

FALL 2020

NC Local Government Responses to the Coronavirus Pandemic

by Anita Brown-Graham, Jason Jones, and Molly Gaskin

“A re-enforcement of the spirit that we can do this—we can figure this out—we are flexible and we are like the little train that thought it could. Together we can still provide great customer service.”

This report offers insights from the results of two surveys of North Carolina’s elected and appointed local government leaders in response to COVID-19. While the spring survey came at a time when unemployment claims surged ahead of positive COVID-19 cases, by the fall, despite positive cases soaring to new records, the economy appeared to have settled significantly due to news about near-term vaccines. Our analysis points out notable contextual changes between the spring and fall. However, much remained the same in the world of North Carolina local governments.

We received 587 responses to the fall survey, with 353 of those responses evaluated as usable. This compares to 202 usable spring survey responses.¹ The responses for the fall survey include a county government or municipal government with jurisdictional boundaries in 98 out of 100 counties (98%). In the spring, we had responses from 88 out of 100 counties (88%).

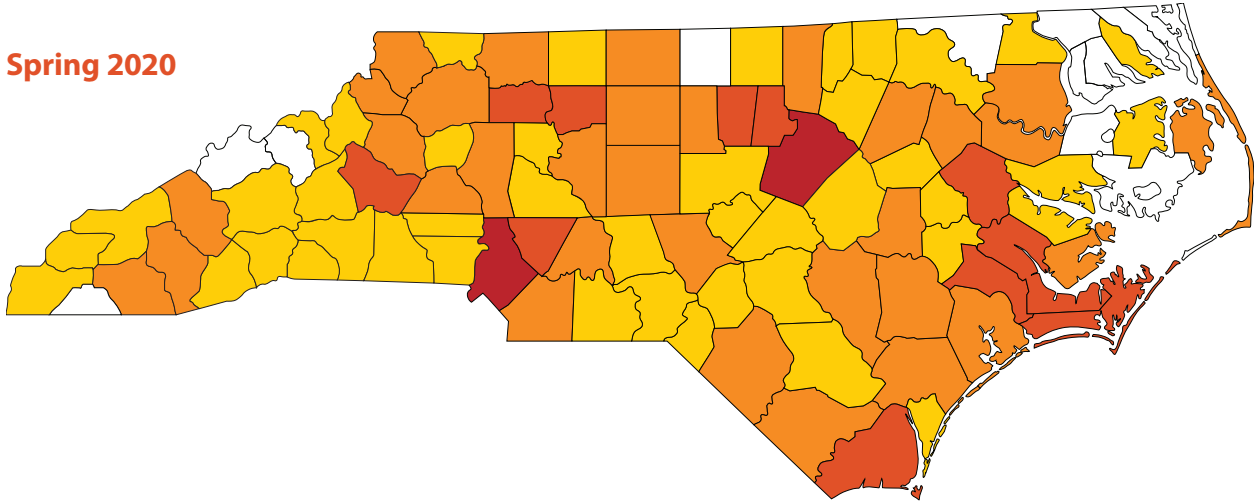
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1. Thirteen individuals in our fall survey dataset provided two responses approximately one month apart. Considering the time difference and that different information was provided in each response, we opted to include both of their responses in our evaluation.

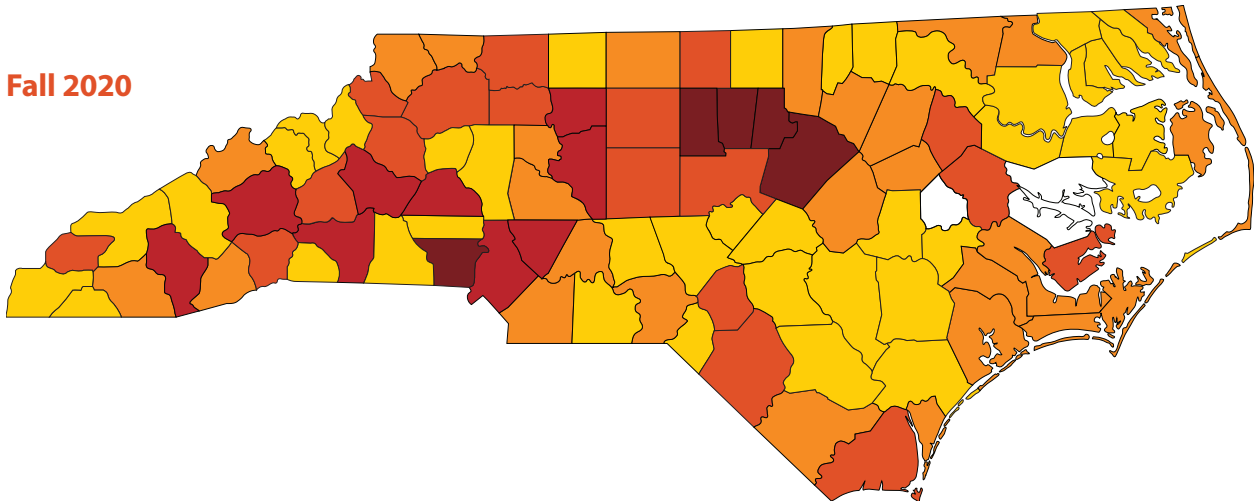
COVID-19 Survey of Local Governments: Responses by County



Spring 2020



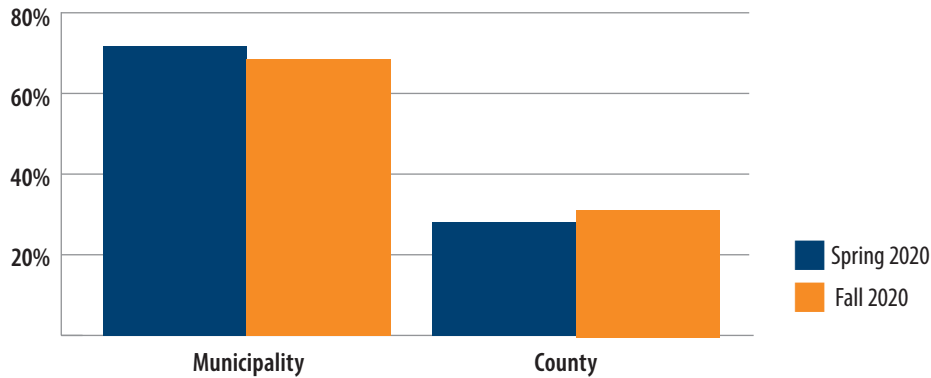
Fall 2020



Two hundred and thirty-six of our fall survey responses came from leaders representing municipalities (67%) and 117 came from leaders representing counties (33%). This is compared to 146 municipal (72%) and 56 county (28%) responses for the spring survey. For the fall survey, 70 different county governments (70%) were represented, and 172 different municipalities were represented (31%). For the spring survey, 47 different county governments (47%) were represented, and 131 different municipalities were represented (24%).²

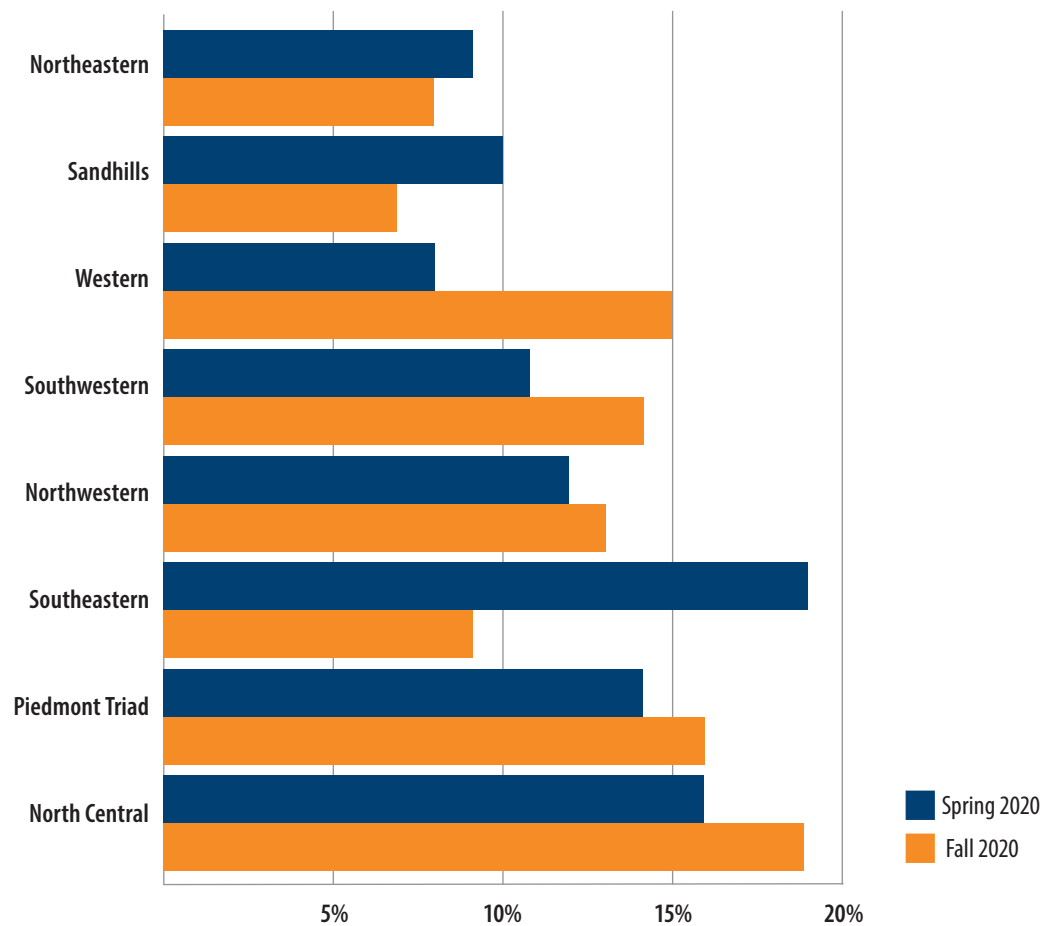
² The N.C. Commerce Division of Labor and Economic Analysis dataset of municipal boundaries in North Carolina has a total of 551 incorporated municipalities. This number was used to derive the percentage versus the estimated 739 Census Designated Places in North Carolina as reported by the Census Bureau.

Response Percentages by Jurisdiction Type



There was little difference in the percentage of responses coming from most of the state’s eight prosperity zones. The primary notable difference was in responses from the Southeast Region. The number of responses was approximately the same as the spring survey; however, the share of the total decreased by 10.3 percentage points.

Response Percentages by Prosperity Zone



Summary of Findings

Below is a summary of some of the most important findings and insights in this report from our spring survey to our fall survey.



Top three **NEGATIVE COMMUNITY IMPACTS**, the percentage of respondents citing:

Employment instability decreased by 16 percentage points.

Housing instability increased by 13 percentage points.

Food insecurity decreased by 13 percentage points.

Travel restrictions decreased by 10 percentage points.



Top three **NEGATIVE LOCAL GOVERNMENT IMPACTS**, the percentage of respondents citing:

Reduced revenue decreased by 39 percentage points.

Staffing absences due to COVID-19 exposure or potential exposure increased by 37 percentage points.

Staff burnout due to COVID-19 increased by 23 percentage points.



The total percent of respondents believing that **COVID-19 HAS HAD SOME POSITIVE IMPACTS ON THEIR COMMUNITY** slightly increased to 37%. The themes among positive impacts included:

- Community unity
- Tourism and occupied rental properties
- Service transitions and changes to operations that may be long-lasting
- Societal shifts such as the recognition of underlying issues like broadband access



When asked if **COVID-19 HAD any POSITIVE IMPACTS ON THE LOCAL GOVERNMENT**, 203 of the 353 survey respondents (58%) indicated there was some positive impact. Their responses formed several major themes, including:

- The benefits of remote work
- Changes to service delivery
- Hard work and resilience
- Improved revenues
- The opportunity for change
- Improvements to emergency preparedness



For **IMPACT ON LOCAL ECONOMY, LOCAL WORKFORCE, AND LOCAL GOVERNMENT REVENUE**, respondents appear to be **MUCH MORE OPTIMISTIC** now about potential impacts over the next 90 days.



When looking at jurisdiction type, **COUNTY GOVERNMENT RESPONDENTS** were **37.25 PERCENTAGE POINTS LOWER** in citing reduced revenue versus municipal government respondents.



The only area in which our fall survey indicates **NO CHANGE IN OUTLOOK** is on **IMPACT TO LOCAL GOVERNMENT STAFFING** over the next 90 days.

North Carolina Regions

This report references many North Carolina Prosperity Zones and Regional Councils of Government. These are two of the [respondent subgroups](#) that we have chosen for deeper analysis. Some context on these two subgroups is provided in this section along with [maps in the appendix](#) to visualize the regions.

Prosperity Zones are a product of the North Carolina Department of Commerce, which operates these eight administrative regions. “Each Zone features a one-stop, physical location, providing citizens and businesses the ability to interact with representatives from multiple state agencies, as well as to encourage better collaboration between the agencies themselves. The state deploys subject matter experts in each Zone, from transportation and environmental topics to workforce development, community planning and liaisons to existing businesses in the Zones.”³

“Regional councils in North Carolina are the result of 1969 legislation that charged the N.C. Department of Administration with developing “a system of multi-county regional planning districts to cover the entire state (GS 143-341) after congress passed the intergovernmental cooperation act in 1968 calling for closer cooperation between federal programs and state and local governments.”⁴

County Distress Rankings (Tiers)

The N.C. Department of Commerce annually ranks the state’s 100 counties based on economic well-being and assigns each a Tier designation. This Tier system is incorporated into various state programs to encourage economic activity in the less prosperous areas of the state. The 40 most distressed counties are designated as Tier 1, the next 40 as Tier 2, and the 20 least distressed as Tier 3. County Tiers are calculated using four factors: average unemployment rate, median household income, percentage growth in population, and adjusted property tax base per capita.⁵

Overall Impact on Communities

As in the spring, again, 86% of survey respondents indicated that the pandemic has had a negative impact on their local community. Given the passage of time, it is not surprising that fewer respondents (9% in the fall versus 13% in the spring) believe it is too soon to tell what the impacts of COVID-19 will be on their communities.

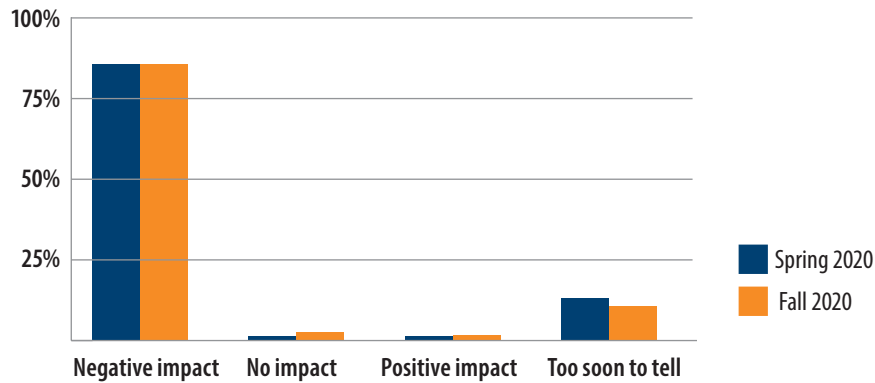
“This accentuated the lack of Internet availability in our small community.”

3. “N.C. Prosperity Zones,” N.C. Department of Commerce, accessed January 26, 2021, nccommerce.com/about-us/nc-prosperity-zones.

4. “About Us,” N.C. Association of Regional Councils of Governments, accessed January 26, 2021, ncregions.org/about.

5. “County Distress Rankings (Tiers)” N.C. Department of Commerce, accessed January 28, 2021, nccommerce.com/grants-incentives/county-distress-rankings-tiers.

Impact on Local Communities



INSIGHTS

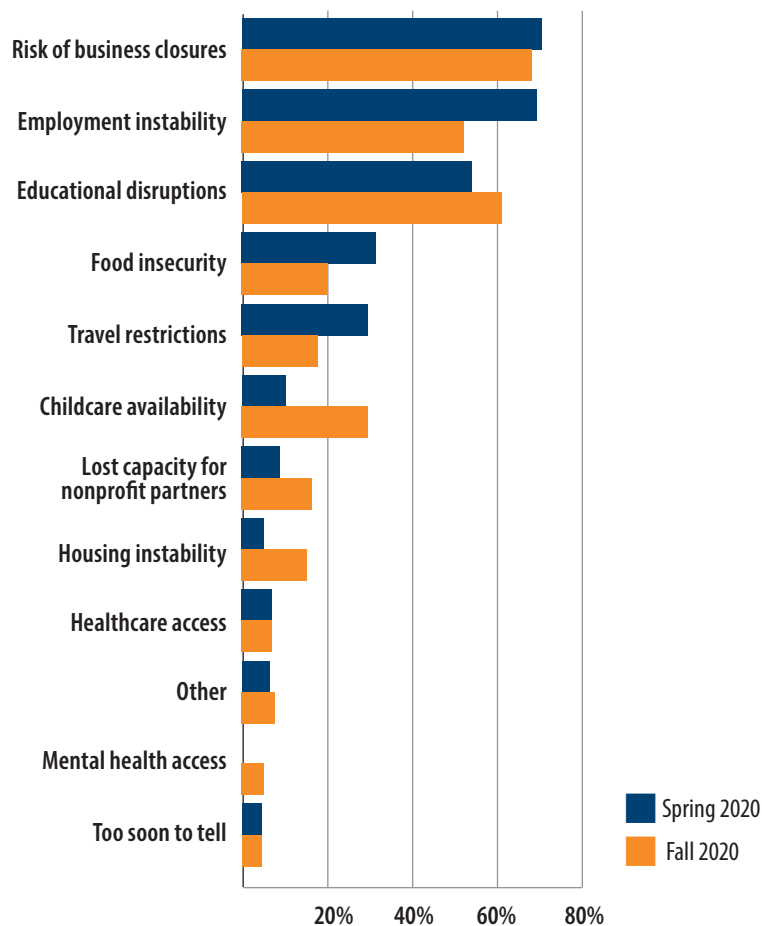
- County respondents were again slightly more negative than municipal respondents (8.4 percentage points).
- Respondents from the Southeast Region prosperity zone and Eastern Carolina Council of Government (COG) were 13.08 and 15.63 percentage points higher in believing there was no impact.
- Respondents from the Mid-Carolina COG were 23.98 percentage points higher than average in believing that it is too soon to tell the impact of COVID-19.
- Respondents from the Eastern Carolina, Lumber River, and Mid-Carolina COGs were 13.11, 13.61, and 19.17 percentage points lower than average in noting negative impacts of COVID-19.



Biggest Negative Impacts on Communities

Overall, risk of business closures (69%), employment instability (54%), and educational disruptions (63%) remained strong top three choices for negative community impacts. The percentage of survey respondents citing employment instability decreased by 16 percentage points. On the other hand, there was a significant increase in the overall percentage of respondents choosing housing instability (13 percentage points) and childcare availability (8 percentage points) as a negative impact on their community and a significant decrease in the overall percentage of respondents choosing food insecurity (13 percentage points) and travel restrictions (10 percentage points).

Percent of Respondents Citing Top Three Negative Community Impacts



Only 17 respondents chose to list negative community impacts not included in the survey options. Of those who chose to provide additional information, five noted physical health or death, and three noted mental health. Three respondents also highlighted utility or Internet issues impacting their communities. Respondents also highlighted political division, closures, and lack of community feeling.

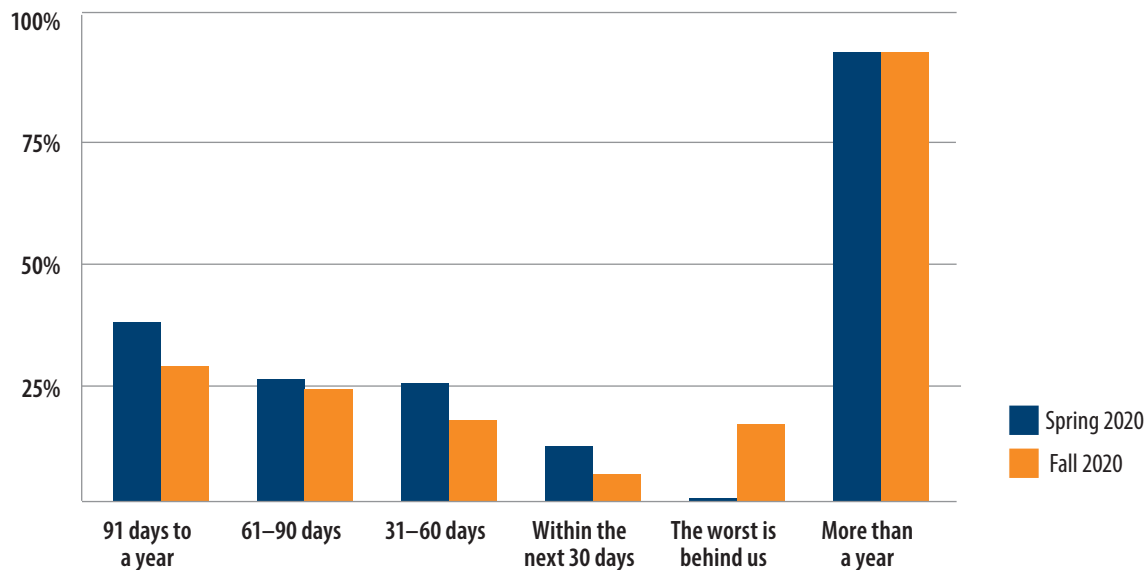
INSIGHTS

- County government respondents were slightly more likely to point to education disruptions and food insecurity as negative impacts. Municipal respondents reported higher levels of concern for lost capacity for nonprofit partners and travel restrictions.
- Tier 1 county respondents were more likely to point to educational disruptions (72%). This was true in the spring survey. Interestingly, the percentage of Tier 3 county respondents selecting educational disruptions as a top concern increased by 18 percentage points over the spring survey.
- Respondents from the North Central Region prosperity zone and Triangle J COGs were 23.75 and 37.78 percentage points, respectively, higher in selecting Housing Instability as a top concern.
- Respondents from the Kerr-Tar Regional and Upper Coastal Plan COGs were 24.64 and 22.86 percentage points, respectively, higher in selecting educational disruptions as a top concern.
- Respondents from the Land of Sky Regional and Mid-Carolina COGs were 27.56 and 29.52 percentage points lower in selecting educational disruptions.
- Respondents from the Cape Fear COG were 24.18 percentage points higher in selecting lost capacity for nonprofit partners.

When Do Communities Expect Impacts

There are no significant shifts from our spring survey to our fall survey in respondent choices for when negative impacts are expected for their community. There are slight decreases in the belief that negative impacts should be expected in 91 days to a year (9 percentage points) and within the next 30 days (7 percentage points). This may be due to 18% of respondents believing that the worst is behind us, a new choice made available to them in the fall survey.

When Local Communities Expect Negative Impacts



INSIGHTS

- Municipal respondents were again slightly more likely to expect impacts sooner.
- Economic Tier subgroup respondents did not display any significant variations from overall.
- Lumber River COG respondents were 22.52 percentage points higher in believing that the most negative impacts will be felt in the next 91 days to a year.
- Land of Sky Regional and Albemarle Commission COGs respondents were 21.92 and 20.34 percentage points lower in believing that the most negative impacts will be felt in the next 91 days to a year.
- The Sandhills Region prosperity zone respondents were 14.69 percentage points lower in believing the most negative impacts will occur in the next 61 to 91 days and 14.83 percentage points higher in believing they will occur in the next 90 days to a year.

Positive Impacts on Communities

The total percent of respondents believing that COVID-19 has had some positive impacts on their community slightly increased to 37%. The themes among positive impacts included: community unity, tourism and occupied rental properties, service transitions and changes to operations that may be long-lasting, and societal shifts in perception of the importance of infrastructure such as broadband.

“As within our county government, our community has pulled together in all sorts of interesting and wonderful and creative ways to build on existing strengths and existing organizations to provide, as best we can, for the needs in our community.”

“I’ve seen more charity and love expressed from everyday people than I’ve ever witnessed.”

Many respondents, 59 total responses, indicated their community came together or otherwise formed partnerships in response to COVID-19. Some responses highlighted increased compassion and assistance among neighbors. Other responses ranged from better collaboration among boards and organizations to unity among residents. Respondents noted seeing community members caring for and assisting one another both directly and through contributions to charities and nonprofits.

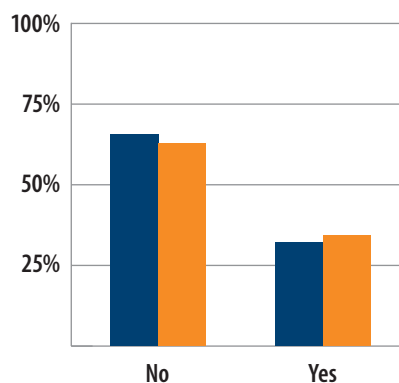
“Outdoor dining expanded, travel to the mountains for the fall increased. Second home residents are staying here longer this year.”

Many others (27 respondents) noted an increase in shopping local, tourism, and rental occupancy and the associated revenues. This reflects the sales tax trends seen following the initial closures in the spring of 2020 and may also reflect the expansion of programs such as Count on Me NC and other public health supports improving consumer confidence.

“We have had to innovate for community activities such as graduation parades, trick-or-treating, holidays.”

Another theme that arose was innovation for changes to services and operations. Respondents highlighted restaurant adaptability and the need to think differently about both private and public services. The changes ranged from outdoor dining to innovative community events that accommodated public health precautions.

Positive Impacts of Crisis on Communities



INSIGHTS

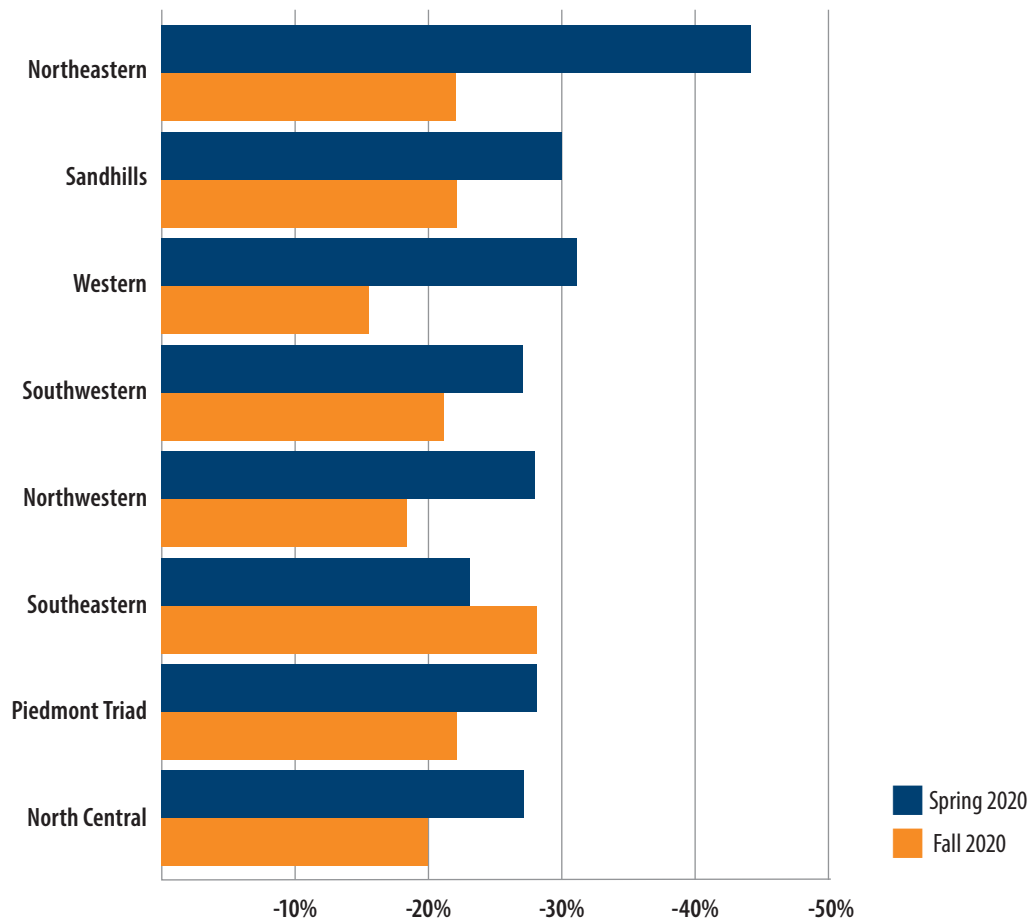
- Professional staff (42%) were more likely to report some positive impacts than elected officials (30%). This subgroup difference is slightly smaller (12 percentage points) in contrast to our spring survey (15 percentage points).
- County respondents (42%) were more likely to report some positive impacts than municipal respondents (35%). This subgroup difference is again slightly smaller (7 percentage points) in contrast to our spring survey (16 percentage points).
- Again, respondents in Tier 3 counties were most likely to report some positive impacts (44%).
- Respondents from the Cape Fear and Western Piedmont COGs were 20.31 and 20.69 percentage points lower than average in believing that there was a positive community impact.
- Respondents from the Isothermal Planning and Development and Southwestern COGs were 20.56 and 25.18 percentage points higher, respectively, in noting positive community impacts.

- Respondents from the Sandhills Region prosperity zone were 19.86 percentage points higher in noting there was not a positive community impact.

Local Economy and Workforce

On average, survey respondents estimated a 21% drop in local economic activity over the next 90 days, 7 percentage points lower than the spring survey overall estimate. There was a lot of variation amongst survey respondents (23.65 standard deviation⁶), which might indicate some confusion or strong disagreement on this topic. Forty-four respondents chose not to answer this question (13%). More details are provided on the significance of this observation in the [appendix](#).

Estimated Expected Impact on Economy by NC Region



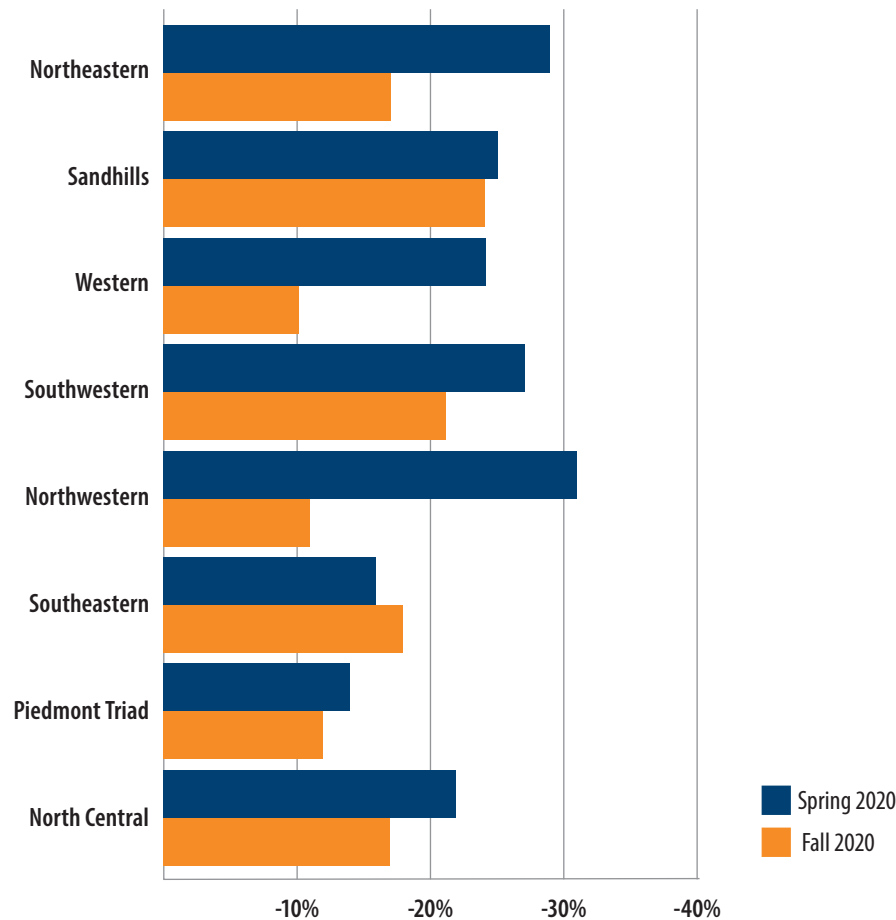
INSIGHTS

- Mid-Carolina COG respondents estimated a 29.34 percentage point higher drop in economic activity over the next 90 days.
- Southwestern Commission COG respondents estimated a 12.06 percentage point lower drop in economic activity over the next 90 days.

6. "If the data points are further from the mean, there is a higher deviation within the data set; thus, the more spread out the data, the higher the standard deviation." "Standard Deviation Definition," Investopedia, accessed January 26, 2021, [investopedia.com/terms/s/standarddeviation.asp](https://www.investopedia.com/terms/s/standarddeviation.asp).

On average, survey respondents estimated a 15.3% drop in local employment over the next 90 days, 7 percentage points lower than the spring survey estimate. Again, there was a lot of variation with responses, which may indicate confusion or disagreement on this topic (23.53 standard deviation). There were 74 survey respondents that chose not to answer this question (21%). More details are provided on the significance of this observation in the [appendix](#).

Estimated Expected Impact on Local Employment by NC Region



INSIGHTS

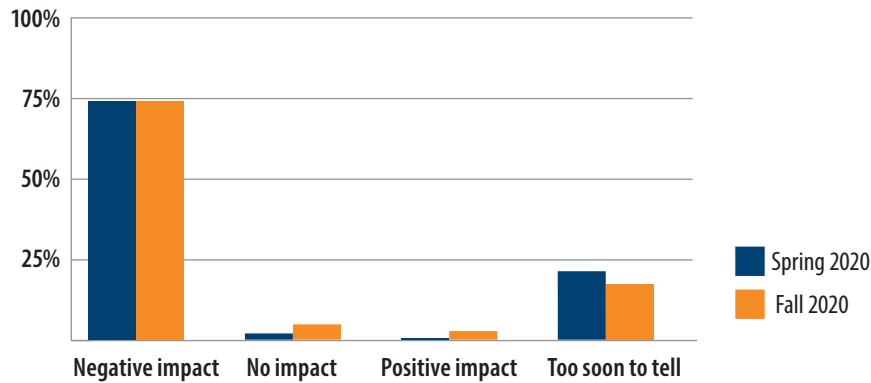
- Respondents from the Upper Coastal Plan COG estimated an 11.5 percentage point lower drop in local workforce over the next 90 days.
- Respondents from the Western Piedmont COG estimated a 10.8 percentage point higher drop in local workforce.

Overall Impact on Local Governments

Again, survey respondents overwhelmingly indicated that the pandemic has had a negative impact on their organization (74%). Fewer respondents indicated that it was too soon to tell, 17% in fall survey versus 22% in the spring survey. This 5 percentage point decrease is also consistent with the same question regarding impact on communities.

“...Inability [or reduced ability] to serve residents in person... particularly our seniors and at-risk children”

Impact on Local Governments



INSIGHTS

- Respondents from the Land of Sky Regional and Mid-Carolina COGs were 16.9 percentage points higher in believing that it is too soon to tell the extent of impacts.
- Respondents from the Upper Coastal Plan COG were 10.89 percentage points higher for believing there was a positive impact.
- Respondents from the Land of Sky Regional and Lumber River COGs were 23.37 and 17.82 percentage points lower in believing there was a negative impact.
- Respondents from the Mid-East Commission COG were 26.63 percentage points higher in believing there was a negative impact.



Most Negative Impacts on Local Governments

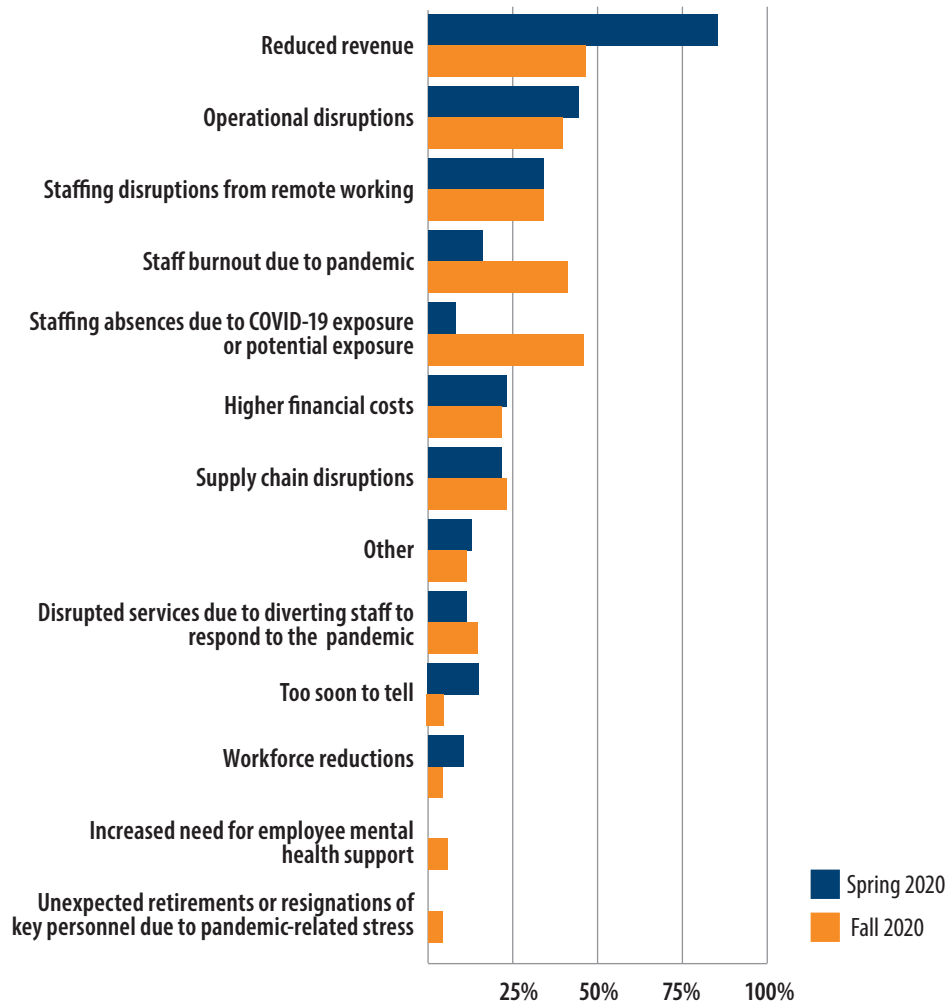
Overall, the top three choices for negative impact to organizations were reduced revenue (46%), staffing absences due to COVID-19 exposure or potential exposure (46%), and staff burnout due to COVID-19 (40%).

The most compelling differences here between the spring and fall surveys is the 39 percentage point decrease in the overall percentage of respondents choosing reduced revenue and the 37 percentage point increase in respondents choosing staffing absences due to COVID-19 exposure or potential exposure as negative impacts on their organization. The next most notable change reflected is the 23 percentage point increase in the overall percent of respondents choosing staff burnout due to COVID-19 as a negative impact on their organization.

These strong shifts in perception not only indicate more certainty around impact to staff and revenue but also provide a strong indication of the types of support resources that organizations may need over the next six to 12 months. Supporting the mental and physical well-being of staff may become a key marker of success for organizations on the tail-end of this pandemic.

Just 26 respondents chose to explain negative impacts on their organization outside of the provided options. Ten respondents highlighted a disruption or reduction in services, and another six respondents noted operational or procedural difficulty in their organization. Five other respondents listed stress and negative morale as a negative impact. Three respondents indicated they lacked sufficient workforce, and another two noted infrastructure or supply issues.

Percent of Respondents Citing Top Three Negative Impacts on Local Governments



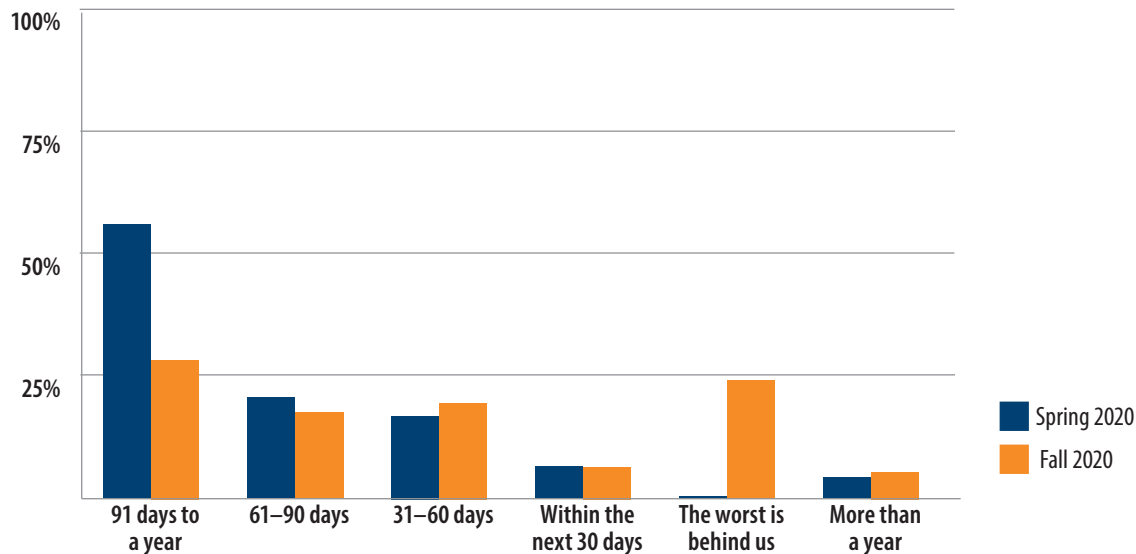
INSIGHTS

- County respondents were 24.76 percentage points lower in choosing reduced revenue and municipal respondents were 12.49 percentage points higher. This in-group comparison also displays a 37.25 percentage point difference between county and municipal respondents for selecting reduced revenue.
- County respondents were 13.45 percentage points higher in selecting staff burnout.
- Respondents from the Sandhills Region prosperity zone were 23.1 and 19.25 percentage points higher in selecting reduced revenue and staffing absences while being 21.17 percentage points lower in selecting staff burnout.
- Respondents in the Lumber River COG were 31.64 percentage points higher in selecting reduced revenue and 29.29 percentage points lower in selecting staff burnout.

When Do Local Governments Expect Impacts

We see a significant decrease from our spring survey in the percent of respondents thinking that negative impacts on their local government organization are expected in three months to a year (26 percentage points). This is possibly attributable to survey sequencing and timing, but there was also a shift in respondents towards choosing that the worst is behind us (18%), a new option in our fall survey.

When Local Governments Expect Negative Impacts



INSIGHTS

- County respondents were slightly more likely (6.87 percentage points) to believe negative impacts will occur in the next 30 days.
- Respondents from the Kerr-Tar Regional COG were 25.46 percentage points higher in believing the most negative impacts would be felt in the next 31 to 60 days.
- Respondents from the Western Region prosperity zone were 15.14 percentage points higher in believing that the worst negative impacts are behind us.
- Respondents from the Mid-East Commission and Lumber River COGs were 25.92 and 20.37 percentage points higher in believing that the worst negative impacts are behind us.



Positive Impacts on Local Governments

“Excellent, rapid progress in how to conduct much more of our business online. Online is not always the same as more efficient, but it’s good to have workable options...”

When asked if COVID-19 had any positive impacts on the local government, 203 of the 353 survey respondents (58%) indicated there was some positive impact. Their responses formed several major themes, including: the benefits of remote work, specific changes to service delivery, hard work and resilience, improved revenues, the opportunity for change, and improvements to emergency preparedness.

“Ability to reimagine remote work for staff, accommodate day care/school schedules and work life balance for employees, much more flexible office hours.”

Of the 203 who provided an explanation for the benefits to their organization, 62 of them indicated remote work as a positive. Their comments ranged from the cost savings of travel to improved childcare and work-life balance for employees. Some mentioned the long-term implications of remote work potentially becoming permanent for some positions, as well as its effect on capital planning.

“Taught us new ways to deliver services. Forced us to upgrade some technology to facilitate virtual meetings. Caused [counties] and municipalities to collaborate on regulations, funding, and operations.”

Similarly, 35 respondents spoke about changes to service delivery or process improvement that occurred in response to COVID-19. Many indicated transitioning services such as permitting and payments to online systems, as well as other customer service functions. Others mentioned transitioning to virtual public meetings and engaging residents through technology.

Nearly as many respondents (34) focused on the positive feelings and good work of their employees. They highlighted resilience and hard work, and noted their employees' creativity, communication, teamwork, and dedication.

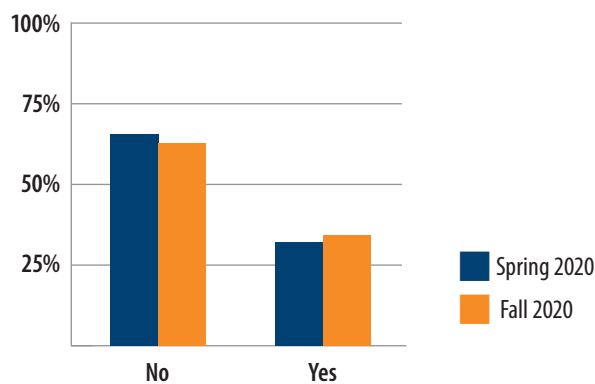
“Increased revenue, in departments such as Building Inspections, Mapping, Register of Deeds. Sales tax is up as well. CARES Act funding has also helped offset operational costs.”

Respondents who talked about revenues largely fell into two categories—those with increased revenues from sales and occupancy taxes or fees, and those who benefited from the additional Coronavirus Aid, Relief, and Economic Security Act (CARES) funds. Many noted an increase in tourism contributing to their sales tax revenues, as well as remote workers spending money more locally. Some places have indicated an increase in permitting and inspections, leading to increased fee revenues. The CARES funds assisted many respondents in adapting to COVID-19, either through improvements to IT infrastructure for remote work, or directly purchasing safety equipment.

“When there are constraints, especially financial, it often generates the most innovation and creativity that ultimately help the organization over the long haul. So, there are clear positives in situations like these. Plus, it puts an emphasis on clarity of mission and priorities.”

Still more respondents (30) focused on the opportunity COVID-19 has provided to make change more broadly in their organization. Some noted the acceleration of an existing change while others highlighted the opportunity for creative thinking and innovation. This opportunity allowed many to step back and reprioritize their work.

Positive Impacts of Crisis on Local Governments



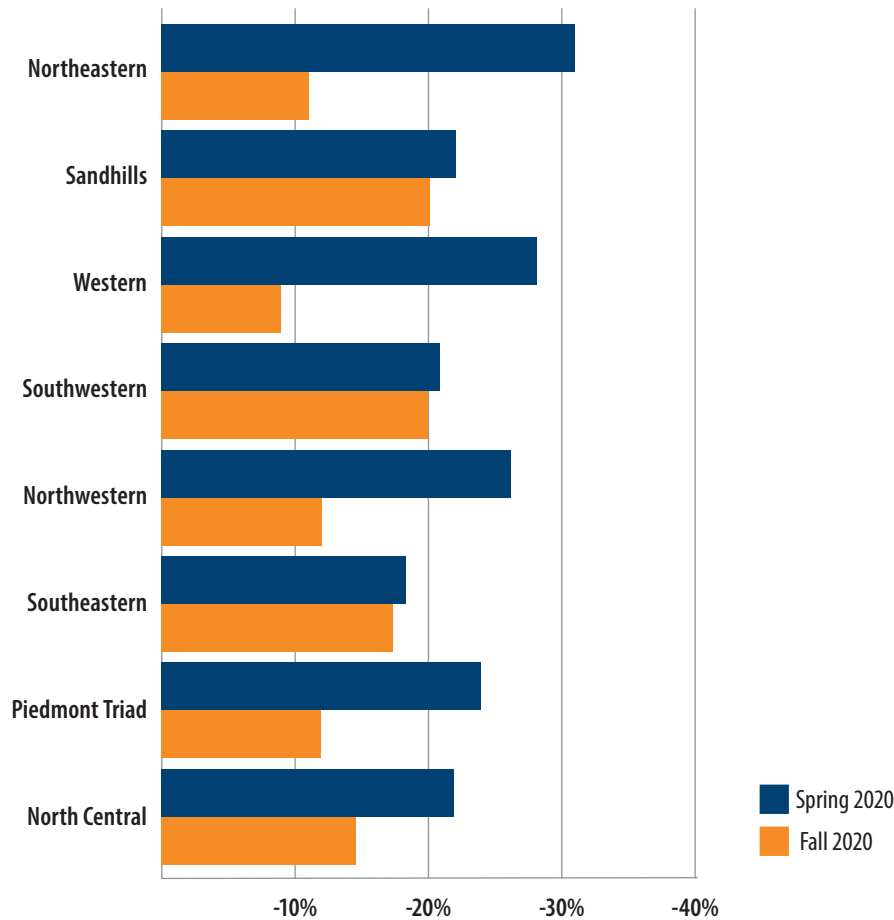
INSIGHTS

- The Sandhills Region prosperity zone was 28.44 percentage points higher in believing that there was not a positive local government organization impact.
- Counties were 10.87 percentage points higher in believing that there was a positive local government organization impact. Represented in this is also a 16.27 percentage point difference from municipalities in believing there was a positive organizational impact.
- The Triangle J COG was 22.08 percentage points higher in believing that there was positive local government organization impact.

Local Government Revenues and Employment

On average, respondents indicated that they expected revenue reductions of 14% over the next 90 days, which reflects a 9 percentage point decrease from our spring survey. As with the other slider questions ([local economy and workforce](#)), there was a lot of variation in response with a response, standard deviation of 22.44. It is also important to note that 47 respondents chose not to answer this question (13%). More details are provided on the significance of this observation in the [appendix](#).

Estimated Average Revenue Impact on Local Governments

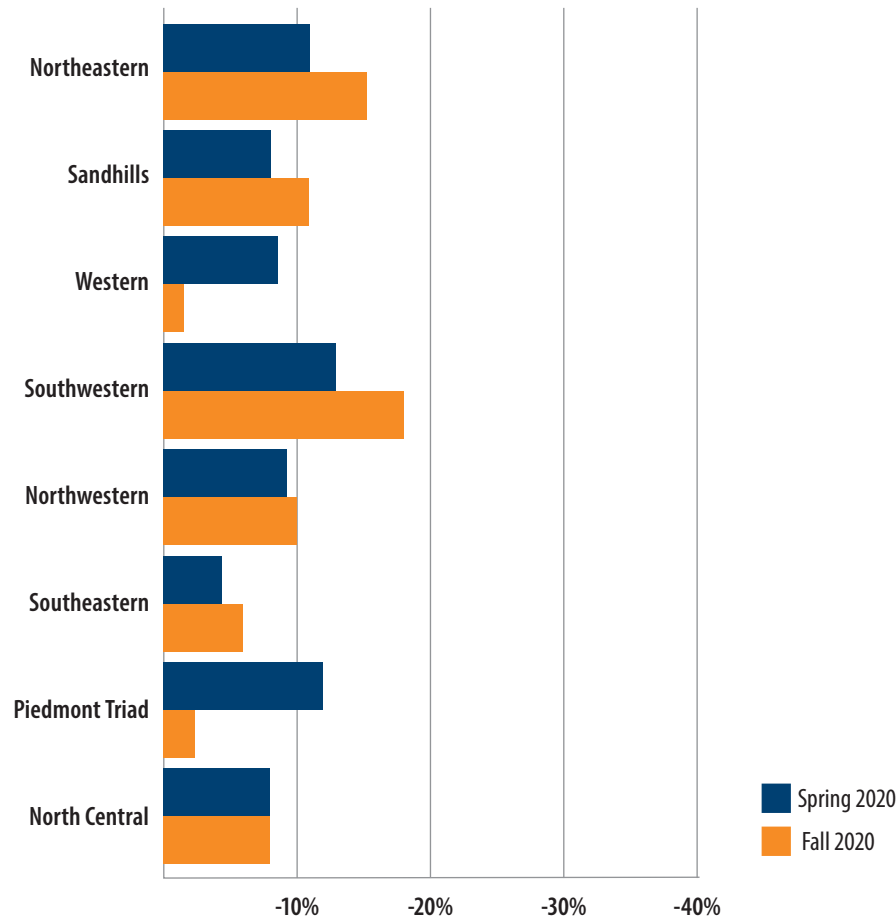


INSIGHTS

- Differences in expectations of revenue loss were very small between elected officials and professional staff.
- Municipal and county respondents were almost equal in expectations of revenue loss (~1 percentage point difference).
- There were very small differences in revenue loss expectations for respondents by economic tier.
- Respondents from the Albemarle Commission and Southwestern Commission COGs were 10.99 and 14.55 percentage points higher in their estimates of negative impact to local government revenue.
- Respondents from the Mid-Carolina COG were 22.59 percentage points lower in their estimate of negative impact to local government revenue.

On average, respondents indicated that they expected an 8.3% reduction in staff over the next 90 days, which is precisely the same as the spring survey. As with all other slider questions, there was a lot of response variation, with a response standard deviation of 22.69. It is important to note that 135 respondents chose not to answer this question (38%). More details are provided on the significance of this observation in the [appendix](#).

Estimated Average Employment Impact on Local Governments



INSIGHTS

- There were very small differences between elected officials and professional staff and between county economic tier respondents.
- County respondents were slightly more negative (6.97 percentage points) on expectations for employment impact.
- Respondents from the Kerr-Tar Regional and Land of Sky Regional COGs were 12.61 and 10.1 percentage points higher in their estimates of negative impact to local government employment over the next 90 days.
- Respondents from the Mid-East Commission COG were 10.36 percentage points lower in their estimate of negative impact to local government employment.

Appendix

Qualitative Methodology

The qualitative analysis process consisted of three steps. In the first step, free responses for each question were labeled with 1–4 key words or phrases associated with the content of the response. After the key words were assigned, the key words and phrases were grouped to identify broader themes among the responses for each question. Each broader theme was associated with a number. In the final step, the responses were labeled using the codes for the broader themes. Quotes that best represent each section were identified over the course of this process and highlighted in the text of the report.

Note: Of those respondents who selected “other” in response to “Are you an elected official or manager?”, four were not local government employees or officials but nonprofit leaders, federal leaders, or regional agency leaders. Their responses are included.

Subgroup Definitions

A set of subgroups was chosen for deeper subgroup analysis. Four of the chosen subgroups were programmatically added to the survey dataset based on the coded response geography.

The current subgroups for analysis are:

- **Jurisdiction Type:** assigned based upon the coded response geography and programmatically added using a formula that assigns either County or Municipality.
- **Respondent Type:** an included survey question which included three choices. Those choices were Elected Official, Manager, and Other.
- **Prosperity Zone:** assigned based upon the coded response geography from the prosperity zone geographic dataset made available by the N.C. Department of Commerce Labor and Economic Analysis Division.
- **2020 County Tier:** assigned based upon the coded response geography from the 2020 county tier geographic dataset made available by the N.C. Department of Commerce Labor and Economic Analysis Division.
- **Council of Government (COG) Region:** assigned based upon the coded response geography from the councils of government regions geographic dataset made available by the N.C. Department of Commerce Labor and Economic Analysis Division.

Subgroup Analytic Methodology

Subgroup analysis was completed by creating comparison tables, that highlighted significant differences between subgroup responses and overall responses. A significant difference for this analysis is being defined as a subgroup percentage which is plus or minus ten percentage points different than the overall percentage.

For this analysis, more focus and time is given to subgroup differences with overall because in-group differences should be expected and do not create a lot of substantive insight for the end consumer. The innate purpose of these subgroups is to categorize things that are different from each other, so it should follow that categorical differences within subgroups should be expected. What will be pulled out as insights are any situations in which there is a significant difference from overall and there is a significant difference within the subgroup.

Subgroup comparison tables are available at ncimpact.github.io/covid-survey-analysis.

Communicating Differences

You may notice the careful language chosen to describe differences in percentages between our spring survey and fall survey respondents overall and subgroup differences with overall. For this analysis we have chosen to describe changes as percentage point changes instead of percent changes. Please know that this was done to carefully inform the end consumer and to not mislead. Describing changes in percentages can be tricky and careful attention should be given to what is conveyed by our choice.

For example, the percentage of respondents choosing childcare availability as a negative community impact rose from 10% in our spring survey to 18% in our fall survey. There are two ways to describe this change. We could choose to say that this is an 80% increase, which would be expressed in formula as $(18\% - 10\%) / 10\% = 80\%$. We can also choose to say that this is an 8 percentage point change, which would be expressed in formula as $18 - 10 = 8$ percentage points. Describing this change as an 80% increase may convey a more significant meaning that would require greater statistical rigor and a deeper analysis of respondent breakdowns between surveys to confidently communicate that type of change.⁷

As noted in our description of subgroup analysis, a significant difference is being defined as a difference of plus or minus ten percentage points. We will attempt to remain consistent throughout in this definition of significant. Please also note that this is not the same as statistical significance, which we are not exploring in this report.

Relative Optimism

Ignoring the real-world implications of the values chosen for our slider questions and focusing instead on the values relative to each other between our spring and fall surveys indicates a much more positive outlook amongst respondents. The strong similarities in responses for our spring and fall surveys for anticipated community impact over the next 90 days on local economy and workforce may also be an indication that respondents largely answered these two slider questions in the exact same way. This provides additional support for thinking about these responses in a relative way. For impact on local economy, local workforce, and local government revenue, respondents appear to be much more optimistic now about potential impacts over the next 90 days. The only area in which our fall survey indicates no change in outlook is on impact to local government staffing over the next 90 days.

For a more concrete example of why we might choose to focus on values relative to each other and strongly caution against interpreting the real-world implications of these chosen values, we could take a closer look at local government employment impact. If a respondent anticipated a -12% impact on local government employment over the next 90 days for an organization with 2,600 employees, that would insinuate a projected loss of slightly more than 300 employees. This would not seem to be a reasonable interpretation of survey results.

Underestimating Optimism

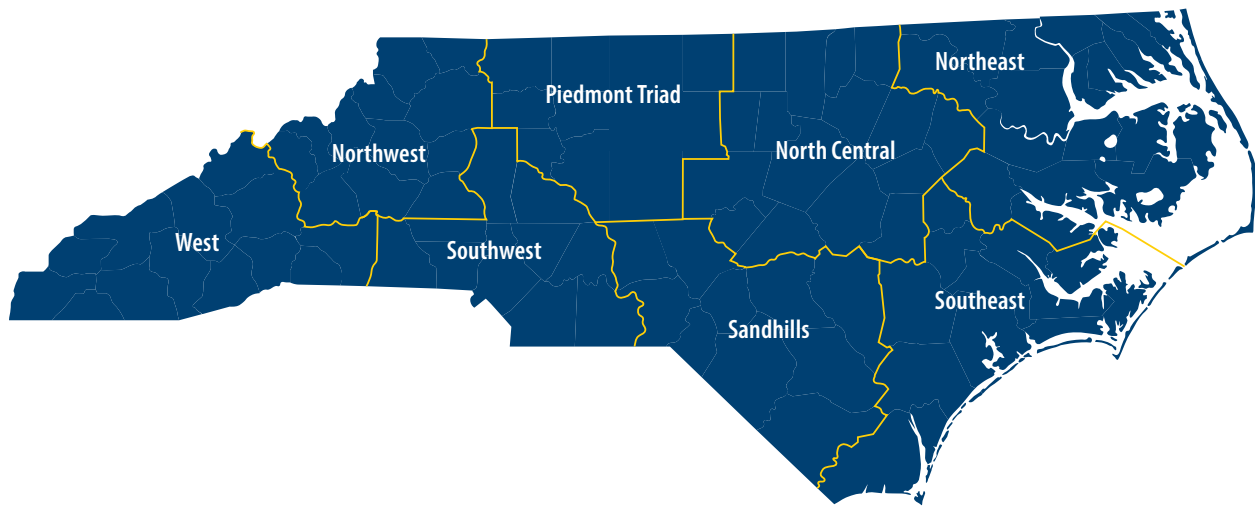
The no response rates for our survey slider questions referenced in this report could be a strong indication that these were very difficult questions for respondents. Taking a closer look at one question, anticipated impact on local government employment, 80 respondents (40%) in our spring survey and 135 respondents (38%) in our fall survey chose to not answer the question. The no response

7. For more basic information, examples, and descriptions, see "Percentage Change and Percentage Point Change: A Primer," Quantitative Skills Center, Reed College, accessed January 26, 2021, reed.edu/academic_support/pdfs/qskills/percent.pdf.

rates referenced for the four slider questions are strongly inconsistent with the no response rates for other questions, which did not exceed 1%. This could also be possible evidence of survey interpretation error, as respondents may have believed that doing nothing with the slider would indicate that their response would automatically be recorded as 0 instead of a no response. If that is the case, optimism about local economy and workforce and local government revenue and employment would be much stronger than estimated here.

Prosperity Zones and Councils of Government

Prosperity Zones



Councils of Government

