CivicPulse Insights

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LOCAL GOVERNMENT SPENDING IN THE WAKE OF COVID-19

REPORT 2F: ROADS AND HIGHWAYS

June 29, 2020

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About *CivicPulse Insights* and the Publishers

About *CivicPulse Insights*. CivicPulse and Power Almanac have teamed up to bring you ***CivicPulse Insights***, a research service dedicated to analyzing critical issues of local governance, providing national and regional benchmarks for local governments, and identifying strategic implications for their suppliers. Using Power Almanac's comprehensive contact information for local government officials across the US, CivicPulse conducts random-sample surveys of township, municipal, and county officials, and completes careful analyses to identify key trends and insights that will guide your decision making.

About CivicPulse. CivicPulse is a nonprofit, nonpartisan organization dedicated to filling the gap in access to high quality information about local government. Founded in 2018 by a few PhD students at Stanford University's Department of Political Science, and led by Dr. Nathan Lee, professor of public policy at the Rochester Institute of Technology (RIT), CivicPulse combines recurring national surveys of local government leaders with a variety of other data sources to provide trustworthy insights for policymakers, citizens, and the broader stakeholder community.

About Power Almanac. Power Almanac's mission is to make it easy for organizations with the ability to help local governments serve their citizens more efficiently and effectively to reach out and connect with key decision makers at the right local governments. We provide the most comprehensive and accurate database of contact information for local government decision makers, with more than 250,000 records from 21,000 cities, counties, and townships. 100% phone-verified every 6 months.

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Local Government Spending Priorities in the Wake of COVID-19: Summary of Reports

The coronavirus has ushered America into its worst economic downturn since the Great Depression. Local governments are on the frontlines of this crisis, as they navigate how to continue providing essential services to meet the growing needs and declining resources of their citizens.

In ***CivicPulse Insights'*** inaugural report series, "*Local Government Spending Priorities in the Wake of COVID-19*," we bring fresh data and analysis to bear—based on a nationally representative survey of the top elected leaders of local governments—to unpack the widespread uncertainty about the looming local budget changes in the wake of the COVID-19 crisis.

In our first report of this series, we characterize local policymakers' expectations about changes in both revenue and spending in the next twelve months, including comparing projected spending across 12 different program and functional areas. The report also examines how expected changes in spending will vary by a range of local factors, including population size, government type, geographic region, the severity of COVID-19's impact, and the locality's political leaning.

The second report, which comes in 12 parts, offers a deeper dive into key local government program and functional areas.

In summary, the report series will be composed of:

Report 1: *Spending projections by program, function, and local factors*

Report 2: *Analyses of projected spending in specific program and functional areas*

Program Areas

a. Health services
b. Housing and community development
c. Public safety
d. Public welfare and social services
e. Public works
f. Roads and highways
g. Sanitation, sewage, and water

Functional Areas

h. Capital investment
i. Citizen communication and engagement
j. Financial administration
k. Technology
l. Workforce

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Key Findings

Below are the most important findings in this report, based on our analysis of our nationally representative survey of top elected leaders of local governments:

1. **Overall trajectory.** 46% of local governments expect to cut spending on roads and highways in the coming year, while only 11% expect to increase it. The remainder (43%) expect no change.

2. **Findings by population size.** Population size is the key factor: the larger the locality, the more likely it is to decrease spending on roads and highways in the next year.

3. **Findings by government type.** Municipal and township governments are slightly less likely to decrease spending on roads and highways than county governments.

4. **Findings by region.** Local governments in the West are more likely than those in any other region to decrease spending on roads and highways, while localities in the Midwest are least likely to decrease spending.

5. **Findings by COVID-19 incidence.** Spending trajectories on roads and highways are similar between localities with lower and higher degrees of COVID-19 disease incidence.

6. **Findings by political leaning.** Spending on roads and highways is somewhat less likely to decrease in Republican-leaning localities than in Democrat-leaning localities.

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I. Overall Spending Trajectories on Roads and highways

In our first report in this series – based on our national survey of local elected officials – we found important differences in expectations about local government spending trajectories across specific program and functional areas. The remainder of this report series tackles each program and functional area separately.

This report presents a deep dive into local government spending on *roads and highways,* one of the seven program areas asked about in our survey.

As Figure 1 shows, nearly a majority of local governments expect spending on roads and highways to decrease (orange segment), more than most other program areas. Nonetheless, a substantial number of local governments expect no change (gray segment) or even an increase in spending (blue segment).

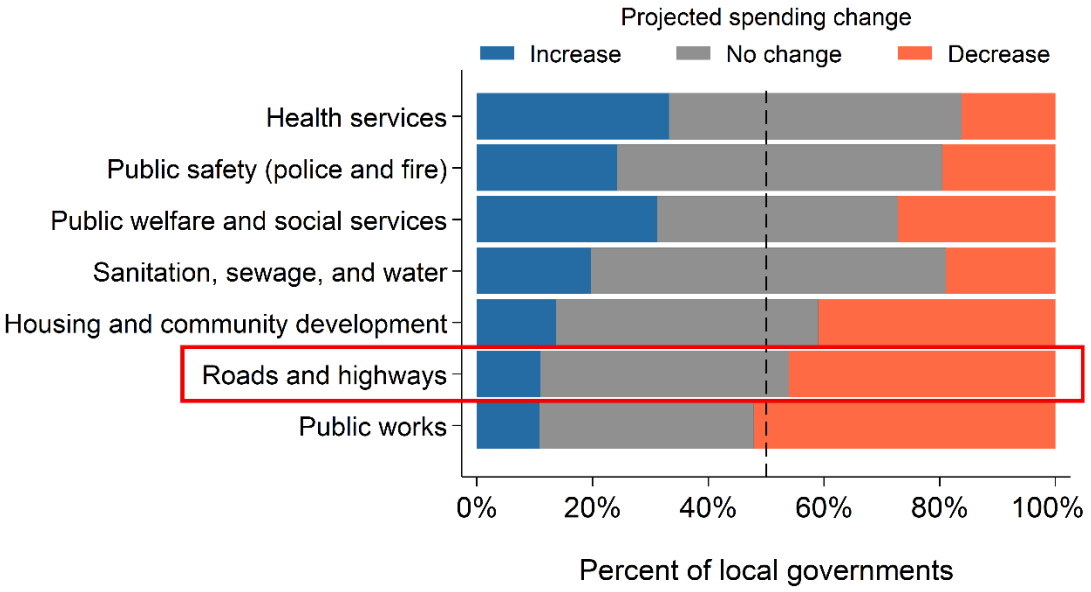

Figure 1. 'Roads and highways' is the second most likely program area to face spending cuts in the next year. For each program area, the percentage of local governments expecting an increase, no change, or decrease is shown.

In this report, we investigate what factors determine whether a given local government is more likely to be toward the right or left side of the figure above. To do so, we use the *net likelihood score*.

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The net likelihood score represents the difference between the percentage of local governments expecting spending to increase (Fig 1, blue), minus the percentage of local governments expecting a spending decrease (Fig 1, orange).

In this case, the overall net likelihood score for local governments' spending on roads and highways is 11% minus 46%, or -35 percentage points (see Figure 2).

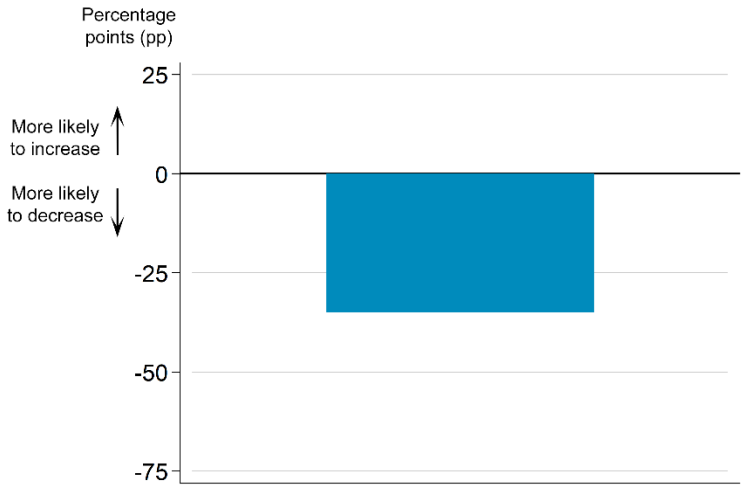

Figure 2. Spending on roads and highways more likely to decrease than increase in the next year. This plot shows the difference in likelihoods (or "net likelihood") that annual overall spending increases versus decreases (equivalent to the difference between the blue and orange bars in Figure 1).

In other words, it is significantly more likely that the average local government will experience a spending decrease on roads and highways than a spending increase.

In the remainder of this report, we use this net likelihood measure to analyze how expected spending changes on roads and highways might vary in terms of five local factors:

- Population size
- Government type
- Region
- COVID-19 incidence

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- Political leaning

II. Spending Trajectories by Population Size

In this section, we disaggregate our analysis of expected changes in local government spending on roads and highways in terms of the locality's population size.

Our analysis shows a correlation between population size and the net likelihood score for spending on roads and highways.

In Figure 3 below you can see that the net likelihood score is closest to zero for lower-population localities (fewer than 3,000 residents), meaning that they are the *least likely* to decrease spending. By comparison, the net likelihood is substantially more negative for localities with more than 10,000 residents.

In other words, the smaller the locality, the less likely it is to decrease spending on roads and highways in the next year. This corresponds with the pattern seen between population size and *overall spending* by local governments (see Report 1 in this series).

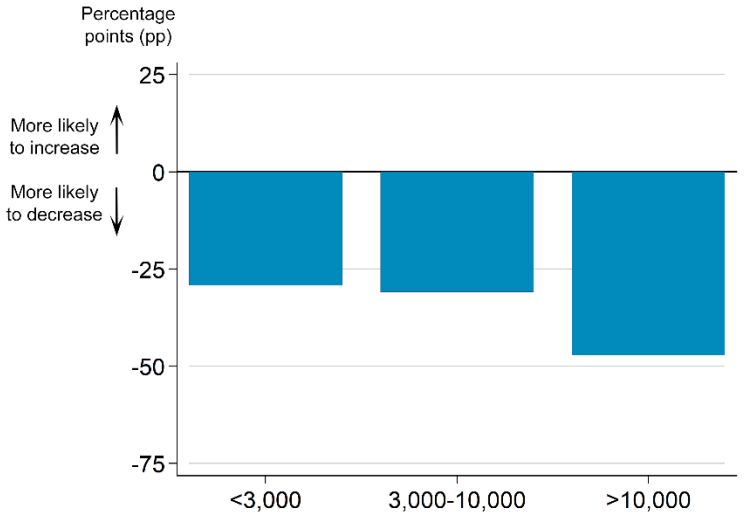

Figure 3. Spending on roads and highways more likely to decrease in higher population communities. Each bar shows, by population size, the difference in likelihoods (or "net likelihood") that annual spending increases versus decreases.

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III. Spending Trajectories by Government Type

Next we explore how expected spending trajectories will vary by the type of government. We found that counties are slightly more likely to expect spending to decline than municipalities and townships (Figure 4). While the net likelihood score for municipalities and townships is about -37 percentage points, it is -42 points for county governments.

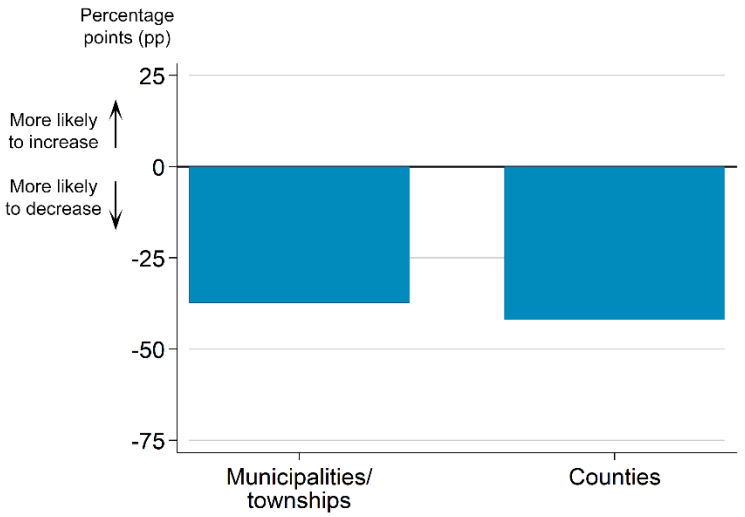

Figure 4. Counties slightly more likely to decrease spending than municipalities and townships. Each bar shows, by government type, the difference in likelihoods (or "net likelihood") that annual spending increases versus decreases.

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IV. Spending Trajectories by Region

How will spending changes vary by region? Answering this question, Figure 5 shows how the net likelihood score for spending on roads and highways varies across different regions of the United States.

The West, with a net likelihood score of -63 percentage points, is the region where local governments are most likely to decrease spending. The Midwest is the region least likely experience a spending decrease, with a score of -27 percentage points. The Northeast and South have scores somewhat more negative than the Midwest, at about -39 points.

Thus, while spending on roads and highways can generally be expected to shrink across the nation, we do see substantial regional variation.

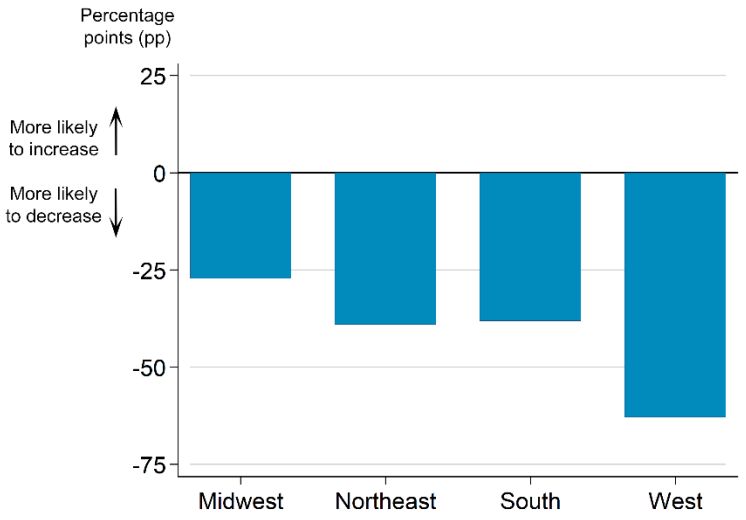

Figure 5. Spending on roads and highways most likely to decrease in the West. Each bar shows, by region, the difference in likelihoods (or "net likelihood") that annual spending increases versus decreases.

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V. Spending Trajectories by COVID-19 Incidence

Next we investigate whether future local government spending on roads and highways depends on the level of COVID-19 disease incidence in their community.

It turns out that communities with a low or high COVID-19 incidence are about equally likely to experience a decrease in spending. Regardless of disease incidence, spending on roads and highways is more likely to decrease than increase, with a net likelihood score of about -37 percentage points.

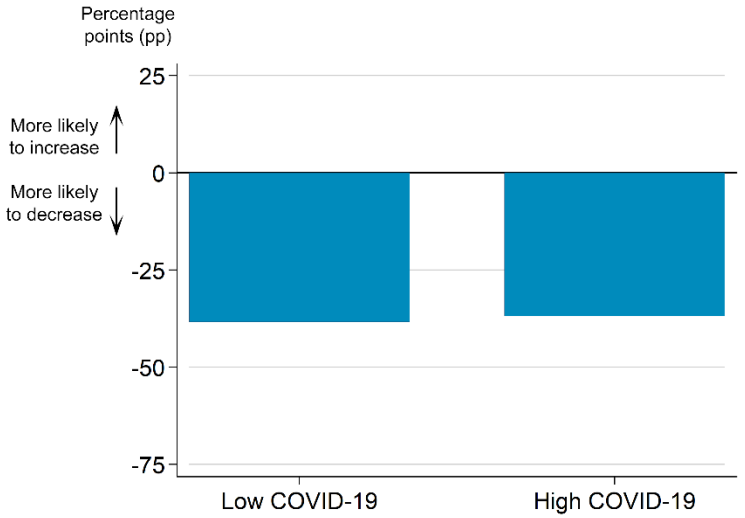

Figure 6. Localities with low or high COVID-19 incidence equally likely to face decline in spending on roads and highways. Each bar shows, by level of disease incidence, the difference in likelihoods (or "net likelihood") that annual spending increases vs decreases. Level of COVID-19 incidence is based on the number of cases per capita in the county at the time of the survey.

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Because the spread of COVID-19 is related to a community's population size, we further partition the data by both disease incidence and population.

As with the aggregated data, we find that disease incidence does not have a significant bearing on projections about spending on roads and highways (Figure 7). In both lower and higher population localities, the net likelihood scores are about the same across levels of disease incidence.

We do find, however, that lower population communities are less likely to expect spending cuts than higher population communities, regardless of disease incidence. This is consistent with our analysis of spending and population size alone shown in Figure 3.

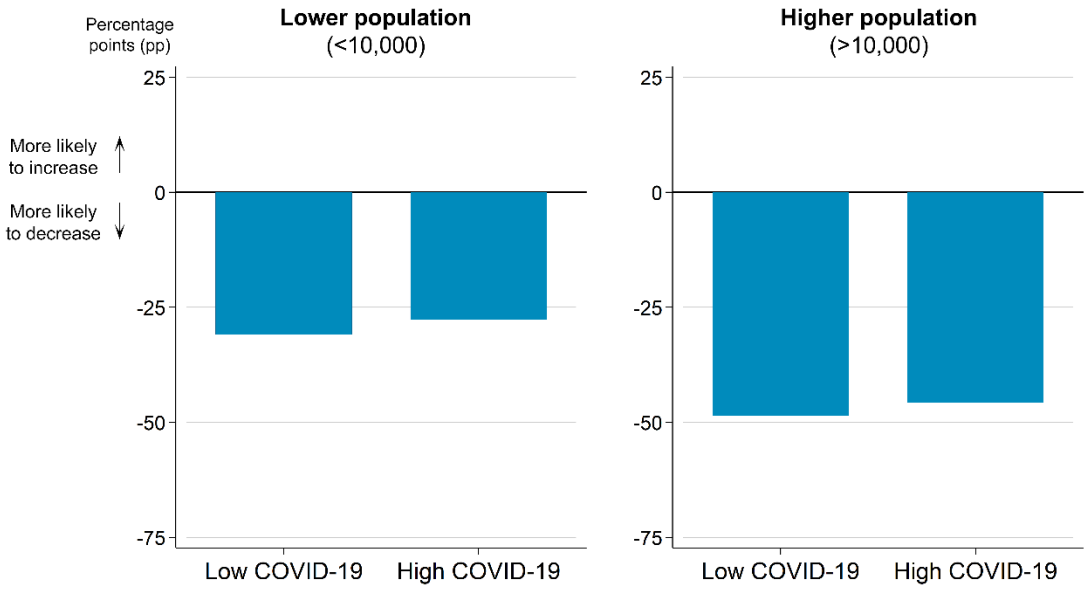

Figure 7. Level of COVID-19 disease incidence does not substantially predict future spending on roads and highways. Each bar shows, by disease incidence and population size, the difference in likelihoods (or "net likelihood") that annual spending increases versus decreases.

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VI. Spending Trajectories by Political Leaning

Lastly, we investigate whether projections about local government spending on roads and highways differ by the political leaning of the locality.

To do so, we divide local governments between those that had a higher percentage of residents voting for Donald Trump in 2016 and those that had a lower percentage of votes for Trump (Figure 8).

If 50% or more in the relevant county voted for Donald Trump, the locality was classified as 'Lean Republican.' If less than 50% voted for Trump, the locality was classified as 'Lean Democrat.'

This analysis reveals a modest difference between Republican- and Democrat-leaning communities. Local governments in Democrat-leaning communities are more likely to anticipate a spending decrease than those in Republican-leaning communities.

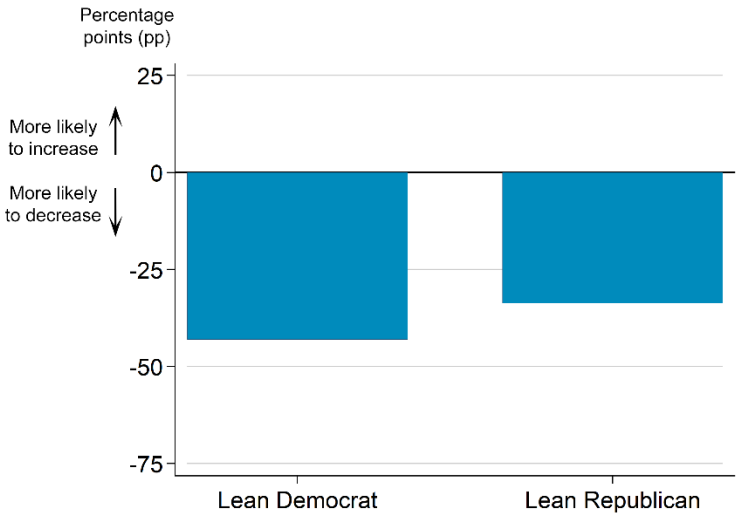

Figure 8. Democrat-leaning localities slightly more likely to see spending decrease. Each bar shows, by political leaning, the difference in likelihoods (or "net likelihood") that annual spending increases versus decreases. Political leaning is based on the locality's county vote share in the 2016 presidential election.

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Because population size and political leaning often go together, we further disaggregate the spending data between these two factors (Figure 9).

We find that the relationship between spending trajectory and local political leaning is consistent across population sizes, but it is a more important predictor in larger localities than in smaller ones.

Overall, Republican-leaning, lower-population localities are the least likely to reduce spending on roads and highways (with a net likelihood score of -29), while Democrat-leaning, higher-population localities are the most likely (with a score of -53).

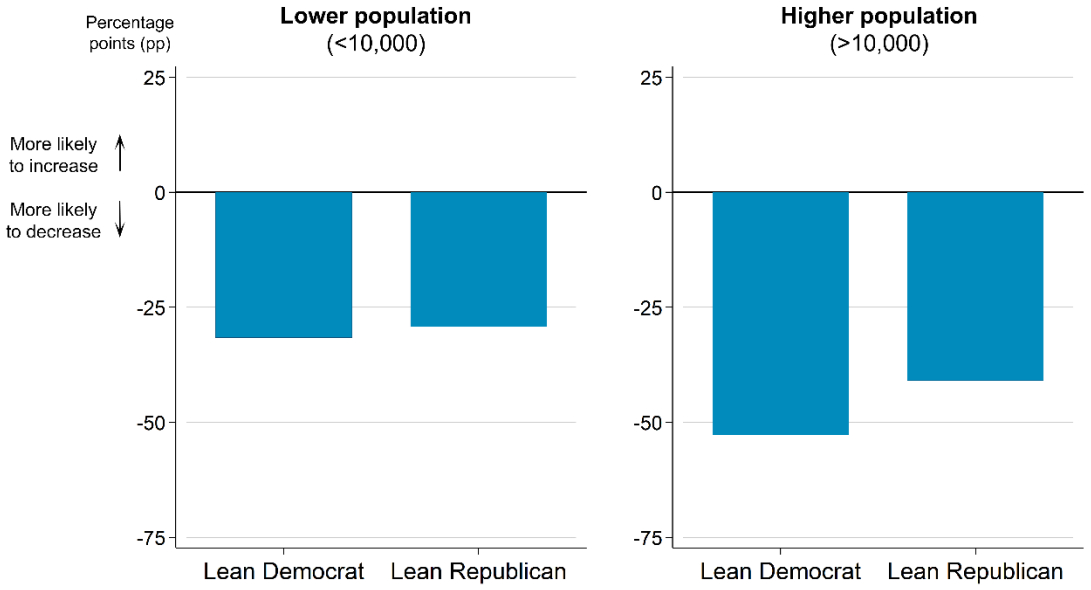

Figure 9. Political leaning important factor in predicting spending changes especially among higher population localities. Each bar shows, by political leaning and population size, the difference in likelihoods (or "net likelihood") that annual spending increases versus decreases.

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Appendix

Methodology and Sample

CivicPulse uses Power Almanac's continuously updated contact list of the appointed and elected officials associated with all townships, municipalities, and counties in the United States with populations of 1,000 or more (98% coverage).

Each survey includes a random sample of officials from this list. The data used in this report is from a survey of 733 responses collected in April and May of 2020 from 47 states. This report draws from a sub-sample of 684 respondents from this survey that answered questions specifically on roads and highways.

Table A1 breaks out survey respondents by the type of local government each represents.

Table A1. Survey Respondents by Type of Government.

	Sample Proportion
Townships	0.23
Municipalities	0.63
Counties	0.14
Total	1.00

The geographic distribution of the survey respondents approximates the population distribution of the United States (Figure A1).

Figure A1. Geographic distribution of respondents.

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To characterize the representativeness of our survey sample, we match these respondents to the U.S. Census using the FIPS system. Tables A2-A3 compare the sample and population medians for four Census-area spatial characteristics: population size, urbanicity, the proportion of residents with a 4-year college education, and the proportion of residents who voted for Trump in 2016.

Table A2. Sample Representativeness among Sub-County[1] Officials

	Sample Median	Population Median
Proportion Urban	0.97	0.85
Proportion College-educated	0.27	0.21
Population Size	6,500	3,700
GOP Vote Share[2]	0.52	0.57

[1] *This group includes officials from townships and municipalities*

[2] *Vote share estimated at the county level. Each sub-county government is matched to the relevant county in which it is contained.*

Table A3: Sample Representativeness among County Officials

	Sample Median	Population Median
Proportion Urban	0.53	0.40
Proportion College-educated	0.21	0.19
Population Size	51,000	26,000
GOP Vote Share	0.62	0.67

Survey weights were also tabulated based on these four spatial characteristics using a post-stratification raking procedure. The findings in this report are consistent with or without the use of survey weights.

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Questionnaire

1. Given COVID-19, how do you expect your government's spending to change over the next twelve months in each of the following areas? *{Respondent views a grid with rows and columns listed below.}*

   Rows (Program Areas):

   - Public safety (police & fire)
   - Highways and roads
   - Housing and community development
   - Sanitation, sewage, and water
   - Public works (NOT including highways/roads)
   - Health services
   - Public welfare and social services

   Columns (Answer choices):

   - Decrease more than 20%
   - Decrease 1-20%
   - Stay about the same
   - Increase 1-20%
   - Increase more than 20%
   - No spending in this area

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Alternative Visualization of Projections by Local Factors

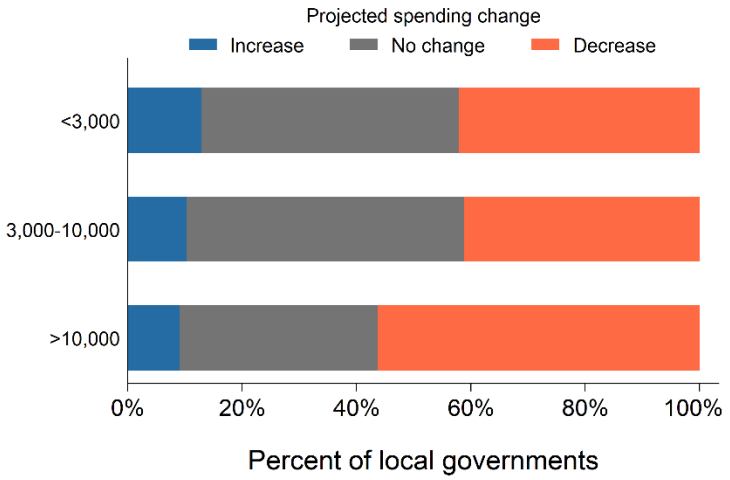

Figure A2. Distribution of responses by population size. Percentage of local governments expecting an increase (blue), no change (gray), or decrease (orange) in annual spending, by population size.

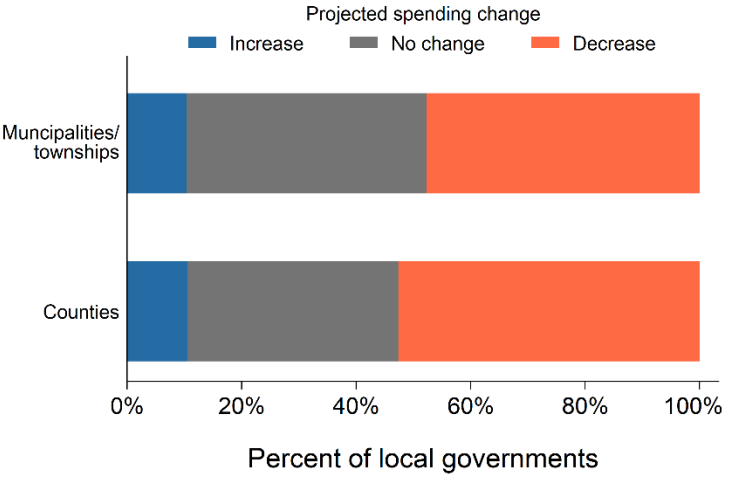

Figure A3. Distribution of responses by government type. Percentage of local governments expecting an increase (blue), no change (gray), or decrease (orange) in annual spending, by government type.

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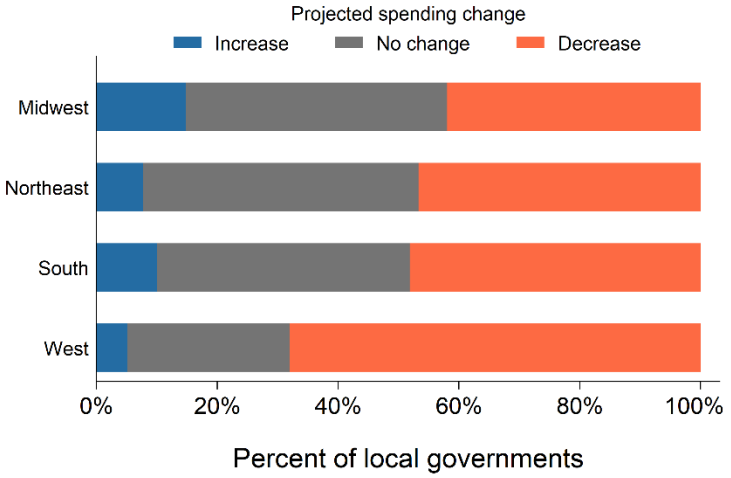

Figure A4. Distribution of responses by region. Percentage of local governments expecting an increase (blue), no change (gray), or decrease (orange) in annual spending, by Census region.

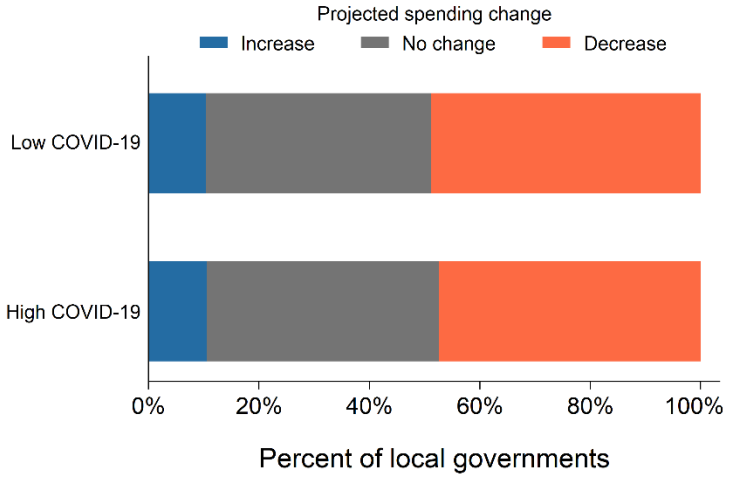

Figure A5. Distribution of responses, by COVID-19 disease incidence. Percentage of local governments expecting an increase (blue), no change (gray), or decrease (orange) in annual spending, by disease incidence. Disease incidence is based on the number cases per capita by county at the time of the survey.

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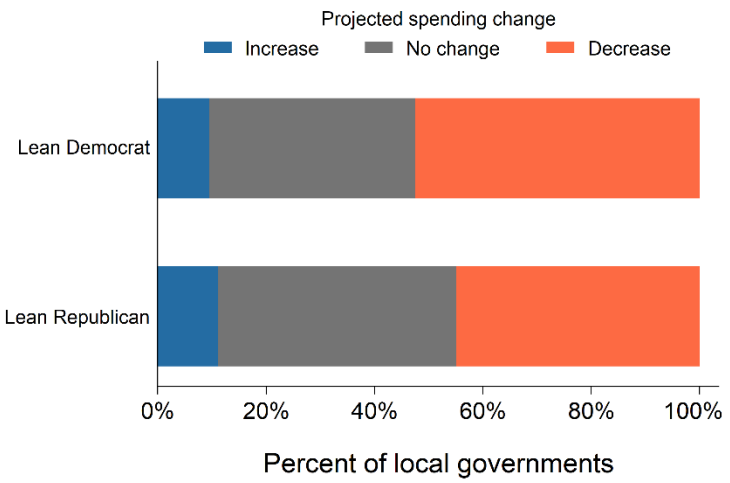

Figure A6. Distribution of responses by political leaning. Percentage of local governments expecting an increase (blue), no change (gray), or decrease (orange) in annual spending, by the locality's political leaning. Political leaning is based on the locality's county vote share in the 2016 presidential election.

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