

Civil Society and Sustainable Cities

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Abstract

Although European cities have generally been regarded as far ahead of American cities in the degree to which they pursue sustainability, recent research suggests that U.S. cities are catching up. But why would this be? Is it possible that U.S. cities have been able to “close the gap” with European cities as a consequence of the development of local citizen groups? That is the central hypothesis of this paper. Our expectation is that across a range of cities, where nonprofit environmental groups have been included or incorporated into the local policymaking process, there is greater commitment to environmental protection, and more extensive adoption and implementation of local policies and programs designed to protect the environment. To test this idea we draw on our own research that combines two original data sets. First we have collected information on what programs and policies are in place in America’s large cities. Second, for 50 large American cities we have also surveyed administrators, city councilors, and interest group advocates. Our expectations are validated by the data. We find that commitment of city administrators is strongly linked to the inclusion of environmental groups in policymaking. The number of local environmental protection policies and programs also demonstrates a strong relationship to inclusion of environmental groups in city policymaking. These two bivariate relationships hold when subjected to multivariate analysis with appropriate controls.

The idea of relying on cities as major contributors to the pursuit of sustainable development began to emerge nearly twenty five years ago, taking hold first in Europe and spreading to North America and other parts of the world. The concept of sustainable development achieved elevated recognition and legitimacy in 1987 when the United Nations' World Commission on Environment and Development (WCED), issued its report *Our Common Future*. More commonly known as the Brundtland Commission report after its Chair, former Norwegian Prime Minister Gro Harlem Brundtland, it was designed to create an international agenda focusing on how to protect the global environment by sustaining and expanding the environmental resource base of the world. In the process, it put forth the very general and now widely cited notion that sustainable development consists of economic development activity that "...meets the needs of the present without compromising the ability of future generations to meet their own needs." (WCED 1987: 8) Beyond this the report is rather short on details and specifics. Its definitional contribution clearly comes out of its focus on what might be called cross-generation concerns as well as its emphasis on the idea that economic development needs to be viewed over a longer period of time than is usually practiced in the political world.

The Brundtland Commission report served as the foundation for the discussions and negotiations on sustainable development that took place among nations in the "Earth Summit," held in Rio de Janeiro in June of 1992. One of the results of the Earth Summit was the passage of a resolution often referred to as "Agenda 21," a statement of the basic principles aimed at guiding nations in their quest of economic development in the 21st century. Embedded in this report is the less-oft referenced view that cities both represent the source of unsustainability and provide the potential locus of efforts to become more sustainable. The Brundtland Commission

conclusion that "...cities [in industrialized nations] account for a high share of the world's resource use, energy consumption, and environmental pollution," (WCED 1987: 241-243) is in its own way a strong argument for urban sustainability.

Cities and Sustainable Development

The Agenda 21 resolution pays significant attention to the relationship between national policies and the activities of local governments. In Chapter 28, "Local Authorities' Initiatives in Support of Agenda 21," the link is made clearer:

Because so many of the problems and solutions being addressed by Agenda 21 have their roots in local activities, the participation and cooperation of local authorities will be a determining factor in fulfilling its objectives. Local authorities construct, operate and maintain economic, social, and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations, and assist in implementing national and subnational environmental policies. As the level of governance closest to the people, they play a vital role in educating, mobilizing, and responding to the public to promote sustainable development. (United Nations Environmental Programme 2000)

Thus, the idea of sustainable cities is born out of an understanding of the importance of individual human behavior, and the *local* governance context in which that behavior takes place. As the Brundtland report states, "local authorities usually have the political power and credibility to take initiatives and to assess and deploy resources in innovative ways reflecting unique local conditions. This gives them the capacity to manage, control, experiment, and lead urban development" for the good of the environment. (WCED 1987: 242) Implicit in this statement is the notion that government efficacy will be aided when there is some degree of congruence between the geographic area in which sustainability is to be achieved and the political jurisdiction trying to achieve it. Cities share this important trait. Indeed, despite enormous differences, cities share many more characteristics, including a wide array of governmental and policymaking processes, than are typically acknowledged. (Waste 1989). This represents a

dominant assumption underlying efforts to localize the implementation of Agenda 21, sometimes referred to as Local Agenda 21 (Agyeman and Evans 1995).

With the biophysical environment such an apparent and integral part of almost any definition of sustainability, local governmental efforts to manage climate change loom large. Over the last decade, local officials have started to express concerns with climate change issues, with large numbers signing on to one or more of the national and international initiatives to work toward reducing greenhouse gas (GHG) emissions. Prominent among these initiatives is the Climate Protection Programme of ICLEI – Local Governments for Sustainability (an outgrowth of the Agenda 21 process), the Climate Protection Agreement of the U.S. Conference of Mayors, and the Climate Initiative of the Clinton Foundation. Each of these initiatives asks cities and their leaders to make voluntary commitments to take “climate action” – commitments to reducing their carbon and GHG emissions. Each also provides some level of technical assistance to cities that make such commitments. Although such efforts are largely confined to an immediate focus on air quality, especially carbon emissions, there is little question that actions to improve air quality can be said to represent steps toward trying to make cities more sustainable.

In terms of sustainability ecosystems or species habitats are the appropriate levels at which the environment should be considered; in practice there is little correspondence between the geographic area of an ecosystem and the boundaries of governmental jurisdictions (Newman and Jennings, 2008). Ecosystems rarely conform to the boundaries of cities or towns, counties, states, election districts, or even nations. This means that no single governmental jurisdiction may possess the authority to deal completely with a particular environmental problem or to achieve sustainability results. Clearly, larger, more encompassing, jurisdictions have advantages in terms of fewer externalities, but there may not be the political will to address sustainability at

such higher levels. In the United States, there are many ways in which the national government could act to work toward greater sustainability, but the contemporary ideological mood, the distribution of power and influence among competing interests, the structure of federalism, and the historical culture of the nation present significant impediments. Even if it cannot be done at the state or national level, is it, in fact, possible for cities to develop the political will to effectively address issues of sustainability?

For scholars the feasibility of focusing on cities as the locus of the pursuit of sustainability is nicely illustrated by the U.S. From the perspective of early twentieth century political history in the U.S., progressive advocates once concluded that the power of local business and entrenched political machines precluded the pursuit of their agenda at the city level. This produced an increasing tendency for the progressive agenda to be pushed toward national politics, where progressive interests could find a critical mass of people to mobilize. Perhaps ironically, by the latter part of the 20th century, the tables had been turned. Three concomitant events altered the political landscape. First, in national politics, there has been a trend toward an increasingly conservative Republican Party in Congress—a caucus hostile toward government efforts to ameliorate climate change and other aspects of environmental degradation. Although this has not necessarily foreclosed advocacy opportunities for environmental citizen groups (Berry 1999; Shaiko 1999), it has made the pursuit of a sustainability agenda more challenging.

Second, at the same time, U.S. national policy has promoted globalization of the economy, including the development of various free-trade agreements that have altered the economies of local communities everywhere. Cities where manufacturing companies once served as the foundation of the local economy now must rely on the service sector to generate needed jobs and economic growth. Perhaps more important for this discussion, corporations

which once dominated local politics and stood in the way of progressive policy have left the city or have been transformed. Businesses with long-term local roots are frequently no longer locally owned, often now divisions of larger multinational corporations with little or no interest in local politics and policies. Other once powerful locally or family owned businesses have succumbed to the vagaries of economic competition. Newly emergent business sectors have tended to locate in the suburbs. To the extent that sustainability can be thought of as progressive (Milbrath 1984), the changing ecology of business has profound implications for the political feasibility of sustainability in cities (Portney 2007).

Third, from the local perspective, and perhaps because of the other two events, many local leaders have started to come to the conclusion that old models of local economic development no longer work. Some new model must be found as an alternative. The old adage that cities should “attract and retain” large, externally owned businesses as anchors of the local economy, no longer seems to provide as much employment potential as it once did. The idea behind attract and retain prescriptions is that local government should engage in the competition to bring new business and industry into the city. Cities do this by offering prospective businesses substantial incentives and assistance, including major tax and fee reductions, zoning variances, streamlining approval processes, and many other advantages. Of course, any particular city wishing to attract a new, large, employer would compete with other cities. Perhaps because there are few takers, and certainly because of a recognition that the longer-term costs and benefits to the city may not be as favorable as once assumed, this model has fallen on hard times. To be sure, there are plenty of cities that still cling to the hope that the old model will work. Yet there is no clear-cut alternative other than a sustainable economic development or smart growth model

based on the strategic development of “green jobs.” (Greenwood and Holt 2010; Fitzgerald 2010; U.S. Conference of Mayors 2008)

European Lessons for U.S. Cities

European cities quickly became the world’s leaders in the implementation of Agenda 21 if not the development of sustainability more broadly. With London, Frankfurt, Freiberg, Zurich, Amsterdam, and major cities in Scandinavia taking early initiatives, many advocates of sustainability pointed to these places as prototypes of what could be achieved through local policies and programs. Indeed, by the early 2000s, scholars began to seriously extol the virtues of what European cities had been able to accomplish with the clear implication that cities in the U.S. had much to learn and benefit from what Europe had achieved. (Beatley 2000) Most of what had been written focused on describing the specific local policies and programs adopted and implemented in the pursuit of sustainability, with much less attention to the local political or social context in which those policies were created. Scholars began asking what kinds of political and social conditions are necessary for the serious pursuit of sustainability, yet studies often came to no conclusion about what such conditions were. Moore’s (2007) analysis of city efforts to become more sustainable in Austin, Texas, Curitiba, Brazil, and Frankfurt, Germany, seems to suggest that the pursuit of sustainability is more idiosyncratic than influenced by any particular governance culture or practice. Yet when Bulkeley and Betsill (2003) systematically compared city climate action programs in the UK, the US, and Australia, conclusions about what conditions created better developed programs centered on a number of local and multi-level governance characteristics. With specific reference to ICLEI’s Climate Change Programme (CCP), they note:

We find that existing concerns for energy management, a strategy for local development centred on “green growth,” committed individuals, access to funding, the institutionalization of the Programme within the administrative structures of local authorities and a shared understanding of energy issues between local authorities and the CCP network, have been critical to its success. (Bulkeley and Betsill 2003: 171)

Their analysis makes a strong case concerning the important role of nongovernmental actors in helping to create these conditions. In turn this raises the issue of the role of civil society more broadly in shaping the political and social conditions necessary for cities to engage in the pursuit of sustainability.

Sustainable Cities: Has the U.S. Caught Up?

With a literature extolling the virtues of European style sustainable cities, the message was clear: cities in the U.S. had a long way to go. By 2000 only a relatively small number of major U.S. and Canadian cities could be realistically thought of as being in the same league as the most aggressively sustainable cities in Europe. The Canadian cities of Vancouver and Toronto, and U.S. cities of Seattle, Portland, and San Francisco had taken great initiative, but the concept of sustainability was still largely foreign on North America. Since then North American cities have undergone rapid change in terms of their commitment to sustainability. Our own analysis of the largest 55 cities in the U.S. suggests that at least 51 of them now have official sustainability policies and programs.

How do these U.S. and Canadian cities compare to European cities? Circumstantial evidence, certainly not meant to be generalizable, suggests that European cities may no longer be light years ahead. For example, when Bulkeley and Betsill (2003) compared several cities’ climate protection efforts in the UK, US, and Australia, Denver’s program appeared to outpace those in the other two countries. The comparison across countries raises an issue that is certainly

not easy to answer, but one that has perhaps inadvertently been addressed in recent systematic analysis conducted by the Siemens Corporation. In a series of reports, Siemens has sought to apply a particular common methodology to assess cities' efforts at trying to become "green." This assessment does not explicitly compare cities across continents; however, it does compare cities within Europe and North America using the same metrics and methods. By evaluating each city's CO₂ emissions, energy consumption, green building, public mass transit, water quality, waste and land use, air quality, and environmental governance, the study develops a "Green City Index" an overall measure of how sustainable the city is.

Table 1 provides a brief summary of the most sustainable cities in Europe and the U.S. The European report concludes that the top twelve cities are Copenhagen, Stockholm, Oslo, Vienna, Amsterdam, Zurich, Helsinki, Berlin, Brussels, Paris, London, and Madrid. The North American report concludes that the top eight U.S. cities are San Francisco, New York City, Seattle, Denver, Boston, Los Angeles, Washington, D.C., and Minneapolis. What is perhaps most striking about these assessments is the apparent fact that the top U.S. cities are so close to the top European cities. Indeed, the top eight U.S. cities seem to compare favorably with the top European cities, and would all place within the top twelve. This finding seems unimaginable just a decade ago. The implication is that with respect to the pursuit of sustainability and environmental protection, European and U.S. cities have become very similar.

[Table 1 Here]

If the pursuit of environmental protection and sustainability is largely a matter of local governance and political will, as Bulkeley and Betsill suggest, then what role does civil society play in contributing to creating this political will? Stated another way, are the U.S. cities that

resemble the greenest European cities governed differently than other cities? Do these cities have demonstrably different civil societies?

Civil Society Foundations of Local Environmental Protection

Although comparative analyses of sustainable cities and city climate action programs provided only modest insight into why some cities were more successful at adopting and implementing such programs, the idea of linkage with civil society did emerge. The basic belief is that mediating and participatory organizations can promote sustainability at the local level (Agyeman and Evans 1995). Such organizations may take on a decidedly different character in the context of different national systems of governance. In his analysis of European cities, Beatley (2000) argues that the “nongovernmental sector” played an important, and in some instances a pivotal, role in influencing local sustainability policies and programs. Hyperbole aside, in a recent analysis of why the city of Phoenix, Arizona, is “the world’s least sustainable city,” Ross (2011, 68-70) suggests that the lack of a strong tradition of civil society organizations may well provide an important explanation.

The role of the nongovernmental sector in advancing local environmental policies and programs is well documented in a series of European case studies conducted by Beatley (2000). His analysis demonstrates that local and neighborhood-based NGOs provide important linkages between residents on one hand and companies and governmental agencies on the other. With reference to the Netherlands, he describes a group called EcoStad Den Haag that “...serves as a nonprofit intermediary between a neighborhood and its residents, and outside companies and municipal and national governments” for the purpose of promoting a variety of specific projects to encourage sustainable lifestyles and policies (Beatley 2000, 355). He also documents the

development of local “eco-teams” throughout the Netherlands by the NGO Global Action Plan. These teams engage thousands of households in discussions about the best ways of promoting environmentally responsible behaviors and policies, and operate a variety of local programs ranging from waste reduction and recycling to carbon footprint reduction (Beatley 2000, 354-355).

If Beatley’s argument concerning the role of nongovernmental organizations in fostering the pursuit of sustainability in European cities is generalizable, then the obvious question is whether nongovernmental organizations have played a similar role in U.S. cities. Is it possible that U.S. cities have perhaps been able to “close the gap” with European cities as a consequence of the development of local citizen groups? This seems plausible on its face since one of the U.S. cities considered a North American leader is Seattle, where studies frequently attribute that city’s rapid progress in large part to the operation of a local group called Sustainable Seattle, Inc., a nonprofit group that grew out of the Global Tomorrow Coalition (AtKisson 1999; Iglitzin 1995; Portney 2003). A similar argument can be made with respect to Portland (Slavin and Snyder 2011; Leo 1998) and San Francisco. (Golub and Henderson 2011)

The central hypothesis of this paper is that U.S. cities with greater commitment to protecting and improving the quality of their respective biophysical environments will have active nongovernmental organizations working on behalf of the environment. We expect to find, across a range of cities, that where nonprofit environmental groups have been included or incorporated into the local policymaking process, there will be greater commitment to environmental protection, and more extensive adoption and implementation of local policies and programs designed to protect the environment. Previous research has suggested a correlation – cities with at least one active, identifiable environmental group seem to do more to pursue

climate protection policies (Lubell *et al.*, 2006; O'Connell, 2009; Brody *et al.*, 2008; Zahran *et al.*, 2008). Our analysis goes a step further to look into the character of policymaking by surveying city policy makers – city councilors or commissioners, and high-level city administrators – and inquiring about specific aspects of city policy and program decisions, especially with respect to the environment and to sustainability.

To step back from the particulars of environmental policy to broader assumptions about the nature of American politics, what is the context for assuming that citizen groups would play a major role in influencing sustainability policy? Political scientists have always placed advocacy organizations at the center of policymaking and maybe no more need to be said than that in terms of justifying a hypothesis that, ultimately, is about measuring the impact of interest groups. Yet at the national level there are powerful business organizations aligned with conservative Republican legislators who actively oppose many of the types of policy initiatives that we are including here in our measurements. One would not likely make the same kind of assumption that commitment to protecting the environment in federal policy has a direct relationship to the incorporation of environmental lobbies. Those advocacy organizations would be seen as part of the mix but surely not a preeminent force as is hypothesized here.

The perspective we take here is guided by Berry's (2010) argument that interest group advocacy in cities is fundamentally different than interest group politics at the national level. In Washington with its conspicuously dense constellation of interest groups, much of what interest groups do is trying to get someone in government simply to listen to their concerns (Baumgartner *et al.* 2009). What is characteristic about cities, however, is that they have a low barrier to entry for interest groups. As we have shown elsewhere small city-level or neighborhood level citizen groups have very high levels of access to local policymakers (Berry

and Portney 2011). Business also a considerably smaller footprint in city politics than on the national level. Building on this theoretical and empirical foundation, our expectations about we might find regarding environmental policymaking in cities is considerably different than what we would hypothesize about Washington policymaking.

Research Design and Findings

Here we present a relatively simple model. Our dependent variables represent measures of city commitment to environmental protection. Our key independent variable is a measure of the incorporation of environmental nonprofit organizations into the local policymaking process. We assess this relationship controlling for several possible powerful alternative, or spurious, explanations. These explanations focus on the political ideology of city officials, the propensity of the city electorate to vote for Democrats in presidential elections, and the level of personal income of the residents of the city. Each of these variables and their measures will be described below.

The data on which this analysis is based come from a 2009 survey of local officials and advocates in 50 of the largest 54 cities in the U.S. The four largest cities, New York, Los Angeles, Chicago, and Houston, were excluded from the survey because the challenges presented by their scale. The 50 surveyed cities have 2007 population sizes ranging from 1.5 million in Phoenix to 336,000 in Tampa. In other words, these cities represent the entire universe of U.S. cities in this population range. Between June and August of 2009, questionnaires were mailed to all city councilors or commissioners, a relatively large subset of city agency administrators, and to a selected set of representatives of advocacy organizations in each of these cities.¹ We used a multi-modal approach, offering subjects the choice of filling out a paper

questionnaire they received in the mail or going to a web site and answering the same questions online. Follow-up prompts to initial non-respondents took the form of personalized emails and specified the hot-linked URL for the web site.² Overall, questionnaires were mailed to the entire population of 541 councilors,³ and 190 responded, yielding an adjusted response rate of 35.9%.⁴ This is a strong response rate for a survey of legislators, many of whom are wary of pinning themselves down in print on issues that come before them (despite academics' promise of confidentiality).

The project also involved identifying and surveying an average of about 18 city administrators in each city, and the responses from these administrators are used in this paper. The administrators we targeted were all leading officials at the heads of departments or bureaus with some relevance to environmental affairs or economic development. Titles of such offices and the organization of responsibilities differed from city to city. Generally, though, we identified those working in areas such as environmental protection, sustainability, public works, parks and recreation, public utilities, water and wastewater management, office of the city manager, economic development, and planning. Questionnaires were mailed to this entire population of 885 city administrators, and 413 responded. Thirty-seven of these questionnaires were returned as "undeliverable," and we were not able to locate appropriate replacement administrators. The adjusted response rate was thus 48.7%.⁵

DEPENDENT VARIABLES

The primary dependent variable in this analysis is an attitudinal measure of how committed the city is to the environment, and is derived from a survey question asked of city administrators. The question asked administrators to reveal how committed they perceived the

city to be to environmental protection using a five-point scale. The specific question wording was:

Cities also vary considerably in their commitment to environmental protection. In your own estimation, how would you evaluate your local government’s commitment to improving the natural environment of the city?

Level of commitment to environmental protection

None	Low	Moderate	High	Very High
1	2	3	4	5

Table 2 provides the frequency distribution of the answers to this question for all respondents. Nearly 70 percent of all administrators reported that their cities have “high” or “very high” commitment to environmental protection. The question here, of course, is whether lower levels of commitment are found in cities without much in the way of nonprofit environmental groups.

[Table 2 Here]

In addition to this attitudinal measure of commitment to environmental protection, we also include a measure of how aggressive the city has been in enacting and implementing specific environmental policies and programs. Presumably a city that has enacted a relatively large number of environmental programs has made a stronger and more significant commitment to environmental protection than a city that has enacted fewer. Here the focus is on how many of some 23 different programs and policies each city has enacted and implemented. This includes programs on public transit, high occupancy vehicles, limits on downtown parking spaces, alternatively fueled city vehicles, bicycle ridership, household solid and hazardous waste recycling, industrial hazardous waste recycling, eco-industrial park development, air emissions control (including climate action programs), purchasing recycled products, superfund or brownfield site redevelopment, lead and asbestos abatement, community gardens (sustainable

agriculture), pesticide reduction, green building, green affordable housing, city purchase of renewable energy, city energy conservation (including use of EECBG funds for city building retro-fits), alternative energy for residential customers, and water conservation. The inclusion of a dependent variable measuring this aspect of local environmental policies is meant to capture actions, not just attitudes. As discussed later, the two variables – attitudes of local officials and actual environmental policies – are closely correlated.

INDEPENDENT VARIABLE

The key independent variable in this analysis focuses on the role of nonprofit environmental groups in policymaking. Our broader analysis sought to help establish the role of a variety of different types of groups and organizations, including business associations and businesses, labor unions, neighborhood associations, and others. The question posed to city administrators to get a sense of the role of these groups was:

Which of these sectors are most likely to be included in informal bargaining and negotiation with city officials? On issues involving both economic development and environmental concerns, what is the likelihood that you and your colleagues would include these sectors in your policymaking deliberations?

	<i>Very Likely To Include</i>	<i>Maybe/ Maybe Not</i>	<i>Not Very Likely To Include</i>	<i>Don't Know</i>
Business associations	___	___	___	___
Environmental groups	___	___	___	___
Nonprofit other than environmental	___	___	___	___
Church or faith-based	___	___	___	___
Specific corporations /businesses	___	___	___	___
Labor unions	___	___	___	___
Neighborhood associations	___	___	___	___
Other city governments	___	___	___	___
Council of Governments or Metropolitan Planning Organization	___	___	___	___
Regional development organization	___	___	___	___

Our analysis focuses on the second type of group in the list – environmental groups. Among all of the types of groups listed, environmental groups would seem to be most likely to be strong advocates of environmental protection. Thus, we would expect when policy decisions are “very likely to include” environmental groups, city governments are likely to exhibit high levels of commitment to the environment, and to enact policies and programs designed to protect and improve the environment. Empirically, the issues is whether there is a relationship, and if so, how strong is it.

CONTROL VARIABLES

Even if there is a reasonably strong correlation between attitudinal commitment and the incorporation of environment interest groups, this relationship could very well have alternative explanations. Here we focus on three such alternatives. First, the political ideology of local officials could independently explain why some cities are willing to incorporate environmental groups into policy deliberations, and why local officials would be willing to adopt environmental protection policies. In order to control for this possibility, we rely on another question from the surveys of city administrators, this one asking respondents to act as informants to provide their assessments of how “liberal” or “conservative” local officials are. The specific question was:

How would you describe the political views of those who work for city government? Are they predominantly liberal? Conservative? Moderate? On a scale where 1 indicates very liberal political views, 4 represents a moderate position, and 7 represents very conservative political views, where would you place the following:

	<i>Please Circle</i>						
	Very Liberal		Moderate				Very Conservative
	1	2	3	4	5	6	7
Most administrators							
Most city councilors/							

commissioners	1	2	3	4	5	6	7
The Mayor	1	2	3	4	5	6	7

The analysis here focuses on administrators reports of the political ideology of city councilors or commissioners, the chief legislative policy makers of the city. Administrators were asked to provide this assessment using a seven point scale.

The second potential alternative explanation focuses on the character of the local electorate. Using information about the average level of support of the voters in each city for the Democrat candidate for President across the 1996, 2000, and 2004 elections provides a sense of how “Democrat” the electorate is. Presumably, cities that have larger Democrat proportions of the electorate would be able to be more committed to environmental protection than cities with smaller proportion Democrats. We use presidential elections because doing so allows us to know the party of the vote (which is not usually possible if local elections happen to be non-partisan), and ensures that the measurement is done at the same points in time, which would be problematic with local elections that may be held at various times of any given year.

The third alternative explanation focuses on the resource base of the city, particularly the level of personal income of the residents. Although previous studies have not universally found a correlation between environmental protection policies and the level of personal income, the idea that those with higher incomes are more likely to be environmentally conscientious persists. Moreover, theoretically at least, there is an expectation that income (as a measure of the level of economic development) presents a non-linear “environmental Kuznets curve” relationship with the pursuit of environmental policies and programs (Kahn, 2003). The measure employed here is median family income as reported in the 2000 U.S. Census.

UNIT OF ANALYSIS

The survey data are measured for individual respondents. Yet the appropriate unit of analysis for the central hypothesis is not the individual person, but rather the city. For this analysis, we use the survey questions to measure the variables as aggregate summary responses at the city level.⁶ The administrators' responses to the question about commitment of the city to environmental protection are used to characterize the city as a whole. Here we use the survey data to compute the percentage of administrators reporting that the commitment is "high" or "very high." The key independent variable, based on responses to the question about incorporation of environmental groups, measures the percentage of administrators who reported inclusion of environmental groups as "very likely." And the political ideology control variable represents the percentage of administrators reporting that most city councilors or commissioners are liberal or very liberal (categories 1 and 2 combined).

FINDINGS

Is the level of commitment to environmental protection related to incorporation of environmental groups in policy deliberations? Figure 1 and Figure 2 show the bivariate scatterplot of the relationship between inclusion of environmental groups and the two dependent variables. Both graphs demonstrate that there is a fairly strong positive relationship where greater inclusion of environmental groups in policy deliberations is associated with greater commitment to environmental protection, both in terms of the reported commitment and the number of environmental protection programs enacted and implemented. But how well do these relationships seem to hold up when the partisan, economic, and political ideological context of the city is considered?

[Figure 1 and Figure 2 Here]

Table 3 provides an OLS regression analysis in an effort to isolate the effects of environmental group inclusion. The patterns are very similar for both dependent variables. Even controlling for family income, the political ideology of public officials, and the tendency for the local electorate to vote for Democrats in presidential elections, inclusion of environmental groups is still significantly related to commitment to environmental protection. Clearly, the ideology of city council exerts some significant influence on how committed the city is to environmental protection, even if Democrat voting and family income do not. What is more striking is that the influence of inclusion of environmental groups, at least as reported by city administrators, persists even controlling for these potential spurious factors.

[Table 3 Here]

Discussion and Implications

Our goal here was to build on what we know about interest groups in city politics and, more specifically, to expand our understanding of the relationship between environmental advocacy and the adoption of environmental protection policies. These are interesting questions in and of themselves but they take on added significance in the context of the federal government's movement away from aggressive policies designed to fight global climate change. The foundation of our argument is that cities have low barriers to entry and, thus, it is considerably easier for environmental groups to have their voices heard. However, being heard and being effective are not the same things. Local officials can hew close to procedural openness, making sure they meet with all stakeholders as policymaking moves forward, without moving in the direction preferred by environmental advocates.

We have found a robust relationship between incorporation of environmental groups into policymaking and policies aimed at moving cities forward toward sustainability. This link holds against conventional statistical controls for obvious counter-explanations. Plausibly this relationship could simply reflect a greater propensity of cities with liberal elected officials to be more oriented toward environmental protection. The liberalism of the city council is a predictor, though it does not vitiate the relationship between administrators' attitudes and the inclusion of environmental groups, or the relationship between number of programs and inclusion. It is also plausible is that the relationships we have emphasized actually reflect nothing more than cities' economic standing. Wealthier cities would seem more likely to fund programs that are, ultimately, discretionary, and must compete against all the other claims made on tight urban budgets. This logic, however, does not survive our multivariate tests. A third control, cities' liberalism among its population in general, based on past patterns of voting in national elections, fails to reach statistical significance as well.

For reasons of space, we have not offered a full recounting of additional alternative explanations. We have run additional tests and stirring the pot further does not change the results we have outlined above. To cite one important additional line of inquiry we explored the relationship of business advocacy to sustainability efforts. One line of thinking about the modern corporation is that in our postindustrial economy, business should not be thought of as a monolith standing firm against environmental protection. Indeed, there is now substantial green business sector. Moreover, in the civic fabric of cities where prestigious civic associations play a role in promoting public-private partnerships, a rearguard action against environmentalism by business members fits poorly with the progressive outlook of such organizations. Without recounting the specific evidence, we will stipulate that running the same tests but substituting

business inclusion for environmental groups inclusion does not produce statistically significant outcomes. A fuller exploration of business advocacy based on both our surveys and on the data assembled on cities' programs and policies, will be developed in a subsequent paper.

We began this paper by asking if American cities have caught up with European cities in their commitment to sustainability. Clearly American cities are closing the gap. There may be nothing quite as visible as the flying wedges of bicyclists in their own wide lanes that frighten American tourists trying to cross the street in Stockholm or Copenhagen, but across the entire range of policies that cities can realistically implement, U.S. cities are moving strongly forward in embracing sustainability. We believe that the relationships we have uncovered across 50 large American cities will aid our understanding of why governments vary in their commitment to sustainability. We also hope that our specific finding that environmental advocacy is critical in generating sustainable policies will encourage those who work in the trenches organizing local lobbying groups.

Although the Siemens data are revealing in a comparative context, these scores are limited in what they can tell us about why some governments are more prone to generate more ambitious efforts to limit environmental degradation. There have been many efforts to compare cities across countries and continents but the dominant mode of analysis has been the case study. Drawing reliable generalizations from case studies is difficult and we have tried here to use a large n database to move past their inherent limitations. We hope that the comparative study of sustainable cities will continue to move progress across a variety of methodologies.

Table 1: European and U.S. Cities' Siemens "Green City Index"*

European City	Green Cities Index	U.S. City	Green Cities Index
Copenhagen	87.31	San Francisco	83.80
Stockholm	86.65	New York City	79.20
Oslo	83.98	Seattle	79.10
Vienna	83.34	Denver	73.50
Amsterdam	83.03	Boston	72.60
Zurich	82.31	Los Angeles	72.50
Helsinki	79.29	Washington, D.C.	71.40
Berlin	79.01	Minneapolis	67.70
Brussels	78.01		
Paris	73.21		
London	71.56		
Madrid	67.08		

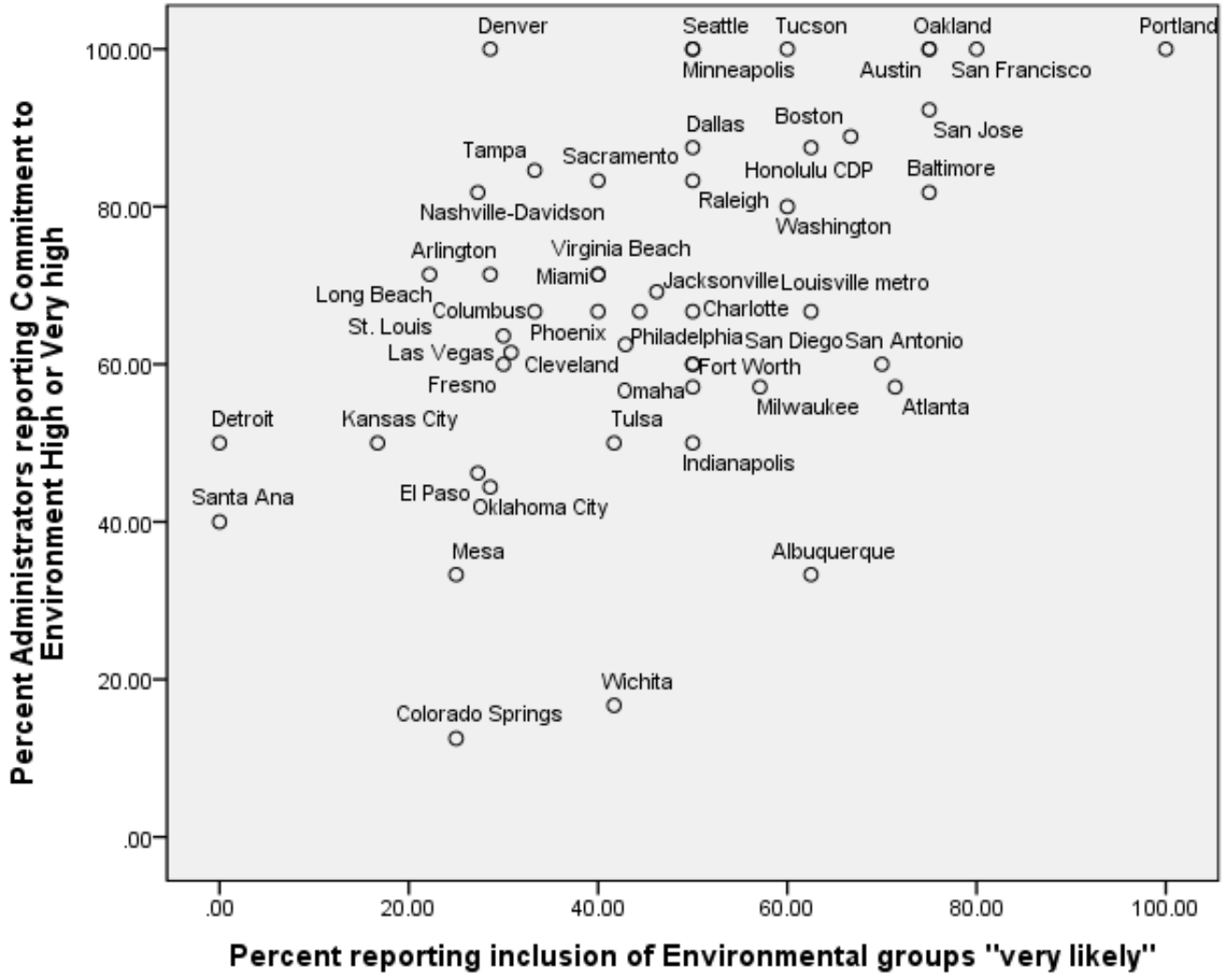
* Sources: Siemens Corporation, 2011. *European Green City Index: Assessing the environmental performance of Europe's major cities*. Found at http://www.siemens.com/entry/cc/features/greencityindex_international/all/en/pdf/report_en.pdf

Siemens Corporation, 2011. *U.S. and Canada Green City Index: Assessing the environmental performance of 27 major US and Canadian Cities*. Found at http://www.siemens.com/entry/cc/features/greencityindex_international/all/en/pdf/report_northamerica_en.pdf

Table 2: Frequency Distribution of City Administrators' Reports of City Commitment to Environmental Protection

Response Category	Number of Administrator Responses	Percentage of Responses
No Commitment	0	0.0
Low Commitment	23	5.6
Moderate Commitment	101	24.6
High Commitment	168	40.9
Very High Commitment	119	29.0
Total	411	100.0

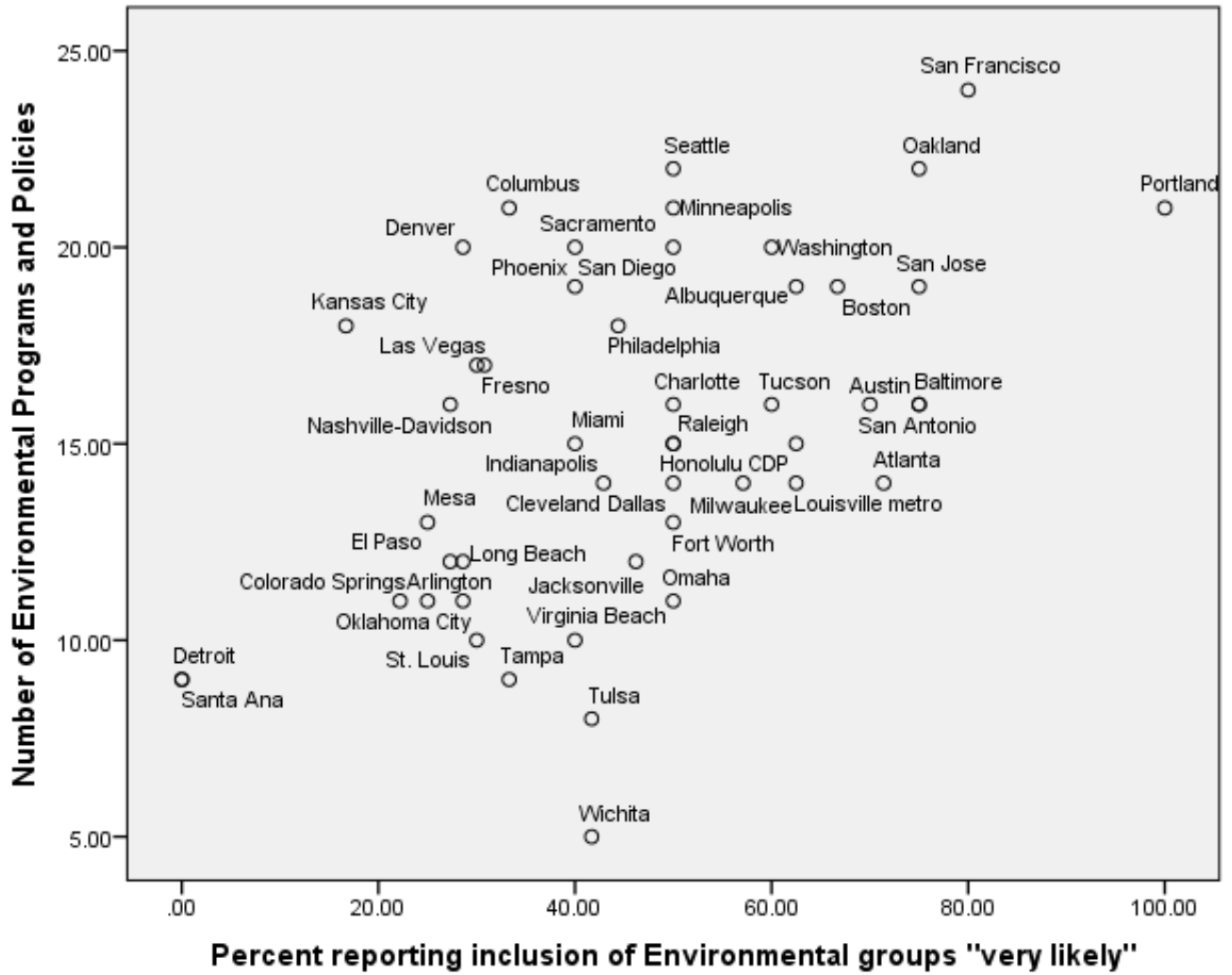
Figure 1: Scatterplot of the Relationship Between “Very Likely” Inclusion of Environmental Groups and Level of Commitment to Environmental Protection, as Reported by City Administrators



% Commitment to environmental protection = 43.5 + .544 (% inclusion of environmental groups “very likely”)

$R^2 = .255$, significance = .000

Figure 2: Scatterplot of the Relationship Between “Very Likely” Inclusion of Environmental Groups and Number of City Environmental Protection Policies and Programs



of environmental programs and policies = 10.5 + .104 (% inclusion of environmental groups “very likely”)

$R^2 = .243$, significance = .000

Table 3: OLS Regression Analysis of Commitment to Environmental Protection

Variable	Dependent Variables					
	Percent of Administrators Reporting Commitment to Environmental Protection “High” or “Very High”			Number of Local Environmental Protection Policies and Programs		
	B	SE	Significance	B	SE	Significance
Inclusion of Environmental Groups “Very Likely”	.313	.134	.024	.052	.025	.046
Percent of City Council/Commission that is “Liberal” or “Very Liberal”	.237	.105	.029	.054	.020	.010
Average Percent Democrat Vote, 1996, 2000, 2004	.258	.233	.274	.043	.044	.331
Median Family Income, 2000	.000	.000	.217	.0000092	.000	.096
Constant	11.64	19.76	.559	3.59	3.75	.343
R ²						
Significance						
		.466			.499	
		.000			.000	

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End Notes

¹ The three questionnaires can be found at <http://ase.tufts.edu/polsci/faculty/berry/> under “Cities Face the Future.” The administrator questionnaire is found at <http://ase.tufts.edu/polsci/faculty/berry/question-admin.pdf>, The councilor questionnaire is found at <http://ase.tufts.edu/polsci/faculty/berry/question-city.pdf>, and the group leader questionnaire is found at <http://ase.tufts.edu/polsci/faculty/berry/question-group.pdf>.

² To incentivize respondents to fill out the questionnaire, we offered them the opportunity to win one of three \$100 gift cards from Amazon.com. The mailings included a pre-paid (stamped) postcard allowing the respondent to provide his/her name and to be entered into the gift card raffle. This mailing also included a new \$1 bill, which Dillman, Smyth and Christian (2009, 238-242) suggest exerts significant influence on the response rate.

³ We use the generic term “councilor” here, although some cities may refer to their representatives as Aldermen (as in Milwaukee), Supervisors (as in San Francisco), or Commissioners (as in Portland).

⁴ Numerous city councilors in Columbus, OH, declined to participate citing a local ordinance that prohibits administration of such surveys. Even so, one councilor responded.

⁵ Two or more city administrators responded in every city except Memphis. As a result, Memphis is not included in the analysis comparing cities.

⁶ The primary disadvantage of this approach to the analysis is that it disregards variations in survey responses within cities. Yet because the unit of analysis is the city, a method of aggregation is appropriate here.