



## **Political Fragmentation and Racial Segregation in the Winston-Salem, NC**

### **Metropolitan Area: How Might this Impact Upward Mobility?**

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#### **EXECUTIVE SUMMARY**

Since the 1950s, racial segregation in the United States has been on the decline. Rates of decline, however, vary across the metropolitan areas throughout the country. Researchers demonstrate a clear relationship between racial residential segregation and the degree of political fragmentation in the area. Moreover, residential segregation has been identified as one of the strongest correlates to upward mobility rates. Therefore, understanding the relationship between segregation and fragmentation is particularly relevant to Forsyth County, NC, which has some of the lowest upward mobility rates in the entire US. This study seeks to address the following questions, using insights from an earlier nationwide study, focused specifically on Winston-Salem – the county seat of Forsyth County, NC: How have these rates been impacted by the changing levels of political fragmentation there? As the number of municipalities increase, does segregation worsen? What are ways in which fragmentation affects segregation? We find that increasing levels of fragmentation decreases the rate of segregations decline. The number of municipalities in a metro area is positively and significantly related to the segregation between blacks and whites in the area. One possible mechanism by which this occurs is through the sorting of households base on certain preferences, though some households face stronger constraints relative to the other, leading to the two groups becoming more segregated over time. A discussion of the findings and policy implications are offered.

## INTRODUCTION

According to multiple studies and various methods of measurement, segregation has been steadily declining throughout the United States (US) since at least the 1960s.<sup>1</sup> In their 2012 study, Glaeser and Vigdor note that the US is the most integrated it has been in over a century. Rates of decline, however, vary across the metropolitan areas throughout the country, with some areas remaining highly segregated.<sup>2</sup> Researchers demonstrate a clear relationship between racial residential segregation and the degree of political fragmentation in the area.<sup>3,4</sup> In his 2005 study, Dawkins demonstrates that Tiebout choice, measured using a Herfindahl index, led to more segregation across a sample of US MSAs between 1980 and 2000.<sup>5</sup> Moreover, residential segregation has been identified as one of the strongest correlates to upward mobility rates.<sup>6</sup> Chetty, Hendren, Kline, and Saez (2014) find that residential segregation and upward mobility are inversely related, with correlation estimates being significant and robust across various measures of mobility. This is particularly relevant to Forsyth County, NC, where mobility rates are some of the lowest in the entire country.

Forsyth County, NC is the third lowest ranked county, out of over 3,000 counties, in the entire US regarding some measures of upward mobility.<sup>7</sup> The two counties lower than Forsyth are located on American Indian reservations. This is truly baffling considering that the county appears to be

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<sup>1</sup> Glaeser, E., & Vigdor, J. (2012). The end of the segregated century. *Manhattan Institute for Policy Research, January*, 23-26. Retrieved from [Manhattan Institute Website](#). Accessed on December 3, 2020.; Schuetz, J. (2017). Metro areas are still racially segregated. *Brookings*. Retrieved from [Brookings Website](#). Accessed on December 3, 2020.; Ellis, M., Wright, R., Holloway, S., & Fiorio, L. (2018). Remaking white residential segregation: metropolitan diversity and neighborhood change in the United States. *Urban geography*, 39(4), 519-545.

<sup>2</sup> *Id.* at 1.

<sup>3</sup> Dawkins, C. J. (2005). Tiebout choice and residential segregation by race in US metropolitan areas, 1980–2000. *Regional Science and Urban Economics*, 35(6), 734-755.

<sup>4</sup> Political fragmentation describes the ever increasing number of local government entities established in metropolitan areas.

<sup>5</sup> Tiebout choice refers to economist Charles Tiebout idea that competition among local jurisdictions to provide optimal levels of public goods and services.

<sup>6</sup> Chetty, R., Hendren, N., Kline, P., & Saez, E. (2014). Where is the land of opportunity? The geography of intergenerational mobility in the United States. *The Quarterly Journal of Economics*, 129(4), 1553-1623.

<sup>7</sup> *Id.* at 6.

thriving and a great place for upward mobility. The county is home to North Carolina's fifth largest municipality (Winston-Salem). Many large employers are headquartered (or recently headquartered) here, including Fortune 500 and 1000 companies (BB&T now Truist, Hanesbrands, RJ Reynolds Tobacco, Krispy Kreme). Multiple well respected colleges and universities are located here (Winston-Salem State University, Wake Forest University, Salem College, North Carolina School of the Arts, Forsyth Technical Community College). The county has numerous not-for-profit agencies. Downtown Winston has received an influx of billions of dollars in investments over the last two decades.<sup>8</sup> Bearing all of these facts in mind, it is still nearly impossible to escape poverty in Forsyth County. Hence, considering the relationship between political fragmentation and segregation, and segregation and mobility, it stands to reason that further research into the effects of political fragmentation are well worth the effort.

This study seeks to address the following questions, using insights from an earlier nationwide study, focused specifically on Winston-Salem – the county seat of Forsyth County, NC: How have these rates been impacted by the changing levels of political fragmentation there? As the number of municipalities increase, does segregation worsen? What are ways in which fragmentation affects segregation? We find that increasing levels of fragmentation decreases the rate of segregations decline. The number of municipalities in a metro area is positively and significantly related to the segregation between blacks and whites in the area. One possible mechanism by which this occurs is through the sorting of households base on certain preferences, though some households face stronger constraints relative to the other, leading to the two groups becoming more segregated over time. A discussion of the findings and policy implications are offered.

## **BACKGROUND AND LITERATURE REVIEW**

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<sup>8</sup> Daniel, F. (2017). Investments in downtown Winston-Salem totaled \$1.5 billion from 2000 to 2016. *Winston-Salem Journal*. Retrieved from [Winston-Salem Journal Website](#). Accessed December 3, 2020.

There are more than 19,000 municipalities in the US, where they range in size from just a few to several million people.<sup>9</sup> Since 1990, over 400 municipalities have been newly established.<sup>10</sup> Municipalities are formed through municipal incorporation, which is a legal process by which unincorporated territories become formally recognized by their particular State.<sup>11</sup> These procedures include provisions for petitions, local elections, and state certifications. Research into municipal incorporation tends to cover areas like the spatial distribution of new municipalities, the clustering of new towns, reasons why cities incorporate and exclusionary propensities of incorporation.<sup>12</sup> Researchers emphasize that when several cities incorporate in a county, this leads to fragmentation, which in turn contributes to segregation.<sup>13</sup>

The wide range of consequences associated with political fragmentation have been well documented, many of which are related to inequality and segregation.<sup>14</sup> In their 1993 study, Cox and Jonas document the role of state managers in the promotion of political fragmentation and how it impacted school district boundaries in the greater Columbus, OH area. This fragmentation produced inequalities in the delivery of educational opportunities.<sup>15</sup> In a 2012 study, a team of

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<sup>9</sup> United States Census Bureau, 2020.

<sup>10</sup> Smith, R.M. (2018). *Municipal Incorporation Activity in the United States: Patterns, People and Procedures*. The Urban Book Series. Springer International Publishing

<sup>11</sup> Smith, R.M. and Waldner, L. (2018). Why Majority-Minority Cities Form in the United States, 1990 - 2010. *Urban Geography*, 39(1), 149-166.

<sup>12</sup> Schmandt, H. J. (1961). The municipal incorporation trend, 1950-1960. Bureau of Government, University Extension Division, University of Wisconsin.; Stauber, R. L. (1965). New Cities in America: a census of municipal incorporations in the United States, 1950-1960. Governmental Research Center, University of Kansas.; Smith, R. M., & Debbage, K. (2006). Where are the geographers? Newly incorporated municipalities (NIMs) in the South. *The Geographical Bulletin*, 48(2), 109-121.; Rice, K., Waldner, L. and Smith, R.M. (2014). Why New Cities Form: An Examination into Municipal Incorporation in the United States, 1950 – 2010. *Journal of Planning Literature*, 29(2), 140-154.; Smith, R.M., Walder, L. and Richardson, C. (2016). New Cities of Color: Socioeconomic Differentiation Between Majority-Minority New Cities and White New Cities, *State and Local Government Review*, 48:3, 155-164.; *Id.* at 11.

<sup>13</sup> Cox, K. R., & Jonas, A. E. (1993). Urban development, collective consumption and the politics of metropolitan fragmentation. *Political geography*, 12(1), 8-37; Ingalls, J., & Rassel, G. R. (2005). Political Fragmentation, Municipal Incorporation and Annexation in a High Growth Urban Area. *The North Carolina Geographer*, 13, 17-30.; Hogen-Esch, T. (2001). Urban secession and the politics of growth: The case of Los Angeles. *Urban Affairs Review*, 36(6), 783-809.; Burns, N. (1994). *The formation of American local governments: Private values in public institutions*. Oxford University Press on Demand.

<sup>14</sup> Hill, R. C. (1974). Separate and unequal: governmental inequality in the metropolis. *The American Political Science Review*, 68(4), 1557-1568.; Morgan, D. R., & Mareschal, P. (1999). Central-city/suburban inequality and metropolitan political fragmentation. *Urban Affairs Review*, 34(4), 578-595.; Judd, D. R., & Hinze, A. M. (2018). *City politics: The political economy of urban America*. Routledge.

<sup>15</sup> *Id.* at 13.

researchers “found a link between increased metropolitan area fragmentation and greater racial differences in mortality between blacks and whites for both children and working-age adults” and asked for additional research into why these disparities exist (pp. 187).<sup>16</sup>

Political fragmentation has been shown to affect local government finance (Pack and Pack 1978).<sup>17</sup> Hill (1974) stated that “the political incorporation and municipal segregation of classes and status groups in the metropolis tend to divorce fiscal resources from public needs and serve to create and perpetuate inequality among urban residents in the USA” (pp. 1567).<sup>18</sup> In a 2003 study, Rusk further highlighted the financial problems brought about by fragmented cities.<sup>19</sup> He describes how fragmentation impedes cities from growing, which prevents them from capturing tax revenue and promotes the financial inequality between them and local suburbs.<sup>20</sup>

In their 1999 study, Morgan and Mareschal conclude that fragmentation harms minorities, through its promotion of spatial mismatch and its limitation of their political representation in the region.<sup>21</sup> As was mentioned earlier, Dawkins (2005) found that the Tiebout model led to increased segregation across a sample of US MSAs between 1980 and 2000.<sup>22</sup> Sadler and Highsmith (2016) explored the impact that political fragmentation had on the exacerbation of Flint, MI’s water crisis.<sup>23</sup> They make the case that the Tieboutian model had intensified the crisis because “a region is presumed stronger when fragmented, independent municipalities compete for residents and investments.”<sup>24</sup> They stress that fragmentation resulted in “environmental injustice due to racial

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<sup>16</sup> Hutson, A. M., Kaplan, G. A., Ranjit, N., & Mujahid, M. S. (2012). Metropolitan fragmentation and health disparities: is there a link?. *The Milbank Quarterly*, 90(1), 187-207.

<sup>17</sup> Pack, H., & Pack, J. R. (1978). Metropolitan fragmentation and local public expenditures. *National Tax Journal*, 349-362.

<sup>18</sup> *Id.* at 14.

<sup>19</sup> Rusk, D. (2003). *Cities without suburbs*. Woodrow Wilson Center Press.

<sup>20</sup> *Id.* at 19.

<sup>21</sup> *Id.* at 14.

<sup>22</sup> *Id.* at 3.

<sup>23</sup> Sadler, R. C., & Highsmith, A. R. (2016). Rethinking Tieout: the contribution of political fragmentation and racial/economic segregation to the Flint water crisis. *Environmental Justice*, 9(5), 143-151.

<sup>24</sup> *Id.* at 23, pp. 143.

segregation, unequal tax bases, and uneven service provisions.”<sup>25</sup> The Tiebout model is flawed, according to Sadler and Highsmith (2016), because municipalities rarely compete for disadvantaged residents who tend to be the least mobile and left behind in aging and highly segregated urban cores.<sup>26</sup> As Farrell (2008) states, “urban and suburban municipalities are replacing neighborhoods as the central organizing units of metropolitan segregation” (pp. 467).<sup>27</sup>

## **FINDINGS**

We begin by creating a set of maps, showing the Winston-Salem metro area in 1990, 2000, and 2010, with the municipalities highlighted. Figure 1a presents the map for 1990, Figure 1b for 2000, and Figure 1c for 2010. In 1990, there were 15 distinct municipalities throughout the Winston-Salem MSA, spread widely throughout the area (see Figure 1a). By 2000, 4 new municipalities emerged, primarily in the northern section of Forsyth County (see Figure 1b). In 2010, there were 18 distinct municipalities in Winston-Salem, which is one less than the total number ten years prior (see Figure 1c).

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<sup>25</sup> *Id.*, pp. 145.

<sup>26</sup> *Id.*

<sup>27</sup> Farrell, C. R. (2008). Bifurcation, Fragmentation or Integration? The Racial and Geographical Structure of US Metropolitan Segregation, 1990—2000. *Urban Studies*, 45(3), 467-499.

Figure 1a. Winston-Salem MSA in 1990

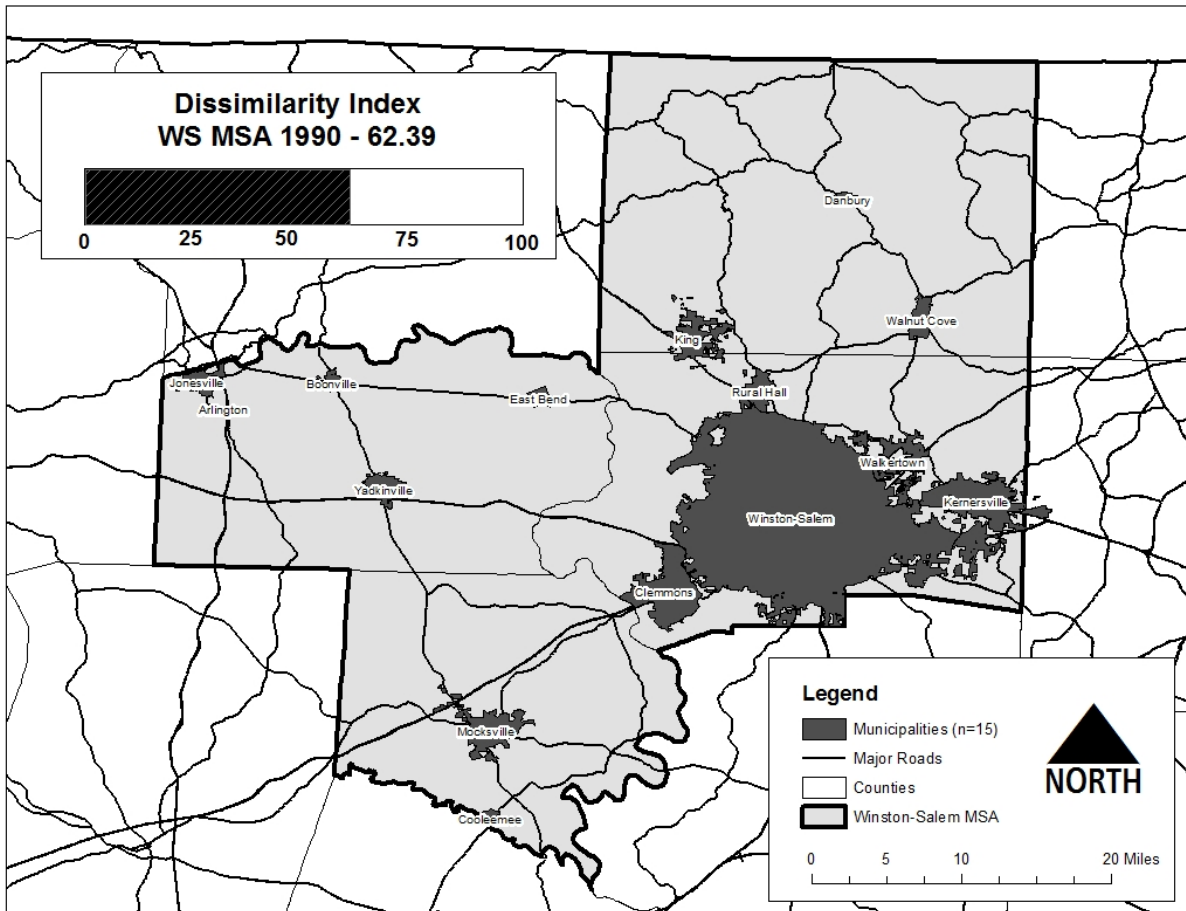


Figure 1b. Winston-Salem MSA in 2000

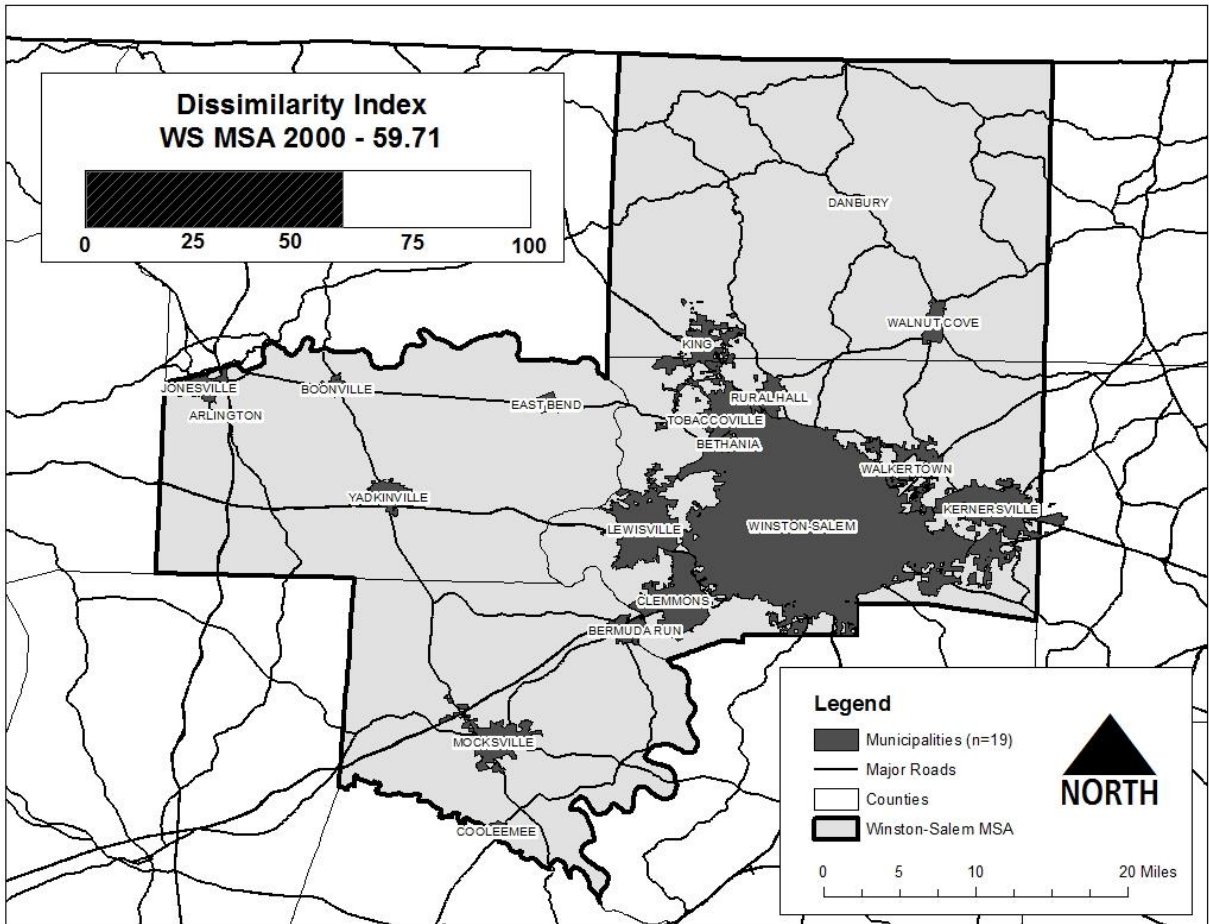
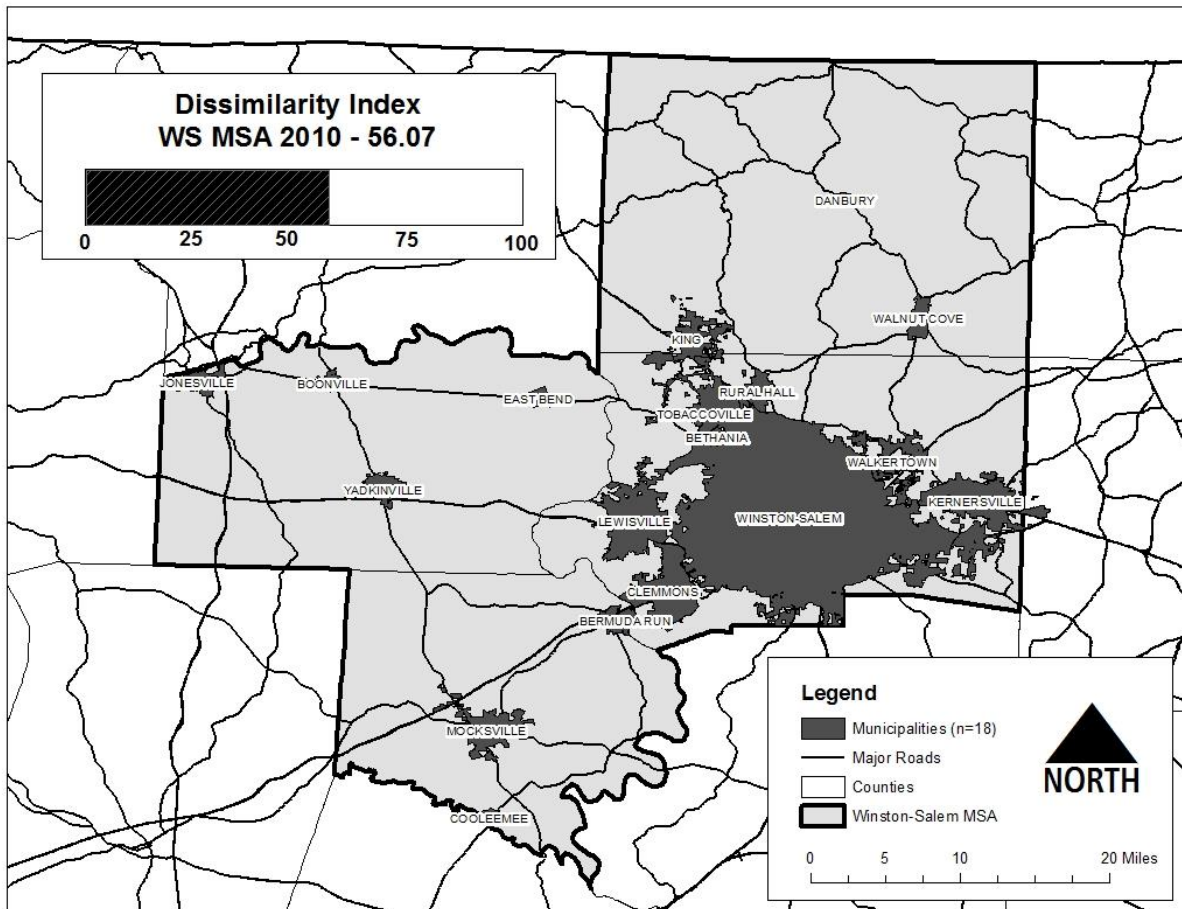


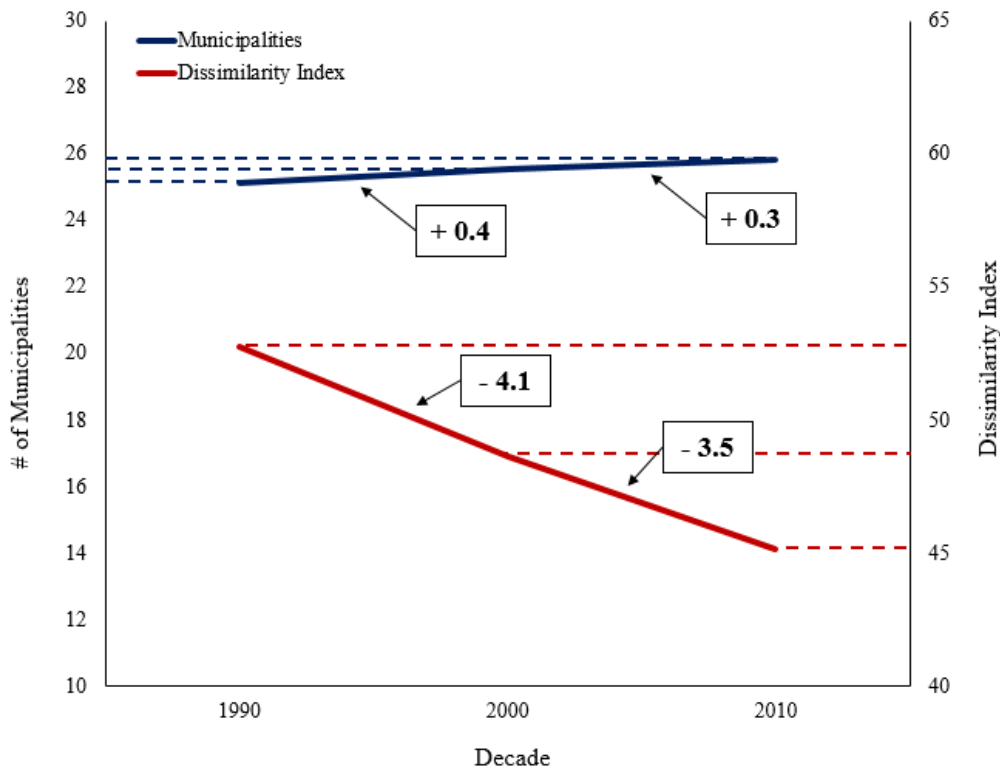


Figure 1c. Winston-Salem MSA in 2010



The US is home to more than 375 MSAs, as designated by the Census Bureau. Approximately 80 percent of the US’s population lives within MSA’s boundary. Figure 2 contains a graph of two time series for 348 MSAs. The first is the average number of municipalities (blue), which is plotted on the primary y-axis. The second is the average dissimilarity index value (red), which is plotted along the secondary y-axis. The decade is located along the x-axis. From 1990 to 2000, the average number of municipalities per MSA increased by 0.4, while the dissimilarity index decreased by 4.1. Then, from 2000 to 2010, the average number of municipalities rose by 0.3, while the dissimilarity index fell by -3.5. On the one hand, the number of municipalities are slowly increasing across the MSAs in the US, though the rate of growth is extremely flat. On the other hand, racial segregation between whites and blacks has been steadily declining since 1990, with the rate of decline being fairly steep.

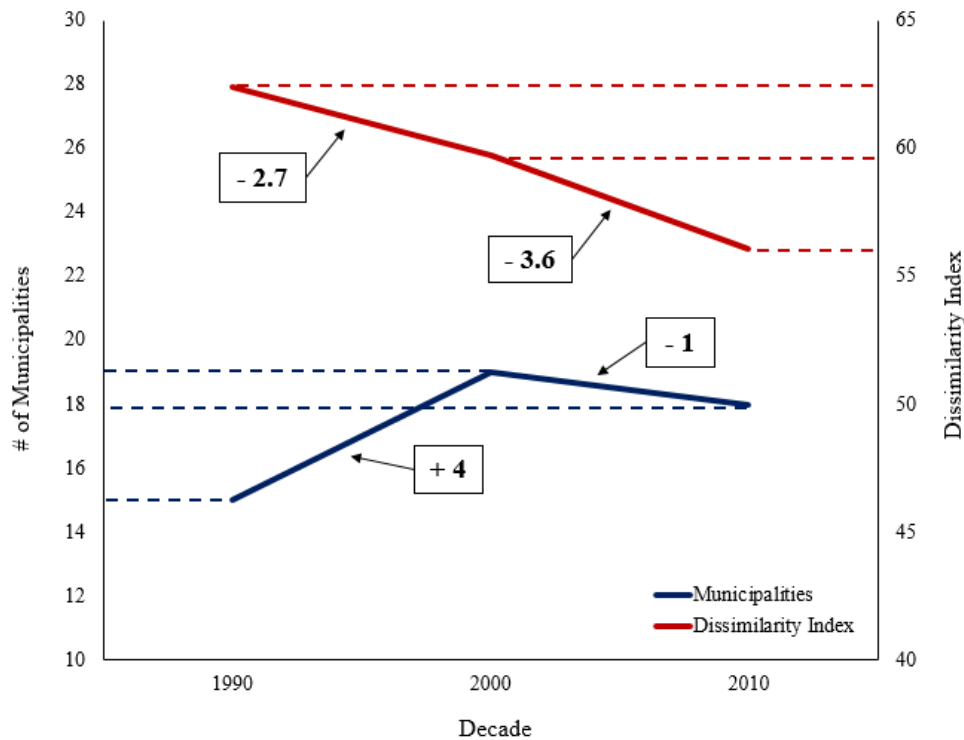
**Figure 2. Municipalities and Segregation in the US, 1990-2010<sup>28</sup>**



<sup>28</sup> The plotted series are averages, across 348 MSAs in the United States. These 348 MSAs are used in the academic paper in which this brief was spun from.

The Winston-Salem MSA is a four county region that consists of Davie, Forsyth, Stokes, and Yadkin Counties (Davidson County was added in 2010). It is home to more than 500,000 residents and is the fourth largest MSA in North Carolina. Figure 3 contains a graph of two time series, associated with the metropolitan statistical area of Winston-Salem, NC. The number of municipalities (blue) is plotted on the primary y-axis and the dissimilarity index (red) is plotted along the secondary y-axis. The decade is located along the x-axis. In Winston-Salem, from 1990 to 2000, the number of municipalities increased from 15 to 19 (+4), while the dissimilarity index decreases from 62.39 to 59.71 (-2.7). Then, from 2000 to 2010, the number of municipalities decreased from 19 to 18 (-1), while the dissimilarity index decreases from 59.71 to 56.07 (-3.6). Hence, the rate of decline in segregation increases when the number of municipalities decreases from 2000 to 2010.

**Figure 3. Municipalities and Segregation in the Winston-Salem MSA, 1990-2010<sup>29</sup>**



<sup>29</sup> In 2010, two towns merged in Stokes County, which is why the number of municipalities fell from 19 to 18.

From our nationwide study, we found that the number of municipalities in an MSA is negatively and significantly related the level of segregation between blacks and whites there.<sup>30</sup> In our paper, we produced multiple estimates of the relationship. According to one estimate, as the number of municipalities in an MSA increases by 1 percent, segregation between blacks and whites tends to increase by 0.037 points. According to the other estimate, as the number of municipalities in an MSA increases by 1 percent, segregation between blacks and whites tends to increase by 0.069 points. These results are summarized in Table 1 below.

**Table 1. Estimated Relationship Between Fragmentation and Segregation<sup>31</sup>**

		Segregation between whites and blacks...
When the number of municipalities in a metro area increase by 1%	Estimate 1	<b>+ 0.037</b>
	Estimate 2	<b>+ 0.069</b>

## DISCUSSION

The results of this study confirm that, though racial residential segregation has declined across MSAs in the US, the rate of decline has likely been impacted by municipal incorporation activity. The greater the political fragmentation within a metro area, the greater the racial segregation tends to be between whites and blacks. This is also true for the Winston-Salem MSA. Though segregation in Winston-Salem has been declining, the rate of decline is steeper when the number of distinct municipalities falls. This finding, in tandem with the results from our nationwide study, suggest that levels of segregation in Winston-Salem may be associated with the political

<sup>30</sup> We measure segregation between blacks and whites using the dissimilarity index. This index is the most widely used metric for this kind of analysis. The index measures whether a particular group is distributed across census tracts within a larger area in the same way as another group. It ranges from 0 to 100, with higher values suggesting more segregation.

<sup>31</sup> Estimates 1 and 2 correspond to two different econometric models that were estimate. Estimate 1 comes from a spatial autoregressive model with random effects and Estimate 2 comes from a 2SLS random effects model. In both models, we included a wide array of socioeconomic variables as controls.

fragmentation in the area. Considering segregations strong relationship to upward mobility rates, these are a noteworthy set of findings. One may wonder why and/or how municipal incorporation *leads to* increased segregation. There are undoubtedly many mechanisms by which this occurs. However, one mechanism in particular seems to be a particularly likely suspect, Tiebout's Hypothesis of residential sorting around taxes and services, especially considering how subtle it is. We provide an illustrative example to demonstrate how might this mechanism play out.

Figure 4 illustrates an example of how segregation between two groups may increase following municipal incorporation. The figure includes a 2x2 panel of maps, representing a hypothetical metropolitan statistical area (in the shape of the Winston-Salem MSA). In the top left panel, notice the entire boundary line of the MSA is dashed (instead of solid), denoting it comprises only unincorporated territory as of year 1990. Hence, there are no distinct municipalities within the MSA. The thin black lines that cut across the landscape represent census tracts.

The dots within each tract represent households. A dot can either be red or blue. Red dots denote Group 1 membership and blue dots belong to Group 2. Compared to Group 2, households in Group 1 are, on average, wealthier and better resourced. They also tend to have higher obtained education levels. In fact, households in Group 2 are much more likely to be in poverty. That being said, in 1990, segregation between members of Group 1 and 2 is Low, with members of each being evenly distributed across the census tracts.

The top right panel in Figure 4 represents year 2000. Ten years have passed and a municipality (A) has been created in the southeastern corner of the MSA. This municipality offers lower taxes. Members of Group 1 and 2 both take notice of this attractive characteristic. So, households decide to relocate to municipality A to take advantage of the lower taxes. Though members of both groups like the idea of paying lower taxes in this new municipality, most of the households that actually

relocate belong to Group 1, as evidenced by more red dots in the area. This is because members of Group 1 are better resourced and can more easily move. The Group 1 households that successfully move tend to be older, more likely to be retired, and less likely to have children still dwelling with them. Notice that segregation between members of Group 1 and 2 has increased to a level of Medium.

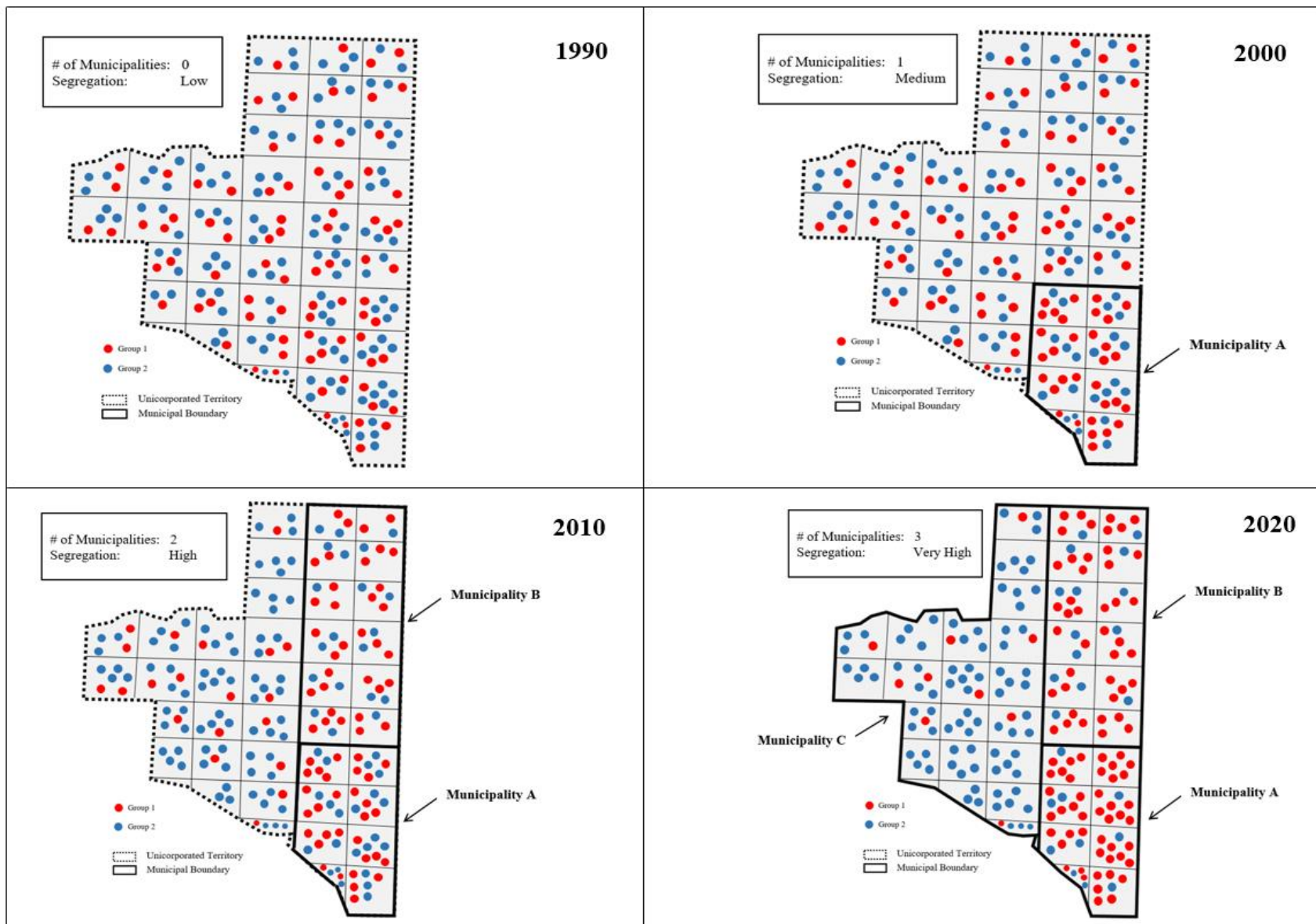
The bottom left panel in Figure 4 represents year 2010. A new municipality (B) has been created north of municipality A. Unlike A, this new municipality has higher taxes. However, it has much better schools and a dynamic system of public services. There are members of Group 1 and 2 that take notice of these attractive characteristics. So, some households decide to relocate to municipality B. Though members of both groups like the idea of living in B, most of the people that actually relocate belong to Group 1, as evidenced by the increase in red dots. This is because members of Group 1 are better resourced and can more easily endure the relocation. The Group 1 households that successfully move tend to be younger, married, and have children. Notice that segregation between members of Group 1 and 2 has increased to a level of High.

The bottom right panel in Figure 4 represents 2020. The remaining unincorporated territory of the MSA has now been incorporated to form municipality (C). Few new residents move to this newly created municipality. Most of the residents there belong to Group 2. By 2020, notice that segregation between Groups 1 and 2 is now Very High.

As municipalities are created, choices become available among different sets of tax structures, public services, etc. Households that are able may decide to relocate to the municipalities that better meet their particular desires. Hence, these households sort themselves according to certain preferences. However, moving, especially for reasons such as these, is not an easy undertaking. Moving an entire household is expensive, time intensive, and sometimes inconvenient. This is

especially burdensome for those towards the bottom of the income ladder. Members of Group 2 are more likely to stay behind while members of Group 1 are more likely to take advantage of the opportunities to move. Therefore, it is unsurprising that segregation would worsen.

Figure 4. Racial Segregation and New Municipalities





The results of this study have implications for policymakers, elected officials and urban scholars. Research on the establishment of new municipalities finds numerous negative outcomes associated with incorporating, including competition for limited resources, duplication of services, and a more fragmented planning environment.<sup>32</sup> Several studies clearly demonstrate that Tiebout choice led to increased levels of racial segregation in the US.<sup>33</sup> Regarding our study, using a novel approach with a newly constructed dataset, we quantitatively demonstrate that racial segregation is a negative externality associated with municipal incorporation activity, and it may have impacted the trends in segregation occurring in the Winston-Salem MSA.

The creation of a new city is not simply a benign process in which grassroots democracy allows residents to establish local governments that suit their notion of democracy. There are unintended negative consequences associated with the creation of new cities, especially in regards to its impact on segregation and inequality. This is especially relevant to the Winston-Salem MSA and Forsyth County, NC, where any impact on segregation will also likely impact economic mobility rates. As a result, local policymakers and elected officials would be wise to analyze the establishment of new municipalities in order explore the potential impact it may have on overall segregation in the MSA. This may involve new requirements for incorporation legislation, that require the applicant seeking to establish a new city to provide justifiable reasons for incorporation. Additionally, specified thresholds could be established by legislators to limit racial residential segregation resulting from municipal incorporation. The dissimilarity index could be utilized to measure existing levels of racial residential segregation, compared to future levels following municipal incorporation activity.

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<sup>32</sup> *Id.* at 11 and 12.

<sup>33</sup> *Id.* at 3.

## **CONCLUDING REMARKS**

Clear societal benefits follow from reducing segregation and addressing factors that increase it or slow its decline. By reducing segregation, upward mobility rates, especially among black residents, is likely to improve. As these residents climb the economic ladder, they will, in turn, pay more taxes. This is certainly one desirable outcome for local governments. Segregation often inhibits low-income minorities from easily accessing economic and employment centers. This, in turn, restricts the pool of viable job candidates at the employers located in these centers. Hence, reducing segregation is likely to benefit employers in this way, since expanding access to viable candidates is an outcome companies and employers certainly desire. Individuals will certainly benefit from reduced levels of segregation too, considering the myriad of negative consequences that follow from it, ranging from health to education outcomes. Therefore, reducing segregation and better approaching issues surrounding political fragmentation will result in “win-win-win” situations, since the big three societal players, businesses, individuals, and governments will benefit.