When Do Local Governments Regulate Land Use to Serve Regional Goals? Results of a Survey Tracking Land Use Changes that Support Sustainable Mobility

August 2017

A Research Report from the National Center for Sustainable Transportation

Gian-Claudia Sciara, University of California, Davis, and University of Texas at Austin

Sarah Strand, University of California, Davis

National Center for Sustainable Transportation

ITS UCDAVIS INSTITUTE OF TRANSPORTATION STUDIES

About the National Center for Sustainable Transportation

The National Center for Sustainable Transportation is a consortium of leading universities committed to advancing an environmentally sustainable transportation system through cutting-edge research, direct policy engagement, and education of our future leaders. Consortium members include: University of California, Davis; University of California, Riverside; University of Southern California; California State University, Long Beach; Georgia Institute of Technology; and University of Vermont. More information can be found at: ncst.ucdavis.edu.

Disclaimer

Acknowledgments

This study was funded by a grant from the National Center for Sustainable Transportation (NCST), supported by USDOT and Caltrans through the University Transportation Centers program. The authors would like to thank the NCST, USDOT, and Caltrans for their support of university-based research in transportation, and especially for the funding provided in support of this project.

The authors gratefully acknowledge the research assistance of Andrew Haruki Hill and Farzad Mashood, and the financial support of the National Center for Sustainable Transportation at University of California-Davis, and Caltrans (UCD Contract No. 65A0527, Task Order 025). The authors also thank Elisa Arias, Gwen Arnold, Elisa Barbour, Coleen Clementson, Elisabeth Gerber, Mark Lubell, Patricia Mokhtarian, and Linda Wheaton for their input on our survey instrument and study design.

When Do Local Governments Regulate Land Use to Serve Regional Goals? Results of a Survey Tracking Land Use Changes that Support Sustainable Mobility

A National Center for Sustainable Transportation Research Report

August 2017

Gian-Claudia Sciara, Institute of Transportation Studies, University of California, Davis, and the University of Texas at Austin, School of Architecture

Sarah Strand, Institute of Transportation Studies, University of California, Davis

[page left intentionally blank]

TABLE OF CONTENTS

When Do Local Governments Regulate Land Use to Serve Regional Goals? Results of a Survey Tracking Land Use Changes that Support Sustainable Mobility

EXECUTIVE SUMMARY

An unprecedented effort to improve regional coordination and land use governance has been underway in California since 2008, when the state passed the Sustainable Communities and Climate Protection Act (Senate Bill 375). The law complements earlier state policy (Assembly Bill 32) to reduce statewide greenhouse gas emissions across an array of sectors. SB 375 specifically encourages regional land use planning that, when coupled with supportive transportation investments, would help to reduce automobile dependent patterns of land use and sprawl. Implementation of these new regional land use visions and the GHG reductions they promise depend largely on local government land use and development actions.

This report explores the responses of California cities and counties to this experiment in order to understand what may make local governments more or less likely to collaborate with regionally oriented policies. It reports on a survey of California local governments administered in early 2017 and explores two main questions: (1) to what extent are California local governments adopting local land use policy and development decisions that reflect the MPO's regional land use vision, and (2) what factors make some local governments more likely to cooperate with regional land use visions, and what factors make others less likely to do so?

A key finding is that California cities have not uniformly included land use strategies to promote smart growth in their zoning codes (see Table ES-1.) Indeed, some cities report using all eight strategies we asked about, while others used none. Cities responding to the survey had adopted on average about five of the eight key land use strategies included in the survey.

Table ES.1. Adoption of Smart Growth Strategies in City and County Zoning Codes

	Total			City			County		
	No	Yes	*n*	No	Yes	*n*	No	Yes	*n*
Increased Building Densities (Q7.1)	16.4	**83.6**	177	16.1	**83.9**	155	18.2	**81.8**	22
Increased Building Heights (Q7.2)	43.7	**56.3**	174	44.7	**55.3**	152	36.4	**63.6**	22
Infill Development (Q7.3)	9.6	**90.4**	177	9.7	**90.3**	155	9.1	**90.9**	22
Urban Growth Boundary (Q7.4)	**64.7**	35.3	173	**68.2**	31.8	151	40.9	**59.1**	22
Mixed-Use Development (Q7.5)	8.5	**91.5**	176	9.1	**90.9**	154	4.5	**95.5**	22
Transit-Oriented Development (Q7.6)	42.4	**57.6**	172	44.0	**56.0**	150	31.8	**68.2**	22
Reduce/Eliminate Min. Parking Requirements (Q7.7)	41.6	**58.4**	173	43.0	57.0	151	31.8	**68.2**	22
Agricultural / Open Space Land Preservation (Q7.8)	26.7	**73.3**	176	29.9	**70.1**	154	4.5	**95.5**	22

We also learned from preliminary models about factors that appear to increase adoption of smart growth oriented zoning (see Table ES-2). Local governments that report awareness of, engagement in, and favorable perceptions of the regional planning process all support increased adoption of SB 375 land use strategies. Additionally, increases in the presence of Green Party-registered voters and in population size are also positively correlated with SB 375-favorable outcomes.

Table ES-2. What Factors Influence Local Adoption of Smart Zoning Strategies?

	Influence on City Adoption of Smart Growth Zoning Strategies	
Factors (Theoretical basis)	**Expected**	**Observed**
Implementation risks / costs anticipated by locals (Feiock)	-	
Implementation benefits anticipated by locals (Feiock)	+	
Organizational capacity (planning staff) (Gerber & Gibson; Deyle & Wiedenmann)	+	-
Previous regional collaboration (Lubell, Gerber, Henry)	+	
Local understanding of reg'l vision /vision communication (Sabatier & Mazmanian)	+	+
Participation in developing regional vision (Sabatier & Mazmanian)	+	+
Control variables		
Population	+	+
Local growth rate (2010-2016)	-	
Median HH income	+/-	
Political orientation majority Republican/Libertarian	-	
Charter city (0,1)	-	

Key: **+** factor increases the likelihood a city will adopt these smart growth zoning strategies
- factor decreases the likelihood a city will adopt these smart growth zoning strategies

Other key findings from the survey are summarized below and explained in greater detail in the report and its appendix.

- A majority of both county and city planning managers report that SB 375 had little to no impact on actions by their city to adopt or strengthen the eight smart growth strategies asked about in the survey. Responses to this effect were especially pronounced for the use of urban growth boundaries and of ag-land and open space preservation, suggesting that cities may have been motivated to support such strategies for other reasons, perhaps even before SB 375 (Table A-3).
- At the same time, a majority of cities and counties report that SB 375 has led to increased communication among local governments and other actors about land use issues and has led them to participate more in the regional planning process (Table A-11).
- When asked about the eight smart growth land use strategies, relatively few local governments anticipate that SB 375 will have a substantial impact on their cities in terms of specific costs or benefits (Table A-4).
- A majority of local governments report participating in the RTP/SCS process and say that their input was given reasonable consideration by the MPO (Table A-5).
- Local government responses suggest that information costs are not a notable deterrent to collaboration on SB 375. Nearly two-thirds to almost 90% of MPOs report sharing various forms of local land use information with their MPO (Table A-7). Also, a majority of cities and counties report that it is easy to learn about the development decisions of neighboring local governments (Table A-8).
- At the same time, many local governments anticipate defection from neighboring local governments, i.e., that neighboring jurisdictions will ignore the RTP/SCS when making development decisions (Table A-5, Q5.8).
- Only about one-fifth of responding local governments report no experience at all collaborating with other jurisdictions on various issues asked about in the survey. The majority of cities and counties report some experience with collaboration, but very few say that they collaborate a great deal with other jurisdictions or stakeholders (Table A-9).
- Roughly one-quarter to one-third of local governments are not aware of the various state and regional grant programs available to support implementation of the SCS (Table A-10). In contrast, somewhat similar shares report receiving fund awards from these programs.

Introduction: Regional Land Use Governance as an Institutional Collective Action Problem

Local authority over land use planning and development is a defining feature of U.S. government. Cities and towns craft the general plans that provide longer term roadmaps for future growth, and they adopt the zoning ordinances and other laws that guide where and how development may occur within their jurisdictional boundaries. Local jurisdictions derive this authority from general police powers, which enable states and local governments to regulate behavior and enforce order within their territory for the betterment of the health, safety, and general welfare of their inhabitants[1].

Many problems faced by local governments today, however, span well beyond a single jurisdiction's boundaries. Consider general challenges related to housing affordability, economic development, groundwater management, sea level rise, or managing freight corridors. Local governments exercising land use authority without mechanisms for coordination with neighboring jurisdictions can result in environmental harms, inefficiencies, and spillover problems across a metropolitan region. For example, one city's decision to approve development of a regional retail center on its edge may increase its own tax revenue but add to regional automobile traffic and related air pollution and greenhouse gas emissions (GHGs) impacting neighboring jurisdictions. Alternatively, consider a traditional low-density suburban city where attractive employers have clustered and where job growth is exploding. If the city seeks to preserve the character of its low-density residential neighborhoods rather than to zone for expanded housing opportunities, workers may have to locate far from jobs, experience long commutes, and add to regional vehicle miles travelled (VMT), highway congestion, and GHG emissions.

In these and other examples, the partitioning of land use and development decision-making authority among a region's cities and counties creates a form of institutional collective action problem (Feiock 2013). One government taking land use and development actions in its own self-interest can hinder outcomes that are regionally efficient or beneficial.

An unprecedented effort to improve regional coordination and land use governance has been underway in California since 2008, when the state passed the Sustainable Communities and Climate Protection Act (Senate Bill 375). The law complements earlier state policy (Assembly Bill 32) to reduce statewide greenhouse gas emissions across an array of sectors. SB 375 specifically encourages regional land use planning that, when coupled with supportive transportation investments, would help to reduce automobile dependent patterns of land use and sprawl. Implementation of these new regional land use visions, and hence the GHG reductions they promise, depend largely on local government land use and development actions.

[1] Ambler Realty Co. vs. Village of Euclid, 272 U.S. 365 (1926).

This paper explores the responses of California cities and counties to this experiment as a way of contributing new insights about what makes local governments more or less likely to collaborate with regionally oriented policies. It reports the results of a survey-based study of California local governments administered in early 2017. The study examines two main questions: (1) to what extent are California local governments adopting local land use policy and development decisions that reflect the MPO's regional land use vision, and (2) what factors make some local governments more likely to cooperate with regional land use visions, and what factors make others less likely to do so?

In the sections that follow, we first explain how California's SB 375 works, what new regional approaches to land use planning the law implies, and why it provides a valuable opportunity to observe local government behavior within an institutional collective action problem framework. Next, we discuss the literature and theory surrounding institutional collective action and collaborative regional governance problems and explain how this literature informs the hypotheses about local government behavior that we test in our study. We present our study methods in a third section, which describes our 2017 survey of California local governments and the dependent, independent, and control variables used to operationalize the outcomes of interest and their determinants. Finally, we report the results, which suggest that cities do not uniformly include in their zoning codes land use strategies to promote smart growth, and that only a small number of factors appear to have a significant effect on how extensively a city uses smart growth strategies in its zoning.

Background: California's Experiment with Regional Land Use Governance

California's 2008 Sustainable Communities and Climate Protection Act (SB 375) aims to curtail transportation-related GHG emissions by reducing the amount of driving that Californians do to accomplish their daily activities. This approach separates SB 375 from other state laws that would reduce transportation-related GHG emissions by requiring or incentivizing more fuel-efficient motor vehicles or by reducing the carbon content of vehicle fuels themselves. In contrast, SB 375 takes aim specifically at land use and development practices that promote sprawl and perpetuate automobile-dependent communities.

California's metropolitan planning organizations (MPOs), the federally required regional bodies that plan for and allocate federal funds to regional transportation investments, play an important but somewhat symbolic role in carrying out SB 375. The law requires MPOs to develop a new component, called the Sustainable Communities Strategy (SCS), of their long-range regional transportation plans (RTP). The SCS must include a regional land development forecast that, when paired with planned transportation investments, will reduce automobile reliance and associated transportation-related GHG emissions.

In short, MPOs must develop a region-serving land use vision that would reduce automobile dependency. A central paradox of SB 375, however, is that the law explicitly upholds local government authority over land use. Implementation of any MPO's regional land use vision thus depends entirely on the voluntary cooperation of the region's member cities and counties. This fact has led some to observe that SB 375 "produces a mismatch between authority and responsibility, expecting more from MPOs than they can easily achieve" (Barbour & Deakin, 2012, 83). Indeed, a recent study of the regional land use "Blueprint Plan" in the Sacramento region shows that housing constructed post-plan diverged visibly from the collaboratively developed regional growth principles stressing mixed-use, compact development, and transportation choice (Allred & Chakraborty, 2015).

SB 375 does anticipate, however, that the state's 18 MPOs will leverage the federal transportation funds at their disposal to reward local land use decisions compatible with their SCS and with SB 375's GHG reduction goals. The law cannot ensure that local governments' zoning and development choices will align with the region's land use vision. Instead, it suggests in principle that local governments making SCS-compatible land use and development choices stand to benefit more from MPO-directed federal funds than those local governments that do not.

Because SB 375 looks to regional growth patterns to temper automobile use and GHG emissions in California, it raises the stakes for understanding the drivers of the local government land use and development decisions that produce those regional growth patterns. This study therefore seeks to understand two main questions. First, it explores the extent to which California local governments are adopting local land use policy and development decisions that reflect the MPO's regional land use vision. Second, it asks what factors might make some California local governments more likely to cooperate with regional land use visions than others.

Theoretical Framework

We view Feiock's theory of institutional collective action (ICA) problems as directly applicable to the problem of local implementation of regional land use visions in California (2013). According to Feiock, ICA problems result from the division or partitioning of authority in which decisions by one government in a specific area impact other governments. Because MPOs have no authority to enforce their regional land use visions (the Sustainable Community Strategy), they must rely on the actions of the various cities and counties within their regional planning boundaries for implementation. Local governments, however, may look more to their individual rather than regional interests when making land use and development decisions. For instance, various self-interested factors may drive local government land use decisions:

- to increase the jurisdiction's tax base (fiscalization of land use) (Lewis, 2001);

- to preserve local community character (and potentially to thwart change bringing more affordable housing or density); and
- to approve development that serves local needs but creates spillover impacts in neighboring jurisdictions and the wider region (e.g. inefficient transportation, automobile dependent development, traffic congestion, more VMT).

Regional land use governance under the SB 375 framework creates what Feiock calls a horizontal collective action problem, where individual governments make land use decisions that produce externalities that can spill across jurisdictional boundaries. The land use choices of one city acting without regard to the MPO's forecasted regional development pattern can undermine other jurisdictions' actions to implement land use and development supporting the regional SCS. Further, one city's narrowly self-interested land use strategies could produce externalities or spillovers for neighboring jurisdictions in the region. Some jurisdictions adopt land use decisions largely to increase local tax benefits, for instance, regardless of regional automobile travel, GHGs, or housing pressures generated by such decisions.

A handful of studies by urban planning scholars have examined why some jurisdictions adopt or implement smart growth or sustainable land use plans and policies while others do not. Works of this kind do not examine regional-local collaboration issues or measure policy adoption *per se*, but some explore the local factors associated with it. Rapid population growth, for instance, correlates to the adoption of local land use controls in some studies (Boarnet, 2011; Wassmer & Lacscher, 2006), but not others (Baldassare & Wilson, 1996). Additionally, high income may (Brody *et al.*, 2006) or may not (O'Connell, 2009; Nguyen, 2009) increase the likelihood of community support for growth controls. Other work has postulated the causal pathways through which plans effect outcomes, including the potential for plans to coordinate interdependent decisions, increase decision makers' knowledge, shape or re-aggregate preferences, and deter non-compliant actions (Millard-Ball, 2012).

Drawing on ICA theory and its conceptualization of collaboration costs and benefits, and on practical and theoretical insights from collaborative governance and policy implementation literatures, we hypothesize that several factors will lead local governments to adopt land use decisions supporting the regional land use vision and the VMT and GHG reductions it targets.

We use these hypotheses first and foremost to develop a descriptive portrait of California local governments, their local land use practices, and their involvement in the planning, development, and implementation of the regional land use vision, the Sustainable Communities Strategy. Additionally, we develop exploratory models to test these hypotheses, and to assess whether empirical evidence from our survey supports to our expectations.

Factors Expected to Influence Local Adoption of Smart Growth Land Use Policies

1. *Calculus of Benefits* – We anticipate that local governments will make land use decisions supporting SB 375 when the perceived risks of doing so are low and when the perceived

benefits are high. Central to Feiock's theory of institutional collective action is the importance of "how local government officials perceive and weigh the various costs and benefits of joint action as they contemplate… intergovernmental collaboration."

How do local governments perceive the costs and benefits to them of aligning local land use with regional land development plans to reduce auto-dependent sprawl? We anticipate that a local government will move to increase density, zone for mixed uses, expand affordable housing, or restrict development on unprotected natural lands when it believes such actions will provide economic, environmental, or social equity benefits, for instance by attracting new businesses, improving air quality, or increasing housing supply.

Other collective action-based studies suggest that **trust among actors** (or "trust networks") may reduce the perceived risks of joint action (Lubell, 2007). Thus, we ask whether local governments are well informed about the land use and development preferences of other jurisdictions in their region; if a city denies development approval to an automobile-dependent retail center, forsaking associated tax revenues, does it know whether its neighboring jurisdictions will do the same?

2. *Calculus of Information Costs* – Following Feiock and ICA, we assume that local governments will be more likely to adopt land use practices supporting the regional vision when other local governments will act predictably. Thus, whether one local government can know when its neighboring cities are cooperating with or defecting from the regional plan is important. We measure this by asking local governments if they agree or disagree that it is easy for their jurisdiction to learn about land use planning and development decisions in other cities in the region. Cities that can easily know about neighboring cities' land use planning and development activities may perceive lower risks to complying with the SCS.

3. *Local Government Capacity* – As local governments increase their staff and technical capacity, we expect their ability to participate in plan development will increase, as will their ability to understand the SCS and its implications, and to adjust land use and development practices to reflect regional planning vision. We operationalize capacity as the number of planners employed by the local government, as reported in the Annual Planning Survey (APS) published by the California Governor's Office of Planning and Research. In the APS results, California cities report having as few as zero staff planners in small cities and as many as 200 planners, as in the City of Los Angeles. Twelve cities report relying on an external contractor(s) rather than dedicated city staff for planning services.

4. *Experience with Regional Collaboration* – We anticipate that a local government will be more likely to collaborate with the MPO's GHG-reducing regional land use vision when it has been involved in pre-existing regional collaborative efforts on other issues, especially environmental or resource issues, such as water management or habitat conservation. Our expectation follows work by Lubell, Gerber, and Henry (2013).

5. *Local Autonomy / Charter City Status* – California state law allows cities to adopt their own charter and thereby to adopt their own organizational structures. Charter adoption signals a city's desire for more local autonomy and its ability to act independently from some state laws (Godwin & Godinez, 2010) and to be more responsive to residents' demands (Kim, 2015). We anticipate that local governments that have adopted their own charter prize local independence and may do less to support of statewide climate objectives via SB 375.

6. *Planning Process Engagement & Perceived Fairness* – We anticipate that a local government will be more likely to support regional GHG reduction goals with its local land use policies when it understands and has engaged in the regional planning process producing such goals and when it believes the MPO has clearly communicated the regional land use vision (Sabatier & Mazmanian, 1980).

Our study also accounts for other factors that we expect to influence the level of local government cooperation with the regional land use plan. These include, for instance, local government size and growth rate, level of urbanization, median household income, and predominant political party among registered voters.

Methodology

This study examines the extent to which cities in California are adopting local land use strategies that support the regional land use visions intended to reduce automobile reliance. We ask this question at a point when the SB 375 experiment is eight-years old and when the California land market has rebounded sufficiently from the Great Recession to observe local growth pressure. We assume that local governments across the state are responding differently to the new SB 375 planning framework. Some local governments will work energetically to adopt plans, policies, and development decisions that support SB 375 and MPO efforts to reduce automobile-dependent sprawl. Such policies may include increasing local density, enabling mixed-use development, and restricting greenfield development. Thus, we also ask what factors make local governments more or less likely to cooperate with regional land use visions.

We rely on a 2017 survey of city and county land use planning and community development directors in California to study the extent to which local governments cooperate with regional land use planning and the circumstances that drive such collaboration. We contacted all 435 cities and all 39 counties located within planning area boundaries of California's 18 Metropolitan Planning Organizations (MPOs), and we invited the land use planning and development director from each local government to participate in the survey. Our questionnaire, administered online via Qualtrix, collected information about the land use and development practices, policies, and activities in each city or county. We use this information to assess whether an individual city or county is taking steps to support the regional land use vision crafted by its MPO, the regional planning body responsible for SB 375 in that

metropolitan area. Survey questions also examine the factors we expect to influence whether a city or county is acting to support that regional vision.

Survey Instrument

We programmed the online survey using Qualtrics survey software and presented it on university servers. Our survey contained various sets of question designed to provide information about local governments and their land use planning and to serve as dependent and independent variables in later analysis. Questions asked about:

- local government perceptions of the MPO's regional planning process;
- local-regional information sharing about land use planning and development;
- local land use practices and policies;
- local stakeholder attitudes toward land use and development issues;
- participation by the local government in available incentives; and
- costs and benefits anticipated from implementing the regional land use plan.

To develop our survey, we collected and examined survey instruments used in similar research. We considered which question formats were best suited to our topic and desired analysis and often modeled our own questions after tried-and-tested formats. We also consulted with the technical advisory committee (TAC) serving this study. Many TAC members commented on the substance of questions, drawing on their expertise with local governments and with California land use planning, housing policies, and land use data and analysis.

Survey Recruitment

California is comprised of 482 cities and 58 counties. To recruit survey participants, we first identified as our target population the local governments (474 in total: 435 cities and 39 counties) located within an MPO service area. Approximately 98% of the state's population resides in these cities and counties served by the state's 18 MPOs. The remaining 42 cities and 19 counties in California do not fall within an MPO's planning boundaries and are thus not included an MPO's regional land use vision under SB 375.[2]

To invite survey participants from all local jurisdictions of interest, we drew from the publicly available 2016 Directory of Planning Agencies (DoPA) developed by the California Governor's Office of Planning and Research. The Directory lists the most current names and contact information of the planning department heads (or equivalent) for all cities and counties, as collected from local governments participating in the state's most recent Annual Planning Survey (APS). Of the state's 540 cities and counties, 404 (74.8%) provided up-to-date contact

[2] Cities and counties outside of census-designated urbanized areas are not required to form an MPO in their region. Transportation planning in non-MPO jurisdictions is performed by rural Regional Transportation Planning Agencies. (See Figure A-1- Caltrans map of MPOs and RTPAs).

information for the 2016 Directory; for jurisdictions that did not provide such information to the APS, the Directory lists the most recent contact information received.

We used the Directory list to email individual survey invitations to these 474 city or county planning directors. Where contact information was obsolete (we recorded 17 email delivery failures), we replaced these email addresses via our own information data gathering and resent the invitation. We targeted the individual responsible for managing land use planning and policy development at each jurisdiction; this included people with functional titles including Planning Director, Planning Manager, Community Development Director, City or Town Manager, Principal Planner, Senior Planner, or similar equivalent titles.

Our online survey opened in January and closed in April of 2017. We emailed an initial survey invitation and followed up with bi-weekly email reminders sent through March to any invited cities or counties that had not opened the survey at all or that had opened but not finished it.

In March, when email reminders ceased yielding additional survey responses, we began telephone follow up to increase participation. We targeted our follow up in two ways. First, we worked to increase participation among the cities and counties we observed were under-represented in the sample to date. These included counties in general, major population centers, and cities and counties within certain metropolitan areas. Second, we used the answers already recorded for one of our survey questions to target specific cities and counties of interest; we asked each responding city or county to identify up to four jurisdictions in their region that they viewed as important to SCS implementation in their region, providing us with a chain-referral. Respondents generally named cities or counties that were large in size, faced significant growth pressures, or were regional leaders. These two approaches yielded a fairly consistent set of target cities and counties for additional phone recruitment; we called approximately 100 of these jurisdictions in our efforts to recruit a more representative sample.

Survey Respondents

Of the 474 municipalities invited, 38 percent (180) completed the survey, a response rate on par with similar studies (Arnold & Neupane, 2016; Berman & Korosec, 2005; Weible et al, 2017). We consider from different angles the extent to which our sample is representative of the larger, invited population of cities and counties affected by SB 375 in California.

Table 1. Invited Population of Local Governments and Responding Sample

	Small MPOs		"Big Four" MPOs		All MPOs		TOTAL
	Counties	Cities	Counties	Cities	Counties	Cities	
Total (Invited)	17	104	22	331	39	435	474
Total Responding	6	41	16	117	22	158	180
Percent Responding	35%	39%	73%	35%	56%	36%	**38%**

One way to consider the representativeness of our sample is to distinguish between cities and counties within California's largest and most urbanized metropolitan planning organizations and those within smaller MPOs (Table 1). The largest MPOs, commonly called "The Big Four," serve the Los Angeles, San Francisco Bay Area, Greater San Diego, and Sacramento Area regions. The lion's share of the state's land coverage, population, and cities and counties are within the boundaries of these MPOs, respectively, the Southern California Association of Governments (SCAG), San Francisco Bay Area Metropolitan Transportation Commission (MTC), San Diego Association of Governments (SANDAG), and Sacramento Area Council of Governments (SACOG). (See appendix Table A-1 and Figure A-1.)

Table 2 reports the descriptive statistics for the cities and counties responding to our survey and suggests that the sample reflects local governments within the metropolitan region and the wider state. Descriptive results reported in Table 3 suggest that the California cities in the sample had adopted on average about five of the eight key land use strategies asked about in the survey. About 15 cities—including Woodland, Chico, Sacramento, Montclair, and Santa Cruz—reported using all eight strategies, while two cities—Beverly Hills and Norwalk—reported using none. Cities in our sample generally have a higher proportion of registered Democrats than other political groups, with the highest proportions of Democrats in cities in Bay area like San Francisco, Oakland, and Berkeley, and in counties such as Marin, Sonoma, and in southern California, Los Angeles. Fewer shares of Democratic-registered voters are found in cities located more rural counties such as El Dorado, Yuba, Placer, and Shasta Counties. San Diego was the largest city in our survey, with a population of nearly 1.4 million, followed by Sacramento, Long Beach, and Oakland; the ten smallest cities, including Avalon, Bradbury and Calistoga, had populations between roughly 1,000 and 5,000 people. The size of sample cities' planning staff varied correspondingly, from 1 staff person to 110.

Table 2. Sample of Cities and Counties Responding to Survey

	City		*County*	
	Sample Avg. (n = 157)	**Population Avg.** (N = 435)	**Sample Avg.** (n = 22)	**Population Avg.** (N = 38)
Total Population (Cities – 2016; Counties - 2010)	88,601	74,259	1,317,306	958,155
Urban Population Percentage (2010)	98.18	97.46	90.74	86.86
Population Growth % (Cities 2008-16; Counties 2000-10)	6.90	6.67	12.72	12.97
Urban Population Growth % (2000-10)	0.20	0.57	-0.73	-1.15
Median Household Income (2010)	67,715	69,298	62,234	60,417
Number (%) of Charter Cities	46 (28%)	121 (27%)		
Democrat Registration % (2016)	44.58	43.94	44.71	42.57
Republican/Libertarian Registration % (2016)	28.68	29.14	2.71	2.74
Independent Registration% (2016)	2.60	2.59	0.50	0.51
Green Party Registration % (2016)	0.42	0.41	0.50	0.51

Table 3. Sample Cities and Descriptive Statistics

Variable	**Mean**	**SD**	**Min**	**Max**
Number of Sustainable Land Practices (DV) (Q7)	5.27	1.85	0.00	8.00
Democrat Registration % 2016	44.58	12.19	21.72	70.24
Republican + Libertarian Registration % 2016	28.68	12.43	3.85	56.06
Green Party Registration % 2016	0.42	0.29	0	1.87
sqrt(Green Party Registration % 2016)	0.62	0.20	0	1.37
Population 2016	88,600.97	150,673.00	1,123.00	1,391,676.00
log(Population 2016)	10.64	1.27	7.02	14.15
Urban Population % 2010	98.18	9.36	0	100.00
Median Household Income 2010	67,714.96	28,102.65	25,216.00	219,485.00
log(Median Household Income 2010)	11.06	0.34	10.14	12.30
Population Growth % 08-16	6.90	5.68	-9.58	27.32
Urban Population Growth % 00-10	0.20	8.85	-41.24	98.58
Planning Staff Capacity	6.69	11.73	1.00	110.00
log(Planning Staff Capacity)	1.34	0.95	0	4.70
Prior Collaboration (Q17Composite)	2.59	0.74	1.00	4.43
Planning Awareness & Engagement (Q5,6 FB Comp, Group 1)	3.83	0.67	1.00	5.00

Variable	Mean	SD	Min	Max
Regional Planning Confidence (Q5,6 FB Comp, Group 2)	3.13	0.71	1.00	5.00
Regional Planning Decisions - Satisfaction (Q5,6 FB Comp, Group 3)	3.04	0.78	1.00	5.00
Anticipated Benefits of Plan Implementation (Q19Composite)	3.19	0.39	2.14	4.43
Sustainable Growth Consensus (Q12 FB Comp,1,3,6)	3.39	0.75	1.00	5.00

Key Survey Results

We report several key descriptive results from our survey in this section, and we note that the report appendix reports a more comprehensive set of survey responses in a series of tables.

Local Adoption of Smart Growth Zoning

Our survey asked local governments to indicate whether its current zoning code provides for eight different strategies associated with concentrating physical development in order to increase accessibility and reduce automobile reliance. We ask if the jurisdiction's zoning provides for (1) increased building densities and (2) increased heights; development that is (3) infill, (4) mixed-use, or (5) transit-oriented; (6) reduced or eliminated minimum parking requirements; (7) an urban growth boundary; and (8) ag-land or open space preservation. Results show that cities do not adopt these strategies evenly. (See Table 4 and Figure 1.)

Table 4. Adoption of Smart Growth Strategies in City and County Zoning Codes

	Total			City			County		
	No	Yes	*n*	No	Yes	*n*	No	Yes	*n*
Increased Building Densities (Q7.1)	16.4	**83.6**	177	16.1	**83.9**	155	18.2	**81.8**	22
Increased Building Heights (Q7.2)	43.7	**56.3**	174	44.7	**55.3**	152	36.4	**63.6**	22
Infill Development (Q7.3)	9.6	**90.4**	177	9.7	**90.3**	155	9.1	**90.9**	22
Urban Growth Boundary (Q7.4)	**64.7**	35.3	173	**68.2**	31.8	151	40.9	**59.1**	22
Mixed-Use Development (Q7.5)	8.5	**91.5**	176	9.1	**90.9**	154	4.5	**95.5**	22
Transit-Oriented Development (Q7.6)	42.4	**57.6**	172	44.0	**56.0**	150	31.8	**68.2**	22
Reduce/Eliminate Min. Parking Requirements (Q7.7)	41.6	**58.4**	173	43.0	57.0	151	31.8	**68.2**	22
Agricultural / Open Space Land Preservation (Q7.8)	26.7	**73.3**	176	29.9	**70.1**	154	4.5	**95.5**	22

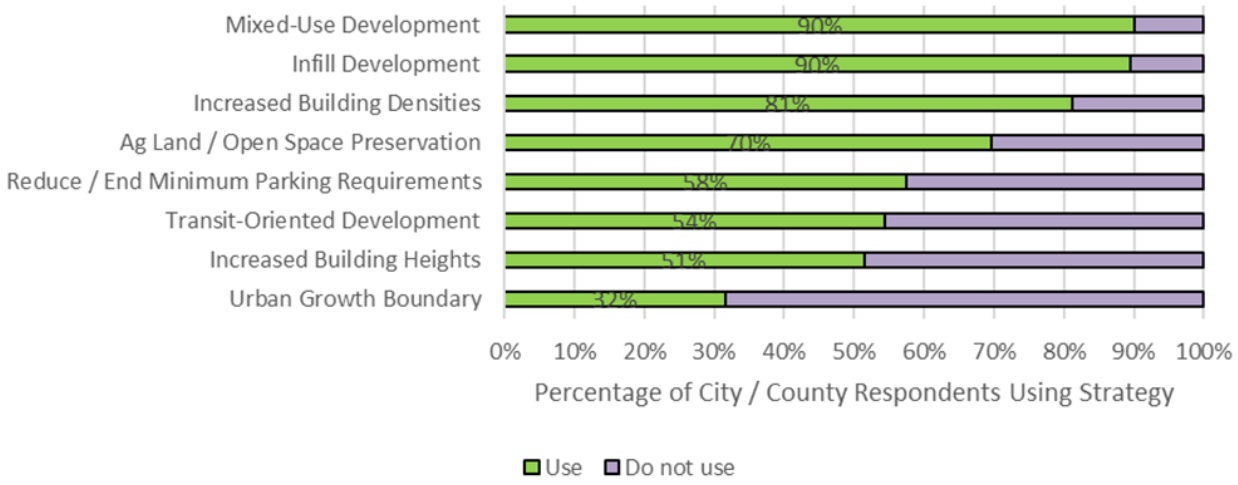

Figure 1. Sustainably-oriented Land Use Strategies in California

Awareness and Pursuit of External Grants to Support SCS Implementation

Cities and counties in California may try for a variety of federal, state, and regional government and non-profit foundation grants that support the smart growth-oriented planning and land use that SB 375 anticipates. Several such state-funded programs, for instance the Affordable Housing and Sustainable Communities Program, explicitly emphasize implementation of regional Sustainable Communities Strategies in their objectives and award criteria.

We ask about eight such opportunities, listed in Table 5a, and construct a composite metric for each local jurisdiction. We award points as indicated in Table 5b, based on the extent to which each jurisdiction is aware of or has taken steps to secure such funding to develop plans or projects implementing the regional plan/SCS. Focusing on "awareness of grant opportunities," we found that of our sample of 157 cities, the highest score was 21 points and the lowest was 0 points. A histogram of this composite "awareness score" (see Figure 2) shows there is an approximately normal distribution centered around nine or ten, but a noticeably high number of respondents (18) scored zero, as they responded "not aware" for all eight questions.

Table 5a. Grant Opportunities for SCS Implementation

1. Affordable Housing and Sustainable Communities
2. State Active Transportation Program
3. Caltrans Sustainable Transportation Planning Grant Programs
4. MPO's Regional Active Transportation Program
5. Other MPO incentive grant programs
6. Any Federal grant opportunities
7. Foundation or Non-Profit grant programs
8. Any other grants not listed

Table 5b. Points Earned for Awareness and Pursuit of Grants

0 = Not aware of grant
1 = Aware of grant. Did not apply.
1 = Aware of grant. Grant not applicable to jurisdiction.
2 = Applied for grant. Not awarded funding.
3 = Applied for grant. Awarded funding.

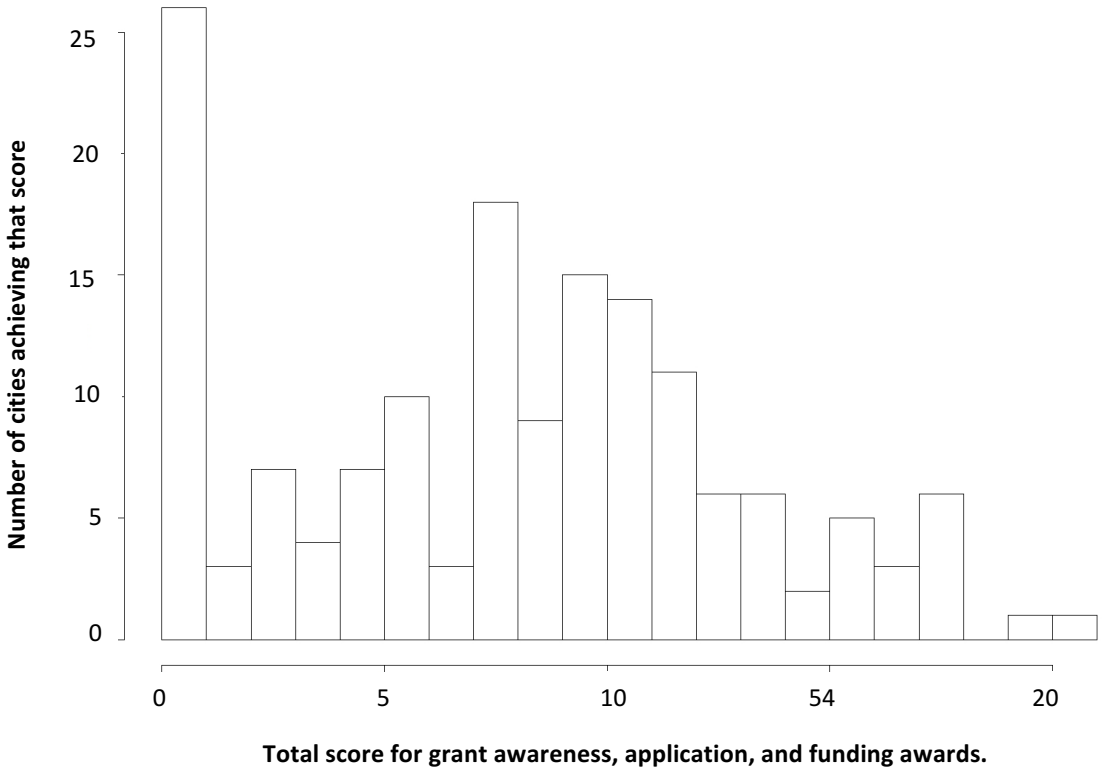

Figure 2. Distribution of Total Grant Scores among Cities (Higher scores signify city is aware of more SCS implementation-grant opportunities, city applied for more grants, and city was awarded more such grants than others.)

We explore the high number of cities that are unaware of such grants by comparing the sub-sample of 18 cities with the overall survey respondent sample of 157 cities. Z-Tests on the demographic statistics and other survey question responses found no statistically significant differences between the sub-sample and survey respondent sample. In other words, differences in cities' demographic statistics (median household income, city population, city population growth, political party registration, and urban population percentage) and in the responding planning managers (the number of years the respondent has worked at the local jurisdiction, their experience in planning) and other information drawn from the survey could not explain this difference.

We summarize other key findings from the survey in bullets below, and refer interested readers to the appropriate summary table(s).

- For one, a majority of both county and city planning managers report that SB 375 had little to no impact on actions by their city to adopt or strengthen the eight smart growth strategies asked about in the survey. Responses to this effect were especially pronounced

for the use of urban growth boundaries and of ag-land and open space preservation, suggesting that cities may have been motivated to support such strategies for other reasons, perhaps even before SB 375. (Table A-3).

- At the same time, a majority of cities and counties report that SB 375 has led to increased communication among local governments and other actors about land use issues and has led them to participate more in the regional planning process (Table A-11).
- When asked about the eight smart growth land use strategies, relatively few local governments anticipate that SB 375 will have a substantial impact on their cities in terms of specific costs or benefits (Table A-4).
- A majority of local governments report that they participated in the RTP/SCS process and that the MPO gave their input reasonable consideration (Table A-5).
- Local government responses suggest that information costs are not a notable deterrent to collaboration on SB 375. Nearly two-thirds to almost 90% of MPOs report sharing various forms of local land use information with their MPO (Table A-7). Also, a majority of cities and counties alike report it is easy to learn about the development decisions of neighboring local governments (Table A-8).
- At the same time, many local governments anticipate defection from neighboring local governments, i.e. that neighboring jurisdictions will ignore the RTP/SCS when making development decisions (Table A-5, Q5.8).
- Only about one-fifth of responding local governments report no experience at all collaborating with other jurisdictions on various issues asked about in the survey. The majority of cities and counties alike report some experience with collaboration, but very few say they collaborate a great deal with other jurisdictions or stakeholders (Table A-9).
- Roughly one-quarter to one-third of local governments are not aware of the various state and regional grant programs available to support implementation of the SCS (Table A-10). Somewhat similar shares report, in contrast, having been awarded funds from these programs.

Measurement

Dependent Variables

We seek to explain what factors lead an individual city or county to support the MPO's regional land use vision, crafted to fulfill SB 375 requirements, by adopting local land use policies and development practices that would help implement that vision. We thus examine local government adoption of land use strategies to concentrate development in existing activity centers. Such practices promote development patterns that have been shown to attenuate the frequency and distance (vehicle miles traveled or VMT) of vehicle trips needed to accomplish daily activities and to increase the trips made by cycling, walking, or public transportation.

We use these results to create a count-based dependent variable tallying the number of supportive land use strategies employed by each jurisdiction. To test whether grouping these eight items provides a reliable measure for the concept of regionally supportive land use measures, we compute Cronbach's alpha for the eight items. The score, 0.64, indicates that our survey items hang together fairly well and provide a relatively cohesive, unidimensional dependent variable. We also considered--but ultimately rejected--a more limited version of the dependent variable, including only five of the eight items. (*We wondered if a more limited version, though not warranted by the Cronbach's alpha results, might provide a more robust measure of regionally supportive land use strategies by excluding from the count three strategies we judged as less applicable across all jurisdictions. We reasoned that a city already land-locked would not enact an urban growth boundary; that transit-oriented development is irrelevant where no transit system exists; and that some cities have no agricultural or natural lands to preserve. Ultimately, however, we concluded this 5-item composite measure ranging from zero to five bordered on problematic for a Poisson model, was not more advantageous than and negligibly improved model fit over the 8-item measure*.) The 8-item measure of regionally supportive land use also satisfied the Poisson mean variance assumptions more closely to and was more equidispersed (Mean: 5.27, Variance: 3.44).

The count-based nature of our dependent variable will lead us to a Poisson model to examine local support for the regional land use vision. The distribution of our dependent variable does not follow the typical skewed Poisson distribution, as the mean number of strategies employed by jurisdictions is 4, not particularly small. The dependent variable, however, is not overdispersed, meeting a critical Poisson assumption. We conclude that a Poisson model is likely to provide reliable estimators for our independent variables.

We examine but ultimately reject operationalizing the concept of local land use and development practices in a second way. This second approach scores each jurisdiction's level of effort to win discretionary grants to pay for local plans and projects that would implement the RTP/SCS; the approach would, we thought, complement measures of local adoption of regionally supportive land use strategies. With 18 of 157 cities unaware of all eight grant options, this second version of the dependent variable was starkly bimodal and did not lend itself to being modeled.

Independent Variables

To explain the extent to which local governments adopt regionally supportive land use strategies, we turn to several independent variables developed from our primary survey data and a set of control variables drawn from existing secondary data sources.

The literature on institutional collective action problems and collaborative governance leads us to expect that a local jurisdiction will adopt more land use strategies supporting regional smart-growth the more it is aware of and has engaged in the regional planning process that produced such strategies. In particular, we expect local governments will do more to support regional

smart growth that the more confidence it has in the underlying fairness of regional planning and the willingness of its neighboring jurisdictions to abide by plan policies. Further, we expect a local jurisdiction will adopt more smart growth strategies the more that jurisdiction anticipates it will accrue benefits from implementation of regional smart growth and the more the jurisdiction has collaborated previously with other local governments on shared problems. We draw on three batteries of survey questions to develop measures for these factors as independent variables.

Planning awareness, engagement and perceptions

First, to measure how local governments perceive, experience, and engage in the regional planning process and the most recently adopted plan, we rely on Likert-scaled responses to a set of eight statements about the regional planning process and adopted RTP/SCS plan. The items assess the degree to which a city or county (1) understands and (2) used opportunities to participate in the planning process; believes the MPO (3) took its input seriously during plan development and (4) makes fair decisions; (5) believes its engagement in plan development had an impact; (6) understands the priority-growth locations outlined by the MPO; thinks (7) expectations for its own development and (8) for development in neighboring jurisdictions are consistent with the adopted regional plan/SCS.

We create a composite variable (*Positive planning perception, awareness, and engagement*) from these items and compute Cronbach's alpha (0.69), which suggests that they provide an internally reliable general measure of positive awareness, perceptions, and engagement with regional planning. We also perform factor analysis on these and related survey questions (Q6) to tease out more specific city perceptions and behaviors with respect to regional planning; we create three composites variables, guided by the resulting factor groupings: *Planning awareness & engagement*, *Confidence in regional planning*, and *Satisfaction with regional planning decisions*.

Anticipated benefits

Second, we use responses to a set of 14 statements about the potential impacts of smart growth to measure the extent to which a jurisdiction believes that it would benefit from RTP/SCS implementation or not. Cities responded on a 5-point scale that plan implementation would have "no impact" to "substantial impacts" on their jurisdictions, considering various favorable outcomes, such as reducing air pollution, preserving open space, attracting jobs, and improving transportation and housing choices. Cities also reported the extent of anticipated negative impacts from plan implementation, such as increased housing prices, displacement of vulnerable populations, lost economic development, and increased congestion. We recode responses to ease interpretation in a single direction, positive impacts, and we create a composite independent variable and its Cronbach's alpha (0.62), confirming its usefulness as a fairly reliable if not perfect measure of whether local governments anticipate more benefits than costs from regional plan implementation.

Sustainable growth and development consensus

The positions of a jurisdiction's stakeholders—including its neighborhood, business, and environmental groups; its real estate developers; and its elected officials and planning staff—may increase or decrease the extent to which that jurisdiction adopts smart growth land use strategies. We ask survey respondents to report the level of consensus among local stakeholders around statements such as "climate change is occurring due to human activity;" "more dense development is needed;" and "land use decision should support walking cycling and transit." We also ask about consensus around statements suggesting that development is needed for tax revenue; that land use regulations are too restrictive; and that infill development would threaten community character. Factor analysis of this question battery yields a variable measuring *Sustainable growth consensus*, indicating agreement on anthropogenic climate change and support for alternative transportation and for denser development unite cities. We anticipate that cities with higher levels of local consensus around sustainable growth and development will adopt more smart growth land use approaches.

Controls

We seek to account for other potentially important determinants of regionally supportive local land use policies that are not represented in our theoretically-driven independent variables. We add control variables representing factors that we reason stand to shape local land use policy outcomes and that similar studies have identified as influential in determining similar outcomes. Our control variables include a jurisdiction's population size and growth rate (from the U.S. Census), to account for the pressures that fast population growth may create for land use policies and decisions that are not restrictive and that accommodate growth, whether or not it reflects the regional smart growth vision in the RTP/SCS. We also control for median household income in the jurisdiction, as we anticipate that higher levels of community wealth may decrease receptiveness to land use strategies that would increase density (Brody, et al, 2006). Residents' attitudes about property rights are likely to be influential, and hence we include the percent of registered voters identified as Republican or Libertarian, Democrat, or Green party members, drawing from data published by the California Secretary of State. We expect that cities will adopt fewer smart growth strategies when they have high shares of registered voters in the Republican or Libertarian party.

We also identify cities that have their own city charter, which we view as indicating a city's inclination toward self-determination. California's state constitution allows cities to adopt their own governing charters, identifying structural features of their local governments from city council size, to election cycle, to election types (at-large or district-based), to contracting requirements (Stone & Tucker, 2016); roughly one-quarter of California cities are "Charter Cities," according to the League of California Cities (2011). We anticipate that a city that has elected structural home rule could be averse to adopting regionally oriented land use strategies.

Finally, we control for the number of full-time planning staff employed in each jurisdiction, as recorded by the in the California Office of Planning and Research (Annual Planning Survey, 2016). We expect that higher levels of staff capacity will enable local governments to undertake planning activities that would lead to adoption of smart growth strategies, for instance by having more staff resources to update the General Plan to reflect SB 375 objectives or by communicating with the MPO about the regional smart growth vision.

Descriptive Results of Model Variables

We used survey responses to develop a number of independent variables characterizing local government experiences with regional land use planning under the SCS development process. In general, responding cities firmly agreed that they understood and used the avenues available to participate in development of the SCS. They also expressed reasonable confidence in the fairness of the regional planning process, though somewhat less satisfaction with regional planning decisions. On average, responding cities exhibited more uniform agreement that implementation of the RTP/SCS would benefit them more than not. Moreover, when asked about local stakeholder consensus on sustainability issues, cities in the sample on average indicated there was slightly more support for than opposition to cycling- and walking-friendly land use decisions and density, and for acknowledgment that human activities are contributing to climate change.

Table 6. Local Adoption of Regionally Supportive Land Use Strategies

Independent Variable	Local Controls	Local Government Capacity	Regional Planning & Collaboration Experiences	Local Interests / Pressures	Regional Planning Participation (Composite Measure)	Regional Planning (Composite) + Collaboration Experiences	Regional Planning (Comp) + Planning Staff Capacity	Planning Staff Capacity + Collaboration Experiences
Democrat Registration % 2016	0.003							
	(0.011)							
Republican + Libertarian Registration % 2016	0.004							
	(0.011)							
sqrt(Green Party Registration % 2016)	0.468**				0.313*	0.336*	0.645***	0.733***
	(0.196)				(0.179)	(0.179)	(0.223)	(0.219)
log(Population 2016)	0.010***				0.103***	0.095***	0.237***	0.236***
	(0.031)				(0.029)	(0.029)	(0.057)	(0.056)
Urban Population % 2010	-0.002							
	(0.004)							
log(Median Household Income 2010)	-0.230**				-0.191*	-0.248**		
	(0.116)				(0.111)	(0.113)		
Population Growth % 08-16	0.007							
	(0.007)							
Urban Population Growth % 00-10	-0.004							
	(0.005)							
log(Planning Staff Capacity)		0.077*					-0.190***	-0.204***
		(0.041)					(0.073)	(0.073)
Prior Collaboration (Q17Composite)			0.089**			0.089*		0.091*
			(0.045)			(0.050)		(0.054)
Planning awareness & engagement			0.068					
			(0.054)					

Table 6. Continued

Independent Variable	Local Controls	Local Government Capacity	Regional Planning & Collaboration Experiences	Local Interests / Pressures	Regional Planning Participation (Composite Measure)	Regional Planning (Composite) + Collaboration Experiences	Regional Planning (Composite) + Planning Staff Capacity +	Planning Staff Capacity + Collaboration Experiences
Confidence in regional planning			0.088					
Group 2: 5.4, 5.6, 5.7, 5.8			(0.053)					
Satisfaction with regional planning decisions			-0.002					
Group 3: 5.6, 6.1, 6.2			(0.050)					
Pos. Planning Perception, Engagement, Awareness				0.167**	0.133*		0.161*	
Q5 Composite				(0.069)	(0.070)		(0.084)	
Anticipated Benefits (Q19Composite)				0.003				
				(0.091)				
Charter City				0.065				
				(0.074)				
Sustainable growth consensus (Q12 Composite)				0.069				
				(0.047)				
Intercept	2.731	1.546***	0.928***	0.844***	2.017	2.942**	-1.596**	-1.302**
	(1.756)	(0.070)	(0.254)	(0.301)	(1.322)	(1.299)	(0.644)	(0.607)
N	155	122	145	147	151	153	118	121
DV = Question 7 Composite, Model = Poisson								
AIC	645.43	515.56	675.06	694.24	608.47	628.98	466.95	491.92
*p < 0.10; **p < 0.05;***p < 0.01								

Model Results

Table 6 reports the several preliminary models tested to explain the adoption of regionally supportive land use strategies by local governments in California. The dependent variable in each regression is the count of smart-growth supportive land use strategies employed by each jurisdiction, as reported in the survey. The count-based nature of the dependent variable (ranging from 0 to 8 strategies) leads us to use a Poisson model for the regression estimates. Our follow-on research is currently exploring additional model specifications, and the results discussed here represent a starting point.

We work first to understand the influence of local factors such as political affiliation among registered voters, city population size and growth rate, and median household income. Increases in household income and city population both increase the number of strategies a city adopts to implement smart growth land use. However, local political affiliation makes a statistically significant positive difference in such strategy adoption only for Green Party registered voters. Tested alone, the number of planning staff employed by a city has a positive effect on smart growth strategy adoption, though at a 0.10 significance level.

We next examine the effect of local governments' prior experience collaboration with other jurisdictions and its experience with regional planning for transportation, land use and housing under SB 375 requirements for development of the SCS. Only a city's prior experiences with inter-municipal collaboration on such issues as water, sanitation, and workforce development appear to exert a significantly positive influence on its use of smart growth land use strategies. Awareness of and engagement in the RTP/SCS planning process, confidence in the fairness of planning decisions, and satisfaction with planning decisions do not seem to have a measurable impact on local government's adoption of RTP/SCS implementing policies.

We test for the impact of attitudes toward and engagement in regional planning more generally in a "local interests and pressures" model using a composite variable that combines a city's responses across all RTP/SCS planning process related questions, rather than separately measuring the impact of planning awareness, confidence, and satisfaction. The composite variable captures positive perceptions of and involvement with regional planning very broadly, and has a significant influence measured in this more encompassing way. To our surprise, anticipation that a city will derive benefits from implementation of the regional land use plan plays no role in its adoption of implementation-supporting strategies. Nor does a city's identity as a "Charter City," or local consensus among city stakeholders supporting sustainable growth and development.

We examine several additional models using our composite measure of Regional Planning Participation together with other significant determinants of a city's adoption of smart growth land use strategies. We compute Akaike's Information Criterion (AIC), with an eye toward models that yield a lower AIC score, signaling relatively higher model quality. The presence of Green Party registered voters—albeit typically very small—retains a consistently positive and

significant effect on adoption of local smart growth strategies. Population size too has a consistently positive and significant influence. Ultimately, however, the effect of a city's wealth, measured in median household income, fades once planning staff capacity is accounted for. Indeed, prior collaborative experiences and positive perceptions of participation in regional planning also matter far less in the end than does planning staff capacity. These results suggest, counterintuitively, that numbers of planning staff may be linked to decreased *implementation* of smart growth-oriented planning, all else held equal. In next steps, we will use different dependent variable constructions and model building approaches to explore this unexpected result.

Concluding Observations

The survey study undertaken attempted to quantify whether and to what extent local governments are supporting SB 375 implementation with their land use and development decisions. Our survey studied two main outcomes. We asked cities and counties about the inclusion of eight different strategies – associated with more accessible development patterns – in their zoning codes. We also asked about their awareness of and experiences with a variety of state, regional, federal and other grants available for supporting SB 375 / SCS-compatible implementation activities.

Overall, we found that cities do not uniformly include in their zoning codes land use strategies to promote smart growth. On average cities use about five of eight of the strategies, and policies to increase mixed use, infill development, and building density appear most common. Further, while we anticipated a range of local government characteristics and factors would play a role in how extensively a city adopts favorable strategies, our preliminary models suggest that only a few did, notably positive awareness of, engagement in, and perceptions of planning; population size; and Green-party voters. The effect of planning staff capacity works in the negative direction.

This work and what it reveals about local government experiences with SB 375 implementation suggests various implications for practice and for future study and monitoring of SB 375 implementation.

- On the whole, California cities and counties anticipate similar costs and benefits to their jurisdictions from implementation of the RTP/SCS, and these do not appear to have a measurable impact on a local government's willingness to adopt smart growth land use strategies or not.
- Few California cities and counties attribute any adoption or strengthening of the eight smart growth strategies in their zoning to SB 375. At best, they perceive SB 375 as having only modest influence on their city's choices in this regard. We interpret this result as reflecting the law's voluntary framework and indicating that SB 375 may be working effectively behind the scenes.

- Exploratory modeling, discussed in the report appendix, suggests that certain factors may increase the number of smart growth strategies that a local government is likely to report including in its zoning code. These factors include positive awareness of, engagement in, and perceptions of planning; population size; and Green-party voters. Where these factors are not present, support may be needed for local governments to take land use actions that would successfully implement SB 375 and support that region's SCS.
- While a visible segment of local governments has successfully availed themselves of the grant funding available to support SB 375 implementation, many are not aware such programs exist. This may suggest that additional outreach or education targeted at local governments may help publicize the availability of such funds and promote their use.

References

Annual Planning Survey. (2016). Sacramento, CA: Governor's Office of Planning and Research (OPR), State of California

Arnold, G., & Neupane, K. W. (2017). Determinants of Pro-Fracking Measure Adoption by New York Southern Tier Municipalities. *Review of Policy Research, 34*(2), 141–305. doi:10.1111/ropr.12212

Baldassare, M., & Wilson, G. (1996). Changing Sources of Suburban Support for Local Growth Controls. Urban Studies, 33(3), 459-471.

Barbour, E., & Deakin, E. (2012). Smart Growth Planning for Climate Protection: Evaluating California's Senate Bill 375. Journal of the American Planning Association, 78(1), 70-86. doi:10.1080/01944363.2011.645272

Berman, E., & Korosec, R. (2005). Planning to Coordinate and Coordinating the Plan: Evidence From Local Governments. *American Review of Public Administration, 35*(4), 380-401.

Boarnet, M. G. (2011). A Broader Context for Land Use and Travel Behavior, and a Research Agenda. Journal of the American Planning Association, 77 (3), 197-213.

Brody, S. D., Carrasco, V., & Highfield, W. E. (2006). Measuring the Adoption of Local Sprawl: Reduction Planning Policies in Florida. Journal of Planning Education and Research, 25, 294-310. doi:10.1177/0739456X05280546

Feiock, R. (2013). The Institutional Collective Action Framework. Policy Studies Journal, 41(3), 397-425.

Gerber, E. R., Henry, A. D., & Lubell, M. (2013). Political Homophily and Collaboration in Regional Planning Networks. American Journal of Political Science, 57(3), 598–610. doi:10.1111/ajps.12011

Kim, C. (2015). The Effects of Recessions on Contracting Moderated by Institutional Arrangements of Government: Evidence From California Cities, 1993–2009. *Public Budgeting & Finance*(Summer), 40-65.

Lewis, P. G. (2001). Retail Politics: Local Sales Taxes and the Fiscalization of Land Use. Economic Development Quarterly, 15(1), 21-35.

Lubell, M. (2007). Familiarity Breeds Trust: Collective Action in a Policy Domain. Journal of Politics, 69(1), 237–250.

Nguyen, M. T. (2009). Why Do Communities Mobilize against Growth: Growth Pressures, Community Status, Metropolitan Hierarchy, or Strategic Interaction? Journal of Urban Affairs, 31(1), 25-43.

O'Connell, L. (2009). The Impact of Local Supporters on Smart Growth Policy Adoption. Journal of the American Planning Association, 75(3). doi: 10.1080/01944360902885495

Sabatier, P., & Mazmanian, D. (1980). The Implementation of Regulatory Policy: A Framework of Analysis. Policy Studies, 8(4), 538-560. doi:10.1111/j.1541-0072.1980.tb01266.x

Stone, S., & Tucker, J. (2016). Variation in Structural Home Rule: Evidence from California City Councils. California Journal of Politics and Policy, 8(4).

Appendix A – Local Government Survey Results

Table A-1. Additional details on the key attributes of each MPO region, including the number of jurisdictions within its boundary, land coverage, and population.

	SAMPLE RESPONSE			TOTAL INVITED			RESPONSE RATE		MPO ATTRIBUTES				
MPO	Cities	Counties	Total Jurisdictions	Cities	Counties	Jurisdictions	Within MPO	Overall	% of Jurisdictions	% Population (2010)	% Land Coverage	Area (Sq. Miles)	MPO 2010 Population
SCAG	59	5	64	191	6	197	32%	36%	42%	38%	50%	38,649	18,051,203
MTC	37	6	43	100	9	109	39%	24%	23%	7%	20%	7,485	7,150,828
SANDAG	10	1	11	18	1	19	58%	6%	4%	4%	8%	4,260	3,095,271
SACOG	11	4	15	22	6	28	54%	8%	6%	6%	6%	6,189	2,274,557
FRESNO COG	7	0	7	15	1	16	44%	4%	3%	6%	3%	6,016	930,885
KERN COG	5	0	5	11	1	12	42%	3%	3%	8%	2%	8,161	839,614
AMBAG	7	1	8	18	3	21	38%	4%	4%	5%	2%	5,151	732,667
SJ COG	2	1	3	7	1	8	38%	2%	2%	1%	2%	1,425	685,306
STAN COG	5	1	6	9	1	10	60%	3%	2%	1%	1%	1,514	514,453
TULARE CAG	2	0	2	8	1	9	22%	1%	2%	5%	1%	4,838	442,171
SB CAG	1	1	2	8	1	9	22%	1%	2%	3%	1%	2,751	423,891
SLO COG	3	0	3	7	1	8	38%	2%	2%	3%	1%	3,323	269,637
MCAG	3	1	4	6	1	7	57%	2%	1%	2%	1%	1,971	255,366
BCAG	3	0	3	5	1	6	50%	2%	1%	2%	1%	1,675	220,000
SRTA	1	0	1	3	1	4	25%	1%	1%	4%	0%	3,843	177,223
KGAG	1	0	1	4	1	5	20%	1%	1%	1%	0%	1,391	152,982
MCTC	0	0	0	2	1	3	0%	0%	1%	2%	0%	2,152	150,865
TRPA	1	1	2	1	2	3	67%	1%	1%	1%	0%	512	55,489
TOTALS	**158**	**22**	**180**	**435**	**39**	**474**	**38%**	**100%**	**100%**	**100%**	**100%**	**101,306**	**36,422,408**

Figure A-1. MPO Areas in California. (Source: http://www.ca-ilg.org/sites/main/files/file-attachments/mpo_rtpa_map_sept2012.pdf)

Table A-2. Invited Population of Local Governments and Responding Sample

	Small MPOs		"Big Four" MPOs		All MPOs		TOTAL
	Counties	Cities	Counties	Cities	Counties	Cities	
Total (Invited)	17	104	22	331	39	435	474
Total Responding	6	41	16	117	22	158	180
Percent Responding	35%	39%	73%	35%	56%	36%	**38%**

Table A-3. Planning Manager Perceptions of SB 375's Influence in City / County Adopting or Strengthening Zoning Strategies

	Total						City						County					
	1 (No Influence)	2	3	4	5 (Very Strong)	N	1 (No Influence)	2	3	4	5 (Very Strong)	N	1 (No Influence)	2	3	4	5 (Very Strong)	N
Increased Building Densities (Q8.1)	49.3	**19.6**	16.9	12.8	1.4	148	**50.0**	20.0	17.7	10.8	1.5	130	44.4	**16.7**	11.1	27.8	0.0	18
Increased Building Heights (Q8.2)	**52.0**	23.5	14.3	8.2	2.0	98	**52.4**	25.0	11.9	8.3	2.4	84	**50.0**	14.3	28.6	7.1	0.0	14
Infill Development (Q8.3)	44.4	**15.6**	25.6	11.9	2.5	160	44.3	**15.7**	26.4	10.7	2.9	140	45.0	**15.0**	20.0	20.0	0.0	20
Urban Growth Boundary (Q8.4)	**72.1**	14.8	4.9	6.6	1.6	61	**68.4**	15.8	5.3	7.9	2.6	38	**61.5**	23.1	7.7	7.7	0.0	13
Mixed-Use Development (Q8.5)	44.1	**18.0**	21.1	15.5	1.2	161	43.6	**19.3**	20.7	15.0	1.4	140	47.6	**9.5**	23.8	19.0	0.0	21
Transit-Oriented Development (Q8.6)	35.4	**24.2**	17.2	19.2	4.0	99	35.7	**26.2**	15.5	17.9	4.8	84	33.3	13.3	**26.7**	26.7	0.0	15
Reduce or Eliminate Minimum Parking Requirements (Q8.7)	**53.5**	18.8	13.9	11.9	2.0	101	**54.7**	19.8	10.5	12.8	2.3	86	46.7	**13.3**	33.3	6.7	0.0	15
Preservation of Agricultural or Open Space Lands (Q8.8)	**66.7**	18.6	5.4	7.0	2.3	129	**68.5**	14.8	6.5	8.3	1.9	108	**57.1**	38.1	0.0	0.0	4.8	21

Table A-4. Anticipated Impacts of RTP/SCS Implementation on California Cities and Counties

	Total						City						County					
	No Impact	A Little	Some	A lot	Substantial	N	No Impact	A Little	Some	A lot	Substantial	N	No Impact	A Little	Some	A lot	Substantial	N
Less air pollution (Q19.1)	**12.7**	**22.0**	**49.1**	12.1	4.0	173	13.2	23.8	**48.3**	11.9	2.6	151	9.1	9.1	**54.5**	13.6	13.6	22
More open space (Q19.2)	**31.8**	**20.2**	37.0	7.5	3.5	173	33.8	**21.9**	36.4	5.3	2.6	151	18.2	9.1	**40.9**	22.7	9.1	22
Higher housing prices (Q19.3)	**37.6**	**26.6**	26.0	9.2	0.6	173	37.1	**27.8**	24.5	10.6	0.0	151	40.9	**18.2**	36.4	0.0	4.5	22
More transport funds (Q19.4)	**23.7**	**29.5**	33.5	10.4	2.9	173	23.8	**29.8**	33.8	10.6	2.0	151	22.7	**27.3**	31.8	9.1	9.1	22
Attract businesses and jobs (Q19.5)	**32.9**	**27.2**	30.1	8.7	1.2	173	35.1	**25.2**	30.5	9.3	0.0	151	18.2	**40.9**	27.3	4.5	9.1	22
Displace vulnerable populations (Q19.6)	**54.3**	21.4	18.5	5.8	0.0	173	**57.6**	23.2	14.6	4.6	0.0	151	31.8	9.1	**45.5**	13.6	0.0	22
Improve public health (Q19.7)	17.3	30.6	**41.6**	8.7	1.7	173	18.5	**34.4**	37.1	9.3	0.7	151	9.1	4.5	**72.7**	4.5	9.1	22
More transportation choices (Q19.8)	**12.7**	**23.7**	**40.5**	18.5	4.6	173	13.9	25.2	**37.7**	19.2	4.0	151	4.5	13.6	**59.1**	13.6	9.1	22
Lose economic dev. to neighbors (Q19.9)	**53.2**	25.4	16.2	4.0	1.2	173	**55.6**	24.5	15.9	3.3	0.7	151	36.4	**31.8**	18.2	9.1	4.5	22
Lower quality of life (Q19.10)	**69.4**	18.5	9.8	1.2	1.2	173	**69.5**	19.2	9.3	1.3	0.7	151	**68.2**	13.6	13.6	0.0	4.5	22
Increased housing choices (Q19.11)	**15.0**	**28.9**	**37.0**	17.3	1.7	173	16.6	30.5	**34.4**	17.2	1.3	151	4.5	18.2	**54.5**	18.2	4.5	22
Drive businesses away (Q19.12)	**61.3**	23.1	13.9	0.6	1.2	173	**59.6**	23.8	14.6	0.7	1.3	151	**72.7**	18.2	9.1	0.0	0.0	22
Increase congestion (Q19.13)	**31.8**	**26.0**	34.1	6.4	1.7	173	31.1	**26.5**	34.4	6.0	2.0	151	36.4	**22.7**	31.8	9.1	0.0	22
Residents live closer to jobs (Q19.14)	**17.9**	**35.3**	34.7	9.2	2.9	173	19.2	**35.8**	34.4	8.6	2.0	151	9.1	31.8	**36.4**	13.6	9.1	22

Table A-5. Local Government (LG) Engagement in and Perceptions of the Regional Transportation Planning (RTP/SCS) Process

	Total						City						County					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N
LG understands RTP/SCS participation opportunities (Q5.1)	1.2	1.8	11.1	**61.4**	24.6	171	1.3	1.3	10.7	**62.7**	24.0	150	0.0	4.8	14.3	**52.4**	28.6	21
LG participated in RTP/SCS development (Q5.2)	1.8	11.5	19.4	**49.7**	17.6	165	2.1	12.3	20.5	**48.6**	16.4	146	0.0	5.3	10.5	**57.9**	26.3	19
MPO considered LG's input (Q5.3)	0.7	2.1	33.3	**47.2**	16.7	144	0.8	2.4	33.9	**47.2**	15.7	127	0.0	0.0	29.4	**47.1**	23.5	17
LG participation had no impact on RTP/SCS (Q5.4)	5.6	40.6	**37.8**	14.0	2.1	143	5.6	40.0	**40.0**	12.0	2.4	125	5.6	44.4	**22.2**	27.8	0.0	18
LG is aware of any priority development areas (Q5.5)	3.0	7.3	12.1	**55.2**	22.4	165	3.4	7.6	11.0	**57.2**	20.7	145	0.0	5.0	20.0	**40.0**	35.0	20
MPO board decisions unfair (Q5.6)	4.7	26.2	**41.6**	20.8	6.7	149	5.3	26.7	**42.7**	20.6	4.6	131	0.0	22.2	**33.3**	22.2	22.2	18
LG plans differ from RTP/SCS (Q5.7)	7.6	**43.3**	24.2	18.5	6.4	157	7.2	**42.8**	26.1	17.4	6.5	138	10.5	**47.4**	10.5	26.3	5.3	19
Other LGs will ignore RTP/SCS (Q5.8)	3.1	26.0	**39.7**	25.2	6.1	131	2.6	25.9	**37.9**	26.7	6.9	116	6.7	26.7	**53.3**	13.3	0.0	15

Table A-6. How would you characterize the overall positions of stakeholders in your jurisdiction regarding the statements?

	Total						City						County					
	Fully Oppose	Mostly Oppose	Even Split	Mostly Support	Fully Support	N	Fully Oppose	Mostly Oppose	Even Split	Mostly Support	Fully Support	N	Fully Oppose	Mostly Oppose	Even Split	Mostly Support	Fully Support	N
Land use should support alt. Transportation (Q12.1)	1.2	3.6	20.2	**54.8**	20.2	168	1.4	4.1	18.4	**55.8**	20.4	147	0.0	0.0	33.3	**47.6**	19.0	21
LG needs development for tax revenue (Q12.2)	1.7	4.0	19.5	**34.5**	40.2	174	2.0	3.3	19.0	**33.3**	42.5	153	0.0	9.5	23.8	**42.9**	23.8	21
Human activity causing climate change (Q12.3)	7.6	32.2	**38.0**	15.2	7.0	171	8.7	32.0	**38.0**	15.3	6.0	150	0.0	33.3	**38.1**	14.3	14.3	21
LG must develop more densely (Q12.4)	5.5	31.5	**40.6**	17.6	4.8	165	6.3	34.0	**39.6**	16.0	4.2	144	0.0	14.3	**47.6**	28.6	9.5	21
LG has too many development restrictions (Q12.5)	7.1	38.1	**36.3**	15.5	3.0	168	8.2	38.8	**35.4**	15.0	2.7	147	0.0	33.3	**42.9**	19.0	4.8	21
Infill development threatens community character (Q12.6)	3.4	10.2	26.5	**42.2**	17.7	147	3.9	11.0	24.4	**44.9**	15.7	127	0.0	5.0	40.0	**25.0**	30.0	20
LG should prioritize road projects (Q12.7)	2.6	6.5	28.6	**36.4**	26.0	154	3.0	3.7	28.9	**34.8**	29.6	135	0.0	26.3	**26.3**	47.4	0.0	19
Too much state influence over land use/dev. (Q12.8)	4.4	16.9	26.9	**35.6**	16.3	160	3.6	18.0	26.6	**35.3**	16.5	139	9.5	9.5	28.6	**38.1**	14.3	21

Table A-7. Do Local Governments Share Land Use & Development Information with Their MPO

	Total				City				County			
	We Don't Collect	No	Yes	N	We Don't Collect	No	Yes	N	We Don't Collect	No	Yes	N
Zoning and Land Use Maps (Q14.1)	3.0	7.8	89.2	166	2.1	8.3	89.6	144	9.1	4.5	86.4	22
Development Proposals (Q14.2)	3.7	32.7	63.6	162	2.8	32.6	64.6	144	11.1	33.3	55.6	18
Proposed Zoning Changes (Q14.3)	3.7	36.6	59.6	161	3.6	36.4	60.0	140	4.8	38.1	57.1	21
Proposed General Plan Amendments (Q14.4)	3.7	28.4	67.9	162	3.5	28.2	68.3	142	5.0	30.0	65.0	20
LAFCo Proposals (Q14.5)	8.5	23.4	68.1	141	8.0	23.2	68.8	125	12.5	25.0	62.5	16

Table A-8. Perceptions of Information Costs: Neighboring Jurisdictions Land Use and Development Decisions

	Total						City						County					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N
Easy to learn about neighbors' development decisions (Q15.1)	0.6	15.6	25.1	**50.9**	7.8	167	3.3	14.6	24.5	**49.7**	7.9	151	0.0	20.0	25.0	**50.0**	5.0	20

Table A-9. Extent of Local Government Collaboration with Other Jurisdictions or Stakeholders on Shared issues

	Total						City						County					
	Not At All	A Little	Somewhat	Alot	A Great Deal	N	Not At All	A Little	Somewhat	Alot	A Great Deal	N	Not At All	A Little	Somewhat	Alot	A Great Deal	N
Municipal Service Sharing (Q17.1)	17.7	25.1	**34.3**	18.3	4.6	175	17.0	26.8	**34.6**	17.0	4.6	153	22.7	13.6	**31.8**	27.3	4.5	22
Regional Workforce Development (Q17.2)	23.4	**30.3**	29.1	14.9	2.3	175	25.5	**30.7**	28.8	13.1	2.0	153	9.1	27.3	**31.8**	27.3	4.5	22
Economic Development (Q17.3)	16.6	24.6	**33.7**	20.6	4.6	175	17.6	26.1	**32.7**	19.6	3.9	153	9.1	13.6	**40.9**	27.3	9.1	22
Community Development/Housing (Q17.4)	20.6	**33.1**	29.1	14.3	2.9	175	18.2	36.4	**31.5**	12.6	1.4	153	0.0	27.3	**27.3**	31.8	13.6	22
Water Management (Q17.5)	12.0	13.1	**28.6**	36.0	10.3	175	11.1	13.7	**30.1**	35.9	9.2	153	18.2	9.1	18.2	**36.4**	18.2	22
Land or Habitat Conservation (Q17.6)	22.9	24.0	**29.1**	18.3	5.7	175	24.8	24.8	**28.8**	19.0	2.6	153	9.1	18.2	**31.8**	13.6	27.3	22
Climate Action or Other Environmental Issues (Q17.7)	19.4	29.1	**34.3**	12.0	5.1	175	20.9	**31.4**	33.3	11.1	3.3	153	9.1	13.6	**40.9**	18.2	18.2	22

Table A-10. Local Government Awareness, Pursuit, and Receipt of Outside Grants for RTP/SCS Implementation

		Total						City						County					
		Not Aware	Aware, Not Applied	Applied, Not Awarded Funding	Applied, Awarded Funding	N/A	N	Not Aware	Aware, Not Applied	Applied, Not Awarded Funding	Applied, Awarded Funding	N/A	N	Not Aware	Aware, Not Applied	Applied, Not Awarded Funding	Applied, Awarded Funding	N/A	N
State	AHSC (Q18.1)	24.9	47.5	8.5	11.3	7.9	177	25.2	49.0	7.7	9.7	8.4	155	22.7	36.4	13.6	22.7	4.5	22
	ATP (Q18.2)	29.4	22.0	11.9	28.2	8.5	177	28.4	21.9	11.6	31.0	7.1	155	36.4	22.7	13.6	9.1	18.2	22
	Caltrans Sustainable Planning (Q18.3)	33.3	27.7	9.0	22.6	7.3	177	31.6	28.4	8.4	25.2	6.5	155	45.5	22.7	13.6	4.5	13.6	22
Regional	MPO's ATP (Q18.4)	35.0	19.2	10.2	26.6	9.0	177	31.6	20.6	11.0	28.4	8.4	155	59.1	9.1	4.5	13.6	13.6	22
	MPO other program (Q18.5)	46.9	18.6	1.1	22.0	11.3	177	45.2	20.0	1.3	23.2	10.3	155	59.1	9.1	0.0	13.6	18.2	22
Federal	Any Federal Grant (Q18.6)	45.8	14.7	2.8	14.7	22.0	177	45.2	15.5	3.2	13.5	22.6	155	50.0	9.1	0.0	22.7	18.2	22
Foundation /	Foundation or Non-Profit Grant (Q18.7)	51.4	12.4	1.7	5.6	28.8	177	52.3	12.3	1.9	4.5	29.0	155	45.5	13.6	0.0	13.6	27.3	22
	Any Other Grant (Q18.8)	52.5	9.0	1.7	10.2	26.6	177	52.9	9.7	1.9	9.7	25.8	155	50.0	4.5	0.0	13.6	31.8	22

Table A-11. Do Local Governments Attribute Regional Outcomes to SB 375?

	Total						City						County					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N
Our LG participates more (Q20.1)	2.5	14.6	30.6	**42.7**	9.6	157	2.9	16.2	**31.6**	41.9	7.4	136	0.0	4.8	23.8	**47.6**	23.8	21
More communication among LGs and actors (Q20.2)	3.1	11.9	25.2	**51.6**	8.2	159	3.6	13.8	25.4	**50.0**	7.2	138	0.0	0.0	23.8	**61.9**	14.3	21
Reduced car dependence (Q20.3)	3.7	16.0	**36.4**	36.4	7.4	162	4.3	17.0	**35.5**	36.2	7.1	141	0.0	9.5	42.9	**38.1**	9.5	21
Increased MPO influence (Q20.4)	3.2	24.5	**47.7**	18.1	6.5	155	3.7	23.1	**50.0**	18.7	4.5	134	0.0	33.3	**33.3**	14.3	19.0	21
No impact on local development (Q20.5)	4.8	33.9	**26.1**	25.5	9.7	165	5.6	33.6	**23.8**	26.6	10.5	143	0.0	36.4	**40.9**	18.2	4.5	22