Micheal Giles and Mancur Olson Meet Vincent Ostrom

Jurisdiction Size and Latino Representation*

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Objectives. Two theories of politics predict that jurisdictional size will have different consequences for minority representation. Ostrom and colleagues suggest that representation is enhanced in smaller jurisdictions. The work of Giles and Olson in contrast implies that smaller jurisdictions will reduce minority representation. We expect that smaller jurisdictions will have fewer Latino representatives on school boards and on the teaching faculty, and these representatives will have less impact on Latino students. Methods. We combine census data with school district data for 1039 school districts in Texas. Results. All other things being equal, small school districts have lower levels of Latino representation on the school board and on faculties; what representation that does exist is less effective in generating benefits for the Latino community. Conclusions. Jurisdiction size is an important variable for quantity and quality of representation.

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Representation, minority representation in particular, is one of the most extensively researched concepts in political science. The result is an impressive body of scholarship that considers the relationship between minority representation and such factors as electoral structure, political reform, political resources, and intergroup competition (Engstrom and McDonald 1981; Kerr and Mladenka 1994; Polinard et al. 1994).

This article examines the influence of jurisdiction size on minority representation. The lack of analysis on jurisdiction size is surprising given that political fragmentation and its correlate, jurisdiction size, are a frequent topic in urban politics scholarship (Ostrom, Tiebout, and Warren 1961; Ostrom 1989; Ostrom, Bish and Ostrom 1988). This literature suggests formally that representation is enhanced by fragmentation and, by implication, by smaller jurisdictions.

This article links the minority representation and the fragmentation scholarship to assess minority representation in the context of jurisdiction size. First, we examine the argument that smaller jurisdictions enhance representation. Second, using the logic of Micheal Giles' power thesis and Mancur Olson's logic of collective action, we offer a counter-argument that suggests smaller jurisdictions adversely affect minority representation.

Third, we test these positions empirically, using both active and passive Latino representation in school districts. Finally, we discuss the implications of these findings.

Smaller Is Better

Over a period of several years, Vincent Ostrom and his colleagues have advocated the normative and empirical benefits of political fragmentation (Ostrom et al. 1988; Ostrom et al. 1961; Tiebout 1956). Fragmentation, all other factors being equal, implies a series of smaller jurisdictions rather than a few large ones. In a fragmented metropolitan area, voters can "vote with their feet" and seek a smaller, more homogeneous community where the combination of taxes and services better meets the voter's needs (Tiebout 1956). The particular bundle of taxes and services in each community is determined by the median voter. A larger number of smaller cities, therefore, will be better able to differentiate their particular tax/service bundles. If cities become too large, then the bundles of taxes and services will come to resemble each other. The clear implication is that smaller is better. Because policy congruence is a widely accepted definition of representation (Eulau and Karps 1977), the Ostrom argument suggests that representation is enhanced in smaller jurisdictions.

In theory "voting with one's feet" creates homogeneous communities; and, thus, there are no "minorities" to represent.

Real jurisdictional markets, however, do not operate as efficiently as theoretical ones that assume perfect information, numerous alternatives, and no transaction costs. Some individuals may misperceive alternatives (Lyons, Lowery and DeHoog 1992) and some areas may lack sufficient jurisdictions, but the real key is transaction costs. Moving is expensive, and some individuals cannot afford to do so. The disjuncture between jurisdictional markets in theory and in practice suggests jurisdictional size is well worth assessing.

Even if policy congruence is not immediately better as the theoretical argument contends, smaller communities have other aspects that can enhance representation. In smaller communities, for example, individuals are more likely to know and come into contact with community leaders. Such communities are unlikely to have large, impersonal bureaucracies that discourage interactions between citizens and their governments. One voter, or a small group of voters, will matter more to a city council member in a town of 1000 than to a council member in a city of one million. Overall, these factors imply that influencing the power structure is easier in smaller communities. To the degree that communities self select, that is, people actually do vote with their feet, the homogeneity of these smaller communities further enhances representation simply because value congruence is greater.

The Ostrom-Tiebout model of fragmentation has generated a

wealth of empirical literature. Some research supports the model (Teske, Schneider, Mintrom and Best 1993); other studies are more critical (Lyons, Lowery and DeHoog 1992). One frequently expressed concern is the impact of fragmentation on racial and ethnic minorities. If de facto segregation occurs, minority communities may lack the tax base to support the public programs that they need. Still, one could argue the relatively lower costs of participating in smaller communities (that is, more accessible public officials, smaller bureaucracies, fewer citizens to mobilize, etc.) might compensate for a lack of resources.

Small May Not Be a Good Thing

An alternative to the Ostrom view can be deduced from the work of Micheal Giles and Mancur Olson. Giles and Evans (1985, 1986) have developed the power thesis; it assumes that the relationships between groups (minority v. minority or minority v. majority) are competitive rather than cooperative. The degree of competition is based on social distance; and this hypothesis has some empirical support (Meier and Stewart 1991). The importance of Giles' work for the present argument is that the power thesis sees minority politics as a two person game with both the minority and the majority being strategic actors seeking their own ends. In such a situation majorities, by definition, have some advantages that minorities do not.

Mancur Olson's work (1965, 1979) also can be used to suggest

how jurisdiction size affects the relative advantages of majorities and minorities. Olson contends that collective action becomes more difficult as the group to be mobilized becomes larger. Larger groups inherently have greater transaction costs in collective action. In addition small groups permit coercion, either social or political, because "free riders" cannot remain invisible. At first blush Olson's work might imply that both majorities and minorities would be better represented in smaller communities because the costs of collective action will be smaller. The inherent advantages of a majority group, however, dispel this initial supposition.[1]

A majority's advantage can be more readily seen in a practical situation. In all jurisdictions, there will be a correlation between political and economic power.[2] In a smaller jurisdiction, a majority coalition can use both political and economic incentives to discourage minority candidates from running or, perhaps, even discourage minorities from voting. Smaller communities mean smaller economic bases and usually more concentrated ownership. Concentration of ownership makes it easier to imply or actually threaten economic sanctions against "unacceptable" political activity.[3] In a large metropolitan area the diversity of employment opportunities and the diversity of values makes such actions less likely. Majorities have an advantage in smaller communities not only because they find it

easier to coerce, but also because majorities are likely to be able to bear higher transaction costs (having more benefits to protect). Majorities, in short, can use economic power to protect their political power. In combination these advantages suggest that minority representation will be hindered rather than helped in smaller jurisdictions.

Our argument is similar to Madison's (Federalist #10) and Hamilton's (Federalist #9) in the <u>Federalist Papers</u>. In Madison's view large jurisdictions are preferred because their heterogeneity works to protect minority interests. In small jurisdictions, groups "more easily will . . . concert and execute their plans of oppression" (Madison [1788] 1961, 83). Recent work confirms that large jurisdictions are less likely to pass anti-minority referenda (Donovan and Bowler 1998).

Overt coercion is not the only tactic that majorities may use to limit minority power. Attempts by a majority to maintain itself via coopting minority leaders or forming strategic coalitions are also facilitated in a smaller jurisdiction, both because transaction costs are lower and because the minority group has fewer alternatives.

The Study

A data set with numerous different sized jurisdictions and good policy measures would be ideal for testing relationships between jurisdiction size and minority representation. Texas

school districts offer such a data set. Texas has over 1,000 school districts, ranging in size from a few hundred people to over 1 million residents. Texas also has a large and dispersed minority Latino populations. The average district has 19.2% Latino population (and 26.1% Latino students) with a standard deviation of 23.5. In addition to good measures of passive representation (e.g., school board seats, teaching positions), school districts also have excellent measures of active representation (e.g., minority performance in those schools).

Our data are from two sources: The Texas Education Agency and the School District Data Book, 1990 Census School District Special Tabulation, Summary File Set 1 Extract. The school data are for 1996 with the census data from 1990. Our unit of analysis is the school district. By examining one state and focusing on Latino representation, we eliminate problems with inter-regional[4] and inter-ethnic group differences.[5]

Representation Measures

A substantial body of research documents the linkage between representation in elected institutions and representation in bureaucracies (e.g., Kerr and Mladenka 1994). A smaller but consistent literature identifies a relationship between passive representation and policies that benefit the represented (Meier and Stewart 1991; Hindera 1993; Selden 1997).

One measure of Latino passive representation in the school

district is the percentage of Latinos on the school board. A

second measure is the percentage of Latino teachers in the

district. Our measure of active representation/policy outputs is

the Latino pass rate on the Texas state exam (TAAS).[6] The TAAS

is an exit level exam that all students in Texas public schools

must successfully negotiate at different grade levels.

We assume that policymakers who owe their elections to

minority voters will intervene directly in the distribution of

services to aid the minority community (Meier, Stewart and

England 1989). For education policies, this process anticipates

the election of minorities to the school board, who in turn

influence the hiring of minority teachers, who, in turn, pursue

policies that benefit the minority student population (Polinard

et al. 1994).

Size

Our key concept of theoretical interest is jurisdictional

size or, in other words, the size of these school districts.

Simply using the total population as an indicator is problematic

because this variable is highly skewed by a few exceptionally

large districts. Since our key hypotheses are interactions

between size and variables that affect representation, using a

skewed variable might tell us something about the difference in

representation between places such as Houston and Dallas and

other places, but would not say much about size per se.[7]

Using total size also appears to contradict Olson who does not suggest a linear relationship between size and transaction costs but rather a fairly high jump in transaction costs after some initial threshold is breached. The threshold concept suggests a division point, with districts falling below that point considered "small." The exact designation of this point is somewhat arbitrary since in any given jurisdiction the level of transaction costs could be affected by political leadership and other factors. To find a division point, we predicted Latino school board membership with percent Latino population and physically controlled for districts of various sizes. The slope from this regression identifies the proportion of expected board seats for a given percentage of Latino population (Engstrom and McDonald 1981).

Figure 1 illustrates that for districts larger than 10,000 this slope is about .48; i.e., Latinos receive about one-half the representation expected based on numbers alone. As one runs this regression for increasingly smaller school districts, the coefficient gradually drops until a sharp drop occurs between 3,000 and 2,000 residents. The right hand side of the graph similarly illustrates how these small districts (less than 2000) differ from larger ones as one estimates this regression for districts over a certain size. This barefoot experiment suggests that small might be defined as districts of 2000 or less.[8] We

created a dummy variable as a threshold for size coded as 1 for districts of less than 2000 persons and 0 otherwise.

<center>[Figure 1 About Here]</center>

If we define representation as the relationship between the Latino population percentage and the Latino seats percentage on the school board, then the impact of size can best be determined by the following interactive regression:

$$\text{Seats} = \alpha + \beta_1(\text{Population}) + \beta_2(\text{Size}) + \beta_3(\text{Population x Size})$$

The slope for population percentage (β_1) should be positive. If Ostrom is correct, the slope for the interaction term (β_3) will be positive. If our interpretation of Giles and Olson is correct, this slope (β_3) should be negative. This base model can be used for both school board seats, teachers, and student test scores with the addition of appropriate control variables.

<center>**Findings**</center>

School Board Representation

Representation should be a function of environmental constraints, resources applied to the process, and majority-minority relations. Perhaps the most significant variable for representation purposes is the percent Latino population. All else being equal, the greater the percentage Latino population in the district, the greater the Latino representation on the school board. We use two measures of Latino population--the percentage

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Latino and the square of the percentage Latino in the district, to test for a curvilinear relationship (see Keech, 1968).

The educational level within the community of the parents constitutes a powerful resource for the educational attainment of children (see, e.g., Coleman 1966). The higher the education level of the minority community, the more likely that community can be effective in pressing its demands upon the local education policy-makers (Meier and Stewart 1991; Polinard et al. 1994). We expect that the percentage of the Latino school district population with at least a high school education positively correlates with Latino representation and Latino test scores.

The Latino population in the United States includes a number of non-citizens who are not eligible to vote. The use of the Latino population percentage without some deflator to help sort out the impact of non-citizens could skew the results. We use the percentage of foreign born Latinos in the school district as a surrogate control for non-citizens.[9]

According to the power thesis (Giles and Evans 1985), another environmental constraint is social class. One common measure of relative social class is the ratio of the percent of Latinos living in poverty to the Anglo percentage living in poverty. The more equal this relationship is, the greater Latino representation should be (Meier and Stewart 1991).

Table 1 reports the results of two equations regressing the

percentage Latino on the school board on the independent variables. The first column of Table 1 reveals neither size per se nor the poverty ratio are statistically significant. The absence of a significant size coefficient means that the intercept for small districts does not differ from that for large districts. All differences, as a result, are reflected in the slope terms. The second column estimates the regression without these two variables.

[Table 1 About Here]

Both Latino population and Latino population squared are positive and significant, indicating an upward curvilinear relationship. At higher levels of Latino population, population has a greater impact on representation. This impact, however, is muted in smaller districts. The coefficient for the interactive term is significant and negative. In other words, in small communities, Latinos receive less representation.

The squared relationship holds for both small and large districts. This indicates that, at all levels of population, Latino representation in small districts is .193 percentage points less for each one percentage point gain in Latino population compared to large districts. Were it not for the squared term, the expected level of minority representation in small districts would be essentially zero.

The differences in representation between small and large

districts at varying levels of population is substantial. With a

nonlinear function, slopes can be estimated by taking the partial

first derivative of the equation and substituting in the

population percentage. At 30 percent Latino population, the

slope is .52 for large districts but only .32 for small districts

all other things being equal.[10] While Latinos are under

represented in both types of districts, the degree of under

representation is much more severe in small districts.

Teacher Representation

We also examined the representation of Latino teachers.

Meier and Stewart (1991: 108) characterize teachers as

"implementation bureaucrats" in the educational system. Payne

(1994) argues that minority teachers are especially effective in

educating urban lower socioeconomic status minority students.

Meier and Stewart (1991, 28) suggest that Latino teachers can

have an impact on Latino students simply by serving as role

models in the classroom, while Smith and Meier (1994) find that

teachers have a significant impact on student test scores.

For control variables we use the Latino high school

education percentage, the Latino/Anglo poverty ratio, and the

percent foreign born. Size interacts with both Latino population

and percent Latino school board members. The results appear in

column 1 of Table 2. Although the interaction coefficients are

not significant at traditional levels, in both cases they suggest

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the detrimental impact of small districts. Both population and school board seats matter more in large districts.

[Table 2 About Here]

The marginal significance levels of the interaction terms are, in part, the result of collinearity. Column 2 estimates the same equation but drops the interaction term for population; column 3 drops the interaction for school board seats. When the number of interaction terms is reduced to one, the interaction term is negative and significant whether size interacts with board representation or population.

The middle regression suggests that a one percentage point increase in school board representation is associated with a .169 percentage point increase in Latino teachers for districts larger than 2000. For districts smaller than 2000, this relationship drops to .043 (.169 - .126) and is not statistically different from zero. This implies that in small districts additional school board representation may not result in more bureaucratic representation. Not only is small size associated with reduced school board representation, but it is also associated with less effective school board representation with respect to teacher representation.

This equation shows only part of the negative impact of size. Because small districts also elect fewer Latino school board members, an additional indirect effect of size on Latino

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teachers operates through the school board variable.

The control variables generally perform as expected. Higher
levels of Latino education are positively associated with more
Latino teachers and higher levels of poverty are negatively
related. The positive relationship between teachers and percent
foreign born is not unexpected; teaching positions are highly
coveted jobs for immigrants and first generation Americans.

Active Representation: Student Test Scores

Table 3 shows the interaction of size and representation on
student test scores.[11] As expected, two environmental variables,
percentage low income students in the district and instructional
revenue per pupil, are both significant and in the correct
directions.[12] The more instructional revenue per pupil, the
higher the Latino student pass rate is on the TAAS. The greater
the percentage of students from low income backgrounds, the lower
the Latino student pass rate. Overall school district quality,
as measured by average SAT scores, had no impact.

[Table 3 About here]

The representational terms--percentage of Latino teachers
and the interactive term--were significant. The first variable,
percentage Latino teachers, has a positive impact on student
performance. A one percentage point increase in Latino teachers
is associated with a .1 percentage point increase in Latino
students passing the test. As the Giles/Olson theory

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anticipates, in small districts the impact of Latino teachers on Latino student pass rates is reduced. Essentially, in small districts, the representational effect is wiped out (.104 -.144 = -.04). Latino students in small districts, thus, receive no benefits from exposure to Latino teachers.

Conclusions

This research is the first to examine jurisdictional size and minority representation. Some scholars advocate smaller jurisdictions to provide more choices for citizens seeking the optimal mix of taxes and services. The deviation of the real world from this theoretical model and research on minority groups and interest groups suggests, to the contrary, that smaller size might have a detrimental impact on minority representation.

The conclusions of our empirical analysis are fairly consistent. Smaller jurisdictions are associated with lower levels of minority representation, all other things being equal. Not only is the level of representation lower, but the quality of representation (the impact on teacher hiring and student test scores) is also lower. Small jurisdictions, therefore, are linked to lower levels of active and passive representation.

An alternative explanation for our findings should be noted. Social distance theory often incorporates the contact thesis which holds that intergroup relationships improve with greater contact (Giles and Evans 1985; Forbes 1997; Taylor 1998; but see

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Voss 1996; Giles and Buckner 1996). If jurisdiction size increases the odds of intergroup contact (because the number of opportunities for interaction increase), then the results here could be attributed to contact rather than transaction costs. Contact might even be an intervening variable between transaction costs and representation. Unfortunately, with the current data we cannot provide a crucial test of the contact hypothesis versus the transaction cost hypothesis.

Much of the normative support for the models of Ostrom, Tiebout and others rests on the proposition that decentralization and fragmentation facilitate democracy. An exhaustive study of fragmentation's impact on individual citizens (Lyons, et al. 1992) questioned fragmentation's ability to develop democratic citizens. This study adds to that critique, suggesting that smaller jurisdictions produce less "efficient" representation processes. A system that is less efficient at translating citizen interests into policies enacted by politicians and bureaucrats by definition is less democratic.

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Table 1

Determinants of School Board Representation

Independent Variables	Slope	t-value	Slope	t-value
Latino Population %	.246	4.34	.242	4.42
Latino Population % Squared	.003	5.18	.330	5.18
Size	1.636	1.52	--------------	
Size * Population %	-.193	-5.14	-.158	-5.76
Foreign Born	-.353	-3.79	-.351	5.18
Poverty Ratio	.172	1.14	--------------	
Intercept	-.789	-0.95	.165	0.25

F= 111.13	F= 165.51
Sign. F= .000	Sign. F=.000
Adj. R^2=.3890	Adj. R^2=.3880
N = 1039	N = 1039

Table 2

Determinants of Teacher Representation

Independent	Slope	t	Slope	t	Slope	t
Latino Population Percentage	.553	25.42	.561	26.50	.537	27.46
Size*Population %	-.043	-1.70	-.065	-3.02	----------	
School Board Representation	.152	6.00	.133	6.01	.169	7.23
Size*Board	-.079	-1.54	---------		-.126	-2.94
Latino High School Education Percent	.091	4.83	.090	4.80	.093	4.96
Poverty Ratio	-.215	-1.99	-.209	-1.99	-.216	-2.00
Foreign Born	.178	2.67	.178	2.67	.188	2.83
Intercept	-5.739	-8.33	-5.761	-8.36	-5.803	-8.43

F= 463.41	F= 398.08	F= 463.10
Sign. F=.000	Sign. F=.000	Sign. F=.000
Adj. R^2=.73	Adj. R^2=.73	Adj. R^2=.73
N = 1039	N = 1039	N = 1039

Table 3

Determinants of Latino Student TAAS Pass Rate

Independent Variables	Coefficient	T-Value
Percent Latino Teachers	.104	4.89
Size*Teachers	-.144	-2.53
Percent Low Income Students	-.271	-12.02
Instructional Revenue per pupil	.001	2.73
Average District Sat Score	.005	1.34
Intercept	57.33	12.94

F= 44.16

Sign. F=.000

Adj. R^2=.24

N = 672

1.The relationship might be nonlinear. After minorities overcome
the disadvantages of small jurisdictions, they are likely to get
better representation until the greater resources needed to
operate in very large jurisdictions become crucial.

2.Our hypothesis is that the correlation between economic and
political power is higher in smaller communities, but this
hypothesis plays no role in our study.

3.The concentration of political and economic power drives the
small jurisdiction hypothesis. While Olson contends the impact
of size dissipates rapidly, concentrated power drops the number
of people who must be coordinated dramatically.

4.The Latino population varies a great deal across the U.S. Both
politics and education policy differs among Mexican American,
Cuban American, Puerto Rican and other Hispanic populations.
Status and political clout also varies by state. Such problems
make multi-state studies of Latinos difficult but not impossible.

5.Meier and Stewart (1991) argue that politics in multi-racial
cities is a three person game with results affected by the types
of coalitions that form. Limiting our study to Latinos only
avoids many of these complications.

6.We use the raw Latino pass rate rather than the ratio of Latino
to Anglo pass rates. The ratio can sometimes be distorted if the

number of Anglos is relatively small. In addition, the ratio
might suggest that Latinos are better off in comparison to local
Anglos but they still could have low scores on the exam.

7.We also tried logging district size to see if this would avoid
the big district problem. While the strategy mitigated some of
the problem, it did not resolve it.

8.There could be another cut point at higher population levels.
Latino representation appears to continue to improve until the
districts get extremely large. We replicated our analysis using
cut points of 1,500 and 3,000 with similar results.

9.Many of these individuals will be citizens and thus voters,
but the cross district correlation between percent foreign born
and percent noncitizens is high. The Census does not provide
information on citizenship for school districts.

10.The percentage foreign born has a significant negative impact
on Latino representation. Large numbers of foreign born persons
within the school district inhibit Latino representation.

11.Another equation, controlling for influential cases [omitting
districts with large Cook's Ds] dropped the representational
coefficient from .0958 in large districts to -.119, an
overwhelming decline in influence, in small districts.

12.Latino student test scores are not normally distributed and
this problem can often distort results. Table 3 was also
estimated via robust regression (Iteratively Reweighted Least

Squares using the Andrews' [1974] sine procedure for four

iterations). Andrews' sine works for a variety of distributions,

and when data are Gausian, produces estimates equal to ordinary

least squares estimates.