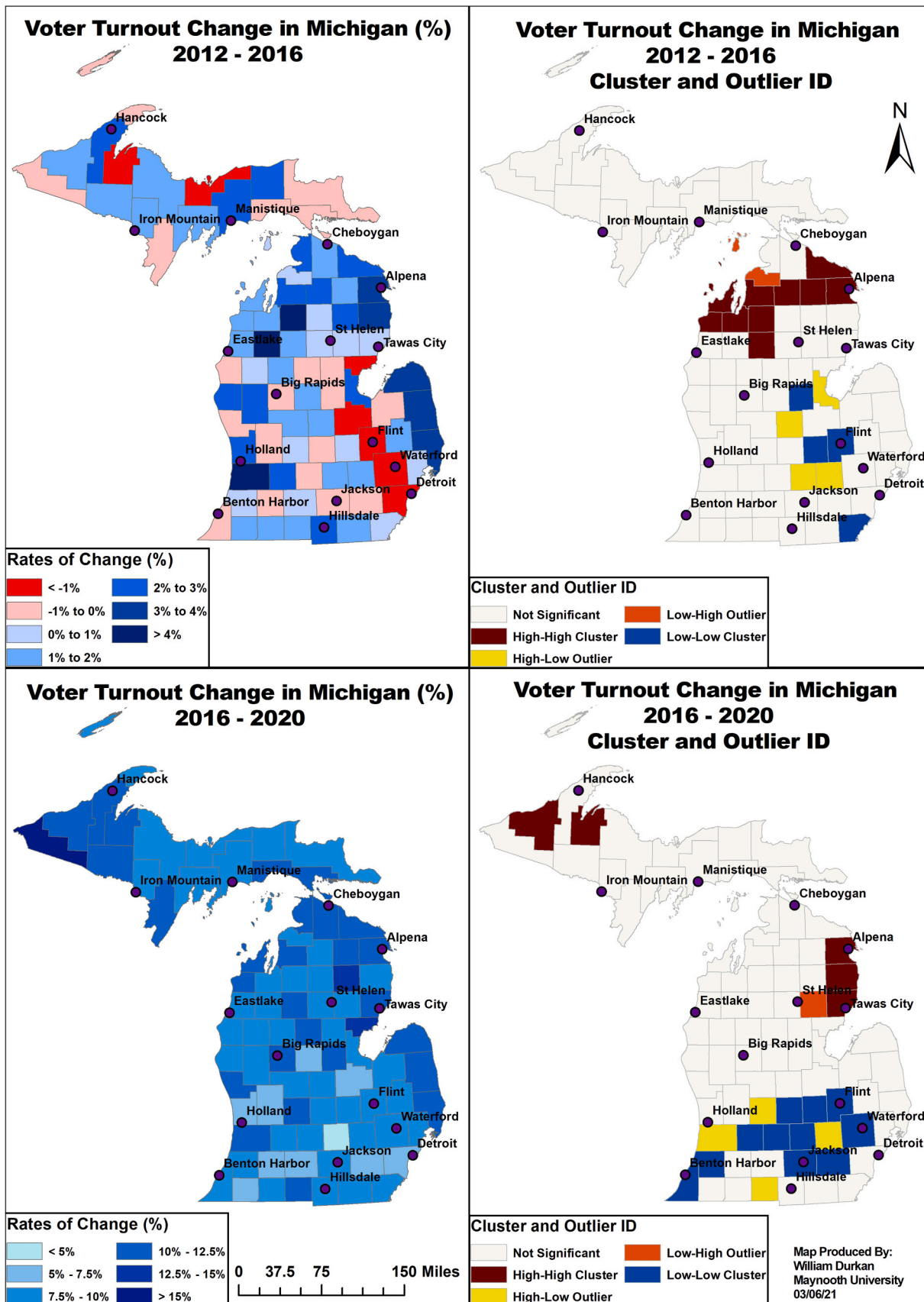
Fig. 3. Rates of voter turnout change from the 2012 to the 2016 presidential election (Top) and from the 2016 to the 2020 presidential election (Bottom) in Michigan State at county level.

Source: Data sourced from the United States Census Bureau (2012–2019) and Politico (2012–2020)

Correlation with Population Density at County Level				
Variable	Pearson	P-Value	Spearman	P-Value
Turnout Change 2016-2020	-0.31	0.0039	-0.43	7.28E-05
Turnout Change 2012-2020	-0.44	3.37E-05	-0.45	2.76E-05

Fig. 4. Correlation between population density and rates of voter turnout change from 2012 to 2020 at county level in Michigan state using both the Pearson and Spearman method.
Source: Data sourced from the United States Census Bureau (2012–2019) and Politico (2012–2020)

narrowing geographical turnout gap is as consequential in Ireland as it is in Michigan. As in the USA, Ireland has seen some historic electoral results recently, including the 2011 'earthquake election', which followed the 2008 financial crisis and the imposition of austerity measures (Gallagher & Marsh, 2011). The results of the 2016 election signalled an

'end to Civil War politics' that dominated the past century of electoral politics (Kavanagh, 2015), paving the way for the growth of Sinn Féin in the historic 2020 election. As in Michigan, an upsurge in urban participation rates appears to have been critical to electoral shifts.

The comparison of Michigan and the Republic of Ireland demonstrates the importance of spatial configurations of voter turnout and highlights specifically how urban/rural variations in voter turnout may potentially impact closely contested elections. Even slight changes in urban/rural turnout levels can have momentous impacts on elections and governance. In both instances, changes in voter turnout in key urban centres have been relatively small; however it is not marginal changes in percentages that win elections, but raw votes. In this respect, even small changes in participation rates in urban areas can mean a very significant, and often decisive, change in political support trends. Understanding of these complex geographies is key to any truly comprehensive understanding of political realignments.
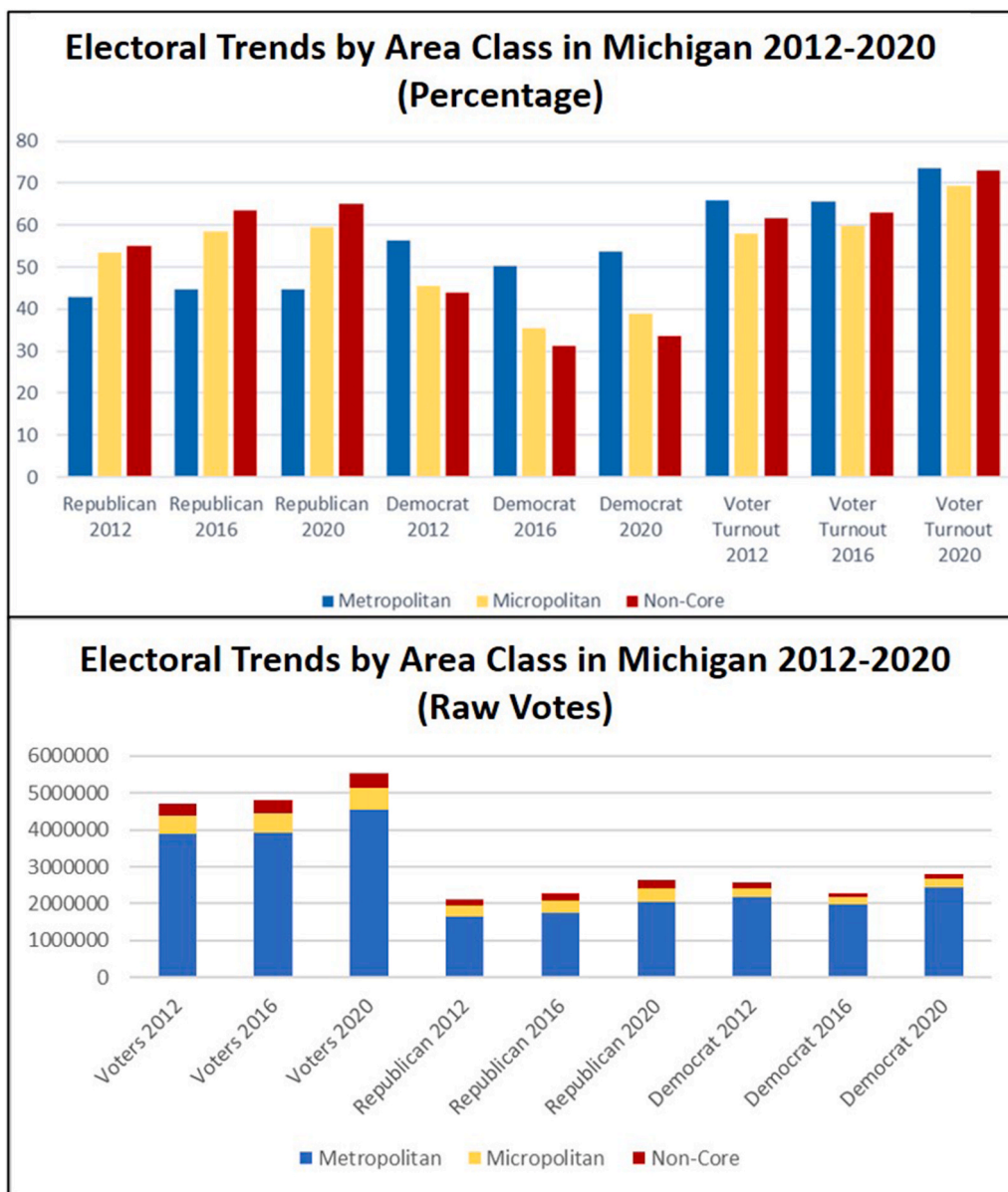

Fig. 5. The urban and rural divergence in political trends within the state of Michigan in presidential elections from 2012 to 2020 at county level.
Source: Data sourced from the Office of Management and Budget (2013) and Politico (2012–2020)

Declaration of competing interest

No conflict of interest.

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