Testing the Keys to Economic Recovery from COVID-19


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The Team

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What strategies will help local economies recover more quickly from the COVID-19 pandemic?
Data Resources for Economic Recovery

Jeff Warren, PhD - Moderator
Executive Director
NC Policy Collaboratory
University of North Carolina at Chapel Hill
Community Confidence Tool

Tommy Bohrmann
Chief Scientific Officer
Digital Health Institute for Transformation

https://dashboard.communityconfidence.org/
Carolina Tracker
A Resource For Recovery

Noreen McDonald
Distinguished Professor, Chair
Department of City and Regional Planning
University of North Carolina at Chapel Hill

https://carolinatracker.unc.edu/
Purpose

Construct an interactive dashboard that explores the economic, travel, social, and environmental impacts of COVID-19 on communities throughout North Carolina.

This project is supported by the North Carolina Policy Collaboratory at the University of North Carolina at Chapel Hill, with funding from the North Carolina Coronavirus Relief Fund established and appropriated by the North Carolina General Assembly.
ABOUT THE PROJECT

Principal Investigators – City and Regional Planning

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GOALS

1. Visualize and explore impacts of COVID-19 in North Carolina
2. Provide timely and relevant information for decision-making
3. Demonstrate the variation of impacts on different groups
GOAL 1:
Visualize and explore impacts of COVID-19

**Employment**
- Unemployment insurance claims
- Mass layoffs/closures
- Labor force participation
- Online job listings

**Spending**
- Sales and use tax revenue
- Small businesses open
- Small business revenue
- Office vacancy rates
- Paycheck Protection Program loans

**Travel**
- Percent of people staying at home
- Vehicle miles traveled
- Median distance of longest daily trip
- Traffic crashes
- Gas prices

**Destinations**
- Business offices
- Grocery stores
- Healthcare
- Parks
- Restaurants and bars
- Recreational facilities

**Housing**
- Eviction filings
- Foreclosure filings
- House sales
- Rental listings
- New building permits
- Vacant residences

**Environment & Society**
- Childcare enrollment
- Air Quality Index (PM 2.5)
- Police stops
- Prison admissions
GOAL 2: Provide timely and relevant information

- Influence day-to-day operational decisions and long-term strategies
- Provide data as it is available in daily, weekly, and monthly updates
- Create automated code (mostly in R) to facilitate this process

On January 03, 32.5% of people stayed at home in North Carolina
GOAL 3: Demonstrate the variation of impacts

- Provide data-driven storytelling and analysis
- Analyze disaggregated breakdowns of datasets
- Use summarizing categories to explore broad spatial and socio-economic trends
FEATURES

- 30 topics to explore in 6 categorical dropdown menus
FEATURES

• Slider bar on time series changes the date of data display
  • Automatically updates the map, dot plot, and overview text
FEATURES

• Default display shows each county and the state average
  • Hover to see details
  • Click to highlight county (or counties) on all graphics
  • Easily clear selection in top right
FEATURES

• Group counties by socioeconomic and geographic categories to see trends
  • Each county’s category group is color-coded on the map and dot plot
FEATURES

• About page provides more information about each topic
  • Original data sources
  • Links to download our clean and ready-to-use data
  • Methodology and calculations
ncIMPACT COVID Composite

Jason Jones
Research Associate, ncIMPACT Initiative
School of Government
University of North Carolina at Chapel Hill

https://ncimpact.shinyapps.io/covid-composite/
Built In Three Layers

The **three layers of our tool** are rooted in real conversations and webinar engagements with local elected officials and practitioners to reflect their concerns and approaches to mitigating pandemic impacts. These three layers help us to:

1. Develop an understanding of a *community’s resilience* and disposition towards widening inequity using publicly available Census data at the Census Tract level.

2. Develop an understanding, where data is available, of the **emergency financial support** resources received which may be masking short-term consequences and delaying second-order impacts of the pandemic at the county level.

3. Develop an understanding of **real-time fluctuations** in a selection of publicly available data points at the county level as the pandemic unfolds.

*Community Resilience in this context is specific to potential community impact due to the pandemic and not community resilience more broadly.
Features

- You can get a quick look at a selection of data points related to COVID economic impact and recovery.

- You have access to a variety of visualization formats depending on your preferences including data cards, charts, and maps.

- All data points are already standardized to allow for comparisons.
Features

• Most significantly, you may choose your county and select your own data points to construct your own composite.

• Data standardization goes a step further with the use of a z-score that makes comparisons simple and helps you visualize how far a data point is away from the average for all data points.
Guidance

- Our z-scores are all documented and standardized to ease interpretation. A higher z-score is interpreted as less desirable and a lower z-score is interpreted as more desirable, regardless of the underlying data point.

- All source code, data, and documentation are freely available in a GitHub repository with more detailed documentation provided in a stand-alone documentation site.
Information to Action

**Information to Action Framework** provides an easy-to-understand way of moving toward meaningful community and organizational action.

COVID Composite is a great way to plug in and get started with some quantitative insights.
Enhancements

Stay tuned for more accessibility and usability enhancements!
Making Data-Informed Decisions For Economic Recovery

Obed Pasha, PhD
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School of Government
University of North Carolina at Chapel Hill

pasha@unc.edu
Research Focus: Organizational behavior, Strategic Planning, Performance Management, Program Evaluation
Decision-making cycle

- Desired Economic State
- Gather Data on Recovery
- Convert Raw Data into Information
- Analyze how far are we from the desired state?
- Make decisions based on the state of recovery
Analysis: Past Performance

Compare performance measures with past performance

• Trends
• How have we been doing over the past few years/months/weeks etc.?
• Example: Percent stay at home
• Example: Rate of eviction filings
Example: Percent Stay At Home

Staying at home by Central/outlying counties

Filter to categories

Staying at home from January 2020 to present (rolling average)

- North Carolina
- Central
- Outlying
- Non CBSA

Mobile devices at home (%)

March, May, July, September, November
Example: Eviction Filings

CAROLINA TRACKER
A Resource For Recovery

Eviction filings Rate by Central/outlying counties
Filter to categories

Rate of eviction filings from January to June 2020

Filings per thousand renters

February March April May June

Click & drag to change month

North Carolina Central Outlying Non CBSA
Example: Infection Rates

Daily change

New cases • United States • North Carolina • 30 days

8,788
10 January

Each day shows new cases reported since the previous day. Updated less than 12 hours ago.
Source: The New York Times • About this data
Analysis: Goals And Targets

Compare recovery with set goals

- Mandated by legislature, budgeting guidelines, industry standards, internal process
- Did we meet the mandated expectations?
- Example: Confidence score
- Example: Capacity, behavior, economic indices
Example: Confidence Indices

Capacity of Care Index: 78%
Behavioral Index: 69%
Economic Index: 46%
Community Health Index: 42%
Environmental Index: 38%

- Covid Test Availability
- Hospital Capacity
- PPE Supply
Example: Confidence Score

Scorecard :: [Black] County

Overall County Score

Confidence 60

Health 47

Confidence Score

7 Days 30 Days 90 Days 180 Days

Last Updated: December 9, 2020

Analysis: Benchmarking

Compare economic recovery with other comparable entities

- Understand our place in the region
- How well are we doing compared to our peers?
- Example: Compare COVID-19 trends in Pender with Onslow County
- Example: Compare Crime per 100k in Asheville with
  - Hendersonville (because of geographic proximity)
  - Gastonia (because of similar size and crime rate)
  - Apex (because of low crime rates)
Example: Unemployment COVID Composite Tool

UNEMPLOYMENT

POVERTY
Example: Unemployment COVID Composite Tool

UNEMPLOYMENT

POVERTY
Example: Poverty Rate
COVID Composite Tool
Analysis

PAST PERFORMANCE

TARGETS

BENCHMARKING
Decision-making cycle

1. Desired Economic State
2. Convert Raw Data into Information
3. Gather Data on Recovery
4. Analyze how far are we from the desired state?
5. Make decisions based on the state of recovery
Decision making

- Making strategic decisions based on the analysis
- Going back to the strategic plan to figure out what worked
- What strategic alternatives should be strengthened or discontinued
- What can we do differently to get better results?
Poll

Which comparison methodologies are used in your organization?

• Past performance
• Set targets
• Peers
Selected References


What everyone should know from the Fall Survey of Local Governments

Anita Brown-Graham
Director, ncIMPACT Initiative
Professor of Public Law and Government
School of Government
University of North Carolina at Chapel Hill
Survey Coverage

- Fall survey covered 98 out of 100 counties with either a county or municipal government response. 67 percent of responses came from municipal government while 33 percent came from county government.

- We collected responses from 70 county governments (70 percent) and 172 municipal governments (31 percent).
Negative Community Impacts

From our spring survey to our fall survey, for top three negative community impacts, the percentage of respondents citing:

1. Employment Instability decreased by 16 percentage points
2. Housing Instability increased by 13 percentage points
3. Food Insecurity decreased by 13 percentage points
4. Travel Restrictions decreased by 10 percentage points
From our spring survey to our fall survey, for top three negative local government impacts, the percentage of respondents citing:

1. Reduced Revenue decreased by 39 percentage points

2. Staffing Absences Due to COVID-19 Exposure or Potential Exposure increased by 37 percentage points

3. Staff Burnout Due to the COVID-19 Pandemic increased by 23 percentage points
## Positive Impact Themes

### Community
- Community Unity
- Tourism and Occupied Rental Properties
- Service Transitions and Changes to Operations That May Be Long-lasting
- Societal Shifts such as Recognition of Underlying Issues Like Broadband Access

### Local Government
- Benefits Of Remote Work
- Changes to Service Delivery
- Hard Work and Resilience
- Improved Revenues
- Opportunity for Change
- Improvements to Emergency Preparedness
Of the positive community impacts, which resonates most with your experience?

- Community Unity
- Tourism and Occupied Rental Properties
- Service Transitions and Changes to Operations That May Be Long-lasting
- Societal Shifts such as Recognition of Underlying Issues Like Broadband Access
For impact on local economy, local workforce, and local government revenue, respondents appear much more optimistic about potential impacts over next 90 days.
Optimism – Expected Impact on Local Employment by Region

Estimated Expected Impact on Local Employment by NC Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Spring 2020</th>
<th>Fall 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western</td>
<td>-24%</td>
<td>-10%</td>
</tr>
<tr>
<td>Southwest</td>
<td>-24%</td>
<td>-19%</td>
</tr>
<tr>
<td>Southeast</td>
<td>-25%</td>
<td>-16%</td>
</tr>
<tr>
<td>Sandhills</td>
<td>-24%</td>
<td>-18%</td>
</tr>
<tr>
<td>Piedmont-Triad</td>
<td>-31%</td>
<td>-14%</td>
</tr>
<tr>
<td>Northwest</td>
<td>-29%</td>
<td>-12%</td>
</tr>
<tr>
<td>Northeast</td>
<td>-22%</td>
<td>-17%</td>
</tr>
<tr>
<td>North Central</td>
<td>-22%</td>
<td>-17%</td>
</tr>
</tbody>
</table>

Spring 2020 and Fall 2020

SCHOOL OF GOVERNMENT
(ncIMPACT Initiative)
Optimism – Expected Impact on Average Local Government Revenue

Estimated Average Revenue Impact on Local Government

- Western: -8% (Spring 2020), 28% (Fall 2020)
- Southwest: -21% (Spring 2020), 20% (Fall 2020)
- Southeast: -17% (Spring 2020), 16% (Fall 2020)
- Sandhills: -23% (Spring 2020), 20% (Fall 2020)
- Piedmont-Triad: -24% (Spring 2020), 13% (Fall 2020)
- Northwest: -12% (Spring 2020), 26% (Fall 2020)
- Northeast: -12% (Spring 2020), 22% (Fall 2020)
- North Central: -14% (Spring 2020), 22% (Fall 2020)
Next Steps

30-minute Post-Session Q&A with all presenters

Webinar Evaluation Survey – only 5 questions
   Link in chat box & by email

Visit project page for updates: go.unc.edu/KeystoRecovery
   Case studies, Data Analysis, Resources, and more
Stay Connected

Email: nclIMPACT@unc.edu

Twitter: @nclIMPACTsog and @NCGrowth

Facebook: NCImpact Initiative and NCGrowth