Diverse Cities Spend More

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Abstract

Previous authors have argued that ethnically diverse cities spend less on public goods than their homogeneous counterparts. In this paper, I present new evidence that challenges this claim. Incorporating improved measures of local expenditures in a panel study of US cities, I find that diversifying cities spend *more* per capita on most public goods – including police, fire protection, sanitation, and parks. This does not appear to come at the expense of other categories of spending. To help explain this finding, I develop a computational model in which agents migrate between competing jurisdictions. The model demonstrates that when residents are allowed to sort themselves across municipalities, the anticipated effect of diversity on public spending vanishes.

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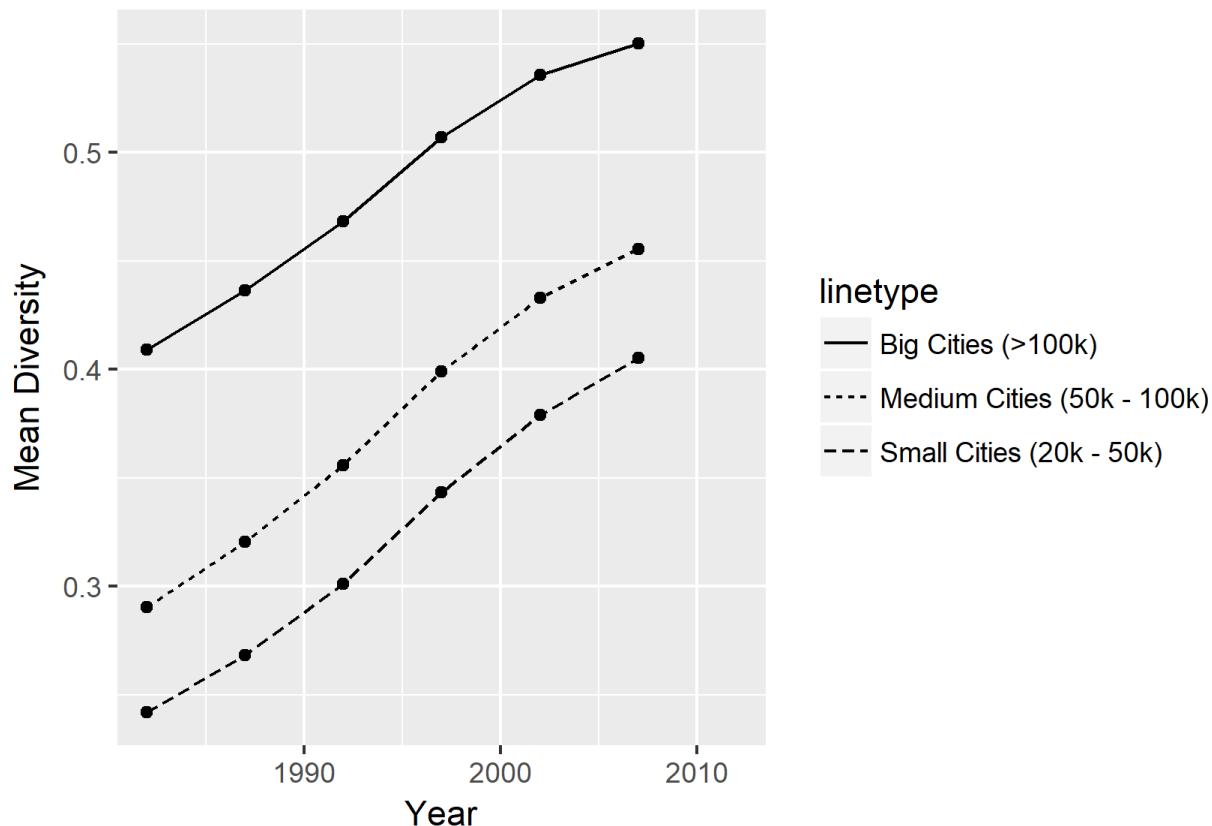https://sites.lsa.umich.edu/ornstein/dcsm/

Figure 1: Average diversity, as measured by the Herfindahl Index $(1 - \sum s_i^2)$, has risen since 1980 across every class of US city.

1   Introduction

Over the past four decades, the United States has experienced a steady increase in racial diversity. The percentage of Americans who identify as non-Hispanic white has dropped with every Census, from roughly 84% in 1970 to 64% in 2010 (Humes et al. 2011). Although this is partly the result of changes in self-identification (Davenport 2016), it is also the product of very real increases in the overall share of Hispanic, Asian, and African Americans. In turn, this national-level trend is reflected at the city level. Through a combination of immigration and gentrification, US urban areas have steadily diversified throughout the late 20th and early 21st centuries. As illustrated in Figure 1, this trend is not confined to big cities, but holds for smaller towns as well. Between 1980 and 2010, roughly 90% of American cities became more diverse.

How might this rising diversity affect municipal politics? According to a broad consensus in the political economy literature, diversification should yield an unintended consequence: diminished local public goods spending. This argument, most closely associated with Alesina et al. (1999), holds that, because diverse cities face significant internal division over public spending priorities, they will underspend on public goods relative to their homogeneous counterparts. There is extensive evidence that this relationship holds at the cross-national (Alesina et al. 2001) and cross-state levels (Alesina & Glaeser 2004), and given the central role of race in American politics (Hutchings & Valentino 2004), it is natural to suppose that we would observe that relationship at the municipal level as well.

In this paper, I argue that this view is mistaken. In a large panel study of US cities, drawing on the most extensive dataset of municipal public finance to date, I find no evidence that diverse cities spend less on public goods. If anything, the data suggest the opposite. Over the period of 1982 to 2012, diversifying cities spent more per capita on nearly every category of public spending – including police, fire protection, sanitation, libraries, roads, parks, and welfare.

This finding, however, presents a new puzzle altogether. How can there be such a robust negative association between diversity and public spending at the state and national levels, but not at the city level? To resolve this puzzle, I develop a simple computational model of residential sorting, in which migration across jurisdictions attenuates the negative relationship between diversity and public spending. Because citizens are free to migrate across municipal boundaries, cities that underprovide public goods are unlikely to attract new residents. In an equilibrium with mobile households, diverse cities will differ from homogeneous cities in the *types* of public goods supplied, but not in their quantity.

In the next section, I will review the literature linking diversity and public spending, and discuss why, despite extensive evidence establishing the relationship at the national level, we should not expect to observe it at the municipal level. Section three develops a computational model of residential sorting, and demonstrates why, when citizens are free to select into a

jurisdiction, any negative relationship between diversity and spending is unlikely to hold in equilibrium. Section four describes the dataset used in my empirical analysis, and section five establishes the basic cross-sectional regression results. In section six, I estimate a set of time series models to investigate within-city variation in diversity and spending. Section seven concludes.

2   The Literature

There is by now an extensive literature finding that ethnic heterogeneity undermines public spending. Part of this evidence comes from cross-national studies. Famously, Easterly & Levine (1997) attribute much of Africa's "growth tragedy" to its ethnic diversity. They find that more diverse African countries tend to invest less in infrastructure and human capital; diverse countries have fewer paved roads, less efficient electricity networks, and fewer average years of schooling. Alesina et al. (2001) compare welfare spending in the United States and Europe, and argue that the latter's generosity is due in large part to its ethnic homogeneity.

There is substantial within-country evidence as well. Miguel (2004) finds that ethnic diversity is negatively associated with local public school funding in Kenya. However, the relationship is weaker in Tanzania, a country with a more successful history of nation-building. Within the US, states with a greater share of African Americans tend to offer less generous welfare benefits (Alesina & Glaeser 2004). Experimental studies of cooperation among co-ethnics reveals a similar pattern. In one such study conducted in Uganda, researchers found that co-ethnics were more likely to cooperate in a dictator game, conditional on observing the ethnicity of their partner (Habyarimana et al. 2007).

Why might diversity undermine public service? Broadly speaking, scholars have offered three different flavors of theory. The first is based on preferences (Alesina et al. 1999). If members of different ethnic groups have divergent preferences over how and where public money is spent, they will be less likely to support more public spending. Trounstine (2015)

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offers an important variation on this argument: because ethnic groups tend to be segregated from one another, they will have different preferences over the geographic allocation of public funds. This may provide a further motivation to decrease overall levels of public spending.

The second theory concerns diversity's effect on trust and social cohesion. Individuals living in ethnically diverse US cities are less likely to report that they trust their neighbors (Alesina & La Ferrara 2002), and less likely to participate in the community (Putnam 2007). Trust makes it easier to overcome collective action problems, so perhaps this explains diminished public goods provision. The third theory concerns *changes* in diversity, rather than its level. Hopkins (2010) argues that rapid immigration inflows, combined with salient national rhetoric, can create the conditions for backlash against immigration, a phenomenon he calls the "politicized places" hypothesis. Hopkins (2011) investigates US municipal spending over time, and finds that the share of the budget going to police tends to increase in diversifying municipalities, consistent with this hypothesis. He does not, however, find concomitant decreases in spending shares for other public goods.

And yet, despite this broad set of theories and evidence, there are several reasons to be skeptical that diversity will undermine public spending at the municipal level. First, diverse cities tend to be more politically liberal, and liberal cities tend to tax and spend more than conservative cities (Tausanovitch & Warshaw 2014). It is surprising, to say the least, that empirical analyses that do not control for city-level ideology find that diverse cities spend less on public goods!

A second objection follows from Paul Peterson's work on city limits (Peterson 1981). US municipal governments tend to play a limited role in redistribution and welfare policy, owing to the constraints of labor and capital mobility. Too much redistribution at the local level simply induces wealthy residents to migrate away. But many of the arguments about ethnic diversity I cited above specifically concern redistributive spending, not pure public goods. Since municipal governments predominantly supply public goods rather than welfare, we should perhaps expect to see a weaker relationship between diversity and spending at the

city level.[1]

Finally, an important characteristic of local governance is that citizens can "vote with their feet", moving across jurisdictional boundaries in search of their ideal mix of taxes and spending (Tiebout 1956). If ethnic diversity were undermining public goods provision in a particular city, why would residents not simply move away? This process of residential sorting should, in principle, attenuate the relationship between diversity and public spending. To explore this intuition further, let us develop a simple model.

3   The Model

3.1   Intuition

In what follows, I begin with the formal model from Alesina et al. (1999). In that original model, the authors argue that diverse polities will spend less on public goods, because when citizens hold diverse preferences over types of public spending, the median voter values the "compromise" public good less than their ideal type. After introducing this model, I then relax two of its assumptions, and show that the original result no longer holds. First, I assume that while ethnicity is correlated with preferences for public goods, it is not perfectly correlated. Second, I allow agents to migrate between jurisdictions, seeking the city that offers them the highest utility. Using an agent-based computational model, I demonstrate that these two amendments are sufficient to eliminate any equilibrium relationship between ethnic diversity and public spending.

The intuition for this result is illustrated in Figure 2, which plots a distribution of preferences over types of public spending. Because ethnicity is correlated with public goods preferences, we will model preferences as if they are drawn from a mixture of three normal

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[1]There are several countries where welfare spending is devolved to the local level. It is noteworthy that studies of ethnic diversity and public spending in these contexts have found less conclusive results. For example, Gerdes (2011) finds no evidence that Danish municipalities with greater inflows of immigrants subsequently reduced their welfare spending.
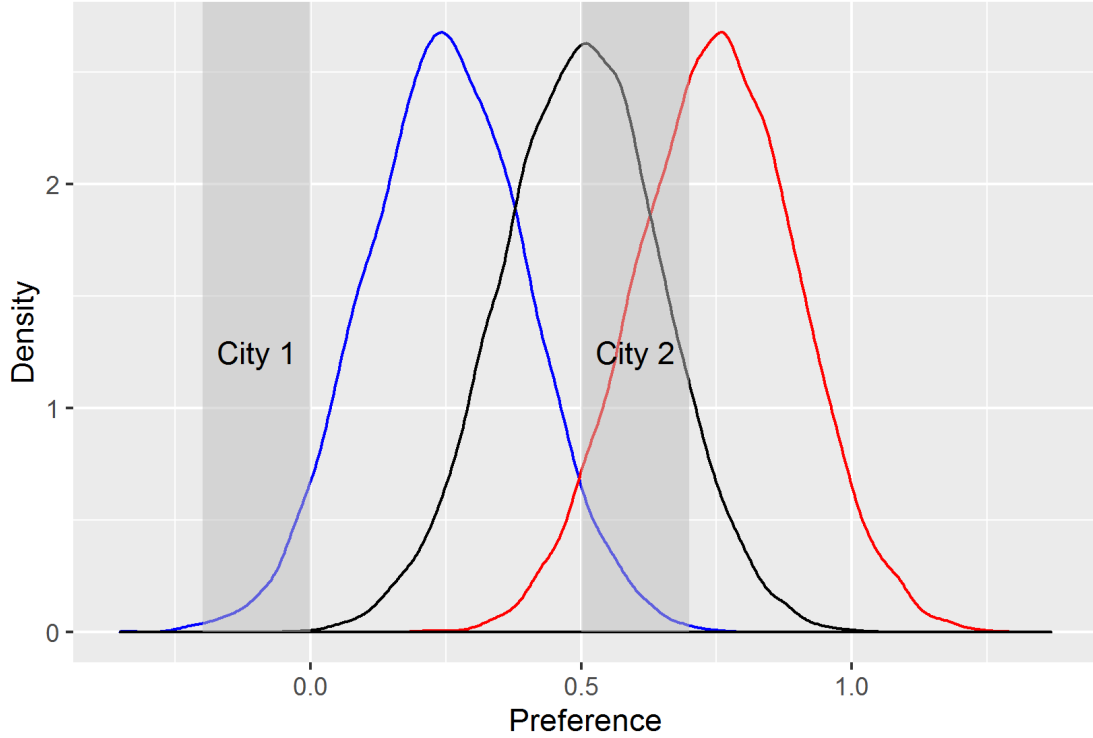
Figure 2: Absent Tiebout sorting, ethnically diverse cities will exhibit more variation in preferences. However, if agents can sort across jurisdictions, preference variation in ethnically diverse cities (e.g. City 2) will not be systematically higher than preference variation in homogeneous cities (e.g. City 1).

distributions, one for each ethnic group. Given this assumption, we should expect, absent migration, that ethnically diverse cities will have more variation in preferences than homogeneous cities. Residents in these cities will more strongly disagree over what types of public goods to provide, so they will vote to tax and spend less. This is consistent with the original result.

But what if agents are allowed to migrate across jurisdictions? As Tiebout (1956) suggests, they are likely to sort themselves into jurisdictions that offer their preferred mix of taxes and spending. Over time, we should expect that agents will migrate away from cities that underprovide public goods, and towards cities where they share similar preferences with their fellow residents. In equilibrium, the population will stratify based on public spending preferences, and the ethnically diverse cities (e.g. City 2 in Fig. 2) will not have systematically

higher preference variation than the ethnically homogeneous cities (e.g. City 1).

3.2 The Computational Model

Consider a collection of m municipal governments, competing for residents within a metropolitan area. There are n agents, who make residential choices and vote on taxes and public spending policy within their chosen jurisdiction. As in Alesina et al. (1999), each municipal government taxes and spends a lump sum for each resident, denoted g. In addition to this quantity, the government must decide what *type* of public goods to provide, which is represented in the model by a real number, T.[2]

Each agent's utility is quasi-linear, given by the following function:

$$U_i = g^{\alpha_i}(1 - |T - \pi_i|) + y - g \tag{1}$$

The term π_i denotes agent i's ideal type of public good, and the expression $|T - \pi_i|$ is the distance between that ideal point and the type of public good chosen by the jurisdiction. Naturally, utility is decreasing with distance. α_i is a shape parameter, denoting citizen i's relative taste for public spending over private consumption, and y is each agent's (exogenous) income. Taking the first order condition and solving yields citizen i's preferred quantity of taxes and spending:

$$g_i^* = [\alpha_i(1 - |\pi_i - \pi_M|)]^{\frac{1}{1-\alpha_i}} \tag{2}$$

Following Alesina et al. (1999), each government makes type and quantity decisions based on the preferences of the median resident. Therefore, equation (2) now includes the expression $|\pi_i - \pi_M|$, which denotes the distance between resident i's ideal point and the ideal point of the median resident. As this distance increases, agent i's preferred value of g decreases. This produces the key result of the original model: as the "median distance to the median" increases, the preferred tax rate of the median voter decreases. In this way,

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[2]For ease of notation, I suppress the subscript denoting the jurisdiction's index.

greater preference heterogeneity diminishes public goods provision.

To implement the computational model with residential sorting, we must now specify distributions for each of the agent-specific parameters. Let α_i be drawn from a normal distribution, and π_i from the mixed normal distribution illustrated in Figure 2, as follows.

$$\alpha_i \sim \mathbf{N}(\mu_\alpha, \sigma_\alpha^2) \tag{3}$$

$$\pi_i \sim \mathbf{N}(\mu_\pi - \lambda G_{1i} + \lambda G_{2i}, \sigma_\pi^2) \tag{4}$$

The parameter λ represents the between-group gap in average preferences, and σ_π^2 is the within-group variance. G_{1i} and G_{2i} are binary variables indicating whether agent i belongs to group 1 or 2, and μ_π is the mean preference for members of Group 0.

In the computational model, events unfold in the following sequence:

1. Each iteration, a sample of agents (size np, where p is a migration rate parameter) are selected to migrate. Agents move to the city that maximizes their utility (equation 1), given its current g and π_M.[3] If there is no such city, the agent does not migrate.

2. Given their new residents, cities update their public goods type to their residents' median π_i, and update g to their residents' median g_i^* (equation 2).

I execute this sequence of events until the model reaches a sorting equilibrium (i.e. no agents wish to migrate). This typically takes no more than 50 iterations. Then I compute the Herfindahl index of ethnic diversity for each of the m simulated cities, and record how well it correlates with g. Figure 3 reports the results from an illustrative run of the model (before and after sorting). Before sorting, there is a clear negative correlation between diversity and spending, as expected. After sorting, however, this correlation vanishes, because ethnic diversity is no longer a reliable signal of preference heterogeneity.

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[3]In other words, agents do not have "rational expectations", and do not anticipate the effects of their migration on the political equilibrium.
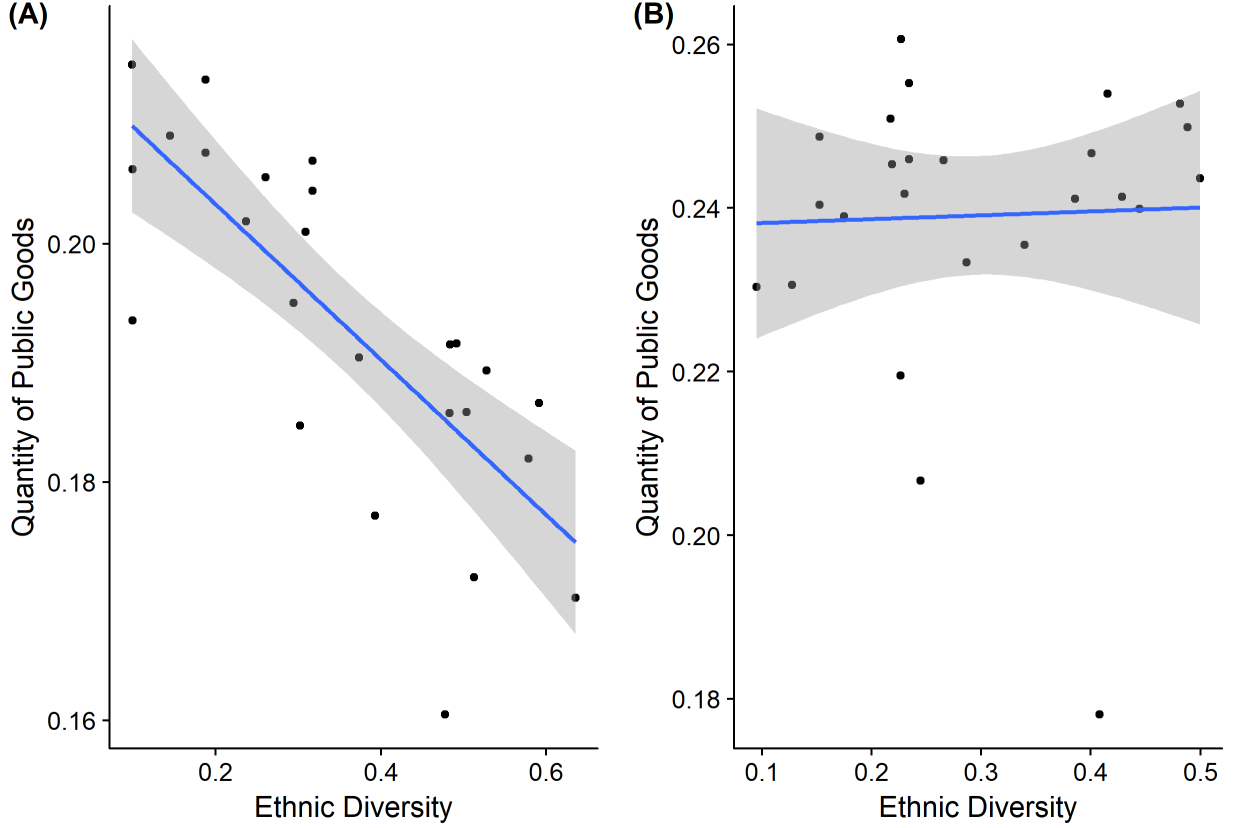
Figure 3: An illustrative run of the agent-based computational model, plotting ethnic diversity and public goods spending in simulated towns before sorting (A) and after (B).

Figure 4 provides a more systematic picture of the model's behavior. Each point represents a coefficient from regressing g on ethnic diversity for each of 60 runs of the model. In half of these runs, I allow agents to sort across cities, and in the other half I do not. When agents are not allowed to sort across cities, the original result holds. Ethnically diverse cities are also cities with a greater variance in preferences, which causes the municipal government to reduce taxes and spending. However, when we allow agents to migrate, the negative relationship between diversity and public spending vanishes. Diverse cities have no greater preference variation, on average, than homogeneous cities, because any such difference is eliminated through sorting and stratification. As a result, the diverse cities in the simulation spend no less on average than the homogeneous cities. Now that we have established the theoretical prediction, let us move to testing it empirically.
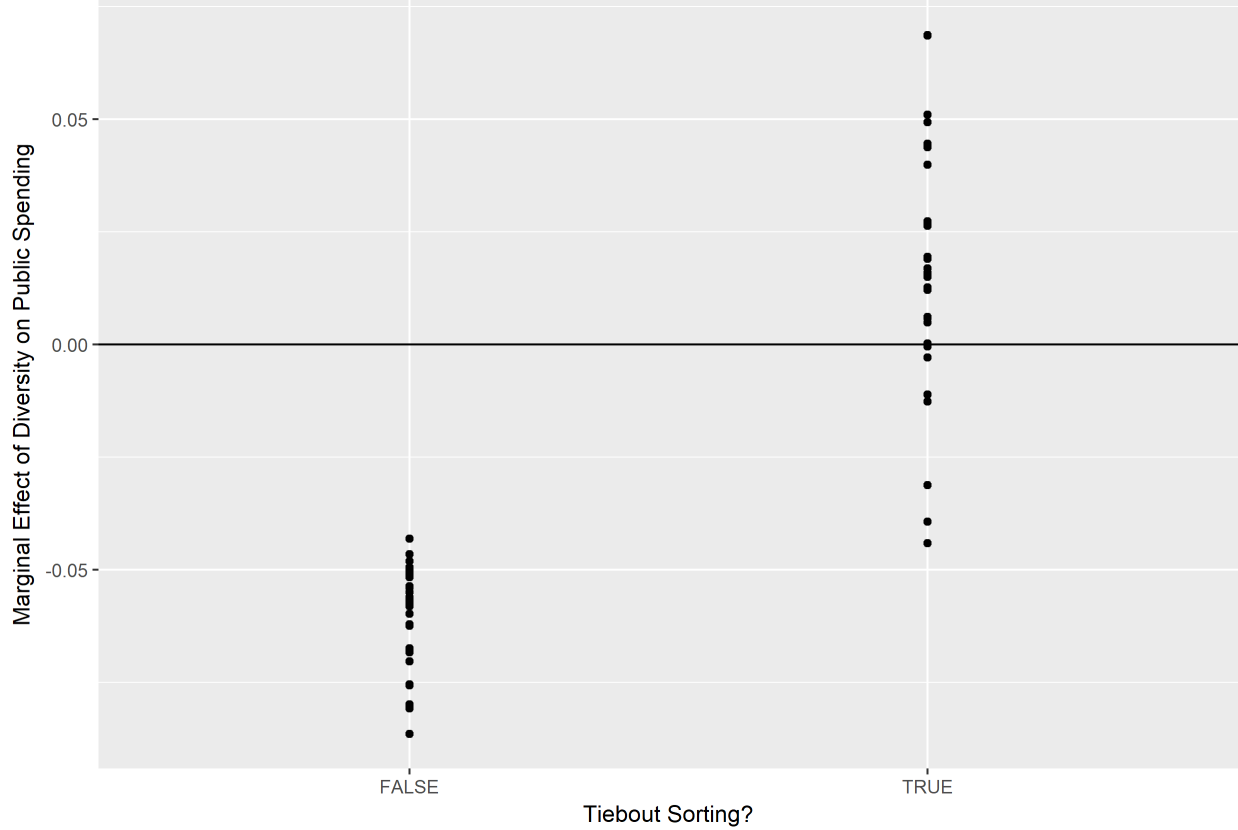
Figure 4: Correlation between ethnic diversity and public goods spending across 60 runs of the computational model, varying whether agents are allowed to sort across jurisdictions. ($\lambda = 0.1$, $\mu_0 = 0.5$, 25 jurisdictions, 1001 agents, 50 iterations).

4   The Data

For my data on municipal expenditures, I turn to the invaluable Census of Governments. This dataset, compiled by the US Census Bureau, collects expenditure and revenue figures from local governments in the United States every five years. Before I can use these numbers, however, I must make a few adjustments.

Comparing municipal government expenditures is notoriously difficult, due to the fact that functional responsibilities vary from city to city. Consider for example, the case of two cities: Flint and Ann Arbor, Michigan. One standard approach when measuring the generosity of local public spending would be to compare direct general expenditures (DGE) per

capita (Tausanovitch & Warshaw 2014, Trounstine 2015)[4] According to the Census of State & Local Governments, the city of Flint spent $538 million on direct general expenditures in 2012, while Ann Arbor spent only $199 million. These two cities had roughly similar populations in 2012, so according to DGE per capita measure, Flint's public spending exceeded Ann Arbor's by a factor of 3.

Does this figure reflect a threefold difference in the generosity of Flint's public services? Hardly. Rather, it is the product of varying municipal functions. A major hospital in Flint – the Hurley Medical Center – is a dependent agency of the city government. Meanwhile, Ann Arbor's major hospital is a part of the University of Michigan. As a result, all of Flint's hospital expenditures ($384 million in 2012) are included with the city's reported expenditures, with no comparable expenditure attributed to Ann Arbor. Net of hospital spending, Flint's DGE per capita is $154 million, 77% of Ann Arbor's total.

Clearly, adjusting for these functional differences can lead to wildly different measures of local public spending. And it isn't just hospitals. In Table 1, I list several public services whose provision differs from city to city. This table illustrates a remarkable amount of variation. Some municipalities operate their own libraries, parking garages, sewer systems, and trash pickup, while others leave these functions to private entities or regional special districts. Most significantly, many large municipalities operate their own school systems, and these expenditures are included in the DGE figure reported to the Census.

Given these varying functional responsibilities, I am skeptical of using direct general expenditures per capita – or shares of DGE – as a measure of local public goods provision. Variation in such a measure is just as likely to reflect differences in municipal function as it is to reflect the underlying generosity of public services. To ensure that my expenditure measures are comparable across cities, I make three adjustments to the reported figures:

1. For any given expenditure category, I drop cities that report zero spending in that

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[4]Direct expenditures exclude intergovernmental transfers (like paying another municipality for use of their sewage treatment system). And general expenditures exclude public utilities (e.g. water, electricity, airports, and public transportation). Throughout, I CPI-adjust the expenditure figures to constant 2010 dollars.

Table 1: Financial Idiosyncrasies for select US cities (2007)

Functional Idiosyncrasy	Example Cities
Dependent School System	New York, Detroit, All of Maryland
Dependent Hospital System	Flint, Boston, Colorado Springs
Private Solid Waste Management	San Francisco, Oakland, Reno
Sewers Managed By County	Birmingham, Tucson
Sewers Managed By Special District	Cleveland, Louisville
Sewers Managed By Private Utility Company	Pittsburgh, Providence
Metropolitan Police Department	Las Vegas, Louisville
County Police Only	Rancho Cucamonga
Dependent Mass Transit Authority	New York
Public Parking Garages	Chicago, Minneapolis, Ann Arbor
Independent Library District	Ann Arbor, Las Vegas, Indianapolis

category. Such cities have likely outsourced that function to a special district, county government, state, or private entity.

2. I exclude capital expenditures, as they are highly "lumpy" over time (cities very rarely construct new public buildings, but when they do, it constitutes a sizable portion of that year's direct spending).

3. I exclude education and hospital spending, as these are typically managed by school districts or private entities.

In addition to this spending data, I also compile data from the American Community Survey on demographics, population, and median income for every US city with more than 25,000 residents. My measure of diversity is the standard Herfindahl index, one minus the squared shares of population from each racial group. I employ the measure computed by Trounstine (2015), who uses five racial groups: non-Hispanic white, non-Hispanic black, Hispanic, Asian, and other.

5 Cross-Sectional Regressions

As an initial step, I attempt to replicate the findings from Alesina et al. (1999) with my more extensive dataset. To do so, I estimate the following cross-sectional regression using data from the 1992 Census of Governments:

$$Y_i = DIVERSITY_i + MEDINC_i + LOGPOP_i + PCT.COLLEGE_i + PCT.65_i + \varepsilon_i \quad (5)$$

Y_i is the share of general expenditures in city i, $DIVERSITY_i$ is the Herfindahl diversity index in city i, and ε_i is an iid error term. The control variables are median income, log population, the percent of residents that are college graduates, and the percent of residents over 65. I estimate one regression model by OLS for each category of spending. As shown in Table 2, this exercise replicates the basic result from (Alesina et al. 1999). Diverse cities spend a larger share of expenditures on police, and a smaller share on other productive public goods like roads and sanitation.

With a few adjustments, however, the picture changes dramatically. As described in Section 4, I replace shares of spending with per capita expenditures, excluding capital outlays and dropping cities that report zero expenditures in a given category. Finally, I include state-level fixed effects, estimating an equation of the following form:

$$Y_i = DIVERSITY_i + X_i + \alpha_{st} + \varepsilon_i \quad (6)$$

Table 3 reports the coefficient estimates and standard errors from this regression. Every coefficient is positive, and with the exception of highway spending, all are statistically significant. Diverse cities spend more on parks, police, fire protection, sanitation, and a category that includes welfare, housing, and healthcare. Although diverse cities devote a greater share of their spending to police and fire, this does not appear to come at the expense of per capita spending in other categories.

Table 2: OLS coefficients and standard errors, regressing shares of general expenditure on the diversity index (1992).

	Highway	Sanitation	Fire	Police	Parks
	Dependent variable:				
	(1)	(2)	(3)	(4)	(5)
Diversity	−0.06***	−0.06***	−0.004	0.07***	0.02**
	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
Median Income (1000$)	0.001***	−0.002***	−0.0005***	0.001***	0.0000
	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0001)
Log Population	−0.01**	−0.01***	−0.003	−0.01***	−0.001
	(0.003)	(0.004)	(0.002)	(0.003)	(0.002)
Pct. College Graduate	−0.09**	0.11**	0.03	−0.10***	0.12***
	(0.04)	(0.05)	(0.03)	(0.04)	(0.03)
Pct. Over 65	−0.19***	0.03	0.17***	0.09*	0.02
	(0.05)	(0.06)	(0.03)	(0.05)	(0.04)
Constant	0.18***	0.33***	0.12***	0.25***	0.04
	(0.03)	(0.04)	(0.02)	(0.04)	(0.03)
Observations	1,057	1,057	1,057	1,057	1,057
R^2	0.11	0.11	0.06	0.05	0.03

Note: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

Crucially, this finding holds when we extend our analysis beyond 1992. Estimating a series of cross-sectional regressions from 1982 to 2007 yields the very same pattern: diverse cities appear to spend significantly more per capita than their homogeneous counterparts. Figure 5 plots the coefficient estimates and standard errors from each regression specification.

Three items are worthy of note here. First, the evidence very clearly belies the notion that diverse cities spend less on public goods. The pattern, if anything, points in the opposite direction. There is only a single estimated coefficient that is negative and statistically significant (highways in 2007), while the majority of estimated coefficients are positive and

Table 3: OLS coefficients and standard errors, regressing per capita expenditures on the diversity index (1992).

	Dependent variable:					
	Highway	Sanitation	Fire	Police	Parks	Welfare
	(1)	(2)	(3)	(4)	(5)	(6)
Diversity	10.67	42.44**	81.61***	148.92***	38.28***	2.29***
	(9.91)	(18.96)	(13.74)	(16.91)	(10.83)	(0.44)
Median Income (1000$)	0.10	−0.75***	−0.55***	−0.44**	−0.44***	−0.02***
	(0.12)	(0.22)	(0.16)	(0.20)	(0.13)	(0.01)
Log Population	−2.94*	1.72	4.29*	11.25***	5.71***	−0.72***
	(1.71)	(3.17)	(2.28)	(2.92)	(1.84)	(0.07)
Pct. College Graduate	48.02**	179.69***	215.38***	237.97***	226.16***	3.10***
	(21.32)	(39.95)	(29.23)	(36.41)	(23.11)	(0.93)
Pct. Over 65	96.07***	188.56***	290.73***	240.22***	169.15***	−0.01
	(29.69)	(56.43)	(40.63)	(50.64)	(32.60)	(1.34)
Constant	75.67***	65.15	−6.60	−95.82***	−39.37*	7.67***
	(21.58)	(39.81)	(28.55)	(36.81)	(23.18)	(0.92)
State Fixed Effects?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,053	984	976	1,053	1,015	977
R^2	0.21	0.23	0.31	0.38	0.38	0.29

Note: *p<0.1; **p<0.05; ***p<0.01

statistically significant. Second, there is strong evidence that police and fire spending are positively correlated with ethnic diversity, while evidence is weaker for the other four categories of spending. Parks, sanitation, and highway expenditures are weakly, but positively, associated with ethnic diversity. The coefficient on welfare expenditure is also positive, but consistently small across these specifications. This is largely because redistributive spending constitutes such a small share of municipal expenditures overall (Peterson 1981).

Because the classical results on ethnic diversity and public goods provision were established using cross-sectional OLS, it is informative to revisit that conclusion using the same
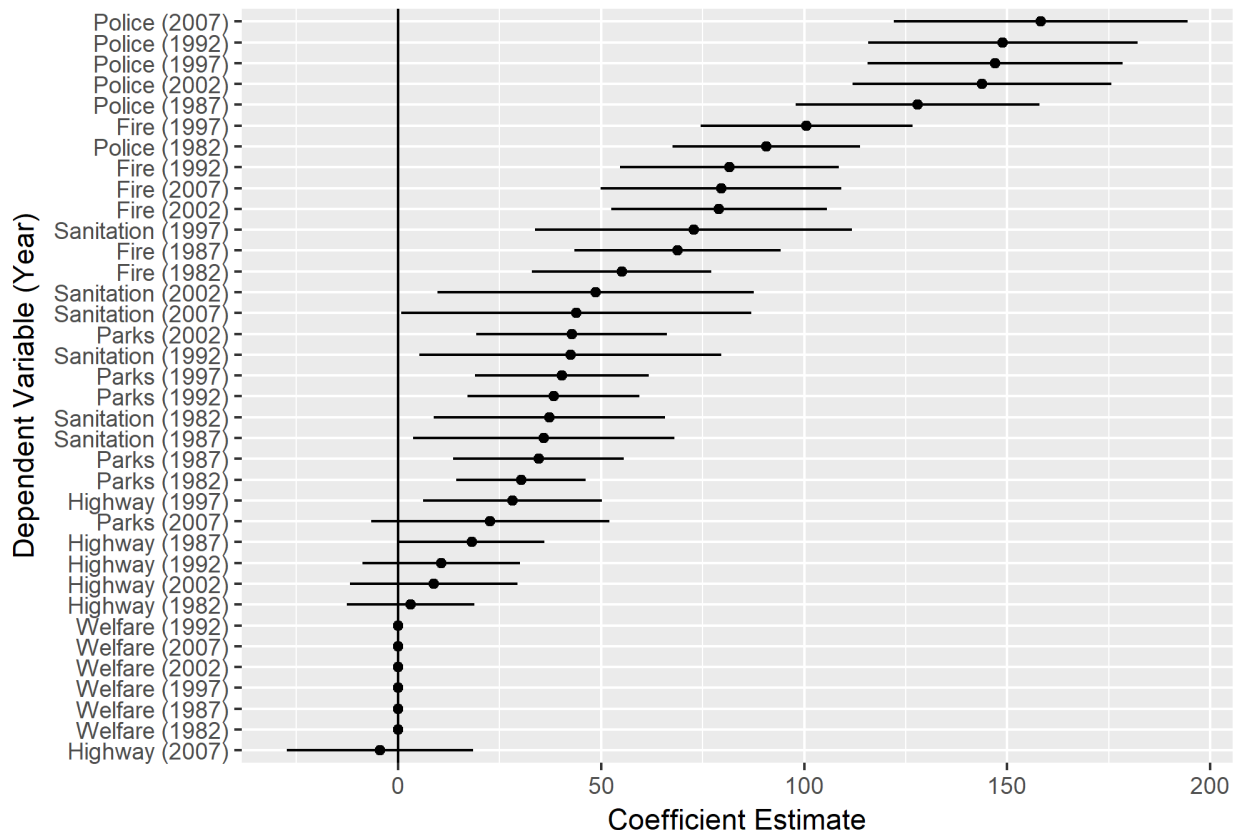
Figure 5: Each point represents the estimated coefficient on the diversity index from a cross-sectional regression. The horizontal bars are 95% confidence intervals for each expenditure category and year.

methodology. However, if I want to argue that diverse cities spend *more* on public goods, then I will need stronger evidence. For that, we now turn to a time series analysis.

6   Panel Data Analysis

As with any analysis based on cross-sectional correlations, there is a danger that the results discussed above are being driven by unobserved differences across cities. Variables like crime rates, political ideology, and other regional characteristics could be correlated with both ethnic diversity and municipal expenditures. To address this potential omitted variable bias, the following analysis will investigate variation that occurs *within* cities over time.

As before, the outcome variables are per capita expenditures by category, omitting capital
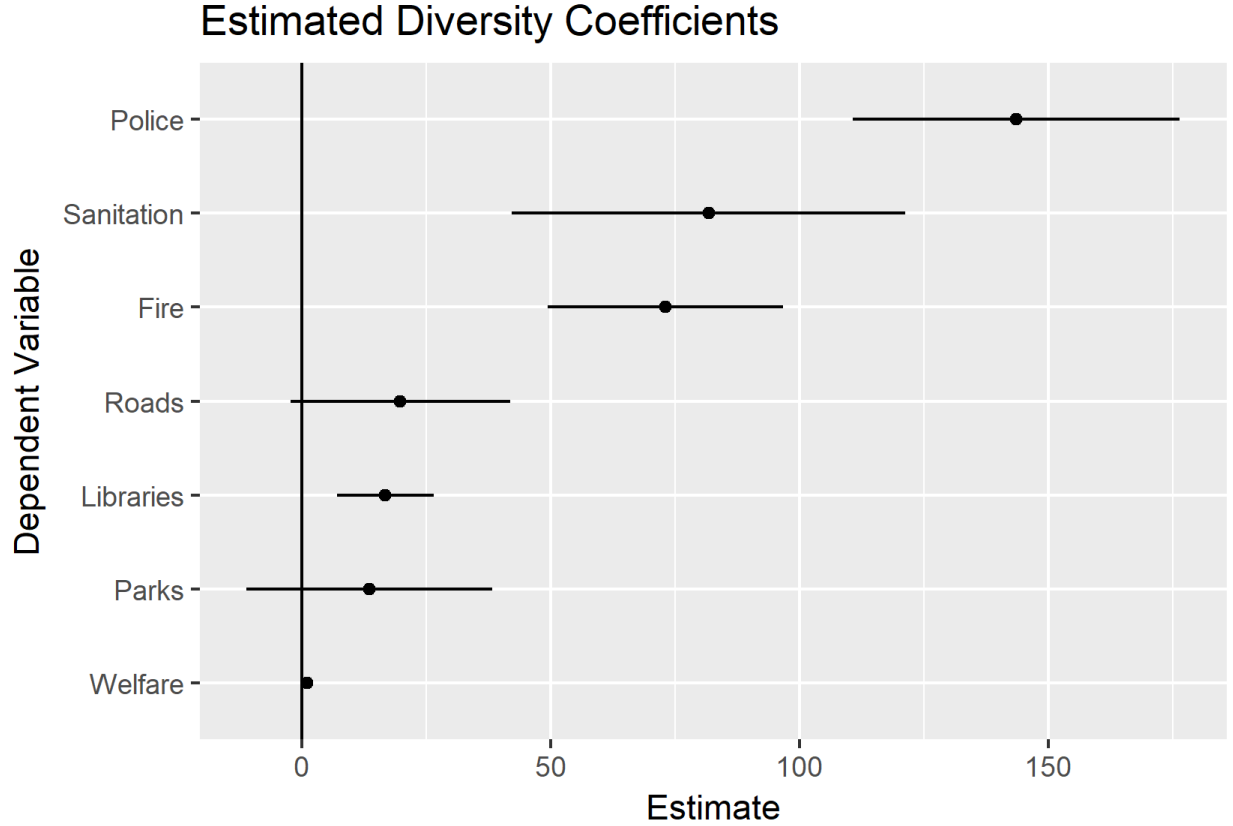
Estimated Diversity Coefficients

Figure 6: Estimated coefficients and panel-corrected standard errors, regressing per capita expenditures on the diversity index. Model in equation (6).

outlays and dropping any cities with zero expenditure in a given category. I include data collected every five years between 1982 to 2007, estimating a series of regressions given by the following equation:[5]

$$EXPENDITURE_{it} = DIVERSITY_{it} + X_{it} + \alpha_i + \varepsilon_{it} \tag{7}$$

The variable α_i denotes city-specific fixed effects, X_{it} is a matrix of city-year control variables, and ε_{it} are panel-corrected standard errors (Beck & Katz 1995). The estimated coefficients on the diversity index, and 95% confidence intervals are displayed in Figure 6.

Just as we saw in the cross-sectional results, the time series analysis is inconsistent with the conventional wisdom. A one-unit increase in the diversity index is associated with roughly

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[5]I am in the process of compiling 2012 and 2017 data.

$140 more in police spending per capita, $80 more on sanitation, $70 on fire protection, and $20 each on roads, libraries, and parks. There is not a single category for which an increase in diversity is associated with a city cutting its expenditures.

To be charitable to Alesina et al. (1999), it remains true that, in diverse cities, spending on public safety rises more rapidly than it does for other "productive" public goods. This implies that, on net, diversifying cities shift the composition of their spending away from parks, roads, and libraries, and towards police and fire departments. It would be a mistake, however, to infer that diversity is *undermining* public spending on roads, libraries, and parks. As the per capita figures reveal, this is simply not the case.

7 Conclusion

The current study faces several limitations, which I hope to improve upon in future work. First, by not including capital expenditures in my empirical analyses, I have removed an important component of municipal public goods provision. It is entirely possible that there are systematic differences between diverse and homogeneous cities with regards to capital outlays. My research design would not capture such a discrepancy. Second, although the fixed effects regression alleviates some concerns about omitted variable bias, it does not establish whether the relationship between diversity and public spending is *causal*. A more rigorous research design would leverage some sort of quasi-experimental shock to municipal diversity, like immigrant or refugee settlements. Studies like Gerdes (2011) take just such an approach, and it is encouraging that our conclusions are similar.

Yet despite these limitations, the findings presented here merit a skeptical re-examination of the conventional wisdom. At a time when anti-immigrant sentiment and anti-cosmopolitan ideals are gaining traction in the public sphere, it is important that scholars' claims about ethnic diversity be well-grounded in evidence. I hope this is a step in the right direction.

References

Alesina, A., Baqir, R. & Easterly, W. (1999), 'Public Goods and Ethnic Divisions', *The Quarterly Journal of Economics* **114**(4), 1243–1284.

Alesina, A. & Glaeser, E. L. (2004), *Fighting poverty in the US and Europe: A world of difference*, Oxford University Press, Oxford.

Alesina, A., Glaeser, E. & Sacerdote, B. (2001), 'Why Doesn't the United States Have a European-Style Welfare State ?', *Brookings Papers on Economic Activity* **2**, 1–69.

Alesina, A. & La Ferrara, E. (2002), 'Who trusts others?', *Journal of Public Economics* **85**, 207–234.

Beck, N. & Katz, J. N. (1995), 'What to do (and not to do) with Time-Series Cross-Section Data', *The American Political Science Review* **89**(3), 634–647.

Davenport, L. D. (2016), 'Beyond Black and White: Biracial Attitudes in Contemporary U.S. Politics', *American Political Science Review* **110**(1), 52–67.

Easterly, W. & Levine, R. (1997), 'Africa's Growth Tragedy: Policies and Ethnic Divisions', *The Quarterly Journal of Economics* **112**(4), 1203–1250.

Gerdes, C. (2011), 'The Impact of Immigration on the Size of Government: Empirical Evidence from Danish Municipalities', *Scandinavian Journal of Economics* **113**(1), 74–92.

Habyarimana, J., Humphreys, M., Posner, D. N. & Weinstein, J. M. (2007), 'Why Does Ethnic Diversity Undermine Public Goods Provision?', *The American Political Science Review* **101**(4), 709–725.

Hopkins, D. J. (2010), 'Politicized Places: Explaining Where and When Immigrants Provoke Local Opposition', *American Political Science Review* **104**(1), 40–60.

Hopkins, D. J. (2011), 'The limited local impacts of ethnic and racial diversity', *American Politics Research* **39**(2), 344–379.

Humes, K. R., Jones, N. a. & Ramirez, R. R. (2011), 'Overview of race and hispanic origin: 2010', *2010 Census Briefs* (March).

Hutchings, V. L. & Valentino, N. A. (2004), 'The Centrality of Race in American Politics', *Annual Review of Political Science* **7**(1), 383–408.

Miguel, E. (2004), 'Tribe or Nation? Nation Building and Public Goods in Kenya versus Tanzania', *World Politics* **56**(3), 327–362.

Peterson, P. E. (1981), *City Limits*, University of Chicago Press.

Putnam, R. D. (2007), 'E pluribus unum: Diversity and community in the twenty-first century the 2006 johan skytte prize lecture', *Scandinavian Political Studies* **30**(2), 137–174.

Tausanovitch, C. & Warshaw, C. (2013), 'Measuring Constituent Policy Preferences in Congress, State Legislatures, and Cities', *The Journal of Politics* **75**(02), 330–342.

Tausanovitch, C. & Warshaw, C. (2014), 'Representation in Municipal Government', *The American Political Science Review* **108**(03), 605–641.

Tiebout, C. M. (1956), 'A pure theory of local expenditures', *The Journal of Political Economy* **64**(5), 416–424.

Trounstine, J. (2015), 'Segregation and Inequality in Public Goods', *American Journal of Political Science* **60**(3), 709–725.