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Participation and the Pursuit of Sustainability in U.S. Cities

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Abstract

This article explores the relationship between political and civic participation and the pursuit of sustainability in American cities. Some have argued that cities that exhibit more participation, engagement, and bridging social capital are more likely to pursue policies and programs designed to achieve greater sustainability. Others have posited alternative explanations, especially explanations related to resources, socioeconomic status, and economic growth. Using the Social Capital Benchmark Survey cities—10 of which have extensive sustainability programs, 5 of which have modest programs, and 12 of which have virtually no sustainability programs at all—as the source of comparison, this research finds that cities that are most committed to pursuing sustainability policies do tend to be more participatory places with respect to signing petitions, participating in demonstrations, belonging to local reform groups, and joining neighborhood associations, even controlling for personal income and other factors.

The idea of a "sustainable city" probably traces its roots to the late 1980s, with the work of the United Nations World Commission on Environment and

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Development (the Brundtland Commission 1987) in its report *Our Common Future*. The Brundtland Commission placed a great deal of emphasis on the role of cities and city governments in achieving greater sustainability. Since that time, scholars have debated the meaning of the concept of a sustainable city particularly in the U.S. context (Rees 1997; Hempel 2009), gathered information about what U.S. cities are actually doing in an effort to try to become more sustainable (Portney 2003; Saha and Paterson 2008; Lubell, Feiock, and Handy 2009), and examined how well these efforts are able to achieve economic growth while protecting the environment (Fitzgerald 2010).

Most recently, scholarly literature on sustainable cities and its corollaries, smart growth, growth management, climate protection, environmental protection, and environmental justice, points to an obvious and central question: Why is it that some cities take sustainability seriously and others do not? Many plausible explanations have been offered, including the wealth and resources of cities (Lubell, Feiock, and Handy 2009; Kahn 2006; Press and Balch 2002), the education level of cities' populations (O'Connell 2008; Portney 2008), the structure of city government (Feiock, Tavaras, and Lubell 2008; Lubell, Feiock, and Ramirez de la Cruz 2009; Jepson 2004), the extent of multilevel governance (Betsill and Bulkeley 2006; Betsill and Rabe 2009; Rabe 2008), the nature of community social capital, especially environmental nonprofit organizations (Miller and Buys 2008; Parisi et al. 2004; Zahran et al. 2008; Brody et al. 2008), and the character of urban governance regimes (Stone 1993; Gibbs and Jonas 2000; O'Connell 2009).

One of the persistent themes is associated with how democratically and collaboratively cities are governed.[1] Such explanations specifically suggest that greater civic and political participation is linked to more extensive sustainability policies in America's cities. Here we investigate whether the *pursuit of sustainability in public policy* may reflect the degree to which residents are politically and civically active. This analysis cannot sort out, with any precision, whether there is a causal connection between participation and the pursuit of local sustainability policies or what the direction of that causation might be. It does, however, provide evidence as to whether there is enough of an association to suggest a plausible connection.

The empirical questions about participation rest on a theoretical foundation that supports a conception of the democratic city in the good society. We presume that broader levels of participation are linked to greater responsiveness by city governments. Unlike national politics, with its reliance on representative government, urban policy making can offer opportunities for direct citizen involvement and even face-to-face democracy at the neighborhood

level. Are cities with ambitious sustainability efforts responding to citizen participation?

On a more practical level, sustainability is linked to the ways in which many cities are trying to revitalize themselves as the world changes around them. Cities are growing again, and as their populations swell, part of that growth is composed of individuals and families who are affluent and sensitive to environmental issues. Indeed, part of the migration into the city is from those who are making a deliberate choice to reduce commuting time and drive less and live in more compact and less wasteful residences. Some cities have actively tried to market themselves to this clientele with new parks, light rail, and other environmental amenities. At the same time cities must generate jobs and must pay for such initiatives. As a city picks among various sustainability policies, how are its choices linked to popular participation?

Participation and the Link to Local Sustainability Policies

Although the literature suggesting a relationship between participation and sustainability is largely silent with respect to the explicit logic or rationale for why such a relationship should exist, it surely springs from particular assumptions about political behavior (Portney 2005). One rationale suggests that if a city is to develop and implement a sustainability initiative it must do so with the confidence and cooperation of its residents. It is not something that can simply be orchestrated from the top, even if some sustainability experts would wish it so (Brugmann 1997). Without a real "buy in" from citizens, a broad sustainability initiative faces a perilous route to enactment. As Zachary (1995, 30) notes, "Based on the experiences of Seattle and Cambridge, MA, it is evident that community involvement can be a key factor in developing tools for moving toward a more sustainable community." Even though the vast majority of citizens may endorse sustainability in the abstract, they are likely to have widely differing priorities among the vast range of policies that can be adopted. Opposition from stakeholders who see some financial peril in particular sustainability proposals must be overcome (Iglitzin 1995; Pena 2003). Direct costs to residents must also be discussed and debated. A broad, overarching effort on sustainability will likely entail a master plan that, in turn, requires substantial community input.

A second logic also underpins the argument that participation should be associated with the pursuit of sustainability. One of the more significant threats to local sustainability is found in the variety of externalities that cities produce while trying to support the local economy and the lifestyles of their residents. In short, all cities impose an "ecological footprint" on people who live outside

of their borders, just as many nations impose ecological footprints on people in other nations (Rees 1992; Rees and Wackernagel 1994). Resembling the challenges of the tragedy of the commons, challenges of externalities suggest that left to their own devices, cities will have incentives to impose greater costs on their surrounding areas. Yet diminishing such externalities is necessary for cities to achieve greater sustainability (Ostrom 1990). These externalities can be diminished only through one or both of two processes. First, externalities can be reduced through some form of regulatory coercion, which cities typically have neither the authority nor political will to use. Second, they can be reduced through significant participatory deliberative democracy that provides a forum through which residents can achieve some degree of consensus on the idea that reducing externalities represents a desirable community good and consensus on how to reduce these externalities (Baber and Bartlett 2005; Miller and Buys 2008). Presumably, coming to recognize a community good associated with reducing externalities and reaching consensus on how to respond is part and parcel of participatory processes among residents.

A third rationale is rooted in the idea that when cities adopt citizen participation programs designed to facilitate the direct involvement of ordinary residents in the public policy-making process, widespread public support for sustainability and environmental protection could conceivably provide countervailing power against business interests antagonistic to particular environmental proposals (O'Connell 2009). Yet some analysts have found citizen programs to be weak because they may do little more than allow residents to "sound off" about what they like and dislike. Much authority resides in agencies and administrative departments, and bureaucrats can render citizen involvement meaningless by adhering to the formal requirements of hearings or forums and then proceeding with what they wanted to do in the first place (Rosenbaum 1978).

There are, of course, many reasons to suspect that participation might undermine the pursuit of sustainability. In other words, greater participation might be unrelated to the pursuit of sustainability, or it might even be associated with the absence of, or opposition to, efforts to try to become more sustainable. People might participate because they are angry about sustainability proposals or because they distrust their neighbors and worry about what their neighbors might come up with in the planning process. NIMBY-ism can also be a factor. Even in the highly participatory and sustainable cities of Seattle and Vancouver, British Columbia, efforts to increase residential housing density as part of efforts to become more sustainable were strongly opposed by affected neighborhoods (Groc 2007). Well-constructed neighborhood-based citizen involvement programs have the potential to

ameliorate NIMBYism as collaborative norms can take hold and a problem-solving frame can supersede factionalism (Berry, Portney, and Thomson 1993). At the same time, given the small scale of neighborhood politics, a modest number of activists can impede and even thwart well-intended proposals to enhance the environs (Fiorina 1999).

Participation may also be fueled by high levels of education or wealth. Since socioeconomic status is so strongly correlated with participation, city policy making may reflect this bias in participation. The rise of environmentalism is broadly linked to the changing nature of liberalism, with its increased focus on quality of life or "postmaterial" issues (Berry 1999). Environmental lobbies, supported by higher income citizens, have been instrumental in pushing sustainability forward. The reverse can also be true. Effective mobilization efforts, through outreach either by the city or by civic and environmental groups, may succeed in broadening participation beyond the usual suspects. Such mobilization may succeed for a variety of reasons, and participants can bring contrary motivations and views to the process.

Data and Method

One of the challenges in analyzing the relationship between the participatory character of cities and the pursuit of sustainability policies is the lack of appropriate and robust data. One approach utilized by scholars is rooted in case studies of specific cities, providing readers with rich details about how participation works in a give place and why that participation contributes to that city's pursuit of sustainability. As with most case studies, however, there is little information that is generalizable across cities. A second, common approach involves comparing a large number of cities at the aggregate level, attempting to characterize cities' participation using such variables as voter turnout, registration rates, whether an environmental "interest group" exists in the city, and so on. Unfortunately, at the aggregate level there are virtually no precise measures of the particular kinds of participation that would seem to be critical for promoting sustainability.

In this article we take advantage of the Social Capital Benchmark Survey (SCBS) conducted in 2000 under the auspices of the Saguaro Seminar at Harvard's Kennedy School of Government. This unique data collection effort consists of surveys conducted with independent random samples of residents in some 41 communities around the United States. It also includes a large national random sample against which the community results can be compared. These surveys contained extensive arrays of questions on a wide array of participation and civic engagement activities and have been used to study

variations in political culture, political trust, and other political characteristics across cities (DeLeon and Naff 2004; Rahn and Rudolph 2005).[2]

Although these community surveys were not conducted for the purpose of directly analyzing any aspect of sustainability, they nevertheless provide a unique opportunity to assess the relationship between several specific sets of population characteristics and cities' pursuit of sustainability. Of the communities included in the survey, 15 are cities that have elected, as a matter of public policy, to pursue sustainability. This expression may be found in a resolution adopted by a city council, a mayor's executive order or statement of priorities, the city's comprehensive plan, general plan, or strategic land-use plan, or the city's environmental, growth management, or climate action plan (Wheeler 2008). This determination of commitment to sustainability is based on the number of specific programs each city has adopted and implemented.[3] In making these assessments of the number of specific policies and programs the city has adopted and implemented, we rely on Portney's (2003) "taking sustainable cities seriously" rankings, updated through January 1, 2008. This approach evaluates cities across 36 specific programs and policies. There must be evidence of implementation, and cities are not credited with having policies or programs if they exist only on paper. This approach to characterizing cities' sustainability policies has been used in studies of cities that have official sustainability policies (Portney 2005) and cities in California's Central Valley (Lubell, Feiock, and Handy 2009). The 10 cities in the SCBS that have adopted and implemented at least 18 (roughly half) of the possible 36 policies and programs are placed in the "top" group and include Boulder, Chicago, Denver, Grand Rapids, Los Angeles, Minneapolis, San Diego, San Francisco, Seattle, and St. Paul. A total of 5 cities that have official sustainability policies but that have adopted fewer than 18 specific programs are placed in the "bottom" group and include Atlanta, Boston, Cincinnati, Cleveland, and Phoenix.

The remaining 12 major cities included in the survey have no sustainability policies at all.[4] These cities—Birmingham, Bismarck, Detroit, Greensboro, Houston, Kalamazoo, Rochester, Syracuse, Wilmington, Winston-Salem, Yakima, and York—constitute the group of nonsustainability cities. Although these 12 cities may well have some specific programs that might be said to contribute to sustainability, they do not have any sort of official sustainability policy and do not profess to be working toward becoming more sustainable. Thus they provide a well-defined cohort against which the cities that have articulated sustainability policies may be compared.[5] Overall, the weighted samples used here consist of 5,280 respondents in 10 "top" sustainability cities, 3,585 respondents in the "bottom" sustainability cities, 6,064 respondents in the nonsustainability cities, and 3,003 respondents in the national sample, for a total of 17,932 respondents.[6]

The cities included in this analysis were not selected for the purpose of conducting this comparison but rather consist of a selection of convenience. In other words, the cities were not selected in such a way as to create separate groups of cities that are matched to control for specific city characteristics or variables. It is important, therefore, to get a sense of how comparable these groups of cities are. Table 1 provides a brief glimpse into four demographic characteristics of all of the cities and reveals some notable differences. Clearly as a result of the two largest cities in the sample—Chicago and Los Angeles—having top ranked sustainability programs, the high sustainability cities are, on average, larger than the other two groups of cities. There is no difference in terms of median age. However, with respect to both median family income and the percentage of the population that is non-White, there are some differences. What stands out in these comparisons is that the lower ranked sustainability cities have a much lower average median family income and a much higher proportion non-White population than either the top ranked sustainability cities or the nonsustainability cities. We return to a discussion of the possible importance of these differences below. However, these results should not be interpreted to suggest that larger cities are more likely to pursue sustainability than smaller cities or that the pursuit of sustainability is largely driven by economic considerations. These are issues that have been investigated more fully elsewhere (Portney 2003; Kahn 2006; Lubell, Feiock, and Handy 2009; O'Connell 2008, 2009), and at least for cities larger than 50,000 in population, there is no overall relationship between city size and the pursuit of sustainability, though there is a modest tendency here for wealthier cities to pursue sustainability. This suggests only that among the cities included here, those that have top ranked sustainability policies are larger than those that have lower ranked policies or no sustainability policies at all. Hence the three groups of cities are not entirely comparable with respect to population size, family income, or percentage non-White. We make an effort in the multivariate analysis presented later to control for these possible influences.

Although the data do not lend themselves to a full explication of the potential causal connection between participation and the pursuit of sustainability policies and programs, the intent is to begin understanding whether greater participation might well constitute a condition influencing cities to try to become more sustainable. Thus participation must predate the adoption and implementation of the policies and programs. Indeed, the SCBS, which was conducted in 2000, predates the policies and programs measured as of January 2008.[7]

Table 1. Selected Characteristics of Social Capital Benchmark Survey Cities

	Population size, 2000	Median age, 2000	Percentage non-White, 2000	Median family income, 1999 ($)
Top ranked sustainability cities				
Boulder	94,673	29.0	11.7	70,257
Chicago	2,896,016	31.5	58.0	42,724
Denver	554,636	33.1	34.7	48,195
Grand Rapids	197,800	30.4	32.7	44,224
Los Angeles	3,694,820	31.6	53.1	39,942
Minneapolis	382,618	31.2	24.8	48,602
San Diego	1,223,400	32.5	39.8	53,060
San Francisco	776,733	36.5	50.3	63,545
Seattle	563,374	35.4	29.9	62,195
St. Paul	287,151	31.0	33.0	48,925
Mean	1,067,122	32.2	36.8	52,166
Bottom-ranked sustainability cities				
Atlanta	416,474	31.9	66.8	37,231
Boston	589,141	31.1	45.5	44,151
Cincinnati	331,285	32.1	47.0	37,543
Cleveland	478,403	33.0	58.5	30,286
Phoenix	1,321,045	30.7	28.9	46,467
Mean	627,270	31.8	49.3	39,136
Nonsustainability cities				
Birmingham	242,820	34.3	75.9	31,851
Bismarck	55,532	36.5	5.2	51,477
Detroit	951,270	30.9	87.7	33,853
Greensboro	223,891	33.0	44.5	50,192
Houston	1,953,631	30.9	50.7	40,443
Kalamazoo	77,145	26.1	29.2	42,473
Rochester	219,773	30.8	51.7	31,257
Syracuse	147,306	30.6	35.7	33,026
Wilmington	72,664	33.7	64.5	40,241
Winston-Salem	185,776	34.6	44.4	46,595
Yakima	71,845	31.4	31.2	34,798
York, PA	381,751	37.4	7.2	52,278
Mean	381,950	32.5	44.0	40,707

Participation in Sustainable Cities

The primary purpose of creating these three different groups of cities is to facilitate comparisons in terms of civic and political participation. Simply

stated, is greater civic and political participation in cities linked to a greater commitment by those cities to trying to become more sustainable? If so, we should find that the cities with top ranked sustainability programs exhibit higher levels of participation than lower ranked cities or cities with no sustainability policies at all.

As noted earlier, other than through case studies, researchers have largely been relegated to analyzing participation variables that are available for cities at the aggregate level. Presumably random samples of participation and engagement by residents in specific cities offer more robust measurements. To be sure, the SCBS covers a wide range of different kinds of civic engagement and political activities. Here we focus on nine different measures of political and civic engagement. These measures include whether the respondent (1) voted in 1996, (2) participated in a political group in the previous 12 months, (3) attended a political meeting or rally in the previous 12 months, (4) participated in demonstrations, boycotts, or marches in the previous 12 months, (5) signed a petition, (6) belonged to a labor union, (7) belonged to any group that took local action for reform, (8) worked on a community project, and (9) participated in a neighborhood association.

In Table 2 the respondents in the top sustainability cities exhibit higher involvement in political groups, participating in demonstrations, boycotts, or marches, signing petitions, belong to a group that took local action for reform, working on community projects, and participating in neighborhood associations. Respondents in these top cities do not appear more likely to attend political rallies or belonging to labor unions, although both groups of sustainable cities, taken together, reveal greater attendance at political rallies and belonging to labor unions than their nonsustainability counterparts. Perhaps equally interesting is the fact that respondents in the top sustainability cities do not exhibit greater propensities to vote and indeed are less likely than respondents in either the bottom sustainability or the nonsustainability cities to report voting in the 1996 election. The chi-square tests of significance, which are applied just to the three groups of cities and do not include the national sample, suggest that these differences are relatively strong. In short, residents of the top sustainability cities do indeed seem to be substantially more likely to engage in most types of political and civic activities.

The results from Table 2 reveal that respondents in the top sustainability cities tend to participate more than those in the bottom sustainability cities or the nonsustainability cities in each specific type of activity but do not address issues of the total levels of participation. For this reason, a summary index of participation was computed as the sum of all nine types of participation. This index ranges from 0 for respondents who engaged in none of these activities

Table 2. Political and Civic Participation and Sustainable Cities

Percentage of respondents reporting participation in type of political or civic activity	Respondents in 10 top sustainability cities	Respondents in 5 bottom sustainability cities	Respondents in 12 nonsustainability cities	National sample
Voted in 1996	70.8	75.9	72.9	69.2
χ^2 significance		.000		—
Participated in a political group	11.6	8.7	8.1	9.1
χ^2 significance		.000		—
Attended a political meeting or rally	19.2	19.4	15.4	16.2
χ^2 significance		.000		—
Participated in demonstrations, boycotts, or marches	11.3	7.2	6.4	7.1
χ^2 significance		.000		—
Signed a petition	45.0	38.3	36.4	35.1
χ^2 significance		.000		—
Belonged to a labor union	10.3	11.4	9.5	11.6
χ^2 significance		.062		—
Belonged to group that took local action for reform	24.6	19.1	17.7	17.5
χ^2 significance		.000		—
Worked on a community project	38.2	35.1	37.2	37.8
χ^2 significance		.065		—
Participated in a neighborhood association	27.8	25.7	21.4	20.4
χ^2 significance		.000		—

to 9 for respondents who did all nine. Table 3 presents the relationship between the type of cities and the summary measure, where categories of the index were combined for ease of presentation. These results clearly illustrate the propensity of respondents in the top sustainability cities to participate more than those in either the bottom sustainability or nonsustainability cities.

Table 3. Summary Index of Political and Civic Participation and Sustainable Cities

Summary index of political and civic participation	Respondents in 10 top sustainability cities (%)	Respondents in 5 bottom sustainability cities (%)	Respondents in 12 nonsustainability cities (%)	National sample (%)
Very low (0 activities)	15.6	12.5	14.1	16.3
Low (1–3 activities)	54.3	63.4	64.5	61.1
High (4–9 activities)	30.1	24.1	21.4	22.6
Total	100.0	100.0	100.0	100.0
N	3,184	1,889	3,286	2,738
χ^2 significance	.00			—

Interestingly, the top sustainability cities also have more respondents who do not participate at all, suggesting that the top sustainability cities are somewhat more polarized than other cities with respect to participation.

These bivariate results are certainly suggestive of a pervasive pattern, but they do not rule out the possibility that they are spurious. Indeed, the demographic differences in the three groups of cities, described earlier, raise the potential for socioeconomic status to be the driving force behind these observed higher levels of participation. To address this, multivariate analysis is used where four background variables are introduced as controls. These four variables, total household income, level of education, and non-White race, are used to account for differences in the three groups of cities. In addition, a measure of self-reported political ideology is introduced to account for the possibility that the top sustainability cities may be disproportionately likely to be politically "liberal" places.

Tables 4 and 5 present the results of three separate multivariate regression analyses, each using a different dependent variable.[8] In the first analysis, on the left side of Table 4, the dependent variable is a dichotomous measure where respondents in the top sustainability cities (1) are distinguished from those in all other cities (0). In the second analysis, on the right side of Table 4, the dependant variable is a dichotomous measure where respondents in either the top or bottom sustainability cities (1) are distinguished from those in the nonsustainability cities (0). And in the third analysis, found in Table 5, respondents in all three groups of cities are distinguished for one another.[9] Statistically significant coefficients for the participation variables are presented

Table 4. Ordinary Least Squares Regression Results: Political and Civic Participation in Sustainable Cities

Independent variable	DV = Top sustainability cities vs. all others				DV = Sustainable cities vs. all others			
	B	β	Sig.	Collinearity tolerance	B	β	Sig.	Collinearity tolerance
(Constant)	.003	—	.000	—	.185	—	.000	—
Civic and political engagement variables								
Voted in 1996	-.014	-.013	.163	.840	.017	.015	.119	.840
Participated in a political group	.012	.007	.435	.784	.018	.011	.280	.784
Attended a political meeting or rally	.009	.008	.426	.776	.014	.011	.268	.776
Belonged to a labor union	-.010	-.007	.441	.958	-.035	-.023	.013	.958
Participated in demonstrations, boycotts, or marches	.087	.049	.000	.871	.035	.019	.046	.871
Signed a petition	.050	.051	.000	.829	.042	.043	.000	.829
Belonged to group that took local action for reform	.037	.031	.001	.751	.032	.027	.010	.751
Worked on a community project	-.018	-.018	.048	.825	-.028	-.027	.006	.825
Participated in neighborhood association	.030	.027	.002	.888	.037	.033	.001	.888
Background (control) variables								
Self-reported political ideology	.039	.095	.000	.958	.029	.069	.000	.958
Education	.020	.073	.000	.735	.015	.056	.000	.735
Total household income	-.001	-.004	.700	.797	-.011	-.044	.000	.797
Non-White race	-.005	-.004	.637	.930	.103	.091	.000	.930
Population size of city	2.1E-007	.380	.000	.974	3.53E-008	.063	.000	.974
Adjusted r^2	.174				.031			
Sig.	.000				.000			

Note: See note 6 for the coding of the variables.

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Table 5. Ordinary Least Squares Regression Results: Political and Civic Participation in Sustainable Cities

| Independent variable | DV = Top sustainability cities vs. bottom sustainability cities vs. nonsustainability cities | | | |
	B	β	Sig.	Collinearity tolerance
(Constant)	−.727	—	.000	—
Civic and political engagement variables				
Voted in 1996	.003	.002	.860	.840
Participated in a political group	.018	.006	.526	.784
Attended a political meeting or rally	.031	.013	.159	.776
Belonged to a labor union	−.021	−.008	.360	.958
Participated in demonstrations, boycotts, or marches	**.125**	**.039**	**.000**	.871
Signed a petition	**.081**	**.046**	**.000**	.829
Belonged to group that took local action for reform	**.055**	**.026**	**.008**	.751
Worked on a community project	**−.062**	**−.034**	**.000**	.825
Participated in neighborhood association	**.076**	**.038**	**.000**	.888
Background (control) variables				
Self-reported political ideology	.077	.102	.000	.958
Education	.035	.072	.000	.735
Total household income	.000	.001	.953	.797
Non-White race	.054	.027	.002	.930
Population size of city	3.74E-007	.372	.000	.974
Adjusted r^2		.171		
Sig.		.000		

Note: See note 6 for the coding of the variables.

in bold. The analyses include statistics that rule out any potential multicollinearity among the independent variables.[10]

All three sets of regression analyses produce fairly consistent patterns. Clearly, the background variables represent important differences—residents of cities that are more serious about sustainability are more likely to have higher education levels, to come from larger cities, and to be politically liberal. However, even controlling for these variables, there seems to be abundant evidence that, indeed, cities that have greater commitment to sustainability

tend to be more participatory places with respect to some types of activities. Respondents in these cities exhibit greater tendencies to participate in marches or demonstrations, sign petitions, belong to groups that took local action for reform, and participate in neighborhood associations. They also appear to be less likely to work on community projects, and they are not more likely to engage in electoral activities, including voting, attending a meeting of a political group, or attending a political rally.

Explaining Commitment to Sustainability: A Summary

Searching for a developmental path for sustainability is an interesting and significant problem for scholars of both environmental politics and urban government. How does the tremendous variation in cities' response to the sustainability challenge square with the theories and frameworks we draw on to explain relevant behavior? At the same time the questions we have been addressing here have great practical significance. Is it possible for city leaders to map a strategy to move forward on sustainability? If so, what role does engagement of residents play?

Our investigation has revealed a number of important findings, some of them surprising. We began by noting that aggregate-level research has already determined that the income or wealth of cities is but weakly related to the level of sustainability efforts. Using a variety of measurements, the analysis here reveals that the top sustainability cities look very different from those cities without sustainability programs or from the national sample of Americans. This analysis of the SCBS demonstrates that residents of cities that seem to take sustainability most seriously do participate more, even controlling for income and education. Cities that pursue explicit sustainability policies are more participatory places.

The surveys are not structured in a way that allows us to plumb why this is the case. Without developing a more elaborate and robust model of political and civic engagement, we cannot know why residents in these sustainable cities tend to participate more in some activities rather than others. Clearly the types of participation residents of the sustainable cities seem to prefer are not electoral but rather operate outside of the electoral arena. We cannot know exactly why specific forms of participation and engagement seem to be associated with the pursuit of local sustainability. And the surveys provide little in the way of direct measures that would help us understand the organizational and institutional foundations of either the higher levels of engagement or the policy

decisions to try to become more sustainable. Questions arise, for example, as to whether there is something specific about the types of participation that actually promotes sustainability. In addition, is the profile of participation in sustainable cities part of an evolving "new political culture" such that these cities' residents develop an identity around sustainability (DeLeon and Naff 2004)? Do the higher levels of participation reflect broad and substantial differences in how such cities are governed (Gibbs and Jonas 2000)? What role do various kinds of local nonprofit and advocacy organizations play in mobilizing public support for sustainability, smart growth, climate protection, and related policies (O'Connell 2009)? What role do such organizations play in convincing local policy makers to adopt and implement policies that promise to make cities more sustainable? Answers to these questions await future research.

The analysis here was not designed to address the broad array of possible explanations for why some cities seem to take sustainability policies and programs more seriously than others. Our purpose in introducing income, education, non-White racial status, and political ideology into the multivariate analysis was to control for these factors in the analysis of political and civic engagement. Even though previous research has found only a modest tendency for cities with greater local resources to be more likely to adopt and implement sustainability policies, the results from the regression analyses here suggest that income and education may well be important influences, either alone or in combination with other variables. It is clear, however, from the analysis presented here that cities adopting and implementing sustainability policies and programs do indeed tend to be somewhat more participatory places, particularly with respect to traditional in-person kinds of participatory activities. Cities that have made a commitment to trying to become more sustainable may not have populations that participate more in electoral activities, but they do seem to have populations that have a greater propensity to sign petitions, participate in demonstrations, belong to local reform groups, and be active in neighborhood associations. In the last analysis sustainable cities are participatory cities.

Declaration of Conflicting Interests

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Notes

1. For a small sampling of works that assert a relationship between democratic participation and support for sustainability, see Zeemering (2009), Prugh, Costanza, and Daly (1999), Shutkin (2003), John and Mlay (1999), Potapchuk (1996), Baber and Bartlett (2005), Koontz (2006), Weber (2003), Gibbs, Jonas, and While (2002), Swyngedouw (2007), and Cuthill (2002). For analysis that empirically calls into question this relationship, see Moore (2007).

2. For a thorough description of the survey, along with the questions and response categories, see http://www.cfsv.org/communitysurvey/docs/survey_instrument.pdf and http://www.ropercenter.uconn.edu/data_access/data/datasets/social_capital_community_survey.html.

3. The 36 programs and policies are existence of eco-industrial parks; use of targeted or cluster green economic development; development of eco-village or urban infill housing project; brownfield redevelopment; use of zoning to delineate environmentally sensitive areas; comprehensive land-use planning that accommodates environmental impacts; use of tax or fee incentives for environmentally friendly development; operation of local public transit; limits on downtown parking spaces; HOV lanes on local streets; alternatively fueled city vehicle program; bicycle ridership program; household solid waste recycling program; industrial waste recycling; hazardous waste recycling; air pollution (VOC) reduction program; recycled product purchasing by city government; hazardous waste site remediation; asbestos abatement; lead paint abatement; pesticide reduction program; urban garden and sustainable food system effort; green building program; green affordable housing program; renewable energy use by city government; alternative energy offered to consumers; water conservation program; sustainable indicators program; sustainable indicators report issued in previous five years; inclusion of action or implementation plan in sustainable indicators; single implementing government agency or organization; sustainability incorporated into comprehensive plan; involvement of city, county, or metropolitan planning agency; involvement of mayor or city manager; involvement of the business community; involvement of the general public in planning or implementation.

4. Many of the "community" surveys were conducted in fairly large geographical areas such as a multicounty area, an entire metropolitan area, and so on. We examined the sampling in these areas and made a determination as to whether they would provide a large enough sample of residents (at least 500) of the largest city in that geographical area and excluded those that did not.

5. A fourth group of respondents included in the full sample consists of respondents from all other urban communities or places in which the surveys were conducted. These residual respondents are not included in the analysis here.

These respondents excluded from the analysis here are "in center city of an MSA" (*metstat* = 1) from separate samples in each of the following: East Baton Rouge Parish, Louisiana; a collection of 11 counties in North Carolina and 3 in South Carolina; a collection of 4 counties in Ohio, 3 in Kentucky, and 1 in Indiana; portions of the "Oakland Corridor," California; a collection of 22 counties in East Tennessee; Newaygo County, Michigan; the state of Indiana; the state of Montana; the state of New Hampshire; a collection of Peninsula/Silicon Valley counties, California; rural South Dakota; and central Oregon. None of these samples yielded large random samples of specific cities.

6. The FWEIGHT variable is used in the database as the weight variable. There are 11,306 respondents in the residual group not included in this analysis. The full data file also includes oversamples of specific targeted groups, and these oversampled respondents are not included in this analysis.

7. Each of the 37 different policies and programs evaluated here (see note 3) was adopted and implemented at a different time. In a few cities, such as Seattle and San Francisco, many of the programs date to the mid-1990s. Programs in most other "sustainable cities" have been adopted and implemented since 2000.

8. A number of different multivariate models might be appropriate in this analysis. Since our purpose is simply to examine the relation between the participation variables and sustainability rather than trying to isolate individual versus contextual effects, we opted not to use a nested model. Similarly constructed ordered logistical regression results reveal the same patterns as those reported in Tables 4 and 5.

9. The first dependent variable has two categories: respondents in top sustainability cities are coded 1, all other respondents are coded 0. The second dependent variable has two categories: respondents in top and bottom sustainability cities are coded 1, all others are coded 0. The third dependent variable has three categories: respondents in top sustainability cities are coded 1, respondents in bottom sustainability cities are coded 0, and respondents in all other cities are coded –1. All political and civic engagement variables (VOTEUS, GRPPOL, RALLY, MARCH, PETITION, GRPLAB, REFORM, PROJECT, and GRPNEI) are dichotomous with participation coded 1 and nonparticipation coded 0. For income (INCOME), 0 = *$20,000 or less*, 1 = *$20,000–$30,000*, 2 = *less than $30,000 unspecified*, 3 = *$30,000–$50,000*, 4 = *$50,000–$75,000*, 5 = *$75,000–$100,000*, 6 = *$100,000 or more*, 7 = *more than $30,000 unspecified*. Political ideology (IDEO) has been coded as 1 = *very conservative*, 2 = *moderately conservative*, 3 = *middle of the road*, 4 = *moderately liberal*, 5 = *very liberal*. Non-White race is coded 1 for non-White and 0 for all others. Education (EDUC_ALL) is coded 1 = *less than high school*, 2 = *high school diploma or GED*, 3 = *some college*, 4 = *associate's degree or specialized training*, 5 = *bachelor's degree*, 6 = *some graduate training*, 7 = *graduate or professional degree*.

10. Generally, a collinearity tolerance below .10 suggests collinearity. None of the tolerance coefficients here approach that level, suggesting that multicollinearity is not a problem.

References

Baber, Walter F., and Robert V. Bartlett. 2005. *Deliberative environmental politics: Democracy and ecological rationality*. Cambridge, MA: MIT Press.

Berry, Jeffrey M. 1999. *The new liberalism*. Washington, DC: Brookings Institution.

Berry, Jeffrey M., Kent E. Portney, and Ken Thomson. 1993. *The rebirth of urban democracy*. Washington, DC: Brookings Institution.

Betsill, Michele, and Harriet Bulkeley. 2006. Cities and multilevel governance of global climate change. *Global Governance* 12 (2): 141–59.

Betsill, Michele, and Barry Rabe. 2009. Climate change and multilevel governance: The evolving state and local roles. In *Toward sustainable communities: Transition and transformations in environmental policy*, 2nd ed., edited by Daniel Mazmanian and Michael Kraft, 201–25. Cambridge, MA: MIT Press.

Brody, Samuel D., Sammy Zahran, Himanshu Grover, and Arnold Vedlitz. 2008. A spatial analysis of local climate change policy in the United States: Risk, stress, and opportunity. *Landscape and Urban Planning* 87:33–41.

Brugmann, Jeb. 1997. Sustainable indicators revisited: Getting from political objectives to performance outcomes—A response to Graham Pinfield. *Local Environment* 2 (3): 299–302.

Cuthill, Michael. 2002. Exploratory research: Citizen participation, local government, and sustainable development in Australia. *Sustainable Development* 10:79–89.

DeLeon, Richard, and Katherine Naff. 2004. Identity politics and local political culture: Some comparative results from the Social Capital Benchmark Survey. *Urban Affairs Review* 39 (6): 689–719.

Feiock, Richard, Antonio Tavaras, and Mark Lubell. 2008. Policy instrument choices for growth management and land use regulation. *Policy Studies Journal* 36 (3): 461–80.

Fiorina, Morris P. 1999. Extreme voices: A dark side of civic engagement. In *Civic engagement in American democracy*, edited by Theda Skocpol and Morris P. Fiorina, 395–425. Washington, DC: Brookings Institution.

Fitzgerald, Joan. 2010. *Emerald Cities: Urban Sustainability and Economic Development*. New York: Oxford University Press.

Gibbs, David, and Andrew Jonas. 2000. Governance and regulation in local environmental policy: The utility of regime approach. *Geoforum* 31:299–313.

Gibbs, David, Andy Jonas, and Aidan While. 2002. Changing governance structures and the environment: Economy–environmental relations at the local and regional scales. *Journal of Environmental Policy and Planning* 4:123–38.

Groc, Isabelle. 2007. Keep your footprint out of my backyard: Vancouver brings the concept of eco-density to North America. *Planning* 73 (January): 32–35.

Hempel, Lamont. 2009. Conceptual and analytical challenges in building sustainable communities. In *Toward sustainable communities: Transition and transformations in environmental policy*, 2nd ed., edited by Daniel Mazmanian and Michael Kraft, pp. 33-62. Cambridge, MA: MIT Press.

Iglitzin, L. B. 1995. The Seattle Commons: A case study of the politics and planning of an urban village. *Policy Studies Journal* 23:620–33.

Jepson, Edward J. 2004. The adoption of sustainable development policies and techniques in U.S. cities: How wide, how deep, and what role for planners? *Journal of Planning Education and Research* 23:229–41.

John, DeWitt, and Marion Mlay. 1999. Community-based environmental protection: Encouraging civic environmentalism. In *Better environmental decisions: Strategies for governments, businesses, and communities*, edited by K. Sexton, A. Marcus, K. Easter, and T. Burkhardt, 353–75. Washington, DC: Island Press.

Kahn, Matthew E. 2006. *Green cities: Urban growth and the environment.* Washington, DC: Brookings Institution.

Koontz, Tomas. 2006. Collaboration for sustainability? A framework for analyzing government impacts in collaborative-environmental management. *Sustainability: Science, Practice and Policy* 1 (2): 15–24.

Lubell, Mark, Richard Feiock, and Susan Handy. 2009. City adoption of environmentally sustainable policies in California's Central Valley. *Journal of the American Planning Association* 75 (3): 293–307.

Lubell, Mark, Richard Feiock, and Edgar Ramirez de la Cruz. 2009. Local institutions and the politics of urban growth. *American Journal of Political Science* 53:649–65.

Miller, E., and L. Buys. 2008. The impact of social capital on residential water-affecting behaviors in a drought-prone Australian community. *Society and Natural Resources* 21:244–57.

Moore, Stephen A. 2007. *Alternative routes to the sustainable city*. Lanham, MD: Lexington Books.

O'Connell, Lenahan. 2008. Exploring the roots of smart growth policy adoption by cities. *Social Science Quarterly* 89 (5): 1356–72.

O'Connell, Lenahan. 2009. The impact of local supporters on smart growth policy adoption. *Journal of the American Planning Association* 75 (3): 281–91.

Ostrom, Elinor. 1990. *Governing the commons: The evolution of institutions for collective action*. New York: Cambridge Univ. Press.

Parisi, D., M. Taquino, S. M. Grice, and D. A. Gill. 2004. Civic responsibility and the environment: Linking local conditions to community environmental activeness. *Society and Natural Resources* 17:97–112.

Pena, Devon G. 2003. Identity, place, and communities of resistance. In *Just sustainabilities: Development in an unequal world*, edited by Julian Agyeman, Robert Bullard, and Bob Evans, 146–67. Cambridge, MA: MIT Press.

Portney, Kent E. 2003. *Taking sustainability seriously: Economic development, the environment, and quality of life in American cities*. Cambridge, MA: MIT Press.

Portney, Kent E. 2005. Civic engagement and sustainable cities in the United States. *Public Administration Review* 65 (5): 577–89.

Portney, Kent E. 2008. Education and smart growth policies in U.S. cities: A response to Lenahan O'Connell. *Social Science Quarterly* 89 (5): 1378–83.

Potapchuk, William. 1996. Building sustainable community politics: Synergizing participatory, institutional, and representative democracy. *National Civic Review* 85 (3): 54–59.

Press, Daniel, and Alan Balch. 2002. Community environmental policy capacity and effective environmental protection. In *New tools for environmental protection*, edited by Thomas Dietz and Paul Stern, 183–200. Washington, DC: National Academies Press.

Prugh, Thomas, Robert Costanza, and Herman Daly. 1999. *The local politics of global sustainability.* Washington, DC: Island Press.

Rabe, Barry. 2008. Revisiting regionalism and the case of multi-level climate governance. In *Intergovernmental management for the 21st century*, edited by T. Conlan and P. Posner, pp. 176-205. Washington, DC: Brookings Institution.

Rahn, Wendy, and Thomas Rudolph. 2005. A tale of political trust in American cities. *Public Opinion Quarterly* 69 (4): 530–60.

Rees, William E. 1992. Ecological footprints and appropriated carrying capacity: What urban economics leaves out. *Environmental and Urbanization* 4 (2): 120–30.

Rees, William E. 1997. Is "sustainable city" an oxymoron? *Local Environment* 2 (3): 303–10.

Rees, William E., and Mathis Wackernagel. 1994. Ecological footprints and appropriated carrying capacity: Measuring the natural capital requirements of the human economy. In *Investing in natural capital: The ecological economics approach to sustainability*, edited by Ann Marie Jansson, Monica Hammer, Carl Folke, and Robert Costanza, 362–91. Washington, DC: Island Press.

Rosenbaum, Walter A. 1978. Public involvement as reform and ritual. In *Citizen participation in America*, edited by Stuart Langton, 81–96. Lexington, MA: Lexington Books.

Saha, Devashree, and Robert Paterson. 2008. Local government efforts to promote the "three Es" of sustainable development: Survey in medium to large cities in the United States. *Journal of Planning Education and Research* 28:21–37.

Shutkin, William A. 2003. *The land that could be: Environmentalism and democracy in the 21st century.* Cambridge, MA: MIT Press.

Stone, Clarence. 1993. Urban regimes and the capacity to govern: A political economy approach. *Journal of Urban Affairs* 15 (1): 1–28.

Swyngedouw, Erik. 2007. Impossible "sustainability" and the postpolitical condition. In *The sustainable development paradox: Urban political economy in the United States and Europe*, edited by Rob Krueger and David Gibbs, 13–40. New York: Guilford.

United Nations, World Commission on Environment and Development. 1987. *Our common future*. Oxford, UK: Oxford Univ. Press.

Weber, Edward. 2003. *Bringing society back in: Grass-roots ecosystem management, accountability, and sustainable communities*. Cambridge, MA: MIT Press.

Wheeler, Stephen. 2008. State and municipal climate change plans. *Journal of the American Planning Association* 74 (4): 481–96.

Zachary, Jill. 1995. *Sustainable community indicators: Guideposts for local planning.* Santa Monica, CA: Community Environmental Council.

Zahran, Sammy, Samuel Brody, Arnold Vedlitz, Himanshu Grover, and Caitlin Miller. 2008. Vulnerability and capacity: Explaining local commitment to climate-change policy. *Environment and Planning C: Government and Policy* 26 (3): 544–62.

Zeemering, Eric. 2009. What does sustainability mean to city officials? *Urban Affairs Review* 45 (2): 247–73.

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