

Comparing Collaboration: Energy Efficiency Action Across Local Governments¹

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ABSTRACT

INTRODUCTION

The last two decades have seen tremendous strides in local government involvement in energy efficiency and conservation efforts. Since the benefits of these policies (i.e. cleaner air, less congestion, etc.) are often indirect and perceived as dispersed and costly, they can be politically unpalatable in some communities. In an attempt to mitigate these challenges by more evenly distributing the costs and benefits of these policies, localities often consider collaborating with one another. This collaboration allows for economies of scale and the potential for reduced negative externalities. However, the decision to collaborate poses considerable risks (Feiock, 2013). These risks are exacerbated by the mechanisms through which collaboration occurs. In this study, we examine the factors that mitigate the transaction costs of formal and informal collaboration in the area of energy efficiency and conservation.

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The organization of this study is as follows. The next section reviews the collaboration literature and explains the theoretical and empirical contributions of this study. This is followed by sections delineating the risks of collaboration and the mechanisms used to mitigate those risks. Based on these ideas and the institutional collective action (ICA) framework, we posit hypotheses linking the mitigation of transaction costs on likelihood of formal and informal collaboration. The fourth and fifth sections describe the research design and results of the analysis. We close with a discussion that revisits the collaboration literature and concludes with directions for future research.

GOVERNMENT COLLABORATION IN THE LITERATURE

Collaboration is often assumed to produce important benefits such as the lessening of negative externalities and the utilization of economies of scale, both of which have the potential to create slack resources (Agranoff and McGuire, 2003; Feiock, 2013; Carr, Gerber, and Luper, 2009). It allows for the lessening of negative externalities by enabling governments to come to solutions that address the needs – to varying extents – of all collaborators (Minkoff, 2013). For example, governments involved in joint economic development ventures such as land acquisition have the potential to situate projects in areas that will be less likely to create congestion for their residents or divert important natural resources. This is by virtue of the fact that they have a voice at the table in the venture.

Another benefit of collaboration is the utilization of economies of scale. Economies of scale are particularly important where the scope and jurisdiction of a public good is disproportionate to the size and/or boundaries of the jurisdiction. For example, capital projects such as highways or infrastructure are often prohibitively expensive for single jurisdictions

(Faruquee, et al., 2006; Porter, 2000). Furthermore, jurisdictions that do choose to go it alone on significant capital projects are often subsidizing neighboring jurisdictions – referred to as free ridership in the literature (Feiock, 2013). Collaboration allows for governments to take advantage of the financial and administrative savings that occur when costs are shared by those that are benefiting.

Overall, the literature suggests that, when the benefits of collaboration supersede the costs of collaboration, governments are willing to work together (Lubell, et al., 2002). However, the costs of collaboration can be considerable. The literature cites both formal and informal mechanisms for overcoming the barriers to collaboration. Scholars assert that informal networks can maximize the benefits of collaboration through trust and reputation while minimizing the costs and potential for opportunism (Feiock, Lee, & Park, 2012; Shrestha, 2010, 2012). Formal mechanisms include contractual arrangements and partnership agreements that protect collaborators by delineating expected behaviors and terms of the exchange (Feiock, 2013; Terman and Feiock, 2016). These solutions are aligned with earlier literature suggesting that governments with similar populations and social and economic homogeneity are more likely to work together because they share the same interests (Andrew, 2009).

However, this tradeoff between costs and benefits varies. We contribute to the literature by examining these tradeoffs in three ways. First, while scholars have studied collaboration in service delivery (Shrestha, 2010), economic development (Lee, Feiock and Lee, 2012), and resource sharing (Kapucu and Hu, 2016; O’Leary and Vij, 2012) we know little about collaboration in the context of energy efficiency and conservation. This is a particularly important area to study because the benefits of energy efficiency and conservation policies are dispersed across adjacent municipal jurisdictions while the costs are concentrated on only those

engaged in policy implementation (Kaunekis and Terman, 2016). Thus, understanding collaboration in this policy context is more important because the potential for free ridership and inequity is heightened. Second, we operationalize the transaction costs of collaboration that are conceptually defined in the institutional collective action framework (Feiock, 2013). We do so using practical concepts of grant receipt, project type and different forms of capacity. Thus, not only do the results make a theoretical contribution, they make a practical contribution.

And, third, we examine the variations in risk and the perceived transaction costs of collaboration by whether the mechanism through which governments collaborate is formal or informal. These different forms of collaboration mechanisms require different levels of commitment, which, in turn, leave governments open to different forms of opportunism. This influences the willingness to collaborate. In the next section, we describe the institutional collective action framework, which we use to hypothesize how governments send signals that influence the likelihood of formal and informal collaboration.

INSTITUTIONAL COLLECTIVE ACTION AND COLLABORATION

The ICA framework identifies the benefits and transactions costs of institutional collaboration. Within the framework, collaboration is assumed to be a solution to local and regional dilemmas of fragmented authority that characterize the federalist system. In particular, ICA compares alternative mechanisms to mitigate horizontal dilemmas among local governments and vertical dilemmas among different levels of government. Local sustainability efforts have been identified as an exemplar of horizontal dilemmas that can arise when jurisdictional boundaries are too small to effectively solve the problem individually and/or the

actions of one government actor create externalities for neighboring governments (Hawkins et al. 2015).

Self-organizing collaboration to address horizontal ICA dilemmas encompass everything from informal communications (Feiock, et al., 2010) to more formal interlocal agreements and contracts (Feiock, 2013). Informal networks can coordinate complex decisions independently. Although federal and state programs can influence their development (Schneider et. al. 2003; Kwak et al 2016), these informal exchanges preserve local autonomy. Local actors also participate in collective organizations and meetings or in regional partnership organizations that provide venues for local actors to create regional economic development partnerships to exchange resources and to coordinate economic development decisions (Chen et al. 2015). While these multilateral venues provide pathways for local actors to develop collaborative solutions to regional problems, they are the gateway to more formal collaborative mechanisms.

Formal mechanisms of collaboration include bilateral and multi-lateral agreements – often for shared service delivery – (Warner and Hefetz 2001, Shrestha and Feiock 2009, Shrestha 2010). Although they have a long history, these agreements have gained popularity in recent years (Thurmaier and Wood 2002, Tavares and Feiock 2015). These agreements often have a basis in contract law, which is where the formal remedies for breach and/or poor performance reside. Since the level of commitment and responsibility posed by these mechanisms varies, the risks vary. ICA couches these risks in terms of transaction costs. The following sections delineate the transaction costs of ICA and the mitigating responses to each of these costs in terms of specific governmental attributes and collaborative mechanisms (i.e. informal vs. formal collaboration mechanisms).

Transaction Costs of ICA

Local governments provide various services, functions and programs that pose problems of scale and externalities. Under ICA, these are general dilemmas for local governments that can be mitigated by collaboration. However, collaboration poses a number of risks that are described by the following transaction costs: coordination search, division and enforcement. Local governments may disagree about the strategies, potential policy solutions and/or coordination efforts to overcome the aforementioned general dilemmas (Maser 1985). Governmental actors often have insufficient information about what potential collaborators are doing or plan on doing; and, they may not know what resources will be needed or what resources other actors have to address the problems. When the actors lack adequate information for coordination, they face a coordination search problem (Andrew, 2009).

Division problems are distinguished from coordination search in that actors agree on the joint action but have difficulties dividing the benefits and costs of the joint action (Steinacker 2004). An unfair distribution decision process or unfair distribution of responsibilities, benefits, and costs can set back collaboration (Steinacker, 2010) or make collaborating governments worse off than before the collaboration (Hatley, Elling, and Carr, 2014).

The third type of transaction cost – enforcement of the collaborative arrangement – can be costly if governments defect from their collaborative agreement (Carr and Hawkins, 2013; Feiock, 2013). Even if there is an agreement, compliance remains uncertain. The participating actors may not follow through on the commitment. They may withdraw or defect when they find that gains from defection are greater than the costs of defection. At the root of the *defection problem* is the opportunistic behavior of actors encouraged by the possibility to free-ride, low probability of spotting renegeing, and lack of penalty or reputational loss. For example, two local

governments may enter into an inter-local service contract but if one does not have the fiscal and human resource capacity to monitor the quality or quantity of a service, it can provide an incentive for its partner cheat (Shrestha 2010).

Responses to Collaboration Risk

Within the ICA framework, collaboration risks reflect certain behavioral dispositions that serve as barriers to resolving coordination search, division, and defection enforcement problems (Feiock 2004, 2013; Carr and Hawkins 2013). At the heart of these barriers is the inherent uncertainty of interacting with and relying on other actors. The ability to overcome coordination search problems is enhanced by access to information, which allows governments to choose the best partners and solutions. Division problems reflect the potential for unfair distribution of gains and responsibilities. Perception of uneven distribution of benefits and costs of collaboration among the actors can prevent them from resolving division problem. Where the benefits are collective, it creates dependencies. A credible division process leading to establishment of a credible collective norm is crucial (Ostrom 1990).

Enforcement costs follow the posterior behavior of defection. Since a pledge or contract to collaborate does not guarantee effective compliance, actors need to have the capacity and political will to faithfully follow it through. The risk of defection increases with uncertainty and the possibility that others will behave opportunistically (Brown and Potoski 2005). The possibility of free-riding and lack of collective enforcement or of threat of reputational loss can also increase defection risk. Defection risks are especially high for the implementation of programs and services such as energy conservation that are new to the organization and for which there is not a history of collaboration.

Local actors respond to these collaboration risks by seeking specific collaboration partners and mechanisms. The attributes of potential collaborative partners provide signals or clues about the available opportunities and constraints to an actor seeking collaborators. If a potential partner signals that commitments may not be credible, fewer local governments will be willing to collaborate with them (Carr, Gerber, and Lupper 2009). Thus, collaboration depends not only on the willingness of a government to work with others, but also – in an alter-centered way – collaboration depends on others’ willingness to work with that actor (Carr, Gerber, and Lupper, 2009). Thus, collaboration is shaped by how successful a government’s actions are in terms of communicating its goals and activities, defining benefits that those activities generate and signaling the credibility of commitments to potential partners.

Perceived risk is also likely to shape the mechanism of collaboration. Where risks are low, the parties may be able to take advantage of the benefits of informal relational agreements. The lack of formality minimizes coordination search and division costs because relationships are more organically formed and performance is based on relational factors such as trust, reputation and shared goals (Terman and Feiock, 2015). Collaboration benefits are high in informal collaborative arrangements because it provides flexibility and prevents collaborative partners from being locked into relationships where partners may defect.

Where risks are higher it may be necessary to formalize agreements. While formal collaborations create additional certainty by explicating the consequences of defection, they can also lock collaborating governments into potentially costly relationships. This is because, while the consequences of opportunistic behavior are more clearly specified, the enforcement costs remain considerable.

Hypotheses

In the subsection below, we operationalize the responses to the transactions costs previously discussed and their expected relationships to various forms of collaboration. Specifically, in hypothesizing this relationship, we look at two forms of collaboration: (1) formal collaboration and (2) informal collaboration.

Coordination Search Risk

Coordination search risk can be mitigated by direct access to information, which can be achieved by being a federal grant recipient in the policy area of the potential collaboration. The receipt of the grant signals to potential partners that a city not only has resources but a specific portfolio of actions. Furthermore, grant recipients might be desirable partners for other communities because they have direct access to information regarding available policy actions and technologies through the intergovernmental relationships they establish with funders. Ideally, this information minimizes the coordination search costs that collaborating governments experience. Thus, since other actors will desire to work with grant recipients we might expect them to participate more in collaborations overall.

However, we believe that this relationship may change when considering the difference between formal and informal collaboration. Grant recipients may have their choice of potential collaborators but, because of the grant funding, they do not necessarily need these collaborators (Kwak, 2016). Thus, they may not want to commit themselves to formal collaborative relationships but rather they will find the looseness of informal collaborations to be a better fit. Alternatively, governments that are not grant recipients may actually need to collaborate and, because they do not have the information resources of the grant, which helps them to choose the best collaborative partners, they need to have more formalized arrangements in place should their

coordination search have resulted in a poor choice of collaborative partner. These arguments lead to the following hypotheses:

H1a: Cities that are grant recipients are less likely to engage in formal collaboration than cities that are not grant recipients.

H1b: Cities that are grant recipients are more likely to engage in informal collaboration than cities that are not grant recipients.

Division Risk

Where there is uncertainty in the distribution of benefits, division risk is a barrier to working together collaboratively. While mitigation of negative spillovers is often a rationale for collaboration, this is primarily where collaborative activities most directly benefit individuals and businesses within a given jurisdiction. Under these circumstances, there is little risk and local actors can take advantage of economies of scale or scope. For example, subsidies for installing systems or technologies in home and buildings to conserve energy pose little risk and the primary beneficiaries are confined to the home or building owners and residents. Thus, collaborating on these activities is low risk because the benefits are easily divisible. However, where the policies involve externalities such as carbon or pollution emissions reductions or infrastructure investments, spillover might provide benefits, but the benefits are difficult to separate between partners. Furthermore, collaborating on high externality programs may create dependencies between collaborative partners. Thus, overall we would expect collaboration on high externality sustainability programs to be less likely and collaboration on low externality sustainability programs to be more likely.

Following this argument, we suspect that governments with high externality programs will need to protect themselves because division is more difficult. Thus, we expect that they will engage in both less formal and informal collaboration. However, division in low externality collaborative programs is far simpler. The likelihood of free-ridership or perceived unfair division is far lower. Thus, low externality programs will be far more likely to produce the expected benefits. Furthermore, the potential for unequitable division that governments would have to protect themselves against is also unlikely. The above arguments lead to the following hypotheses:

H2a: Cities that adopt high externality sustainability programs engage in less formal collaboration than cities that do not adopt higher externality sustainability programs.

H2b: Cities that adopt high externality sustainability programs engage in less informal collaboration than cities that do not adopt higher externality sustainability programs.

H2c: Cities that adopt low externality sustainability programs engage in more formal collaboration than cities that do not adopt low externality sustainability programs.

H2d: Cities that adopt low externality sustainability programs engage in more informal collaboration than cities that do not adopt low externality sustainability programs.

Defection Risk

Governmental capacity has been consistently linked to city sustainability action (Hawkins et al. 2016). We suspect that it is also linked to collaboration (Kwak et al 2016) because it shapes the ability of communities to make and keep commitments, which influence transaction costs (Zahner, 2005). Lack of capacity may make defection, opportunism or free-ridership more likely to go undetected because resources are limited. Moreover, these resource limitations open the possibility of moral hazard because it can provide an incentive for collaborating partners to cheat

because they know that they can get away with it (Shrestha 2010). However, there are different forms of capacity (Terman, 2016) and we believe that they actually may have differing effects on collaboration.

We specifically test the effect of three different forms of capacity – elected official, technical and information capacity – on mitigating defection risk. We can think about this capacity in terms of either political – elected official power – or bureaucratic. We might consider this model to be testing the capacity of both sides of Wilson’s politics-administration dichotomy (1887). Political capacity may be understood as the power to both guide administrative bodies in addition to operate in higher level negotiations with other political actors (Hawkins, Hu and Feiock, 2016). Thus, we suspect that where elected officials have higher levels of capacity, they can better protect themselves against the defection of collaborators. Additionally, with the desire, on the part of elected officials, to build their own networks and social capital (Teodoro, 2015) we suggest that, as their capacity increases, they will be better able to facilitate positive collaborations. Furthermore, because of the rewards that elected officials have of building social capital, we suggest that they are more likely to actively seek out municipal collaborations, be they formal or informal. The above arguments lead to the following hypotheses:

H3a: Cities with greater elected official capacity are more likely to engage in formal collaboration than cities with less elected official capacity.

H3b: Cities with greater elected official capacity are more likely to engage in informal collaboration than cities with less elected official capacity.

Alternatively, cities with greater bureaucratic capacity may find themselves needing to protect themselves in some circumstances while reaching out in others. We examine two forms of bureaucratic capacity – information and technical. These two types of capacity are distinct. Technical capacity is more likely to include tangible items such as infrastructure and

specialized machinery, the use of sharing which is costly. Thus, governments with high levels of technical capacity have more to protect and will desire more formal arrangements as informal arrangements will leave them vulnerable to freeridership on their technical infrastructure of their collaborators. Alternatively, information capacity is more latent and can be better protected. Information can give cities the tools to know the likelihood of defection and the probability that they will need to exercise enforcement. Thus, information reduces the transaction cost of defection because it can be better anticipated. Thus, they will have less need for the strings associated with formal collaboration. And, with more information, they can protect themselves better in informal collaborations where defection can be more difficult enforce. The above arguments lead to the following hypotheses:

H3c: Cities with greater technical capacity will be more likely to engage in formal collaboration than cities with less technical capacity.

H3d: Cities with greater technical capacity will be more likely to engage in informal collaboration than cities with less technical capacity.

H3e: Cities with greater information capacity will be less likely to engage in formal collaboration.

H3f: Cities with greater information capacity will be more likely to engage in informal collaboration than cities with less information capacity.

RESEARCH DESIGN

Sample and Data

Data were collected through two national surveys, “Sustaining Sustainability After EECBG” and “City Governments and Sustainability,” both conducted by the Local Governance Research Lab at Florida State University in 2013; this was supplemented with information from the 2010 U.S. Census of Governments and the ICMA’s (International City/County Management

Association) 2012 Form of Government survey. The targets of the sustainability surveys were EECBG Program recipients and non-recipients. The first survey was distributed to EECBG municipal recipients having populations greater than 30,000. For comparison, all respondents in the second survey did not receive, nor did they qualify for, grant funds because of their population (<30,000).

Both surveys were initially web-based, followed by mailed surveys to cities that did not respond to electronic surveys. EECBG surveys were sent directly to the DOE liaison for EECBG grant reporting.² Non-EECBG surveys were addressed to the top-management positions in each locality (e.g. city manager, mayor, or chief executive manager in sustainability development or energy utility development). Surveys asked respondents questions about the adoption and implementation of energy efficiency and conservation programs in addition to renewable energy projects. The response rate for the EECBG recipient survey was over 53%; 513 out of 968 municipal governments responded. A total of 298 municipal governments out of 581 responded to the Non-EECBG recipient survey, with a response rate of about 51%. These nationwide EECBG and Non-EECBG recipient surveys provide an opportunity to empirically investigate the effects of federal grant aid programs and their administrative capacities on collective actions through informal or formal interlocal agreement at the local government level.

Dependent Variable

We use two survey questions across the two surveys that ask respondents to state whether they have engaged in formal collaboration and whether they have engaged in informal collaboration. Table 1 shows the operationalizations for these two dependent variables.

² DOE required that all EECBG recipients designate a point of contact for all EECBG-funded projects. Surveys were addressed to this person.

Independent Variables

We estimate three sets of independent variables corresponding to the three forms of transaction costs delineated above. Coordination search costs are operationalized as whether the local government received grant funding from the Energy Efficiency and Conservation Block Grant (EECBG) Program. The EECBG Program was a one-time grant program funded by the American Recovery and Reinvestment Act (ARRA) and administered by Department of Energy (DOE) directly to local governments with a primary goal to create jobs in the new green economy. Grantees received considerable implementation guidance and support (Carley, Nicholson-Crotty, Fisher, 2014).

Division costs are operationalized by whether the city collaborates on low or high externality programs – a variable indicating whether a city adopted and currently implements financial support programs for energy efficient devices; and a variable indicating whether a city implemented programs to introduce alternative fuel or hybrid vehicles into the city fleet.

The costs associated with defection risk are operationalized by survey questions asking respondents to rate, on a five-point scale, three dimensions of capacity: elected official capacity, technical capacity and information capacity.

We include a number of control variables that have been shown to influence sustainability efforts. These include form of government, membership in the International Council for Local Environmental Initiatives (ICIEI), median household income (logged), per capita income, per capita own source income, and population density.

Analytic Technique

Each of the dependent variables is measured dichotomously. As such, we use logistic regression to examine whether cities report engaging in formal or informal collaboration. Model one examines formal collaboration and model two examines informal collaboration.

RESULTS

Table 3 presents the results of two logistic regression analyses that focus on whether municipal governments engage in formal (Model 1) and/or informal (Model 2) collaboration. The table reports logit coefficients and standard errors.

The results of the first model show that, in terms of coordination search risk, cities that are grant recipients are less to engage in formal collaboration (H1a) and that there is no relationship between grant recipient status and informal collaboration (H1b). In terms of division risk, there is no relationship between cities engaged in high externality programs and formal collaboration (H2a) and cities that are engaged in high externality programs are less likely to engage in informal collaboration (H2b). Alternatively, and also in line with our hypotheses, cities with low externality programs are more likely to engage in both formal collaboration (H2c) and informal collaboration. And, lastly in terms of enforcement risk with elected official capacity, there is no relationship between the capacity of elected officials and the incidence of formal collaboration (H3a). However, confirming our hypothesis, there is a positive relationship between elected official capacity and enforcement risk (H3b). In terms of bureaucratic capacity being able to mitigate enforcement risk, technical capacity is positively associated formal collaboration (H3c) while there is no relationship between technical capacity and informal collaboration (H3d). For the other operationalization of bureaucratic capacity, information capacity is negatively associated with formal collaboration (H3e) while there is no relationship

between information capacity and informal collaboration (H3f). While a number of our hypotheses proved to show no relationship, there is evidence to suggest that all tree of the transaction costs delineated in the ICA framework do have an effect on collaboration.

DISCUSSION AND CONCLUSION

This study is one step to understanding the statistical effect of transaction costs on formal and informal collaboration. At the core of our argument here is that as the transaction costs are reduced, governments are better protected against the opportunism of their collaborating partners. This has considerable benefits so that governments will not need to burdensome protection of formal collaboration. This argument hinges on the fact that, while formal collaborations are important in some cases, they can also handcuff governments. The flexibility of informal collaborations may allow for leaner, more flexible arrangements.

This work provides several promising paths forward. The model here operationalizes the transaction costs of ICA but we need to know more about the causal mechanisms that link each mechanism for mitigating these costs to collaboration choices. There is considerable work to be done in our estimation of capacity. While the politics/bureaucratic theorization that we tested is useful, there may be better operationalizations for capacity.

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Table 1: Codebook and Measurement

Construct	Measurement	Data Source
Dependent Variables		
Formal collaboration	Has your city entered into [formal agreement] with one or more local governments in relation to energy sustainability or climate issues? [0,1]	EECBG Survey and Non-EECBG Survey 2013
Informal collaboration	Has your city entered into [informal agreement] with one or more local governments in relation to energy sustainability or climate issues? [0,1]	EECBG Survey and Non-EECBG Survey 2013
Independent Variables		
Grant recipient	Recipient of the EECBG [0-1]	EECBG Survey and Non-EECBG Survey 2013
Low externality collaboration policies	A dichotomous variable indicating whether a city adopted and currently implements financial support programs for energy efficient devices	EECBG Survey and Non-EECBG Survey 2013
High externality collaboration policies	A dichotomous variable indicating whether a city adopted and currently implements programs to introduce alternative fuel or hybrid vehicles into the city fleet	EECBG Survey and Non-EECBG Survey 2013
Leadership of Elected officials	On a scale from 1=Very low to 5=Very high, please rate the [Leadership from local elected officials] of your government with regard to energy conservation and climate policy plans and projects.	EECBG Survey and Non-EECBG Survey 2013
Information Capacity	On a scale from 1=Very low to 5=Very high, please rate the [Information resources] of your government with regard to energy conservation and climate policy plans and projects.	EECBG Survey and Non-EECBG Survey 2013
Technical Capacity	On a scale from 1=Very low to 5=Very high, please rate the [Technical capacity] of your government with regard to energy conservation and climate policy plans and projects.	EECBG Survey and Non-EECBG Survey 2013
ICLEI membership	ICLEI membership status [0-1]	ICLEI-Cities for Sustainability , USA
Council –Manager form of government	A dichotomous variable indicating whether a city has a council-manager form of government [0-1]	ICMA, Form of Government Survey 2011
Population density	Municipal population per square mile	U.S Census, 2010
Per capita municipal own source revenue	Municipal own source revenue per capita	U.S Census, 2010
Per capita income	Municipal income per capita	U.S Census, 2010
Median home value	Median home price (logged)	U.S Census, 2010

Table 2: Logistic Regression Results

	Formal Collaboration	Informal Collaboration
	β (s ϵ)	β (s ϵ)
EECBG recipient	-1.933*** (0.0.736)	-0.818 (0.752)
Low externality policies	0.503*** (0.146)	0.235** (0.116)
High externality policies	-0.248 (0.16)	-0.248* (0.14)
Leadership of Elected officials	0.151 (0.121)	0.306*** (0.103)
Information Capacity	-0.894*** (0.169)	-0.023 (0.134)
Technical Capacity	0.404*** (0.138)	-0.092 (0.120)
ICLEI membership	0.385 (0.263)	0.844*** (0.216)
Council –manager FOG	-0.942*** (0.309)	-0.272 (0.252)
Population density	0.00*** (≤ 0.00)	0.00*** (≤ 0.00)
Per capita municipal own source revenue	0.001*** (≤ 0.00)	0.001*** (≤ 0.00)
Per capita income	0.00*** (≤ 0.00)	0.00*** (≤ 0.00)
Median home value (logged)	0.947*** (0.358)	-1.619*** (0.320)
	n = 653 LR $X^2=158.27$ *** Pseudo $R^2 = 0.244$	n = 654 LR $X^2 =97.96$ *** Pseudo $R^2 = 0.126$

Standard errors in parentheses *p<.1; **p<.05; ***p<.01