

**REGIONAL PLANNING COMMISSION  
OF GREATER BIRMINGHAM**

# PANDEMIC ANALYSIS REPORT



This report was supported by funding from the Economic Development Administration (EDA) through the CARES Act that was passed by Congress on March 27th, 2020. This report was prepared as a cooperative effort of Regional Planning Commission of Greater Birmingham (RPCGB) staff, using Economic Development, Planning, GIS, and Executive expertise to ensure comprehensibility and accuracy of the ideas outlined in this document.

The Pandemic Analysis Report (PAR) serves as a guide to assessing the regional impact of the COVID-19 pandemic on individuals, industry, and local economy. As such, some elements in the report may become outdated. The RPSGB has made every effort to ensure the data and analyses presented in this report were accurate and updated to its fullest extent at the time of publishing.

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# **ACKNOWLEDGMENTS**

## **THANK YOU TO ALL THE RPCGB STAFF MEMBERS WHO MADE THIS REPORT POSSIBLE**

Charles Ball, AICP, Executive Director  
Ray Morris, Deputy Executive Director  
Jesslan Wilson, Director of Economic Development  
Sarah Thomas, Economic Development Coordinator  
Brett Isom, GIS Manager  
Maria Hines, AICP, Senior Planner  
Hanxi Zhu, Economic Development Intern  
Trevor Felixbrod, Economic Development Intern  
Marley Hicks, Former Economic Recovery Coordinator  
Carley Horner, Former Economic Development Intern  
Rebekkah Smith, Former Economic Development Intern

## INTRODUCTION & PURPOSE

An economy describes how goods and services are produced and exchanged according to demand and supply between participants within a given area. Economic health is determined by its ability to produce and distribute these goods and services to meet the consumption needs and stimulate the growth of its markets. Many factors affect an economy's stature, from means of production and distribution to consumer participation. Most often measured at a national level through metrics like Gross Domestic Product and Consumer Prices Indexes, regional economies have proportional measurements. This report will analyze the economy of the Greater Birmingham region and evaluate the prominent market changes caused by the Coronavirus Pandemic between March 2020 and April 2021. The geographic area analyzed in this report is within the Regional Planning Commission of Greater Birmingham service area, or Blount, Chilton, Jefferson, Shelby, St. Clair, and Walker counties. This district is analogous to the Birmingham-Hoover Metropolitan Statistical Area (MSA), excluding Bibb County.

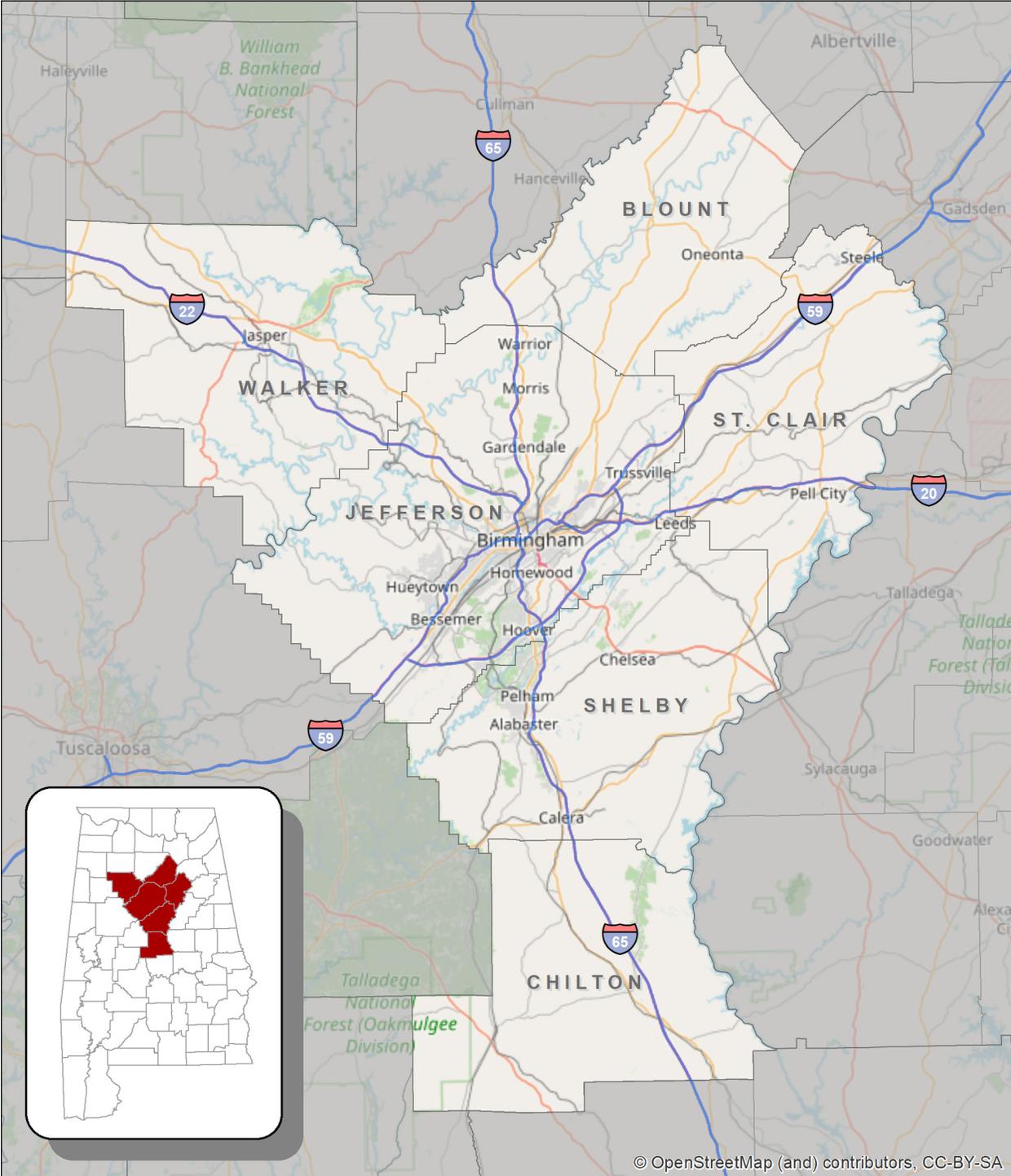
The Coronavirus Pandemic caused an array of market fluctuations and public health challenges across the nation since its detection in March 2020. Increases in unemployment, declines in revenues, and unanticipated expenditures are just a few examples of the challenges local government officials faced during the last year. Due to the extraordinary nature of the virus, many municipalities had few resources available to respond to the uncertainties facing their communities. This report is intended to provide regional leaders, officials, government agencies, industry associations, and economic development councils with information to assist with recovering from the negative effects of the pandemic and prepare for future economic events.

## REPORT OUTCOMES

The PAR was developed with the goal of delivering three main outcomes:

- Assist local leaders with understanding how the region was impacted by the pandemic.
- Provide local governments with resiliency and recovery strategies for future economic events specific to their communities.
- Develop resiliency and recovery tools to serve as the foundation for the next 5-year update of the region's Comprehensive Economic Development Strategy (a blueprint plan for economic development at a local level developed by RPCGB).

# THE REGION



# REPORT ORGANIZATION

Table 1.1: Report Organization

TITLE	DESCRIPTION
<b>Part One: Regional Economic Impact Assessment</b>	<b>Describes the economic impacts caused by the pandemic by detailing changes in factors such as the region's labor force and employment.</b>
Regional Labor Force & Employment Levels	Details regional labor force characteristics and prominent areas of employment for workers
Industry & Employer Concentrations	Identifies local employer sectors & analyzes industry impacts caused by pandemic
Economic Stability	Evaluates external economic factors impacted by the pandemic & their outcomes
<b>Part Two: Regional Resilience</b>	<b>Analyzes the region's economic strengths, improvement areas, and potential opportunities outlined by the pandemic to evaluate the region's resiliency during time of economic disruptions; uses input from local government survey to draw conclusions</b>
Overview of Regional Resilience	Describes the history of the region through the lense of economic resiliency
Resiliency Index Comparison	Compares four different Resiliency Indexes and the regional trends that emerge from Index data
Local Government Survey Analysis	Summarizes the responses of local government officials on the impact of COVID-19 in their community
Regional Vulnerabilities	Identifies regional vulnerabilities that inhibit economic resilience in the region
Regional Assets	Identifies regional assets that advance economic resilience in the region
Regional Resiliency Goals	Builds upon findings from the Pandemic Analysis Report to identify goals for the region that will serve as a foundation for the CEDS
<b>Appendix A: Disaster Resilience Index Variables</b>	<b>Details the variables that make up the four resilience measures of the Disaster Resilience Index</b>
<b>Appendix B: StatsAmerica Innovation Index 2.0</b>	<b>Details the inputs and outputs that make up the index scores and the variables that are comprised within each input and output</b>
<b>Appendix C: Local Government Survey Responses</b>	<b>Lists the survey questions used to gauge local perspective of pandemic impacts and the responses made by local officials</b>



**PART ONE**  
**REGIONAL**  
**ECONOMIC IMPACT**  
**ASSESSMENT**

## INTRODUCTION

The purpose of this chapter is to evaluate fluctuations in the local economy caused by the coronavirus pandemic. Each section strives to identify the existing labor force and market conditions prior to the pandemic and compare them to the changes these areas experienced, including alterations in the regional supply chain and impacts on local spending. This evaluation will cover the six counties within the Greater Birmingham region with the most up-to-date data available as of May 2020.

The Regional Economic Impact Assessment chapter is divided into three sections. Each chapter analyzes an important factor in the regional economy and details the effects experienced in each category due to the pandemic. An overview of these sections is provided below.

**Table 1.1:** Part One Outline

Chapter	Purpose
<b>Regional Labor Force &amp; Employment Levels</b>	Describes the regional labor force characteristics & prominent areas of employment for workers
<b>Industry &amp; Employer Concentrations</b>	Identifies local employer sectors & analyzes industry impacts caused by pandemic
<b>Economic Stability</b>	Evaluates external economic factors impacted by the pandemic & their outcomes

## CHAPTER ONE REGIONAL LABOR FORCE AND EMPLOYMENT LEVELS

The purpose of this section is to analyze the pre-pandemic characteristics of the regional labor force and evaluate the effects caused by the pandemic on the region's workforce. Assessing how the region's workers and households were affected by these economic fluctuations can provide vital information regarding the region's resiliency and help identify what factors impact these areas during economic disruptions. Though some of the features described in this chapter, such as population, age, and housing units, are not as susceptible to economic impacts as others, these elements are important to assess when determining the region's ability to respond to economic shocks.

Main Ideas:

- Describe the attributes of the region's workforce
- Define what areas of labor force were most vulnerable and susceptible to effects of the pandemic
- Evaluate the changes the pandemic had on employment conditions, like teleworking, and the future implications of these changes

### REGIONAL LABOR FORCE CHARACTERISTICS

The purpose of the following sections is to describe the Greater Birmingham's labor force features to evaluate how the attributes of workers and households were impacted by the coronavirus pandemic.

## TOTAL POPULATION AND PROJECTIONS

The economic expansion of an area can be predicted by its population growth rate. The Greater Birmingham region has experienced consistent growth in population, increasing by over 12 percent in the last two decades. By 2020, the region was home to approximately 1.16 million residents. **Table 1.2** outlines the increases in population from 2000 to 2020 throughout the region, while identifying each county’s growth rate. Five of the six counties in the region have experienced population increases over the past 20 years. However, Walker County has experienced population decline, with a decrease of 7.5 percent. Growth within the region has primarily been concentrated in Shelby County, which has more than doubled its population size since 2000.

**Table 1.2:** Population Changes by County, 2020

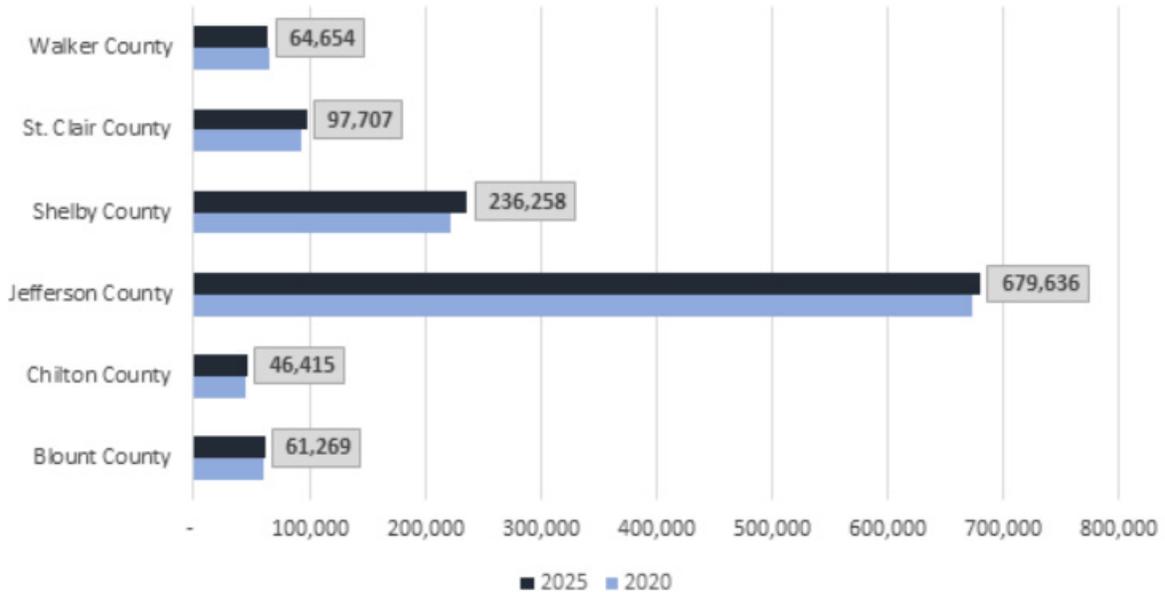
County	Population 2000	Population 2020	Percent Change
Blount	51,141	59,134	15.6%
Chilton	39,892	45,014	12.8%
Jefferson	662,285	674,721	1.9%
Shelby	144,684	223,024	54.1%
St. Clair	65,078	91,103	40.0%
Walker	70,638	65,342	-7.5%
Regional	1,033,718	1,158,338	12.1%

Source: US Census Data, 2000 & 2020

The growing number of residents in the area has impacted the region’s population densities. The average number of residents per square mile in the region is 244 people. The area with highest population density is Jefferson County, which is also the most populated and largest county in the region, with an average of 600 residents per square mile. Chilton County has the lowest population density, with approximately 64 people per square mile. Population density changes can have an impact on future land use and infrastructure demand. As the population continues to grow in these areas, the demand on infrastructure and land use may adapt as a result.

In addition, population density affects the economy because the population defines the region’s domestic market. Population growth helps spur economic enhancement by enlarging the consumer base of the market, as well as adding to its labor force. The increase in the region’s population can be attributed to a variety of factors, including economic opportunities and availability of resources. According to projections for 2025, the population is expected to grow by approximately 3 percent, which will likely result in positive impacts on the regional economy. See **Figure 1.1** for a county comparison for future population projections.

**Figure 1.1:** Population Projections, 2000-2025



Source: American Community Survey Data, 2020

**AGE DISTRIBUTION**

The age of residents is indicative of several important factors, such as consumer spending demands and patterns as well as labor force participation. According to U.S. Census data from 2018, Alabama’s population is aging at a rate exceeding most states in the nation with a median age of 39.3<sup>1</sup>. For the Birmingham metropolitan area, the median age ranges between 39 to 44 years. This span has increased slightly since 2000, and is reflective of state trends. **Table 1.3** lists the median age for each county in the region. Walker County has the oldest population rate, with half its residents being older than 42.

**Table 1.3:** Average Median Age by County, 2021

County	Median Age
Blount	41.2
Chilton	40.0
Jefferson	39.0
Shelby	39.0
St. Clair	41.0
Walker	44.0
<b>Regional Average</b>	40.7

Source: U.S. Census Data, 2021

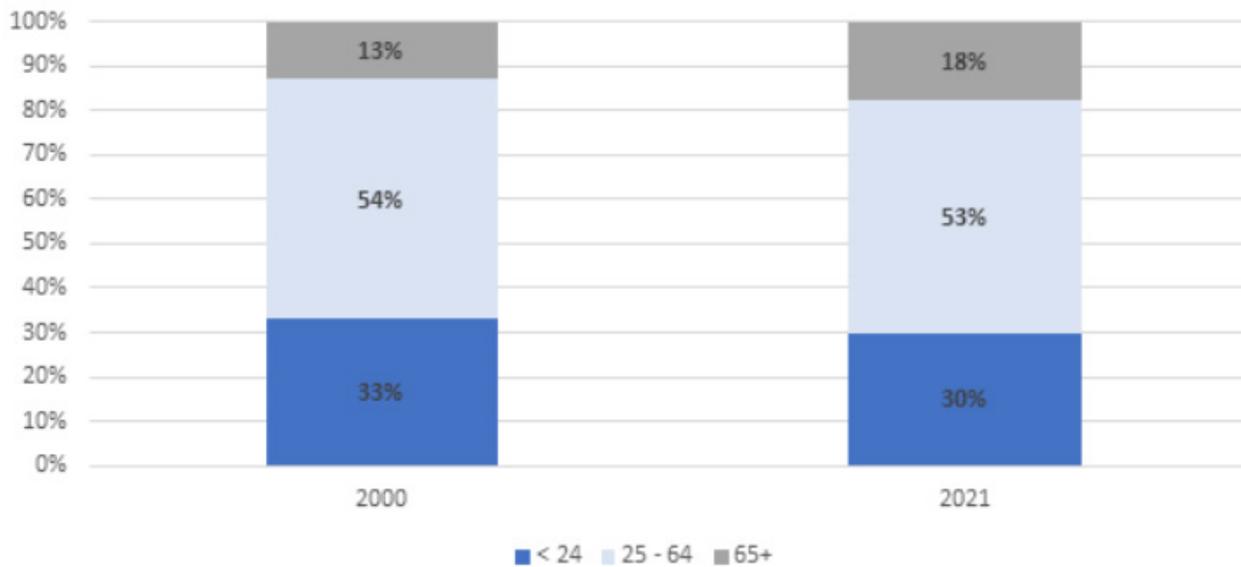
1 Ramsey Archibald, “Alabama population older than national average, and keeps growing grayer.” Alabama Local News, Advance Local, December 30, 2019, <https://www.al.com/news/2019/12/alabama-population-older-than-national-average-and-keeps-growing-grayer.html>.

As illustrated in **Figure 1.2**, the distribution of age within the region has been highly concentrated in the 25-64 age block for the last 20 years. This age group represents the largest segment of the region’s workforce and is currently constructed of Generation X and Millennials. Though this age block has decreased by 1 percentage point in the last 20 years, current population trends indicate that this age category will remain the most prominent. The continued expansion of this age bracket is a key factor in determining future economic prosperity since the retainment of a working population is necessary to achieve economic sustainability. This age distribution is similar across all six counties, signifying the region has a wide variety of working aged people in its labor force.

However, as illustrated in **Figure 1.2**, the 65+ age block has increased to 18 percent in recent years. This significant growth in this age group will likely impact our region’s economy in the coming decades. As the population ages, the demand and supply of goods and services will likely alter to meet the needs of this demographic shift. The demand for healthcare services is likely to increase, and the size of the workforce could shrink as a larger proportion of the population meets the retirement age.

However, this expansion of the 65+ age block is not unique to the region or the State of Alabama. States across the country are experiencing the same changes in age distribution and are also forecasting its challenges. While this issue is not expected to arise in the immediate future in the state, it is predicted to become a major issue in the next 40 to 50 years. See Figure \_ for the distribution of age in the region in years 2000 and 2021.

**Figure 1.2:** Regional Age Distribution, 2000 and 2021



Source: American Community Survey Data, 2020

**RACIAL COMPOSITION**

The Greater Birmingham region is becoming increasingly more diverse. Between 2000 and 2010, the region’s white population has decreased by 8 percent. Jefferson County has the highest concentration of diversity in the region, where 50 percent of residents are white, and 50 percent are non-white. Due to the positive relationship between diversity and economic vitality, the Birmingham region’s increasingly diverse population is advantageous for the area’s present and future prosperity. Diversity encourages innovation at all levels of the economy, as maintaining a diverse workforce can assist in areas like problem-solving and capturing a larger share of the consumer market. This growth in diversity is beneficial to this region’s economy and will help determine how the economy will evolve in the future. Table \_ lists the racial composition of the region on a county level.

**Table 1.4:** Racial Composition, 2020

County	White	Black	Hispanic/Latino	Other
<b>Blount</b>	87%	2%	10%	1%
<b>Chilton</b>	80%	10%	8%	2%
<b>Jefferson</b>	50%	44%	4%	2%
<b>Shelby</b>	77%	13%	6%	4%
<b>St. Clair</b>	86%	10%	2%	2%
<b>Walker</b>	89%	6%	2%	3%

Source: US Census Data, 2020

**EDUCATIONAL ATTAINMENT**

Educational attainment is used to evaluate the workforce capability of an area, and it is often indicative of prosperity and sustainability of a local economy. The education levels within the Greater Birmingham region have increased over time and are higher than the State of Alabama averages. As of 2021, 30 percent of the residents within the region have at least a bachelor’s degree, compared to the state’s average of nearly 22 percent<sup>2</sup>. Shelby County has the highest percentage of individuals with a bachelor’s degree or higher, at nearly 43 percent. Walker County has the lowest density of residents with a bachelor’s degree or higher, with less than 13 percent. **Table 1.5** lists the individual county education rates, and **Figure 1.3** illustrates the attainment averages for the region.

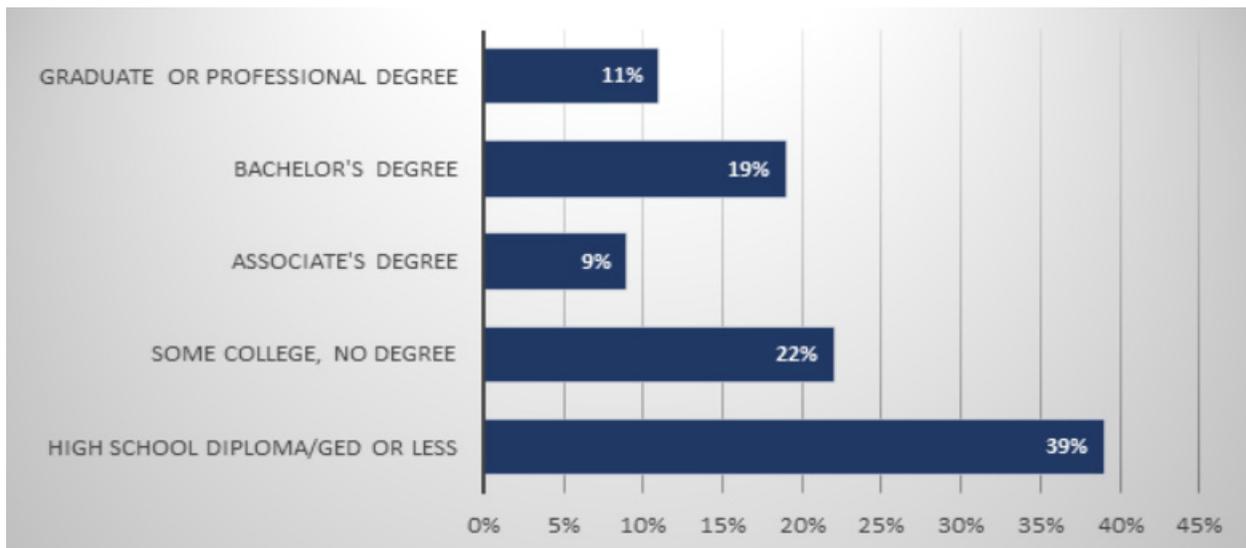
2 Center for Business and Economic Research, Culverhouse School of Business, “Alabama Shows Dramatic Improvement in Education Attainment; State Remains Below National Average,” University of Alabama, August 7, 2019, <https://cber.culverhouse.ua.edu/2019/08/07/alabama-shows-dramatic-improvement-in-education-attainment-state-remains-below-national-average/>.

**Table 1.5:** Education Rates by County, 2021

Education Attainment	Blount	Chilton	Jefferson	Shelby	St. Clair	Walker
High school degree/GED or less	48.6%	61.5%	35.1%	26.0%	49.8%	54.4%
Some college, no degree	20.8%	16.2%	20.6%	20.9%	22.4%	21.9%
Associates degree	13.8%	8.6%	9.2%	8.3%	10.7%	11.5%
Bachelor's degree	9.1%	8.5%	21.0%	29.1%	11.1%	7.8%
Graduate/professional degree	4.9%	5.1%	14.1%	15.6%	6.0%	4.4%

Source: U.S. Census Data, 2021

**Figure 1.3:** Regional Age Distribution, 2000 and 2021



Source: American Community Survey Data, 2020

**REGIONAL HOUSEHOLDS & HOUSEHOLD INCOME**

**HOUSEHOLD CHARACTERISTICS**

The concentration of households in the region is reflective of its population density, as discussed on page 9. Approximately 435,690 households are located within the six counties in the Greater Birmingham area, which has had a growth of 7 percent since 2000. Most households are in Jefferson County, the most populous county in the region, with 268,302 households. Chilton County has the least number of households, with a total of 17,465. The most growth has occurred in Shelby County, increasing by over 54 percent since 2000. As shown in **Table 1.6**, Walker County was the only county with a decrease in its households. However, household size, which refers to the number of individuals living within a single housing unit, is similar across county lines. The average household size for the region is 2.56 people, with a range of 2.43 in Jefferson County to 2.64 in Blount County. See **Table 1.6** for a comparative list of regional households from 2000 and 2019.

**Table 1.6:** Change in Number of Households by County, 2000 and 2021

County	2000	2021	Percent Change
Blount	19,153	22,265	16.2%
Chilton	15,287	17,465	14.2%
Jefferson	263,265	268,302	1.9%
Shelby	54,631	84,319	54.3%
St. Clair	24,143	36,060	49.3%
Walker	28,364	26,416	-6.9%

Sources: U.S. Census Data, 2000 and 2021

**HOUSEHOLD INCOME LEVELS**

Household income has a substantial impact on an area’s economy. It is one of the main determinants of the local demand for goods and services, as household spending generally increases as income grows. Income levels are also important in determining the purchasing power residents possess after necessities, such as housing and food, are purchased. To measure these spending patterns, median household income is generally the metric used to compare living standards between varying areas.

The average median household income for the Greater Birmingham area was approximately \$56,601 in 2021. Shelby County had the highest median household income at \$76,116, and Walker County had the lowest at \$46,607. Income levels increased across all six counties when compared to 2000 rates, with the largest percent change occurring within St. Clair County (68.5 percent). The smallest increase in household income was in Shelby County, which increased by 37.3 percent. **Table 1.7** illustrates the changes in household income across the Greater Birmingham region.

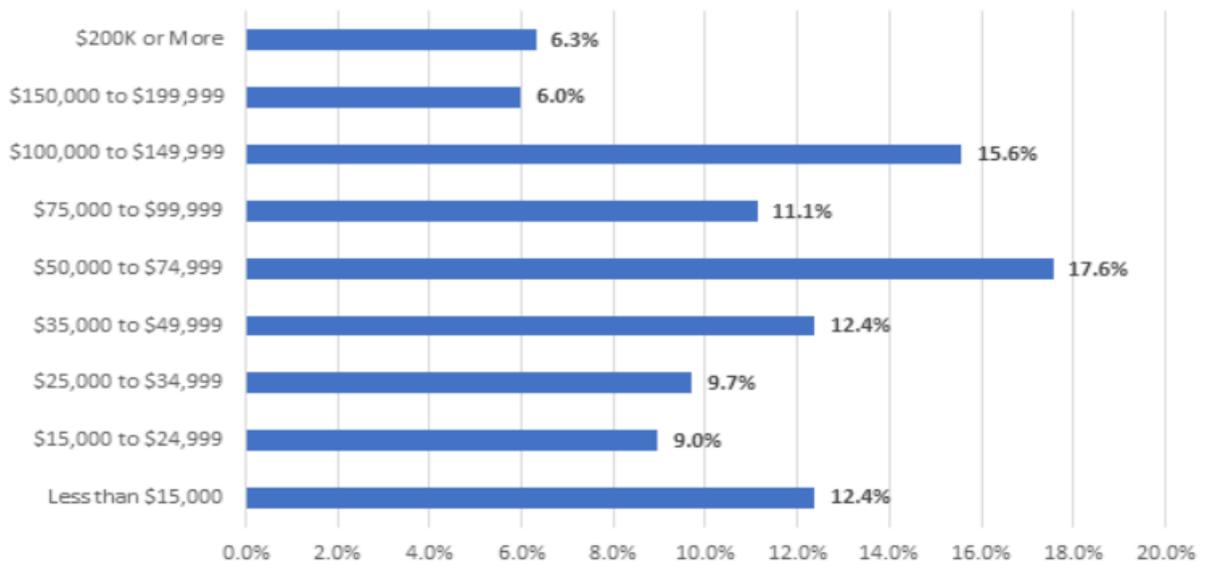
**Table 1.7:** Comparison of Median Household Income, 2000 and 2021

County	2000	2021	Percent Change
Blount	\$35,241	\$50,657	43.7%
Chilton	\$32,588	\$49,343	51.4%
Jefferson	\$36,868	\$54,056	46.6%
Shelby	\$55,440	\$76,116	37.3%
St. Clair	\$37,285	\$62,825	68.5%
Walker	\$29,076	\$46,607	60.3%
<b>Regional Average</b>	<b>\$37,750</b>	<b>\$56,601</b>	<b>49.9%</b>

Source: U.S. Census Data, 2000 and 2021

In addition to measuring demand, household income levels can also be used to identify the poverty rate within the region. Evaluating poverty levels is important because poverty has an adverse effect on the economic vitality of a community. According to 2021 estimates, 21.4 percent of all regional households earned under \$25,000 per year and 43.5 percent of all households earned less than \$50,000 per year (see **Figure 1.4**). Additionally, estimates indicate 12 to 21 percent of all families lived below the poverty line in 2021.

**Figure 1.4:** Regional Household Income by Income Bracket, 2021

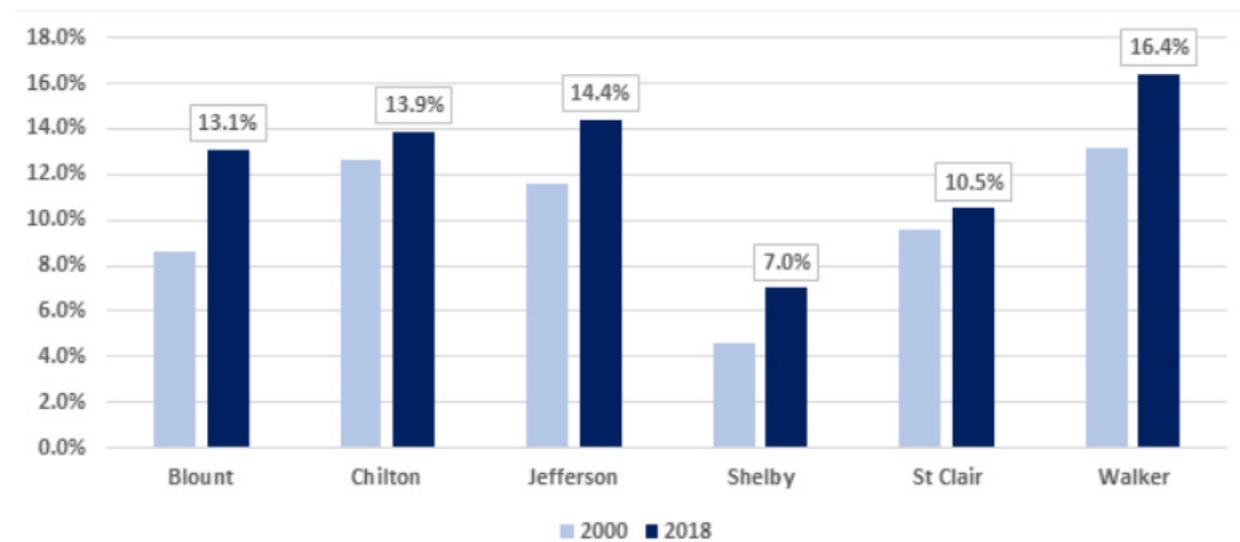


Source: American Community Survey Data, 2020

For comparison, the pandemic heavily impacted the amount of income available to households across the nation, and in turn affected the overall health of the economy. Close to half of all American households experienced a reduction in income over the course of the pandemic. These unfavorable effects disproportionately affected low-income households and households with children under the age of 18.<sup>3</sup> It is likely the number of households living in poverty within the region fluctuated due to the financial uncertainties caused by the pandemic.

Poverty rates by county have all increased. **Figure 1.5** shows the changes in families living in poverty on a county level. The highest increase in poverty occurred in Chilton County, and the county with the largest decline in poverty levels was Walker County.

**Figure 1.5:** Percentages of Families Living in Poverty Comparison



Source: U.S. Census Data, 2000 & 2019

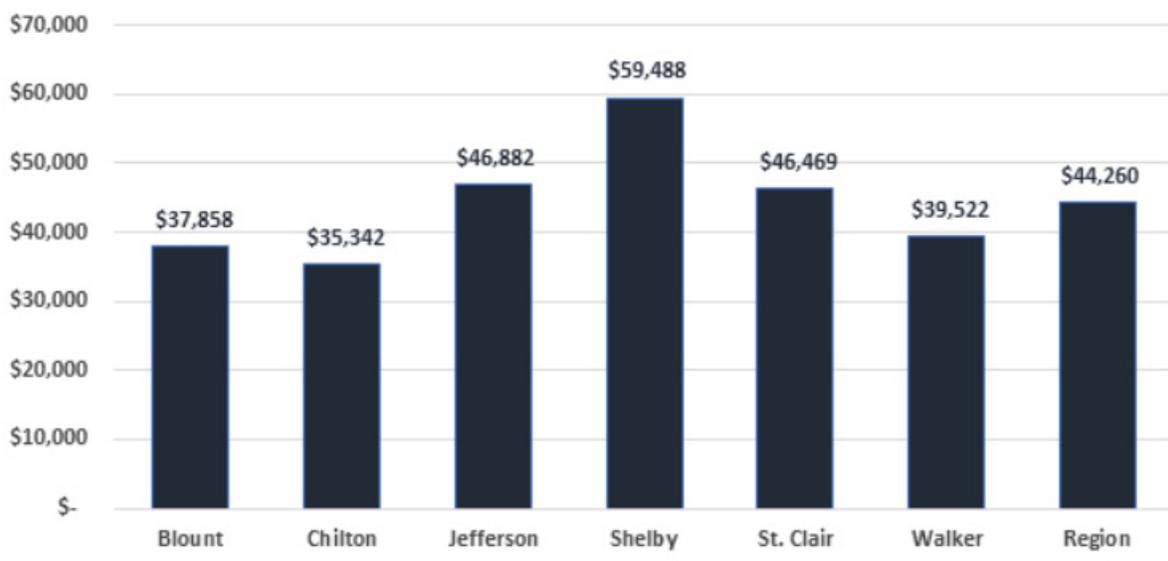
3 “COVID-19 Pandemic’s Impact on Household Employment and Income,” Congressional Research Service, November 9, 2020, <https://crsreports.congress.gov/product/pdf/IN/IN11457>, 1.

**DISPOSABLE INCOME**

Levels of disposable income, or the income available after taxes are removed, are also imperative to evaluate when considering consumer spending patterns and purchasing potential. This measurement is an important indicator for the economic health of an area, and it is often used to gauge the viability of business investments. However, this metric is different than discretionary income. Discretionary income is the measurement of income after taxes and necessities, such as housing and healthcare payments, are removed. Therefore, the amount of actual disposable income, whether it is used for household savings or retail spending, is lower than may be indicated.

The 2020 estimated median disposable income in the Greater Birmingham region was \$44,260. Over 26 percent of regional households have less than \$25,000 a year in disposable income, and nearly 52 percent have less than \$50,000. Shelby County’s median disposable income is the highest in the region, with an estimated amount of \$59,488, and the lowest median disposable income is within Chilton County, which is reported to be \$35,342. With an estimated 50 percent of disposable income being spent on necessities such as housing, food, and transportation, the remaining 50 percent represents the actual discretionary income available to regional households. See **Figure 1.6** for a comparison of the disposable income levels throughout the region.

**Figure 1.6:** Disposable Income by County, 2020



Source: ESRI Data, 2020

**HOUSEHOLD BROADBAND ACCESS**

Affordable, high quality and reliable broadband access for communities is becoming a critical resource for working, communicating, and thriving in an increasingly digitized society. It impacts local commerce, education systems, health and public safety operations, workforce development and countless other essential services. Currently, the Federal Communications Commission (FCC) defines a “broadband” internet connection as one that provides at least a 25 Mbps download speed and a 3 Mbps upload speed. Additionally, broadband access can be measured by percentage of households with internet access and internet accessible devices. **Table 1.8** shows the regional broadband access by county, as well as regional national averages for each measure.

**Table 1.8:** Regional Broadband Access in 2019

County	Percent of households with no computer, smartphone, or tablet	Percent of households with no internet access	M-Lab Median Download Speed (Mbps)	M-Lab Median Upload Speed (Mbps)
<b>Blount</b>	19.0%	23.9%	8.286	2.143
<b>Chilton</b>	19.9%	27.3%	8.371	1.604
<b>Jefferson</b>	12.1%	16.9%	30.299	9.167
<b>St. Clair</b>	12.2%	17.4%	10.792	1.495
<b>Shelby</b>	5.7%	9.3%	35.920	9.222
<b>Walker</b>	17.2%	24.8%	23.597	5.712
<b>Regional Average</b>	14.3%	19.9%	19.544	4.891
<b>National Average</b>	14.6%	20.6%	26.981	9.203

Source: U.S. Department of Commerce, National Telecommunications and Information Administration (NTIA)

Within the six-county region, only two counties, Jefferson and Shelby, meet both download and upload speed requirements for broadband connection set by the FCC. Shelby County had the highest level of broadband connection with a 35.920 Mbps download speed and a 9.222 Mbps upload speed. Walker County met the 3 Mbps upload speed but did not meet the requirement of a 25 Mbps download speed. Additionally, the regional average download and upload speed was lower than the national average, indicating a potential weakness within the region’s infrastructure and development.

Regional broadband accessibility can also be measured by household access to internet and broadband-accessible devices. The Greater Birmingham region has more households, on average, with access to internet, computers, and smart devices than the national average. Nationally, an average of 14.6 percent of households have no computer, smartphone, or tablet with which to access the internet and 20.6 percent of households have no internet access altogether. Regionally, only 14.3 percent of households have no computer, smartphone, or tablet and an average of 19.9 percent of households have no internet access. Chilton County has the highest average percentage for both measures of broadband access with almost 20 percent of households with no broadband accessible devices and 27.3 percent of households with no internet access.

## HOUSING UNITS & STRUCTURES

### HOUSING TYPES & AGE

The real estate and housing market plays an important role in the regional economy. Housing can represent a significant amount of household wealth and net worth, accounting for 30 to 35 percent of monthly household spending on average.<sup>4</sup> The housing characteristics of the region primarily consist of single family detached homes, which makes up 69.5 percent of all housing options in the area. Shelby County has the highest concentration of single family detached homes in the region, comprising nearly 75 percent of all housing options within the county. Apartments are the second most common housing type, making up nearly 15 percent of all available housing options. Jefferson County has the highest levels of apartment availability in the region by a large margin, with over 61,000 apartment units throughout the county. In addition, other housing types exist in the region on a smaller scale. Manufactured homes make up around 13 percent of all housing units, while town houses construct approximately 10 percent of all housing types. **Table 1.9** lists all housing types as percentages according to county.

**Table 1.9:** Housing Types by County, 2018

Counties	Total	Single Family, Detached	Town Houses	Apartments	Manufactured Homes
Blount	24,222	68.9%	3.5%	2.3%	25.2%
Chilton	19,586	60.2%	4.5%	2.7%	32.3%
Jefferson	307,372	69.6%	7.5%	20.0%	2.9%
Shelby	86,077	74.5%	7.0%	10.4%	8.0%
St. Clair	36,628	67.8%	3.7%	4.4%	23.9%
Walker	31,057	63.1%	4.4%	3.2%	29.3%

Source: American Community Survey Data, 2018

The age of units is also important to note because it can reflect future demand in the housing market. The region's housing market includes moderately aged housing options. Seventy-two percent of all housing in the region was built between 1940 and 1999, with a little over 20 percent being developed since 2000. **Table 1.10** lists the age of housing units on a county-by-county basis.

**Table 1.10:** Age of Housing Units, 2018

Counties	2000 or Later	1970 to 1999	1940 to 1969	1939 or Earlier
Blount	23.6%	53.0%	18.6%	4.8%
Chilton	23.6%	51.7%	18.2%	6.6%
Jefferson	15.2%	39.9%	35.3%	9.5%
Shelby	34.4%	57.0%	7.1%	1.5%
St. Clair	35.2%	48.8%	13.6%	2.3%
Walker	18.1%	51.6%	24.6%	5.7%

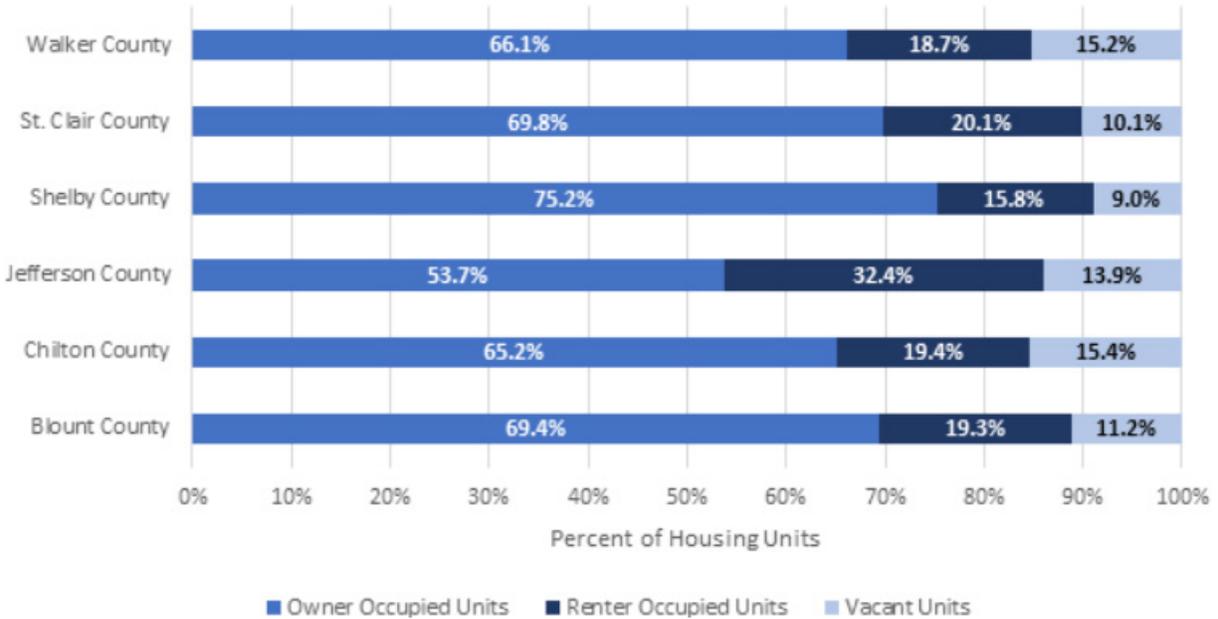
Source: American Community Survey Data, 2018

4 Regional Planning Commission of Greater Birmingham, Community Profiles, 2021.

**OWNER AND RENTER RATES**

Ownership of housing units outweighs renter rates throughout the region. On average, 67 percent of those occupying housing units are owners, while 21 percent of occupiers are renters and 12 percent of housing units are vacant. Shelby County has the highest rate of home owners, with 75.2 percent of occupied units being owned. Jefferson County has the highest rental rates of housing units, with over 30 percent of inhabited units being occupied by renters. See **Figure 1.7** for a comparison of owner and renter rates throughout the region.

**Figure 1.7:** Owner, Renter and Vacant Unites by County, 2021



Source: American Community Survey Data, 2021

The owner and renter rates in demand for an area could be influenced by income levels, place of residence, and age. A 2018 data report from Bloomberg connected the likelihood of renting housing units with certain income thresholds (predominately less than \$50,000), living in a more urbanized area, and being within the 20- to 30-year age group.<sup>5</sup> These trends can help explain some of the patterns the housing market has made in recent years within the region.

In 2021, renter rates increased in three out of the six counties in the region. The most prominent increase has been concentrated in both the rural and urban parts of the region. The highest growth rate occurred within St. Clair County, with an increase of 16.9 percent in renter units since 2010. Other areas of relatively high growth were in Blount and Jefferson counties. In Chilton, Shelby, and Walker counties, renter rates decreased by 3.5 to nearly 15 percent.

5 David Montgomery, "Who Owns a Home in America, in 12 Charts," Bloomberg, Bloomberg L.P., August 8, 2018, <https://www.bloomberg.com/news/articles/2018-08-08/who-rents-their-home-here-s-what-the-data-says>.

**Table 1.11:** Change in Owner Rates Between 2000 and 2001

Counties	2010 Owner Occupied Units	2021 Owner Occupied Units	Percent Change in Owner Occupied Units
<b>Blount</b>	72.8%	69.4%	- 4.7%
<b>Chilton</b>	65.8%	65.2%	- 0.9%
<b>Jefferson</b>	56.9%	53.7%	- 5.6%
<b>Shelby</b>	73.0%	75.2%	3.0%
<b>St. Clair</b>	71.8%	69.8%	- 2.8%
<b>Walker</b>	65.3%	66.1%	1.2%
<b>Regional Average</b>	67.6%	66.6%	- 1.5%

Source: Regional Planning Commission of Greater Birmingham, 2021

**Table 1.12:** Change in Renter Rates Between 2000 and 2021

County	2010 Renter Occupied Units	2021 Renter Occupied Units	Percent Change in Owner Occupied Units
<b>Blount County</b>	17.6%	19.3%	9.7%
<b>Chilton County</b>	20.1%	19.4%	-3.5%
<b>Jefferson County</b>	30.7%	32.4%	5.5%
<b>Shelby County</b>	18.5%	15.8%	-14.6%
<b>St. Clair County</b>	17.2%	20.1%	16.9%
<b>Walker County</b>	20.9%	18.7%	-10.5%
<b>Regional Average</b>	20.8%	21.0%	0.6%

Source: Regional Planning Commission of Greater Birmingham, 2021

Some of the decreases in rental rates and increases in owner occupied rates may be due, in part, to the pandemic. Historically, economic downturns depress home ownership and exacerbate the rise in rental rates. Yet, many researchers have found that the unique nature of the coronavirus pandemic has led to consumer preferences shifting towards homebuying instead of home renting. The Mortgage Bankers Association reports that in August of 2020, mortgage applications for new home purchases increased by 33 percent from the previous year nationwide.<sup>6</sup> The Mortgage Bankers Association (MBA) Builder Application Survey (BAS) data for December 2020 shows mortgage applications for new home purchases increased 42.2 percent compared from a year ago. Compared to November 2020, applications increased by 0.2 percent. This change does not include any adjustment for typical seasonal patterns.<sup>7</sup> Additionally, in September of 2019, the average home sold within 28 days of its list date. A year later, a home sold in

6 Adam DeSanctis, “August New Home Purchase Mortgage Applications Increased 33.3 Percent,” Mortgage Bankers Association, September 15, 2020, <https://www.mba.org/news-and-research/newsroom/news/2020/09/15/august-new-home-purchase-mortgage-applications-increased-33-3-percent>.

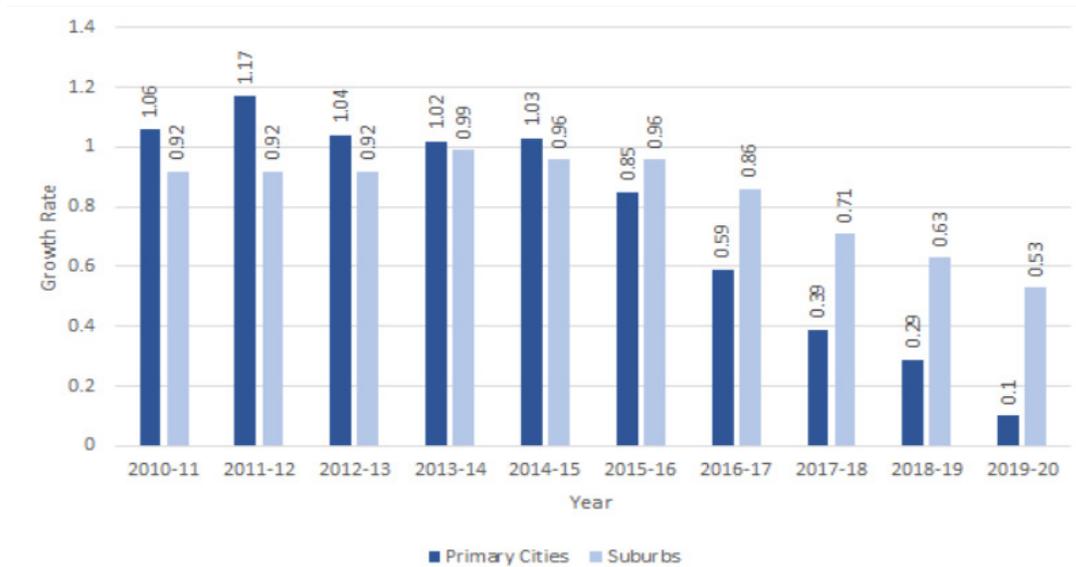
7 Adam DeSanctis, “December New Home Purchase Mortgage Applications Increased 42.2 Percent,” Mortgage Bankers Association, January 14, 2021, <https://www.mba.org/news-and-research/newsroom/news/2021/01/14/december-new-home-purchase-mortgage-applications-increased-42-2-percent-x275788>.

only 16 days.<sup>8</sup> For the Birmingham Metro area, the residential sales for the first quarter of 2021 totaled 4,125 units, an increase of 18.7 percent from the 3,474 units sold in the first quarter of 2020.<sup>9</sup>

These trends defy not only the seasonal homebuying patterns, but also the preconceived notions of consumer behavior during times of economic fluctuations. Some experts point to an increase in demand for homes due to the unique nature of pandemic. The onset of the pandemic saw widespread government-mandated shutdowns and increased teleworking. Urban areas were particularly hit hard by these closures, as many of big cities saw the highest COVID-19 cases and deaths. Many of these cities were also some of the first cities to shut down and among the last to reopen, often haltingly. These factors have potentially caused the value of urban amenities—public transit, variety of restaurants and retail spaces, and recreational events—to decline while increasing the value of the amenities offered by suburban and rural areas. According to a study conducted by the Brookings Institution, large cities showed exceptionally slow—or negative—growth from 2019 to 2020.<sup>10</sup> In cities with populations exceeding 250,000 people, population growth in 2020 was noticeably lower than the previous year. Nearly one-third of these cities also indicated that the year of the pandemic was their lowest annual growth within the decade.

Simultaneously, as consumers looked for ways to accommodate increased time spent at home with work and school schedules, suburban and rural areas became more popular due to the abundance of space with a more affordable price tag. This shift in consumer preferences—from urban to suburban—could be one reason that the demand for homeownership has drastically increased within the past year. **Figure 1.8** illustrates the shifts in consumer preferences beginning even before the pandemic.

**Figure 1.8:** Annual Growth Rate in Primary Cities and Suburbs from 2010 to 2020



Source: *The Brookings Institution*

8 Chris Glynn, “Homes Are Selling Incredibly Fast, Regardless of Price – Defying Seasonal Norms,” Zillow, Zillow, INC., October 15, 2020, <https://www.zillow.com/research/days-on-market-by-tier-2020-28167/>.

9 ACRE Alabama Cabinet, “Birmingham Residential 1st Quarter Report – 2021,” Alabama Center for Real Estate, University of Alabama Culverhouse College of Business.

10 William H. Frey, “America’s largest cities saw the sharpest population losses during the pandemic, new census data shows,” Brookings, The Brookings Institution, June 8, 2021, <https://www.brookings.edu/research/the-largest-cities-saw-the-sharpest-population-losses-during-the-pandemic-new-census-data-shows>.

Additionally, with the onset of the pandemic, the already limited supply of housing became even smaller. The uncertainty that comes with any economic downturn causes some people to be reluctant to make big changes, such as selling a home. As of October 2020, two-thirds of homeowners, or about 65 percent, who were considering selling their home in the next three years say that financial uncertainty, or just the general uncertainty of life, is the reason they have not listed their home.<sup>11</sup> Also, with the coronavirus being a highly contagious and relatively new disease, many potential home sellers may have been nervous to show their homes to strangers. For the Birmingham Metro area, there was a decrease of 26.6 percent in the total homes listed for sale for the first quarter of 2021 when compared to the first quarter of 2020. Also, the inventory-to-sales ratio for the region in the first quarter of 2021 was 50 percent below the 3-year quarterly average.<sup>12</sup> The decrease in supply regionally and nationally potentially indicate that home sellers decided to exit the market due to the pandemic. With less home sellers entering the market, there are fewer housing units transitioning from owner-occupied units to renter-occupied units, increasing the overall total number of owner-occupied units. Therefore, it is predicted that home ownership has increased while rental rates have decreased in the region due to the pandemic.

**REGIONAL HOUSING PRICES**

Housing prices for the Greater Birmingham region have shown a consistent increase since 2009. In April 2009, the median house price for newly constructed housing units in the region was \$189,900. Twelve years later, in April 2021, the median house price was \$301,120. This change represents a nearly 60 percent increase in housing units. **Table 1.13** displays the median sales price of newly constructed housing units in the month of April from 2009 to 2021.

**Table 1.13:** Median Sales Price of Newly Constructed Homes in April from 2009 to 2021

Date	Median Sales Price (USD)
4/1/2009	\$189,900
4/1/2010	\$173,120
4/1/2011	\$171,962
4/1/2012	\$218,955
4/1/2013	\$225,517
4/1/2014	\$259,900
4/1/2015	\$280,900
4/1/2016	\$278,900
4/1/2017	\$249,110
4/1/2018	\$271,000
4/1/2019	\$284,900
4/1/2020	\$299,000
4/1/2021	\$301,120

Source: University of Alabama Center of Business and Economic Research

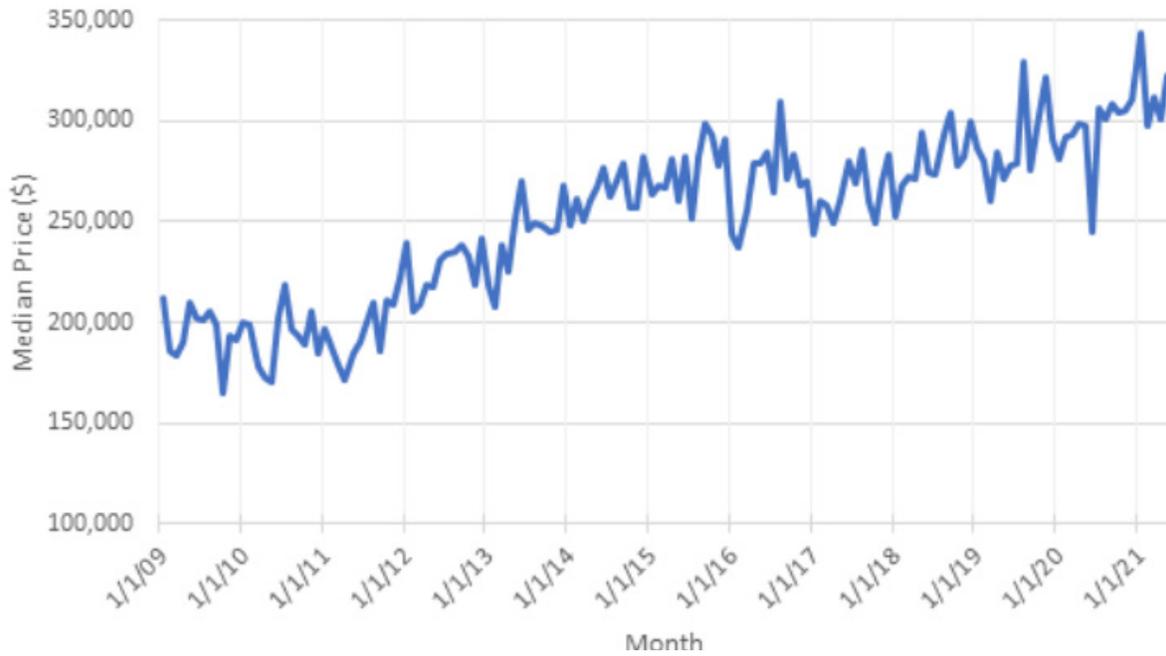
Additionally, **Figure 1.9** displays the median sales price of newly constructed homes from January 1, 2009 to May 5, 2021. In the region, the lowest median sales price of \$165,000 was recorded in October 2009. In January 2021, housing prices reached their 12-year peak at \$343,500. As seen in the graph, the region has seen consistent and dramatic price increases in the past twelve years. Much of this growth

11 Manny Garcia, "Financial Anxiety, Ongoing Uncertainty Keeping Sellers on the Sideline," Zillow, Zillow, Inc., October 27, 2020, <https://www.zillow.com/research/why-arent-sellers-selling-2020-28224>.

12 ACRE, "Residential 1st Quarter Report."

can potentially be attributed to the financial crisis of 2008 driving down demand in the housing market until years later, as well as the coronavirus pandemic drastically increasing housing market demand starting in mid-2020.

**Figure 1.9:** Median Sales Price of Newly Constructed Homes from January 2009 to May 2021



Source: University of Alabama Center of Business and Economic Research

### REGIONAL EMPLOYMENT CHARACTERISTICS

Analyzing the composition of the region’s workforce is crucial to understanding the impacts of job loss and unemployment caused by the pandemic. The purpose of this section is to analyze regional labor force trends, identify changes or fluctuations occurring during the pandemic, and evaluate the occupational characteristics of the region’s workforce. These factors can give insight into what areas of the local economy have been resilient through the market disruptions caused by the pandemic, as well as identify areas susceptible to economic fluctuations.

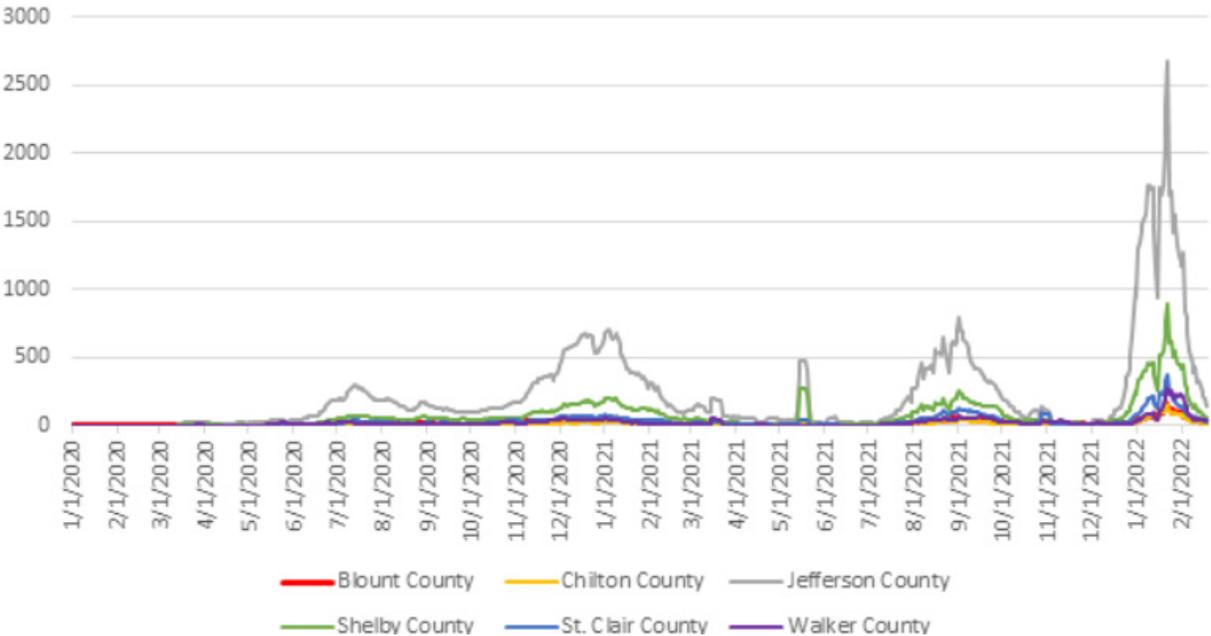
### PANDEMIC IMPACT ON REGIONAL EMPLOYMENT

Prior to evaluating labor force and employment trends, it is important to identify the context of how the pandemic specifically impacted employment within the area. The onset of COVID-19 caused large shifts in economic activity, and the six-county region felt the effects of business closures, stay-at-home orders, and mass hospitalizations through limited economic activity and increased unemployment rates. There are many indicators that can be used to analyze the impact of COVID-19—the relationship between COVID-19 related deaths, COVID-19 cases, vaccination rates, or mask mandates and the fluctuations in GDP, unemployment, population, or various other economic health indicators. However, because most county-level data, such as GDP, personal income, and population estimates, are currently measured on an annual basis, this section will analyze the number of COVID-19 cases in each county against their unemployment rates to extract notable conclusions about the effect of COVID-19 on the economic health of the region.

### COVID-19 IN THE REGION

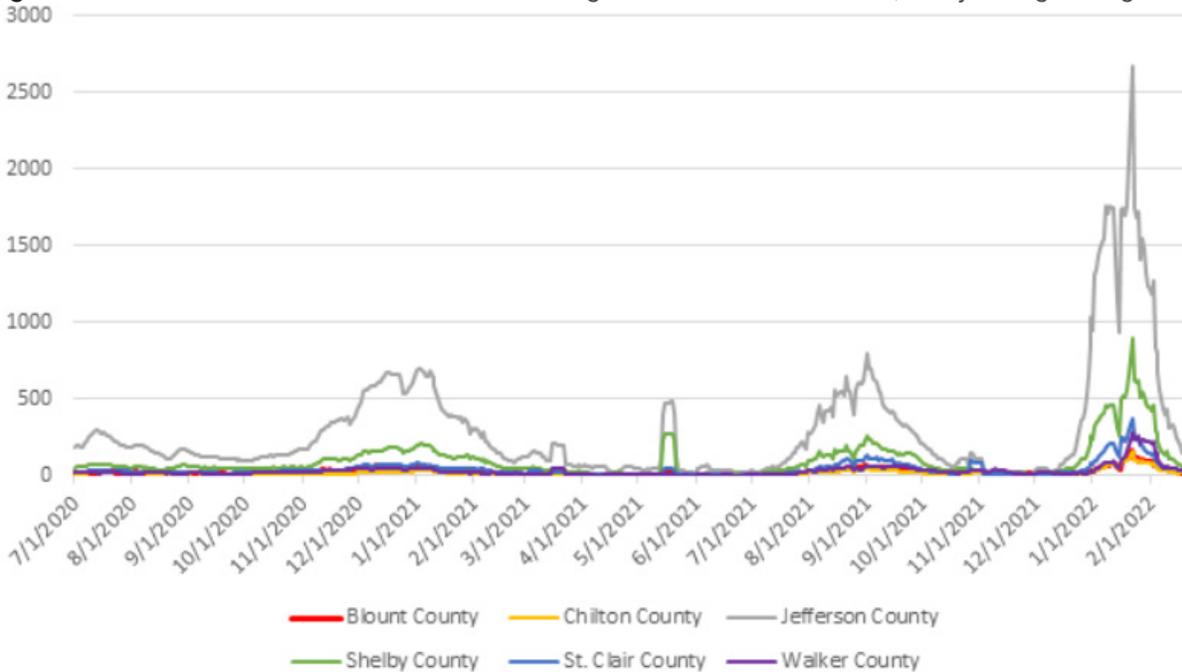
Jefferson County saw the largest number of cases from the very start of the pandemic in early 2020. Potential factors that contribute to these high levels on infection are Jefferson County’s large population and high frequency and size of urban centers. This would also potentially explain Shelby County’s high number of cases as well, as it is the second most populous county in the region. **Figure 1.10** illustrates the number of COVID-19 cases reported in each county in the region from January 1, 2020, to February 2, 2022. **Figure 1.11** depicts the number of COVID-19 cases in the region after the initial spike in June and July of 2020. This illustration provides a closer look at the larger spikes of cases in the region.

**Figure 1.10:** COVID-19 Cases in the Greater Birmingham Area, 7-day rolling average



Source: Center for Disease Control and Prevention, COVID Data Tracker

**Figure 1.11:** COVID-19 Cases in the Greater Birmingham Area after 7/1/2020, 7-day rolling average



Source: Center for Disease Control and Prevention, COVID Data Tracker

**COUNTY LEVEL COVID-19 CASE PROFILES**

Pages 27 to 32 provide County COVID-19 Case Profiles that include figures for unemployment rates and COVID-19 cases for each county in the Greater Birmingham region. Though each county was affected differently by the pandemic, COVID-19 cases and unemployment rate fluctuations remained relatively similar. However, there were a few notable trends that came out of this analysis that are discussed in further detail below.

First, there were large spikes in unemployment rates in late March and April across the region despite the initial large levels of COVID-19 cases beginning in May and June of 2020. This, in part, is likely due to the statewide implementation of the initial stay-at-home order on April 2, 2020, issued by Governor Kay Ivey.

Second, all counties experienced a rapid and significant decrease in unemployment rates from May 2020 to December 2020, apart from Blount and Jefferson who saw the drop off begin in June and July respectively, before leveling out to current levels. These lower unemployment rates coincide with the decreases, or leveling off, of COVID-19 cases in every county between this five-to-seven-month time frame. Potentially, once COVID-19 cases began to drop, many people felt safe enough to leave their homes and start returning to a pre-pandemic way of life. Additionally, other people may have been rehired after a temporary leave or found other employment opportunities once business and economic activity began to ramp up.

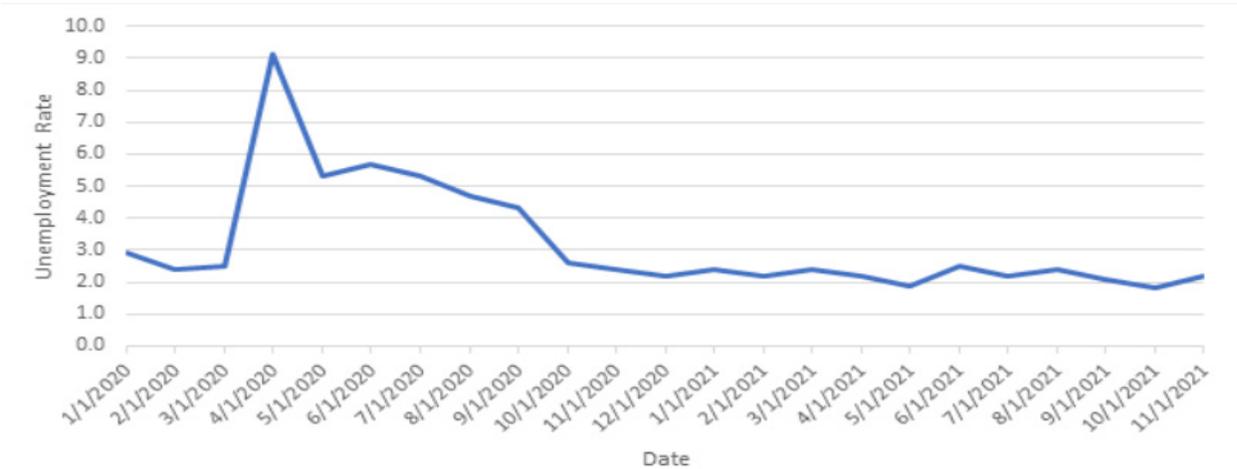
Lastly, apart from small, occasional increases in unemployment rates, every county continues to experience near-record low unemployment. After the large drop in unemployment that started in May to July of 2020, no county has seen unemployment rates soar like they did in March and April of 2020. This may be partly due to the easing of stay-at-home orders and the reopening of non-essential businesses spurring economic activity. Another reason may be that many people who were unemployed before or because of the pandemic may have dropped out of the workforce all-together, and are, therefore, not counted as unemployed.

The Greater Birmingham region saw drastic economic changes as COVID-19 swept through the state, with one of them being drastic increases in unemployment during the initial months of the pandemic. However, as COVID-19 cases initially declined, these initial spikes abated and eventually leveled off to pre-pandemic, near-record lows. Though some of those initially unemployed may have found new means of employment or have since been rehired due to economic activity expanding once again, others may have dropped out of the workforce all-together.

## COVID-19 CASE PROFILE

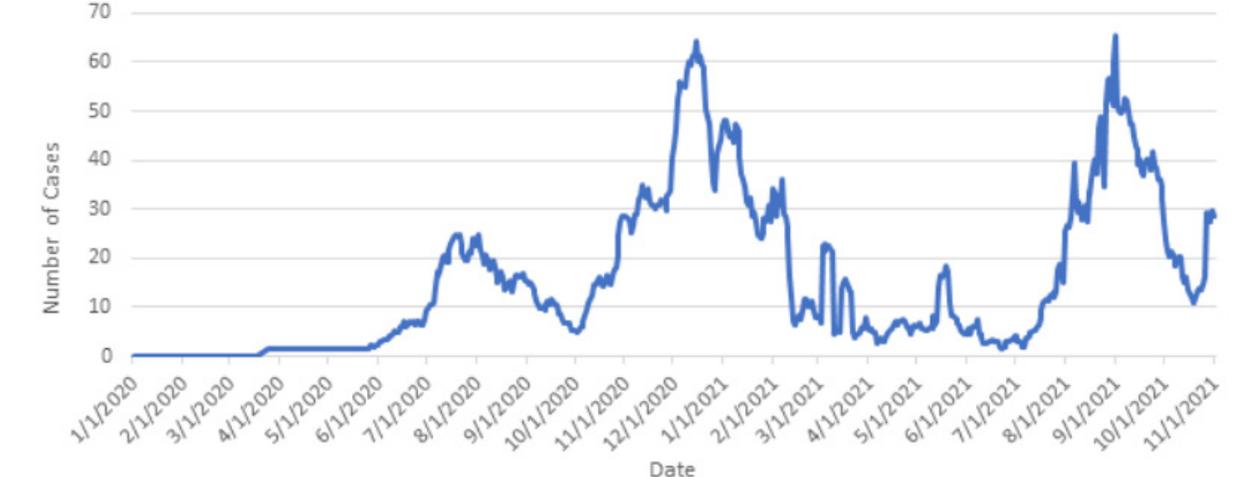
### BLOUNT COUNTY

Figure 1.12: Unemployment Rate in Blount County, AL, Percent, Monthly, Not Seasonally Adjusted



Source: Federal Reserve Economic Data (FRED), Unemployment Rate in Blount County, AL

Figure 1.13: COVID-19 Cases, Blount County, AL, 7-day rolling average



Source: Center for Disease Control and Prevention, COVID Data Tracker

## COVID-19 CASE PROFILE

### CHILTON COUNTY

**Figure 1.14:** Unemployment Rate in Chilton County, AL, Percent, Monthly, Not Seasonally Adjusted



Source: Federal Reserve Economic Data (FRED), Unemployment Rate in Chilton County, AL

**Figure 1.15:** COVID-19 Cases, Chilton County, AL, 7-day rolling average

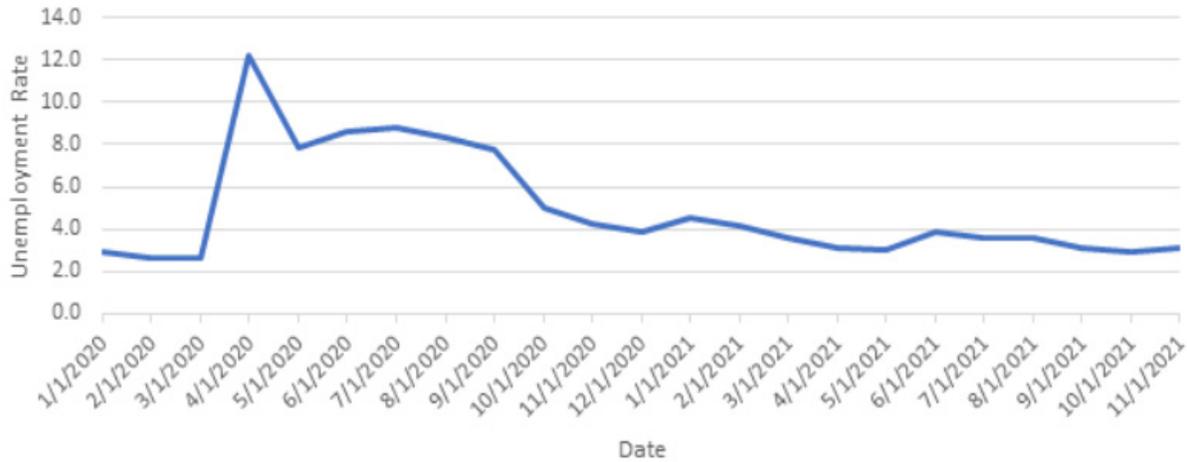


Source: Center for Disease Control and Prevention, COVID Data Tracker

## COVID-19 CASE PROFILE

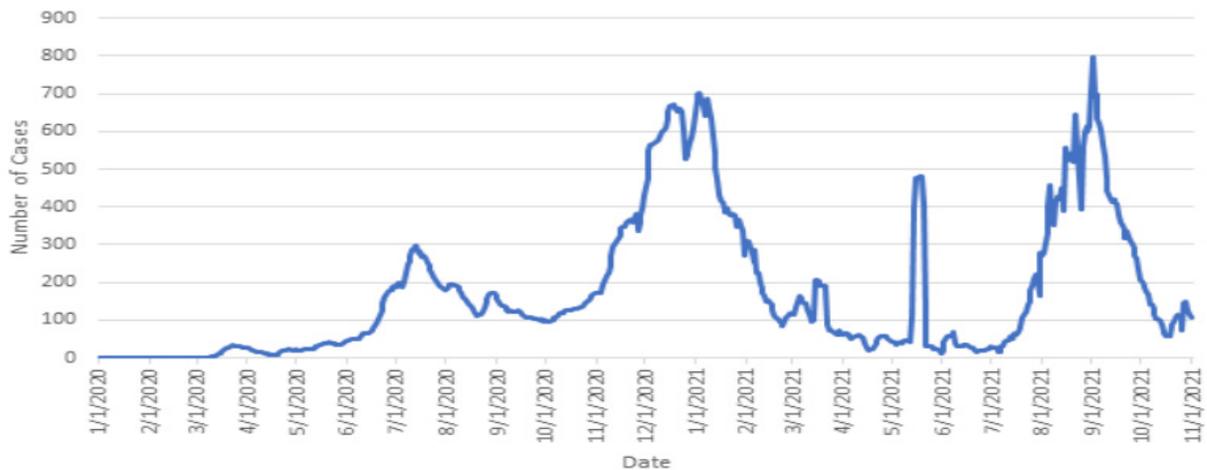
### JEFFERSON COUNTY

**Figure 1.16:** Unemployment Rate in Jefferson County, AL, Percent, Monthly, Not Seasonally Adjusted



Source: Federal Reserve Economic Data (FRED), Unemployment Rate in Jefferson County, AL

**Figure 1.17:** COVID-19 Cases, Jefferson County, AL, 7-day rolling average



Source: Center for Disease Control and Prevention, COVID Data Tracker

## COVID-19 CASE PROFILE

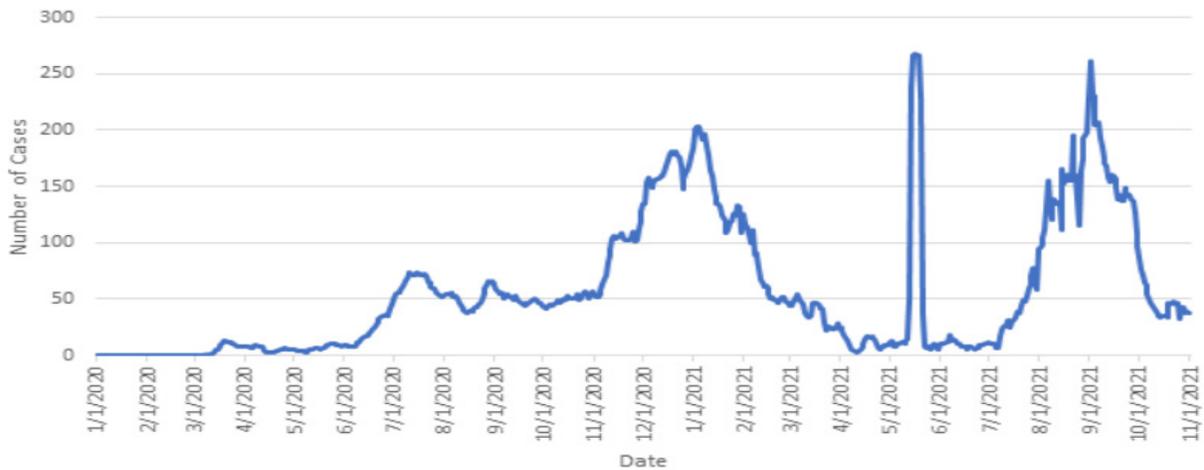
### SHELBY COUNTY

**Figure 1.18:** Unemployment Rate in Shelby County, AL, Percent, Monthly, Not Seasonally Adjusted



Source: Federal Reserve Economic Data (FRED), Unemployment Rate in Shelby County, AL

**Figure 1.19:** COVID-19 Cases, Shelby County, AL, 7-day rolling average

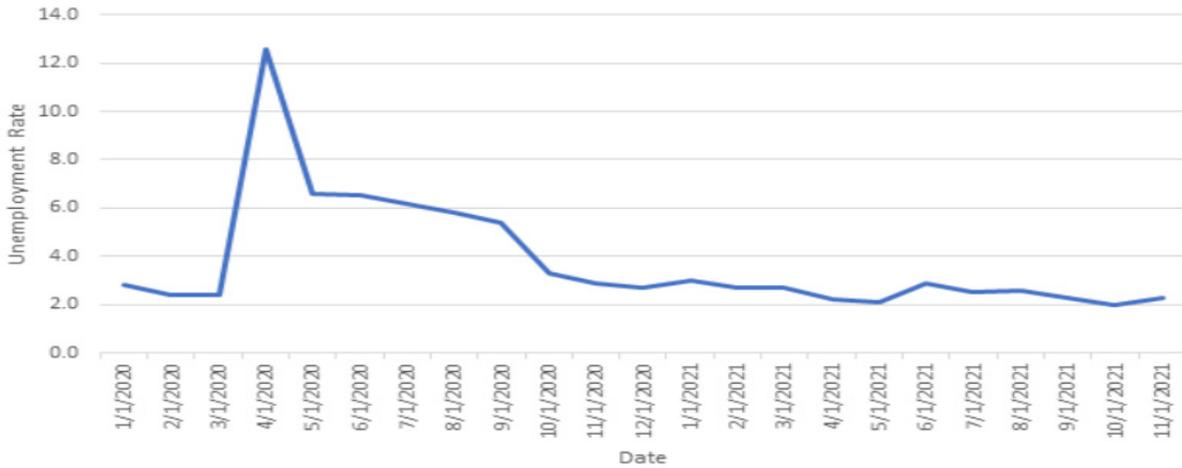


Source: Center for Disease Control and Prevention, COVID Data Tracker

# COVID-19 CASE PROFILE

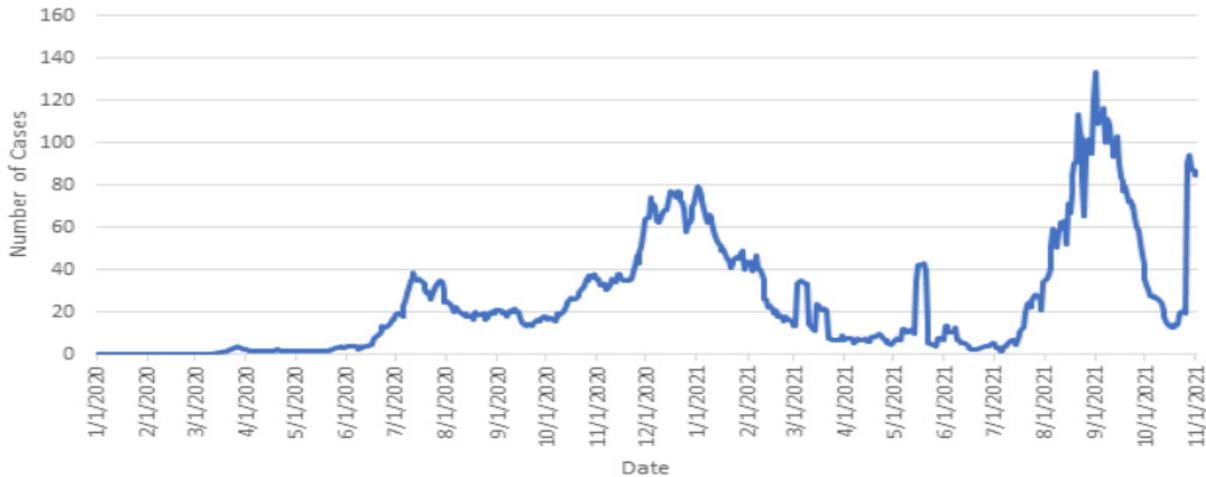
## ST. CLAIR COUNTY

**Figure 1.20:** Unemployment Rate in St. Clair County, AL, Percent, Monthly, Not Seasonally Adjusted



Source: Federal Reserve Economic Data (FRED), Unemployment Rate in St. Clair, AL

**Figure 1.21:** COVID-19 Cases, St. Clair County, AL, 7-day rolling average



Source: Center for Disease Control and Prevention, COVID Data Tracker

## COVID-19 CASE PROFILE

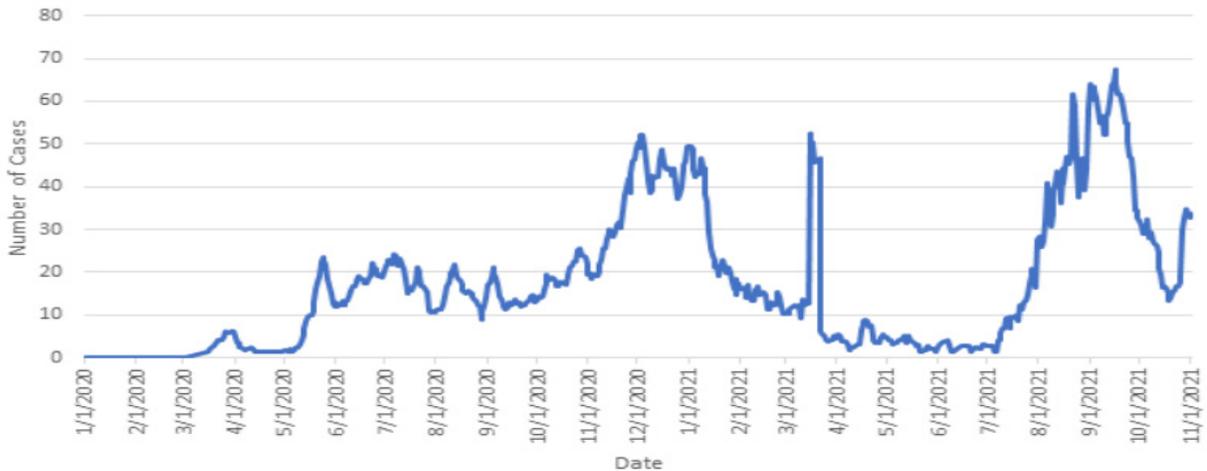
### WALKER COUNTY

**Figure 1.22:** Unemployment Rate in Walker County, AL, Percent, Monthly, Not Seasonally Adjusted



Source: Federal Reserve Economic Data (FRED), Unemployment Rate in Walker County, AL

**Figure 1.23:** COVID-19 Cases, Walker County, AL, 7-day rolling average



Source: Center for Disease Control and Prevention, COVID Data Tracker

## LABOR FORCE TRENDS

Labor force trends are often quantified through metrics such as labor force participation rates, unemployment rate, and employment-population ratios. These statistical measures are necessary to calculate when evaluating labor force trends because, when used in conjunction with each other, they can help illustrate the health of the labor market and overall economic performance. The purpose of this section is to assess the regional labor force participation rate characteristics, as well as unemployment rates, employment-population ratio, and unemployment insurance claims to garner a more comprehensive understanding of the pandemic’s effects on the regional workforce conditions to establish recent trends.

### LABOR FORCE PARTICIPATION RATE

The labor force participation rate is an estimate of an economy’s active workforce. It is calculated by dividing the total labor force population, which is categorized as those within the total population of an area ages 16 and older, by the number of people in the labor force population who are employed or actively seeking employment. This measure can also be used to estimate the unemployment rates for an area, as the unemployment rate is the total labor force population minus those participating in the workforce. The labor force participation rates for the region in 2020 and 2021 are illustrated in **Figure 1.24**. Rates decreased for every jurisdiction in the region between 2020 and 2021, with the largest decline at 3 percent occurring in Walker County. The percent changes in the rates between 2020 and 2021 are listed in **Table 1.14**. Regional participation rates outperform those at a state level, which has a labor force participation rate of nearly 58 percent.

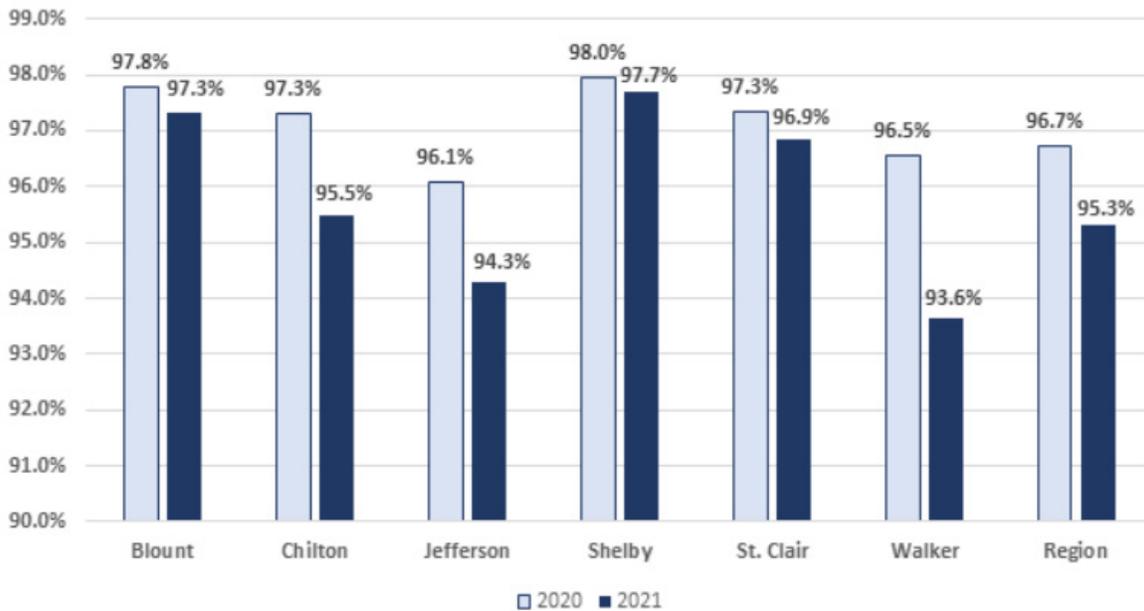
## LABOR FORCE PARTICIPATION RATE FORMULA

$$\frac{\text{Labor Force}}{\text{Civil Noninstitutional Population}} \times 100$$

- Labor Force: Includes all people age 16 and older who are classified as either employed or unemployed and actively seeking work.
- Civil Noninstitutional Population: Population age 16 and older excluding active duty members of the U.S. Armed Forces and people confined to, or living in, institutions facilities such as
  - prisons, jails, and other correctional institutions and detention centers
  - residential care facilities such as skilled nursing homes

Source: U.S. Bureau of Labor Statistics

**Figure 1.24:** Labor Force Participation Rates by County, 2020 to 2021



Source American Community Survey Data, 2020 to 2021

**Table 1.14:** Labor Force Participation Rate by County, 2020 to 2021

County	2020	2021	Percent Change
Blount	97.8%	97.3%	-0.5%
Chilton	97.3%	95.5%	-1.9%
Jefferson	96.1%	94.3%	-1.9%
Shelby	98.0%	97.7%	-0.3%
St. Clair	97.3%	96.9%	-0.5%
Walker	96.5%	93.6%	-3.0%
Region	96.7%	95.3%	-1.5%

Source: American Community Survey Data, 2020 to 2021

Changes in the total labor force population can also impact participation rates. **Table 1.15** compares the labor force population for each county and the region from 2019 and 2021, and it outlines the percentage of change each county experienced. As shown, Chilton County experienced the most labor force population growth from 2019 to 2020, while St. Clair had the most decline.

**Table 1.15:** Comparison of Population in the Labor Force by County, 2019 to 2021

County	2019	2021	Change
Blount	22,715	22,524	-0.8%
Chilton	18,726	19,424	3.7%
Jefferson	326,672	335,865	2.8%
Shelby	114,270	113,171	-1.0%
St. Clair	42,830	41,617	-2.8%
Walker	26,638	27,351	2.7%
Region	551,851	559,952	1.5%

Source: American Community Survey Data, 2019 to 2021

Many factors can impact the changes in the labor force participation in an area. As outlined earlier, the labor force population for a jurisdiction includes all people ages 16 and older. The younger people within this measure may or may not be employed due to school or other factors, so that may be a reasonable explanation for lower percentages in participation. In addition, the pandemic has impacted the rates parents enter the workforce. According to the Women’s Fund of Greater Birmingham, Alabama has the second-lowest rate of workforce participation by women, due to barriers such as a lack of affordable childcare and access to paid leave.<sup>13</sup> This could be a factor for Walker County’s growth in labor force population, even with the lowest participation rate.

### UNEMPLOYMENT RATE

Typically, the unemployment rate is the most common metric for labor force conditions since it is most often used to indicate the expansions and recessions of the economy. In the years following the 2008 recession, the unemployment rates in the Greater Birmingham region reached their highest points, with an average of 11.1 percent in 2010. However, between 2010 and 2019, the unemployment rates for both the state and the region decreased drastically. In October 2019, the unemployment rate for the State of Alabama was at a 20-year low, at just 2.7 percent. The region’s unemployment rate was even lower, at 2.3 percent. **Table 1.16** contains a comparative analysis of each county’s unemployment rate for the last 20 years, recorded from the month of April for each year.

**Table 1.16:** Unemployment Rates by County, April 2000 to April 2020

County	2000	2005	2010	2015	2020
Blount	2.8%	3.3%	9.8%	5.1%	9.4%
Chilton	3.3%	3.3%	10.2%	5.1%	12.1%
Jefferson	3.3%	3.9%	10.1%	5.3%	17.4%
Shelby	2.2%	2.7%	6.9%	3.8%	9.2%
St. Clair	3.0%	3.5%	10.0%	4.8%	13.1%
Walker	5.2%	3.9%	12.5%	6.7%	12.9%
Regional Average	3.3%	3.4%	9.9%	5.13%	12.3%

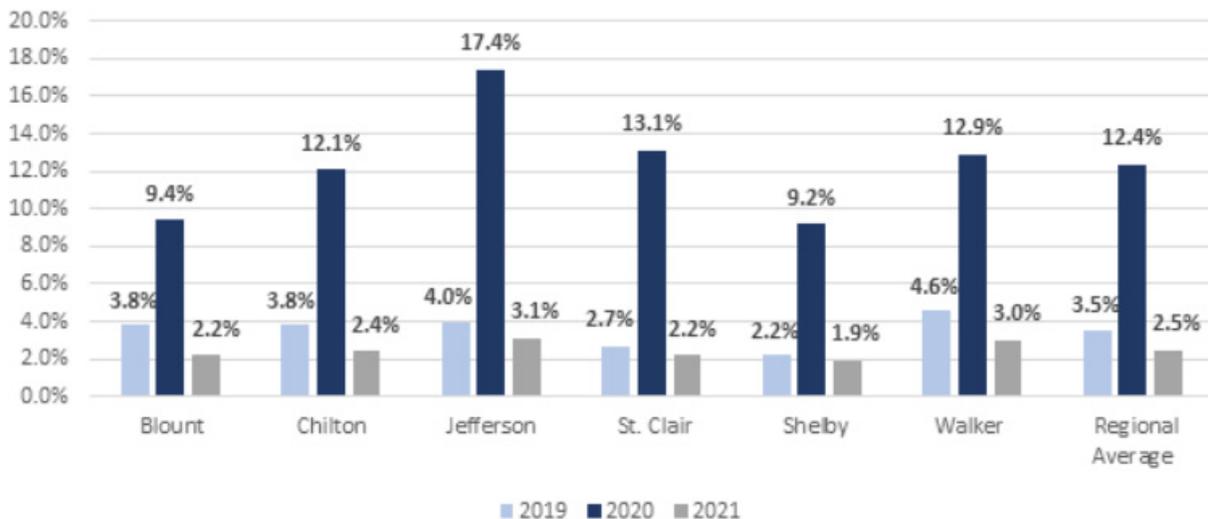
Source: Federal Reserve Bank of St. Louis

13 Amy Yurkanin, “The pandemic ‘she-cession’ could bolster efforts to help women workers in Alabama,” Alabama Local News, Advance Local, March 5, 2021, <https://www.al.com/news/2021/03/the-pandemic-she-cession-could-bolster-efforts-to-help-women-workers-in-alabama.html>.

Despite the progress made towards lowering levels of unemployment, the shutdowns resulting from the pandemic severely impacted the unemployment rates for the region by April 2020. As seen in Figure 1.25, the regional unemployment rates increased by over 250 percent from 2019 levels. The highest unemployment rates occurred in Jefferson County, which experienced an increase of over 330 percent. Blount County had the smallest increase in unemployment, but the rate still grew by nearly 150 percent from 2019. These large increases are likely due to the significant job loss within the region, primarily in the Leisure and Hospitality industry. The Alabama Department of Labor estimated that more than 11,000 jobs were lost in this sector for the region by July 2020 when compared to employment levels a year prior.

Despite large losses in jobs and employment opportunities on the onset of the pandemic, the region proved to be economically resilient as unemployment rates in April 2021 were lower across every county than pre-pandemic levels. However, it is important to note that although these rates are low, they do not include discouraged workers or those not currently seeking employment. It is likely those actually unemployed within the region are larger than represented, especially considering the “Great Resignation,” during which reports estimate 250,000 workers in Alabama left their jobs towards the end of 2021.<sup>14</sup> Figure 1.25 illustrates the unemployment rate changes for each county from April 2019 to April 2021. Jefferson County experienced the great swing in employment rates, decreasing from over 17 percent in April 2020 to 3 percent in April 2021. Shelby County experienced the smallest change in unemployment rates across the timeframe, increasing to 9 percent in 2020 and then dropping to less than 2 percent in 2021.

**Figure 1.25:** Unemployment Rates by County, April 2019 to April 2021



Source: Federal Reserve Bank of St. Louis

**EMPLOYMENT TO POPULATION RATIO**

Another measurement used to analyze labor force trends is the employment to population (EP) ratio. This statistical metric is not as susceptible to seasonal fluctuations in employment as the unemployment rate is, and it includes outlying populations such as discouraged workers, who are typically excluded from unemployment calculations. In other words, this ratio illustrates the number of people working as

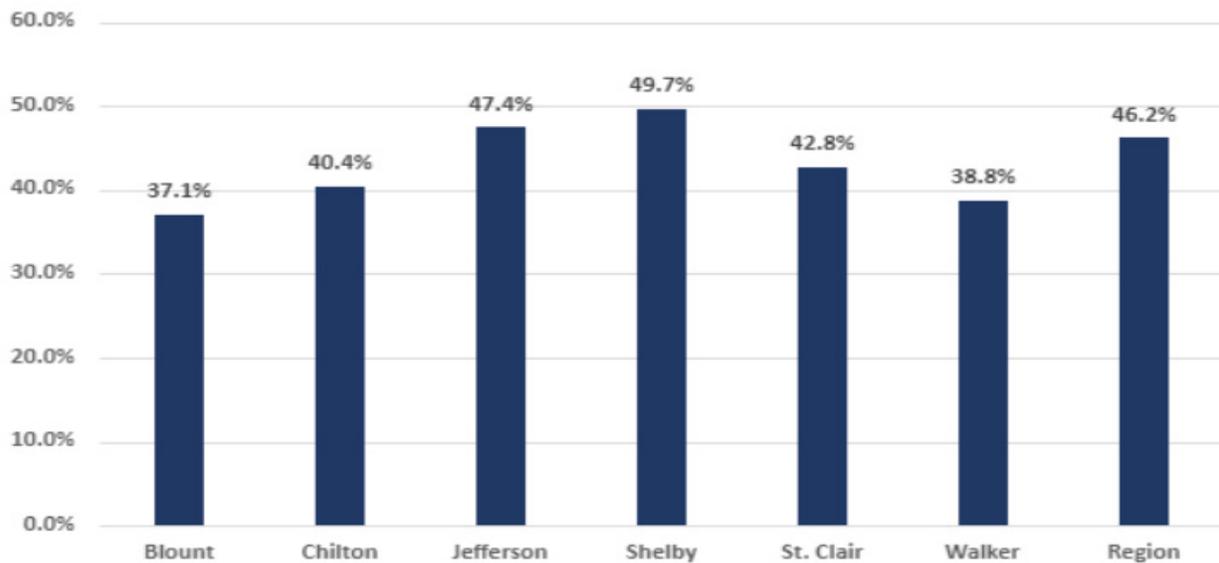
14 Thornton, William. “It’s now or never’: 250,000 Alabamians left their jobs during ‘The Great Resignation,’” Alabama Local News, Advance Local, January 19, 2022, <https://www.al.com/business/2022/01/its-now-or-never-250000-alabamians-left-their-jobs-during-the-great-resignation.html>.

a percentage of the total labor force population, or those over the age of 16. **Figure 1.26** compares each of the county ratios and lists the regional average ratio. Shelby County has the highest ratio with nearly 50 percent employed, while Blount County has the lowest with 37 percent employed. These rates are lower than the state and federal ratios. The State of Alabama had an employment to population ratio of 56% in 2019, while the national rate was approximately 60 percent.

Source: American Community Survey Data, 2021

In general, any EP ratio less than 50 is considered low, and low ratios indicate a large share of the working population is not involved directly in market-related activities because they are either unemployed or out of the labor force altogether. These relatively low rates may be an effect of several events, including the

**Figure 1.26:** Employment to Population Ratio, 2021



“Great Resignation” or the uncertainty for working parents regarding their children’s schooling due to the pandemic.<sup>15</sup>

**UNEMPLOYMENT INSURANCE CLAIMS**

Another factor to consider when evaluating the region’s unemployment is the number of unemployment insurance claims submitted. According to the Alabama Department of Labor’s 2019 Annual Report, the State of Alabama reported 122,656 unemployment insurance claims, which had decreased by nearly 8 percent since 2018. However, this level rose by over 350 percent in 2020. The State of Alabama projected an estimated 891,839 total claims between March and December, potentially attributed to business closures as a result of the pandemic. The industry with the largest number of claims was Unclassified Establishments, followed by Manufacturing. The occupational sector with the largest number of claims was Production, followed by the Food Preparation and Serving Related sector. See **Tables 1.17 and 1.18** for the list of the top five industries and occupational sectors with the largest statewide unemployment insurance claims.

15 Nicole Zedeck, “People leaving the workforce at alarming rates; many calling it ‘The Great Resignation,’” WAAY 31, Allen Media Broadcasting, January 11, 2022, [https://www.waaytv.com/news/people-leaving-the-workforce-at-alarming-rates-many-calling-it-the-great-resignation/article\\_b5b8a498-7271-11ec-997c-d3a27b69fadd.html](https://www.waaytv.com/news/people-leaving-the-workforce-at-alarming-rates-many-calling-it-the-great-resignation/article_b5b8a498-7271-11ec-997c-d3a27b69fadd.html).

**Table 1.17:** Top Five Industries with the Largest Unemployment Insurance Claims in Alabama, 2020

Industry	Number of Claims	Percent of Total Claims
Unclassified Establishments	163,244	18%
Manufacturing	86,928	10%
Accommodation and Food Services	66,097	7%
Administration Support, Waste Management, Remediation	56,136	6%
Retail Trade	50,581	6%
<b>Total Top 5 Industry Sector Claims</b>	<b>422,986</b>	<b>47%</b>

Source: Alabama Department of Labor, 2020

**Table 1.18:** Top Five Occupation Sectors with the Largest Unemployment Insurance Claims in Alabama, 2020

Occupation Sector	Number of Claims	Percent of Total Claims
Production	80,778	9%
Food Preparation and Serving Related	64,817	7%
Office and Administration Support	57,502	6%
Sales and Related	50,666	6%
Transportation and Materials Moving	39,683	4%
<b>Total Top 5 Occupation Sector Claims</b>	<b>293,446</b>	<b>33%</b>

Source: Alabama Department of Labor, 2020

## RESIDENTIAL OCCUPATION CHARACTERISTICS

Occupational concentrations reflect the income and education levels that are necessary for employment in a particular area. In addition, this measure can signify the strengths and weaknesses of the regional job market by identifying any potential employment areas that are at risk for automation or most susceptible during a disaster.

The Greater Birmingham region’s major occupation areas include a wide variety of industries, ranging from office administrative support to transportation and health care. The smallest sectors of employment are also from a diverse line of industries, including forestry, computer and mathematical jobs. **Tables 1.19 and 1.20** lists the 10 occupations with the largest or least employment within the region as a percentage of total employment. When compared to 2019, most occupations experienced a decline in the total percentage of employment while also keeping their rank within the top 10 occupations. In contrast, however, jobs within the construction industry grew at a rate to be included within the top 10 largest occupations, removing educational services from the list.

**Table 1.19:** Occupational Groups by Largest Total Employment, 2020

<b>Top 10 Occupational Groups: Largest Employment</b>	<b>Employment</b>	<b>Percent of Total</b>
<b>Office and administrative support</b>	69,650	14.0%
<b>Sales and Related</b>	54,740	11.0%
<b>Food Preparation and Serving Related</b>	41,110	8.3%
<b>Healthcare Practitioners and Technical</b>	40,890	8.2%
<b>Transportation and Material Moving</b>	39,660	8.0%
<b>Production</b>	32,800	6.6%
<b>Management</b>	27,270	5.5%
<b>Business and Financial Operations</b>	26,930	5.4%
<b>Construction and Extraction</b>	24,410	4.9%
<b>Installation, Maintenance, and Repair</b>	24,180	4.9%

Source: U.S. Bureau of Labor Statistics, 2020

**Table 1.20:** Occupational Groups by Smallest Total Employment, 2020

<b>Top 10 Occupational Groups: Least Employment</b>	<b>Employment</b>	<b>Percent of Total</b>
<b>Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders</b>	30	0.006%
<b>Animal Control Workers</b>	30	0.006%
<b>Physics Teachers, Postsecondary</b>	30	0.006%
<b>Forest and Conservation Technicians</b>	30	0.006%
<b>Geoscientists</b>	30	0.006%
<b>Pump Operators</b>	30	0.006%
<b>Ambulance Drivers and Attendants</b>	40	0.008%
<b>Jewelers and Precious Stone/Metal Workers</b>	40	0.008%
<b>Desktop Publishers</b>	40	0.008%
<b>Financial Clerks</b>	40	0.008%
<b>Baggage Porters and Bellhops</b>	40	0.008%

Source: U.S. Bureau of Labor Statistics, 2020

Assessing the top three largest occupational areas helps to explain the expansive job loss experienced in the region by the pandemic. According to Alabama’s Department of Labor, the Leisure and Hospitality and Professional and Business Services sectors comprised nearly 15,000 of the jobs lost in the state as of August 2020. It is likely that the losses in these large employment areas contributed to the significant employment loss in the region during the pandemic.

**WAGE AND SALARY LEVELS**

Wage and salary levels are critical factors in employment decisions, and they are often indicative of the income levels and earnings of consumers within a region. Workers rely on a living wage to accommodate their needs, and businesses are interested in paying workers a competitive wage to attract and retain skilled labor. For this report, wages recorded for the Greater Birmingham region are evaluated by occupational group and location. It is important to note that these averages are used as overall descriptions of wage capacity for the area, considering the combined earnings of both hourly and salary compensated workers. They are not necessarily illustrative of the median wages earned within the area, since occupations held by residents likely vary across earnings levels.

It is also important to note that the salary and wage levels for residents in 2020 may be slightly misleading, due to the nature of the unemployment trends in the region due to the pandemic. Lower paid occupations are often more susceptible to loss during an economic downturn, thereby removing those earnings from the wage calculation for this timeframe. Therefore, the changes of median wages may appear stable or unchanging, but they may not be completely reflective of the loss of wages from the jobs lost during the pandemic.

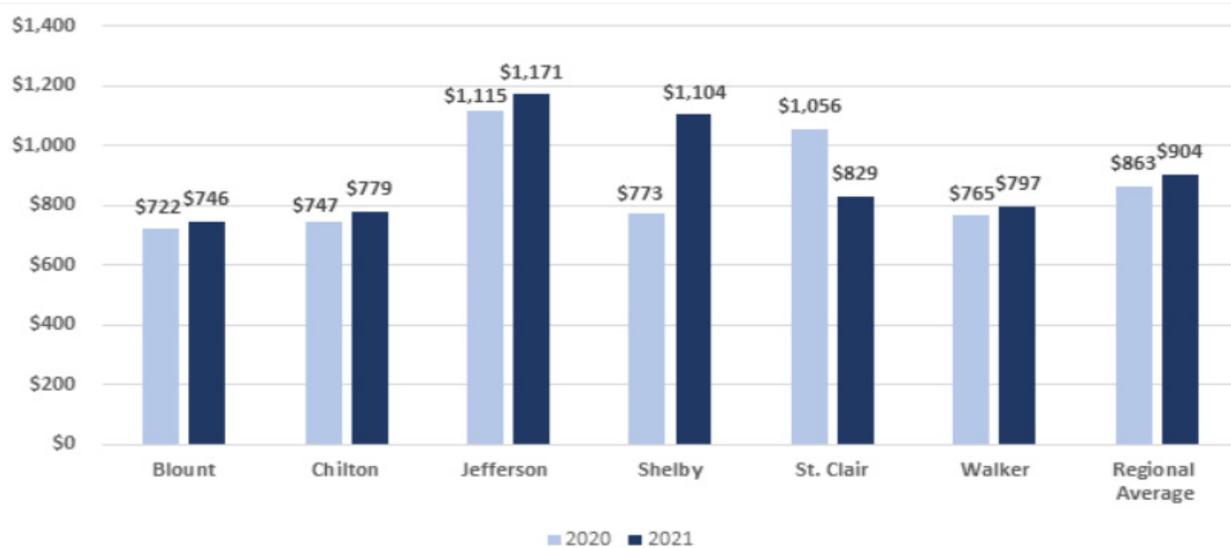
**Table 1.21** lists the average weekly wages by county according to BLS data from 2019-2021, as well as the percent changes between 2019-2020 and 2020-2021. The average wage levels for the region declined at an average of 3 percent between 2019 and 2020, likely due to the increased job loss within the region, where the weekly wage average declined from \$888 to \$863 in 2020. By 2021, wages had risen across the region, with the largest inclines occurring within St. Clair County. Regionally, wages increased by an average of 5 percent from 2020 to 2021, likely due to businesses reopening and workers returning to work. For comparison purposes, **Table 1.22** lists the average hourly wages across the region, along with the percent changes from 2019-2020 and 2020-2021.

**Table 1.21:** Average Weekly Wage Rates by County, 2019 to 2021

County	2019	2020	Change: 2019-2020	2021	Change: 2020-2021
<b>Blount</b>	\$730	\$722	-1.1%	\$746	3.3%
<b>Chilton</b>	\$796	\$747	-6.2%	\$779	4.3%
<b>Jefferson</b>	\$1,141	\$1,115	-2.3%	\$1,171	5.0%
<b>Shelby</b>	\$796	\$773	-3.9%	\$1,104	4.5%
<b>St. Clair</b>	\$1,099	\$1,056	-2.9%	\$829	7.2%
<b>Walker</b>	\$768	\$765	-0.4%	\$797	4.2%
<b>Regional Average</b>	\$888	\$863	-2.8%	\$904	4.8%

Source: U.S. Bureau of Labor Statistics, 2019 to 2021

Figure 1.27: Weekly Wage Comparison, 2020 to 2021



Source: U.S. Bureau of Labor Statistics, 2020 to 2021

Table 1.22: Average Hourly Wage Rates by County, 2019 to 2021

County	2019	2020	Change: 2019-2020	2021	Change: 2020-2021
Blount	\$18.25	\$18.05	-1.1%	\$18.65	3.3%
Chilton	\$19.90	\$18.68	-6.2%	\$19.48	4.3%
Jefferson	\$28.53	\$27.88	-2.3%	\$29.28	5.0%
Shelby	\$19.90	\$19.33	-2.9%	\$27.60	42.8%
St. Clair	\$27.48	\$26.40	-3.9%	\$20.73	-21.5%
Walker	\$19.20	\$19.13	-0.4%	\$19.93	4.2%
Regional Average	\$22.20	\$21.58	-2.8%	\$22.61	4.8%

Source: U.S. Bureau of Labor Statistics, 2019 to 2021

Since these measurements can be impacted by the occupations held by residents, **Table 1.23** lists the average hourly wages of the top 5 highest paid and lowest paid occupational groups for the region. These regional averages are compared to the national averages for each occupation. As depicted in the table below, most occupations, even the highest paid ones, earn less per hour in the Birmingham region than the national average. Most striking is the healthcare practitioner occupation group, which on average earn nearly 18 percent less than the average for the United States.

Several factors can contribute to these differences. One reason could be the relatively low cost of living for the State of Alabama. According to a 2021 report from the Missouri Economic Research and Information Center, Alabama was ranked in fourth place in terms of low costs of living, behind Mississippi, Kansas, and Oklahoma.<sup>16</sup> Another possible explanation for the large difference in hourly earnings is the minimum wage. Though Alabama currently uses the federal minimum wage rate, many states have higher minimum wages than the federal rate of \$7.25 an hour. This would cause a higher

16 State of Missouri, Missouri Economic Research and Information Center, “Cost of Living Data Series,” Official State of Missouri Website, Accessed June 16, 2022, <https://meric.mo.gov/data/cost-living-data-series>.

average for the national rate and increase the difference between the Birmingham region and the United States.

**Table 1.23:** Average Hourly Wages for the Top Five Highest Paid Occupations, 2020

Occupation Group	US	Birmingham Region	Difference
<b>Management</b>	\$58.88	\$55.45	-5.8%
<b>Legal</b>	\$52.71	\$42.49	-19.4%
<b>Computer and mathematical</b>	\$45.08	\$39.46	-12.5%
<b>Healthcare practitioners and technical</b>	\$40.21	\$33.19	-17.5%
<b>Architecture and engineering</b>	\$42.69	\$39.02	-8.6%

Source: U.S. Bureau of Labor Statistics, 2020

**Table 1.24:** Average Hourly Wages for the Top Five Lowest Paid Occupations, 2020

Major Occupation Group	US	Birmingham Region	Difference
<b>Food preparation and serving related</b>	\$12.82	\$10.85	-15.4%
<b>Personal care and service</b>	\$15.03	\$12.92	-14.0%
<b>Healthcare Support</b>	\$14.91	\$13.00	-12.8%
<b>Building and grounds cleaning and maintenance</b>	\$15.03	\$13.36	-11.1%
<b>Farming, fishing, and forestry</b>	\$15.07	\$16.68	10.7%

Source: U.S. Bureau of Labor Statistics, 2020

**COMMUTER STATISTICS**

Analyzing the residents’ locations of work can be used to evaluate concentrations of employment and analyzing commuting trends. Though commuting data for 2020 has not been released, it is expected that these commuting patterns were interrupted by the pandemic. In addition to layoffs across industries (as described in Section I), the shutdowns led to increased teleworking. Early research on COVID-19 and remote work indicates that by the first week of April 2020, 34.1 percent of surveyed employees were commuting to work, while 11.8 percent of surveyed employees had been laid off or furloughed.<sup>17</sup> This research found 32 percent of respondents from the South had started teleworking completely by the first week of April 2020. However, the Southern United States had the lowest fraction of workers switching to remote work, as well as the highest fraction of workers still commuting to work. Furthermore, as the pandemic spread across the nation in following months and more businesses, cities, and states shutdown, the number of employees moving to entirely remote work, or a hybrid work model, may have increased significantly. These combined outcomes likely drove down travel rates, especially towards the metropolitan core of the region.

17 Erik Brynjolfsson et al., “COVID-19 and Remote Work: An Early Look at US Data,” National Bureau of Economic Research Working Paper Series (2020), <https://mitsloan.mit.edu/shared/ods/documents?PublicationDocumentID=6322>, 3.

**A NOTE ON THE STUDY OF COVID-19 AND REMOTE WORK**

From April 1-5, 2020, a group of researchers from the Massachusetts Institute for Technology, Stanford University, and the National Bureau of Economic Research surveyed a nationally representative sample of the U.S. population. In total, 25,000 responses were gathered.

Pre-pandemic estimates indicate that Jefferson County had the highest percentage of residents working within its jurisdiction at 87 percent. Blount County, on the other hand, had the highest percentage of residents working outside its jurisdiction, with 67 percent of residents commuting outside the county. Many factors can explain why individuals travel outside of his or her county of residence for work, such as better employment opportunities or access to employment based on skill level.

**Table 1.25:** Place of Work of Regional Workers Age 16+, 2018

County	In County	In County Percent	Outside County	Outside County Percent	Outside State	Outside State Percent
<b>Blount</b>	6,861	32.4%	14,167	67.0%	120	0.6%
<b>Chilton</b>	7,881	45.8%	9,051	52.6%	275	1.6%
<b>Jefferson</b>	260,397	87.5%	34,069	11.5%	3,004	1.0%
<b>Shelby</b>	53,914	51.7%	49,098	47.0%	1,371	1.3%
<b>St. Clair</b>	14,824	38.9%	22,908	60.1%	377	1.0%
<b>Walker</b>	16,272	67.2%	7,607	31.4%	331	1.4%
<b>Walker</b>	16,272	67.2%	7,607	31.4%	331	1.4%

Source: American Community Survey Data, 2018

In addition, the location of employment affects the commuting characteristics of an area. Current commuting trends show that workers in all areas are becoming more willing to drive longer distances to and from work, possibly due to more and more people moving to suburbs and commuting into metropolitan areas for work. This is true within the Greater Birmingham region, as the daily travel times for workers were reported to average nearly 30 minutes in 2018. However, this rate is slightly higher than the average of the United States, which is 26 minutes. **Table 1.26** lists the average commuting times that employees 16 years or older take to work for each county in the region. Jefferson County has the lowest commuting time at 24 minutes, and Blount County has the highest at over 33 minutes. These times are reflective of the number of workers traveling a farther distance for work, as shown in **Table 1.25**.

**Table 1.26:** Average Commute Time by County, 2018

County	Average Commute Time (Minutes)
<b>Blount</b>	33.4
<b>Chilton</b>	32.1
<b>Jefferson</b>	24.3
<b>Shelby</b>	28.9
<b>St. Clair</b>	29.6
<b>Walker</b>	28.4
<b>Regional Average</b>	29.45

Source: American Community Survey Data, 2018

Commuting patterns in the region are indicative of popular transportation modes. Workers within the region overwhelmingly rely on single-person commuting for transportation. In 2018, nearly 85 percent of employees drove alone to work. This can often contribute to increases in the density of drivers on the road and longer commute times. The county with the highest percentage of workers participating in single-person commutes was St. Clair County, with a rate of 86.6 percent. Of those taking other modes of

transportation, an average of less than 10 percent of workers carpool, and an average of one percent of workers rely on public transportation. The number of people carpooling to work was the highest in Chilton County, and the county with the largest use of public transportation was Jefferson County. **Table 1.27** lists the transportation modes used within each county to get to and from work.

**Table 1.27:** Modes of Commuting Transportation by County, 2018

Counties	Drive Alone	Carpool	Public Transportation	Work from Home	Other
<b>Blount</b>	86.2%	10.4%	0.1%	2.3%	1.0%
<b>Chilton</b>	83.6%	12.5%	0.0%	2.5%	1.4%
<b>Jefferson</b>	83.7%	9.8%	1.8%	3.1%	2.6%
<b>Shelby</b>	86.1%	7.3%	0.0%	5.2%	1.4%
<b>St. Clair</b>	86.6%	9.1%	0.4%	2.5%	1.5%
<b>Walker</b>	85.2%	10.5%	0.4%	2.2%	1.9%
<b>Region</b>	84.6%	9.4%	1.1%	3.4%	2.1%

Source: American Community Survey Data, 2019

## CHAPTER SUMMARY

### REGIONAL DEMOGRAPHICS

- The region has experienced consistent population growth, at a 12 percent increase, within the last two decades, and it is expected to grow by approximately 3 percent by 2025.
- The region’s median age ranges from 39 to 44 years—this range is reflective of the Alabama state median age of 39.3 years.
- The 65-year and older age block has increased to 18 percent in the last two decades. This increase will potentially increase the demand for healthcare services and workforce development needs in the region as more people choose to retire.
- The Greater Birmingham Region is becoming increasingly more diverse, tying into increases in economic prosperity and growth.
- The education levels within the Greater Birmingham region are higher than the State of Alabama average, with over 30 percent of the residents within the region having at least a bachelor’s degree.
- Ownership of housing units outweighs renter rates throughout the region. On average, 67 percent of those occupying housing units are owners, while 21 percent of occupiers are renters.

## REGIONAL LABOR FORCE

- Office and administrative support accounts for the largest portion of occupations in the region, with 14% of the labor force working in this sector.
- Sales is the second largest occupation, contributing to 11% of the total workforce.
- Educational Services has been within the top ten largest occupations in the region. However, in 2020, Construction and Extraction occupations replaced Educational Services.
- In October 2019, the unemployment rate for the State of Alabama hit a 20-year low of 2.7 percent and the unemployment rate for the Greater Birmingham region reached 2.3 percent.

## REGIONAL INCOME

- Despite high education rates, the average median household income for the Greater Birmingham area was approximately \$56,601 in 2021.
- Income levels increased across all six counties when compared to 2000 rates.
- The estimated median disposable income in 2020 in the Greater Birmingham region was \$44,260.
- Over 26 percent of regional households have less than \$25,000 a year in disposable income, and nearly 52 percent have less than \$50,000.
- Shelby County's median disposable income is the highest in the region, with an estimated amount of \$59,488.
- Chilton County has the lowest reported median disposable income of \$35,342.

## PANDEMIC IMPACTS

- Office and administrative support accounts for the largest portion of occupations in the region, with 14% of the labor force working in this sector.
- Sales is the second largest occupation, contributing to 11% of the total workforce.
- Educational Services has been within the top ten largest occupations in the region. However, in 2020, Construction and Extraction occupations replaced Educational Services.
- In October 2019, the unemployment rate for the State of Alabama hit a 20-year low of 2.7 percent and the unemployment rate for the Greater Birmingham region reached 2.3 percent.

## CHAPTER TWO

# INDUSTRY AND EMPLOYER CONCENTRATIONS

Historically, the success of the region's economy depended heavily on the iron and steel industries. As the area became less reliant on these industries, it has shifted its focus to other industry sectors. This diversification has increased the region's economic resilience in recent decades. As a result, multiple types of industries have been established within the region, and many have expanded at impressive rates. According to estimates from the Birmingham Business Alliance, growth across the region has accounted for creating over 14,000 jobs and attracting approximately \$3.27 billion in private investments since 2015 alone.

Industrial expansion has also contributed to the region's overall employment growth, which has experienced a 3 percent increase since 2010. By 2020, the largest sectors in the region included Healthcare and Social Assistance, Education Services, Retail Trade, and Finance. These sectors constitute nearly half of the region's total employment. The steady expansion in these industries over the last ten years has been beneficial to the economy, and demand projections confirm the expansion in these sectors, primarily in Healthcare and Social Assistance.

Main Ideas:

- Describe the most prominent industries within the regional economy and the outlook of those industries
- Identify the industries most impacted by the pandemic
- Analyze the health of small businesses within the region

## REGIONAL EMPLOYER CHARACTERISTICS

Employer concentrations describe the prominent employment opportunities and necessary skillsets required within a market area. These concentrations also reflect the potential limits existing for job mobility within the region, as some sectors of employment have less transferability than others. This transferability can be a key component when evaluating economic impacts by job loss and unemployment, as workers search for additional employment opportunities within their local area.

## LARGEST REGIONAL EMPLOYERS

The largest employers within the region represent entities with the most employees. According to the Birmingham Business Alliance, four of the ten largest employers in the region are within the Education and Healthcare Service sectors. The other sectors represented in the top ten list include financial services, telecommunications, and public and private agencies. **Table 1.28** lists the top ten employers within the region with its estimated employment.

## SECTORS BY EMPLOYMENT

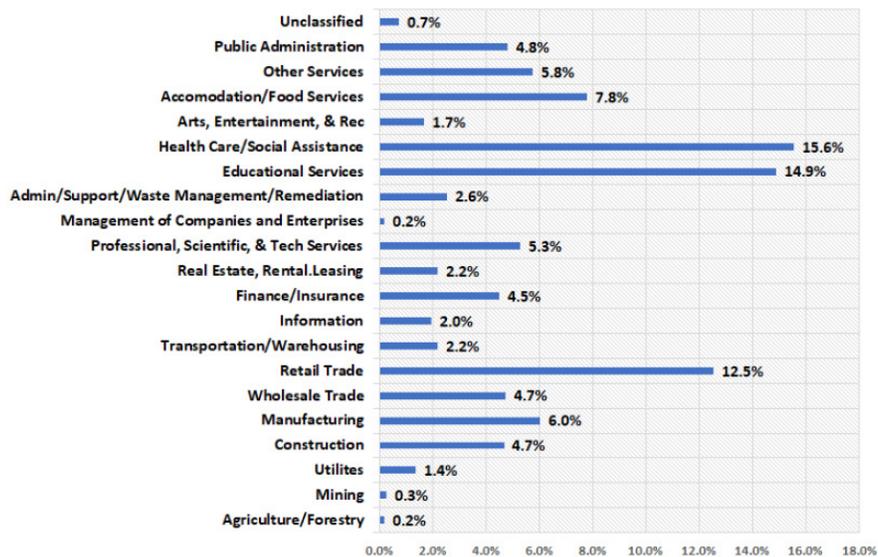
Sectors of employment is a metric used to identify jobs within a given area. As shown in **Figure 1.28**, the largest sector by employment within the Greater Birmingham region is Health Care and Social Assistance, followed by the Educational Services and Retail Trade sectors. These three sectors alone account for nearly 243,000 of the region's workers, or 43 percent. The smallest sectors by employment are Agriculture/Forestry, Mining, and Management of Companies and Enterprises, which combined have less than one percent of total employment.

**Table 1.28:** Largest Regional Employers

Employer	Number of Employees	Industry
University of Alabama at Birmingham	23,000	Education & Healthcare Services
Regions Financial Corporation	9,000	Financial Services, Banking
St. Vincent's Health System	5,100	Healthcare Services
Children's of Alabama	5,000	Specialized Healthcare Services
AT&T	4,517	Telecommunications
Brookwood Baptist Health	4,459	Healthcare Services
Jefferson County Board of Education	4,400	Government, Education Services
City of Birmingham	4,200	Government, City Administration
Blue Cross-Blue Shield of Alabama	3,100	Financial Services, Insurance
Alabama Power Company	3,092	Utilities Services, Electrical

Source: Birmingham Business Alliance, Metropolitan Birmingham Largest Employers

**Figure 1.28:** Sectors by Number of Employees



Source: Regional Planning Commission of Greater Birmingham

**LOCATION QUOTIENT RATIO**

A location quotient is a statistical analysis tool used to evaluate a region’s distribution of employment, by industry, relative to national levels. This evaluation can be meaningful in terms of measuring the impact of the pandemic on employment sectors. These quotients are calculated by comparing the local employment ratio to the national employment ratio for a particular industry. The formula is described below, and **Table 1.29** lists the explanations for different ratio values.

**Table 1.29:** Location Quotient Value Descriptions

LQ Value	Implication
<b>Less than 1</b>	Region has proportionally less workers in the industry than the nation; possible area of future employment growth
<b>Greater than 1</b>	Region has proportionally more workers in the industry than the nation
<b>Equal to 1</b>	Local share of employment for the industry is equal to the national level

For this evaluation, location quotients were calculated for the top five largest employment industries for the region: Healthcare and Social Assistance, Education Services, Retail Trade, Accommodations and Food Services, and Manufacturing. As shown in **Table 1.30**, three of the five industries had location quotients that were greater than 1.0. Education Services had a significantly large quotient, which indicates that educational jobs are much more concentrated within the region relative to national levels. Accommodations and Food Services were approximately equal to the distribution of the national ratio, while Manufacturing had less.

**LOCATION QUOTIENT FORMULA**

$$\left( \frac{\text{Regional Industry Employment}}{\text{Regional Total Employment}} \right) \div \left( \frac{\text{National Industry Employment}}{\text{National Total Employment}} \right)$$

**Table 1.30:** Location Quotients for Birmingham’s Largest Employment Industries, 2020

Industries	Local Employment	National Employment	Location Quotient
<b>Healthcare and Social Assistance</b>	87,882	19,928,500	1.11
<b>Education Services</b>	84,202	3,318,700	6.40
<b>Retail Trade</b>	70,789	15,264,600	1.17
<b>Accommodations and Food Services</b>	44,087	11,381,900	0.98
<b>Manufacturing</b>	34,085	12,227,000	0.70

Source: Regional Planning Commission of Greater Birmingham, Bureau of Labor Statistics, 2020

## REGIONAL INDUSTRY EVALUATION

Evaluating regional industries is a critical aspect of understanding the economic drivers and health of an area. This section will evaluate regional industry clusters, job loss, industry demand projections, and small business conditions to reveal a better understanding of the streams of goods and services created from current businesses activities, as well as potential economic weaknesses or threats posed by industry concentrations.

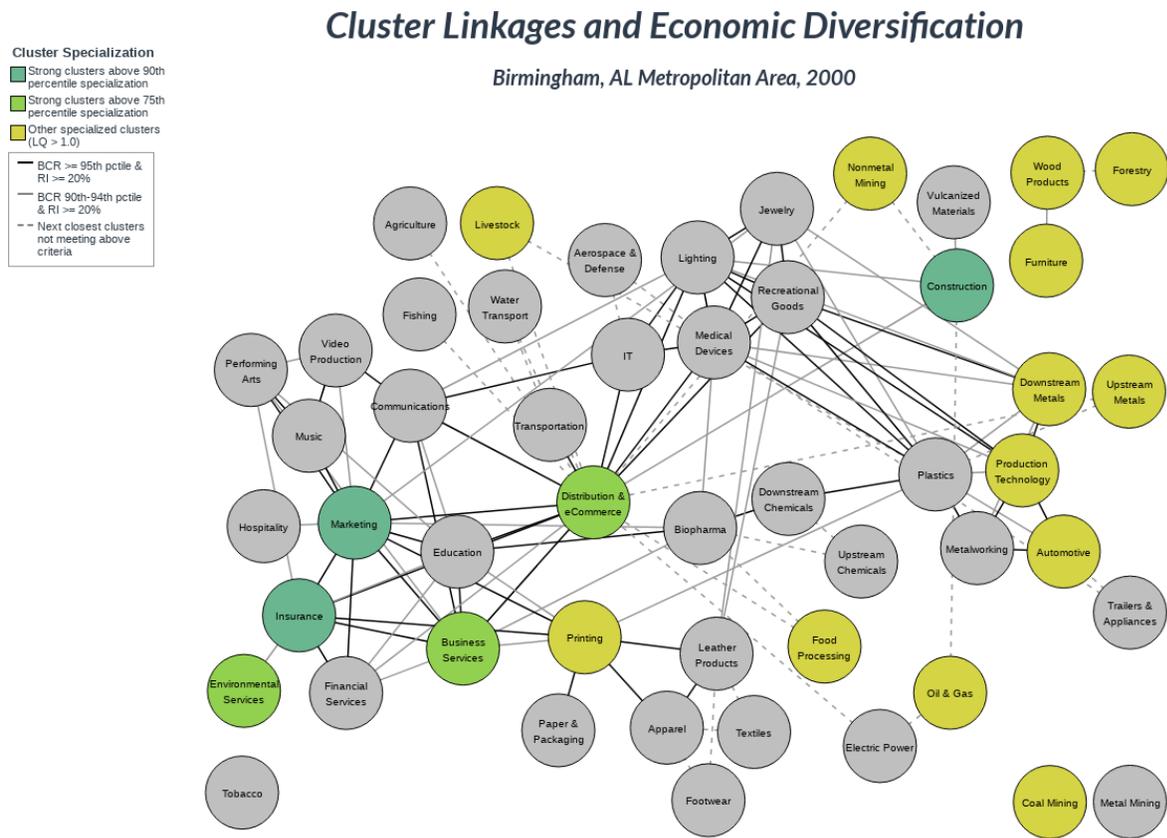
### REGIONAL INDUSTRY CLUSTERS

Industry clusters are important to evaluate when analyzing a region's industry composition. Unlike sector analyses, industry clusters include all services in the value chain of a generally defined industry, from the suppliers to the products. This measurement is useful in painting a fuller picture of the flow of goods and services within a region, as well as describing local economic drivers.

For this analysis, cluster data was reviewed from the U.S. Cluster Mapping Project, funded through the U.S. Department of Commerce. This initiative uses over 50 million data records on industry clusters and regional business environments from across the nation to provide regional economic performance indicators. This information is used to develop a comprehensive list of specialized industry clusters on a regional level.

For the Birmingham region, which includes both Talladega and Cullman micropolitan areas as well as the Tuscaloosa metropolitan area, many industry clusters have increased and decreased over the past two decades. As illustrated in **Figures 1.29 to 1.31**, a cluster assessment of the region's shows the most notable changes have been in industries such as Performing Arts, Business Services, Construction, and Environmental Services. The largest increases, or those industries that were not strong clusters in 2000 but were in 2019, were in Performing Arts, Electric Power, Metalworking, and Communications. The clusters with the most decline, or those who were ranked in high percentiles in 2000 but not in 2019, were in specializations within the Construction, Business Services, and Environmental Services. Though the most recent cluster data available is from 2019, many of the highly ranked clusters are still prevalent economic players in the region economy, and these sectors are discussed more in-depth in the following sections.

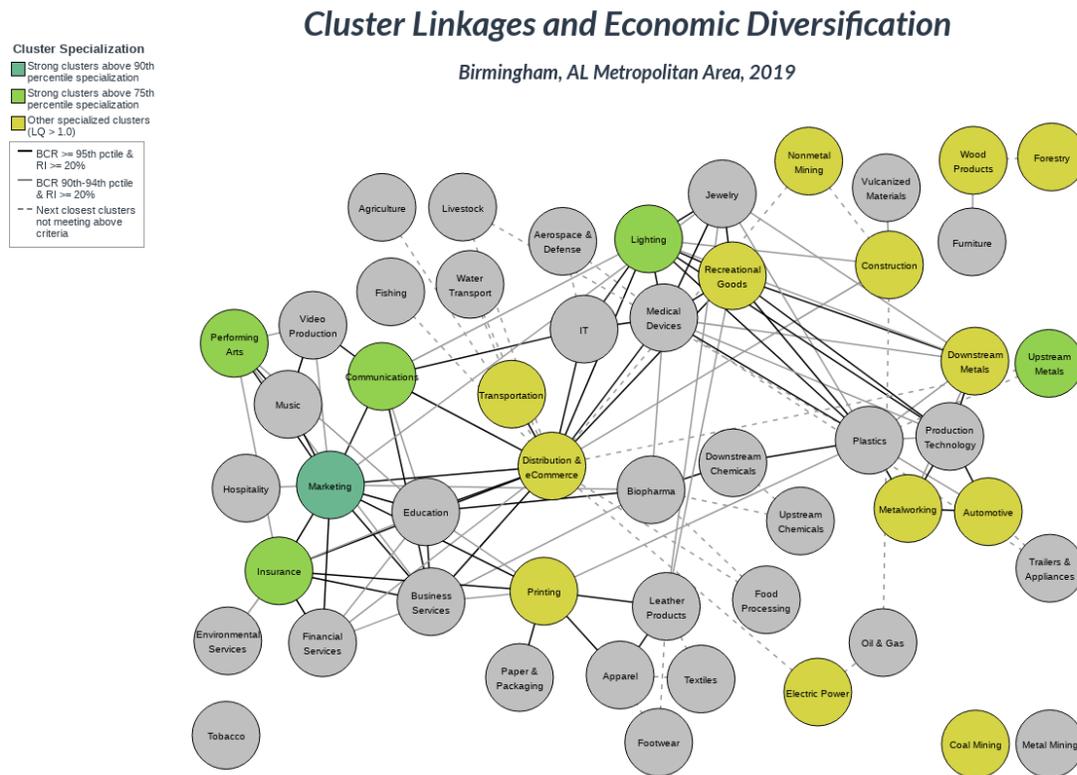
**Figure 1.29:** Industry Cluster Analysis for Birmingham, AL, 2000



Source: U.S. Cluster Mapping, Birmingham, AL Economic Area Cluster Portfolio, 2016



**Figure 1.31:** Industry Cluster Analysis for Birmingham, AL, 2019

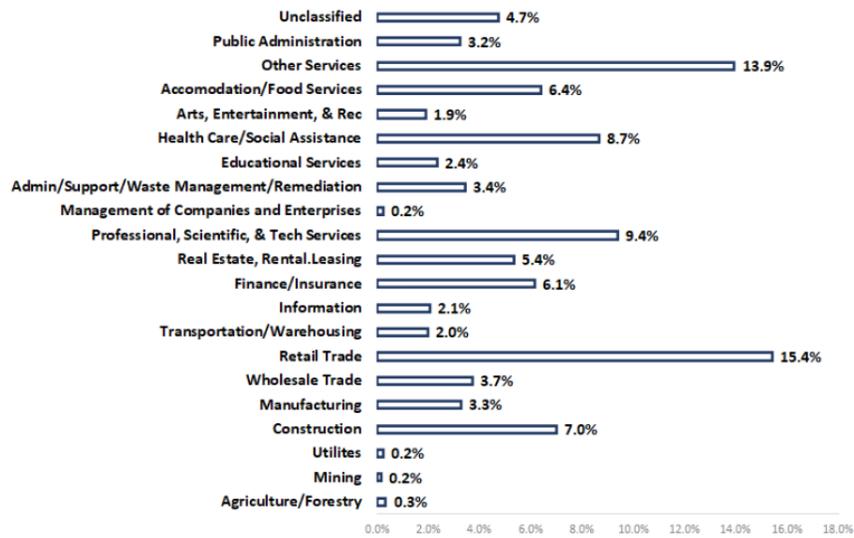


Source: U.S. Cluster Mapping, Birmingham, AL Economic Area Cluster Portfolio, 2016

**SECTORS BY BUSINESS ENTITIES**

In addition to the number of workers, it is also helpful to identify how sectors compare based on the number of business entities within the region. Nearly 40,000 business establishments exist within the region, and they collectively employ over 565,000 people. This can give insight to the composition of the local market. As shown in **Figure 1.32**, Retail Trade is the sector with the most business entities throughout the region, followed by the Other Services and Professional, Scientific, and Technical Services sectors. These areas consist of over 15,500 businesses throughout the region, or nearly 40 percent of business entities.

Figure 1.32: Sectors by Number of Businesses



Source: Regional Planning Commission of Greater Birmingham

### SECTORS BY JOB LOSS

According to the Bureau of Labor Statistics, the top five employment industries in the region experienced job loss due to the pandemic. The sharpest decline in employment occurred within the Leisure and Hospitality sector, which includes Accommodations and Food Services. This sector lost 24,000 jobs between April 2019 and April 2020. Most of the employment loss occurred between March and April 2020, when the sector lost 22,000 jobs. This sector has also experienced the most lag in its recovery. By December 2020, 16,000 jobs were rehired, indicating that 13 percent of jobs from 2019 had yet to be recovered. The Education and Health Services sector experienced the second highest decline in jobs, losing nearly 7 percent of total employment from April 2019 to April 2020; 6,600 jobs were lost from March to April 2020.

However, though each of these sectors experienced losses in employment due to the pandemic, each made substantial gains towards recovery by December 2020 when compared to 2019. Professional and Business Services made a full recovery to 2019 levels, while the Trade, Transportation, and Utilities Services sector hired at a rate that surpassed those in April 2019. **Table 1.31** lists the percent changes from both April 2019 to April 2020 and March to April 2020. The last column lists the percentage of jobs regained by December 2020 from March 2020.

Table 1.31: Job Loss by Sector, 2019 to 2020

Sector	Percent Change: April 2019 to April 2020	Percent Change: March 2020 to April 2020	Percent Jobs Gained Back by December 2020
Education and Health Services	-6.5%	-8.6%	96.3%
Trade, Transportation, and Utilities	3.0%	-4.2%	103.8%
Leisure and Hospitality	-44.8%	-43.5%	87.0%
Professional and Business Services	-7.4%	-6.9%	100.7%
Manufacturing	-4.3%	-3.3%	96.7%

Source: U.S. Bureau of Labor Statistics, 2019 to 2020

**INDUSTRY DEMAND PROJECTION**

However, though employment in the prominent sectors of the region has mostly recovered, several sectors within the region are still experiencing a rapid employment decline. The pandemic may have potentially accelerated this trend, but other advancements have impacted these sectors during recent years. New technologies have automated many jobs, decreasing the demand for various types of employment such as secretaries, bank tellers, and office clerks. Both the Utilities and Information Industries have seen the largest impact by these trends as they are expected to decrease by over 7 percent by 2024.

Other industries, such as Healthcare and Social Assistance and Construction, have grown significantly since 2014 and are projected to increase even more by 2024. Recent trends in the housing market and overall growth of the region may largely account for the expected demand in these and other industries.

**Table 1.32:** Top Five Least Demanded Industries by Projected Growth, 2014 to 2024

Industry	Percent Change
Utilities	-8.7%
Information	-7.0%
Manufacturing	-1.4%
Finance & Insurance	0.9%
Goods Producing Services	2.9%

Source: Alabama Department of Labor, Region 4 Statistics

**Table 1.33:** Top Five Most Demanded Industries by Projected Growth, 2014 to 2024

Industry	Percent Change
Healthcare & Social Assistance	18.6%
Construction	12.3%
Professional, Scientific, & Professional Services	11.7%
Transportation and Warehousing	11.0%
Administrative/Support and Waste Management/Remediation Services	9.6%

Source: Alabama Department of Labor, Region 4 Statistics

**REGIONAL SMALL BUSINESS ANALYSIS**

Small businesses are a critical component of a thriving economy. These establishments stimulate economic growth by providing local employment opportunities and promote innovation at all levels of the supply chain. These positive impacts can be seen across the Greater Birmingham region, as every county has experienced increases in the number of small businesses located in their jurisdiction since 2000. Over 25,000 small business establishments were in the region in 2019, and together they employed over 3 million people. These entities represent an array of industries, including transportation, finance, and healthcare. Analyzing where small businesses are located and what industries they represent is important to understanding how these entities are impacted during times of economic turbulence.

**SMALL BUSINESS BY LOCATION**

When analyzing the small business environment within the Greater Birmingham region, it is important to note where the establishments are concentrated. As shown in **Table 1.34**, over 25,700 small businesses are located within the six-county area. Jefferson County has the highest number of these entities by a large margin, while Blount County has the lowest amount with 706 establishments. The large gap in the

quantity in the number of small businesses between counties can point to many factors such as the availability of resources, support for entrepreneurs and start-ups (loan programs and incubators), and access to consumer and supplier bases.

**Table 1.34:** Small Businesses by County, 2018

County	Number of Small Businesses
Blount	706
Chilton	770
Jefferson	16,402
Shelby	5,271
St. Clair	1,321
Walker	1,234
Regional	25,704

Source: American Community Survey, 2019

### SMALL BUSINESS BY SECTOR

Small businesses exist in every sector in the regional economy. However, in each of the counties in the region, Retail Trade is the leading industry driving small business activity. **Table 1.35** shows that retail establishments made up 16 percent of the region’s small businesses, or over 4,000 entities. Jefferson County has the highest number of establishments at 2,591 while Blount County has the lowest number of retail establishments at 128.

**Table 1.35:** Regional Retail Small Businesses, 2018

County	Total Retail Trade Businesses	Percent of Small Businesses
Blount	128	18.1%
Chilton	148	19.2%
Jefferson	2,591	15.8%
Shelby	689	13.1%
St. Clair	232	17.6%
Walker	274	22.2%
Regional	4,062	15.8%

Source: American Community Survey, 2019

Though Retail Trade is the largest small business industry in all regional counties, the second largest industry is split depending on jurisdiction. An array of service-related industries makes up the second largest number of small businesses in the region, ranging from 12 to 16 percent of establishments.

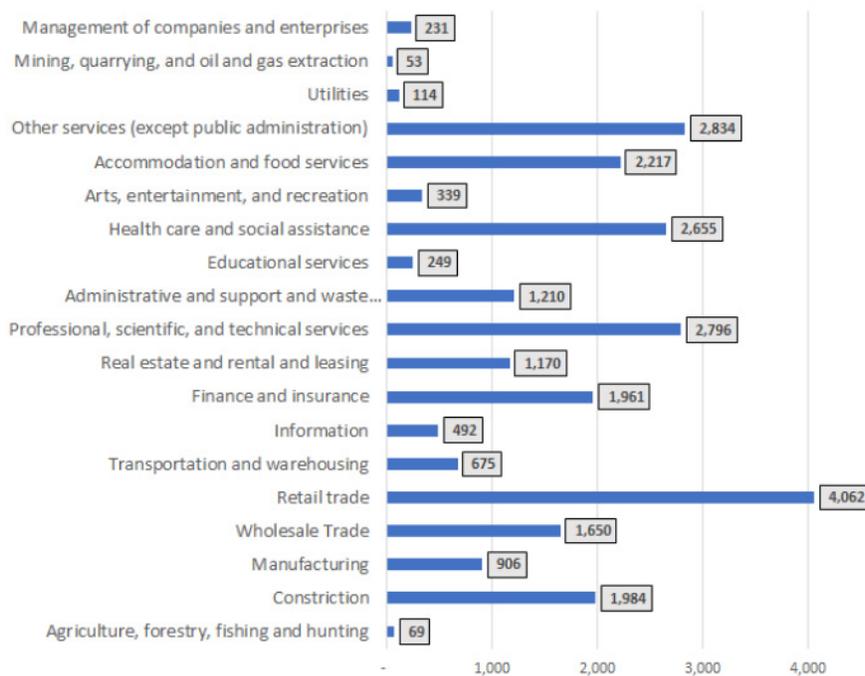
**Table 1.36:** Second Largest Small Business Sectors by County, 2018

County	Small Business Sector	Number of Small Businesses in Sector	Percent of Small Businesses
<b>Blount</b>	Other Services	101	14%
<b>Chilton</b>	Other Services	120	16%
<b>Jefferson</b>	Professional, Scientific, and Technical Services	1913	12%
<b>Shelby</b>	Professional, Scientific, and Technical Services	619	12%
<b>St. Clair</b>	Construction	163	12%
<b>Walker</b>	Health Care and Social Assistance	168	14%

Source: American Community Survey, 2019

The Retail Trade industry has the largest concentration of small businesses by a wide margin, which is demonstrated by the number of retail establishments located in each county. However, there are also high numbers of Other Services; Professional, Scientific, and Technical Services; Health Care and Social Assistance Services; and Accommodation and Food Services establishments throughout the region. The mining sector has the smallest number of small businesses, followed by the agriculture industry. These limited number of businesses are likely due to the declines these industries have had in the region in recent decades.

**Figure 1.33:** Small Businesses by Sector, 2018



Source: American Community Survey, 2019

## CHAPTER SUMMARY

### REGIONAL EMPLOYERS

- Four of the ten largest employers in the region are within the Education and Healthcare Services sector.
- The University of Alabama at Birmingham is the region's largest employer, employing around 23,000 people.
- The regional location quotient indicates that the top three largest sectors of employment are much more concentrated in the region relative to national levels.

### REGIONAL INDUSTRIES

- The most notable changes within the region's industries have been in Apparel, Textile, Plastics, and Environmental Services.
- Strong clusters have emerged in the Plastics, Metalworking, and Communications industries over the course of 20 years.
- Nearly 40,000 business establishments exist in the region, collectively employing over 565,000 people. The Retail Trade sector represents the largest number of business entities, followed by Other Services and Professional, Scientific, and Technical Services.
- 24,000 jobs were lost within the Leisure and Hospitality sector, making it the industry with the largest amount of job loss in the region due to the pandemic. This industry has also experienced the largest recovery lag, with 13 percent of lost jobs yet to be recovered by December 2020.
- The Healthcare and Social Assistance industry is the fastest growing industry in the region with data indicating it will experience a growth rate of 18.6 percent from 2014 to 2024.

### REGIONAL SMALL BUSINESSES

- In 2019, over 25,000 small businesses operated in the region, employing over 3 million people.
- Every county in the region has experienced an increase in the number of small businesses since 2000.
- Retail Trade makes up 16 percent (4,000 entities) of the region's small business establishments and has largest concentration of small businesses in every county, followed by industries such as the Professional, Scientific, and Technical Services sector, the Health Care and Social Assistance sector, the Construction sector, and the Other Services sector.

## CHAPTER THREE

# ECONOMIC STABILITY

The term “economic stability” can be defined in various ways, but it generally describes the state of the economy in the absence of excessive fluctuations, such as high inflation rates or large recessions. The purpose of this chapter is to evaluate the fluctuations of the external economic players crucial to the region’s economic stability, including gross regional product and consumer spending demand, due to the financial shocks caused by the pandemic.

Main Ideas:

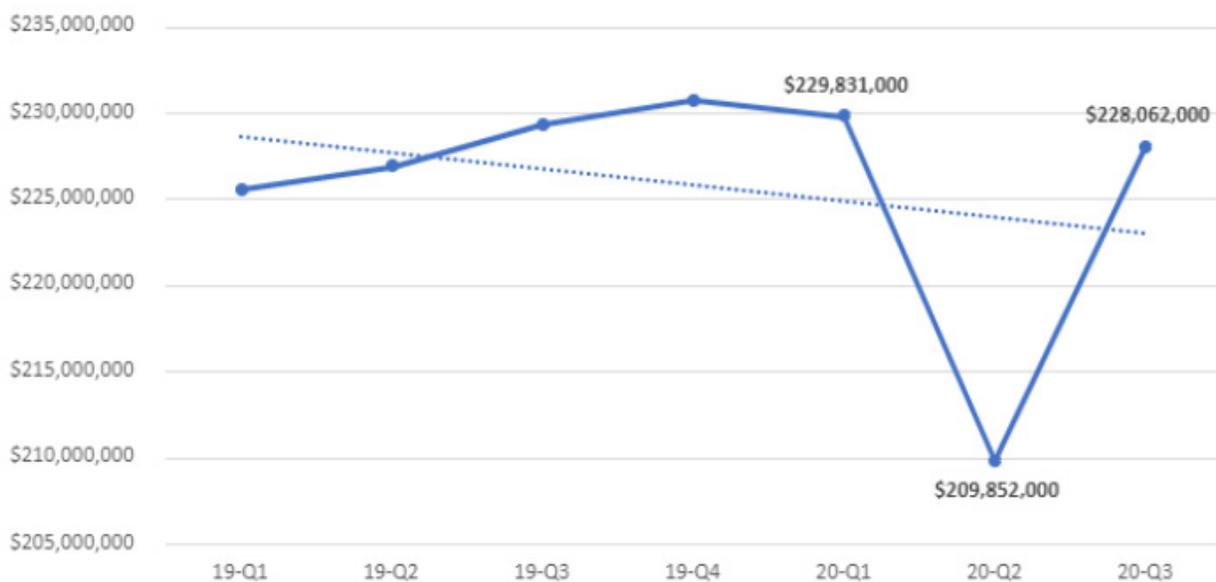
- Evaluate the external economic factors that affect the region’s economic stability
- Determine which external factors are most susceptible to economic fluctuations
- Analyze how consumer behavior shifts during times of economic uncertainty
- Describe which sectors within the retail industry were most impacted by the pandemic

## GROSS REGIONAL PRODUCT

Gross regional product, or GRP, is defined as the total value of goods and services produced in a region over a period of time. This measurement is calculated by adding employee compensation, proprietor income, other property income, and taxes on production and imports generated in an area. In other words, it is measured in the same way as the Gross Domestic Product (GDP) is for a country or state. For this analysis, the GRP will be compared to the levels of GDP changes for the State of Alabama between 2019 and 2020.

The GDP levels for the State of Alabama have consistently increased over the past several years. However, outputs experienced significant fluctuations in 2020. The state’s GDP level declined by 9 percent from December 2019 to June 2020, decreasing from nearly \$230.8 billion to \$209.9 billion. However, during the third quarter of 2020, the state’s GDP increased to 2019 levels, rising by 9 percent from the previous quarter (see **Figure 1.34**). It is projected that the GDP rates for the state will continue to climb as the pandemic effects subside, and vaccines become more widely available.

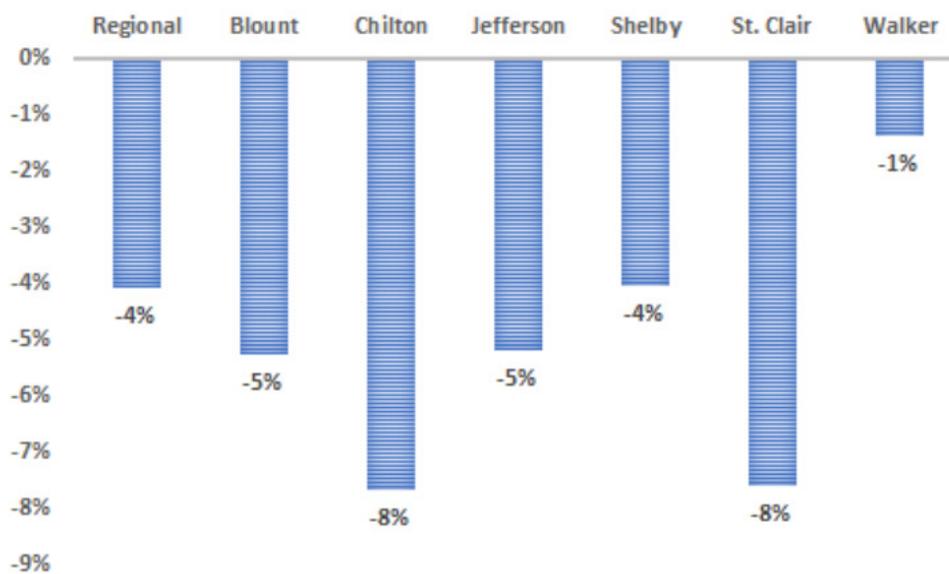
**Figure 1.34:** Change in Alabama GDP from 2019 to 2020



Source: Bureau of Economic Analysis, State of Alabama GDP by Economic Quarter, 2019 to 2020

These trends are reflected on the regional level as well. The Birmingham-Hoover Metropolitan Statistical Area (MSA) was the largest MSA per GRP in the state in 2019, contributing approximately \$69.6 billion to the state’s economy and growing by over 10 percent from 2010 to 2019. However, the closure of businesses and the implementation of stay-at-home orders decreased areas of the region’s GRP for 2020, with the sharpest downturn occurring in the second economic quarter. The GRP declined by 4 percent by June 2020, dropping to approximately \$66.7 billion. The state revenue streams most affected by the economic downturn were taxes on production and imports, including sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments. This rate fell by over 54 percent between 2019 and 2020, declining from \$4.6 billion to \$2.09 billion. **Figure 1.35** illustrates the changes in GRP for each county in the region between 2019 and June 2020.

**Figure 1.35:** Changes in GRP by County, 2019 to 2020



Source: IMPLAN, 2020

## REGIONAL CONSUMER SPENDING

Consumer spending measures the total spending by households within a given timeframe. This metric is a critical component of understanding local demand, or the willingness and ability of customers to buy goods and services. Several factors affect the way consumers spend their income, including purchasing power, item prices, need, potential substitutes, and consumer preferences and expectations. Consumer spending is one of the largest—if not the largest—driver of local economies. The pandemic impacted consumer spending in a variety of ways, such as increases in unemployment, declines in extra income, stimulus spending, and changes in business operations. According to a Bank of America Survey, an estimated 64 percent of individuals reported the pandemic caused a change in their spending behaviors.<sup>18</sup> Evaluating changes in these behaviors between 2019 and 2020 can help predict how consumers’ priorities alter during crises to understand how demand is likely affected in the Greater Birmingham region in the wake of an economic downturn.

18 Megan Leonhart, “64% of Americans changed their spending habits during the pandemic – here’s how,” Your Money Mindset, CNBC LLC., September 29, 2020, <https://www.cnbc.com/2020/09/29/americans-have-changed-their-spending-habits-during-the-pandemic-heres-how.html>.

**CONSUMER SPENDING BY INCOME**

For the purpose of this chapter, consumer spending is evaluated by analyzing the top fifteen spending categories for different household income levels in the first two quarters of 2020 and comparing them to 2019 levels. The goal of this evaluation is to measure how the difference in income affects the goods and services purchased. **Table 1.37** lists the household income groups used for this evaluation, along with the approximate percentage of regional households within each of these categories.

**Table 1.37:** Percentage of Households by Income Level, 2018

Income Category	Percent of Households
Less than \$30,000	28%
\$30,000-\$50,000	18%
\$50,000-\$70,000	15%
\$70,000-\$100,000	15%
\$100,000-\$200,000	19%
Greater than \$200,000	5%

Source: U.S. Census Data, 2018

The percent change between 2019 and 2020 spending for each category is also listed for each income group. This metric represents the degree of change in each spending category between 2019 and 2020 and is included to illustrate how the amount of spending fluctuated in 2020 compared to pre pandemic levels. The change in total spending shares is also included in each income level evaluation. The total spending share represents the amount each household income group spent on each spending category in proportion to the total amount spent on all goods and services. The changes in total spending shares are important to note. Though spending declines occurred in several categories during the pandemic, many of these reductions can be linked to the overall decrease in spending, not just spending on one category.

**SPENDING EVALUATION: ALL INCOME LEVELS**

**Table 1.38** compares the total spending amounts for each income category in 2019 and 2020. As shown, household spending within the region declined by an average of 10 percent. The highest level of decline occurred in the \$100,000 to \$200,000 income group, and those with less than \$30,000 in income experienced the smallest decrease. The total spending amounts shown below for years 2019 and 2020 will be used to compare spending changes for each income level, as well as different spending classifications in the following sections.

**A NOTE ON THE DATA**

The data used for this evaluation was compiled through IMPLAN economic modeling software. The 2020 spending data is based on 2020-Quarter 2 estimates, derived from the Bureau of Labor Statistics and Bureau of Economic Analysis. This dataset was annualized and seasonally adjusted, meant to represent the 2020 economy as if the second quarter of 2020 was representative of the entirety of the year 2020. This dataset was compiled to represent how the whole year would look based on these two quarters of the year. As a result, the composition of household spending did change to reflect the adjusted spending behavior.

**Table 1.38:** Total Spending per Income Level, 2019 to 2020

Income Category	2019 Total Spending	2020 Total Spending	Percent Change
Less than \$30,000	\$5,979,776,023	\$5,497,120,804	-8.1%
\$30,000-\$50,000	\$5,762,770,553	\$5,241,875,696	-9.0%
\$50,000-\$70,000	\$5,568,557,182	\$4,991,615,463	-10.4%
\$70,000-\$100,000	\$7,145,970,009	\$6,474,651,165	-9.4%
\$100,000-\$200,000	\$11,803,788,016	\$10,456,072,927	-11.4%
Greater than \$200,000	\$5,896,579,883	\$5,256,279,274	-10.9%

Source: IMPLAN, 2021

**CONSUMER SPENDING EVALUATION: HOUSEHOLD INCOME LESS THAN \$30,000**

For households earning less than \$30,000, total consumer spending declined by approximately 8 percent, or \$482.6 million, between 2019 and 2020. Housing costs, including renting and owning expenditures, were the largest spending category, comprising over 15 percent of total spending. However, the total amount spent on residential costs decreased for this income level by nearly 9 percent from 2019 to 2020, but its share of total spending declined by around 1 percent on the margin. Healthcare Services, including hospital services, pharmaceuticals, and doctors’ office visits, were the third highest spending category for those earning less than \$30,000. However, though spending on these services declined, the percent of total share of spending on healthcare services increased by over 5 percent. This change was potentially caused by the increase in hospitalizations and illness cases in the region due to the pandemic. The spending category with the largest decline between 2019 and 2020 was non-store retail services, which includes online retailers and retailer vendors. The amount spent on this category declined by over 15 percent, and the percent of total share of spending declined by nearly 10 percent.

The spending categories with the largest increase in the amount spent between 2019 and 2020 were expenses associated with software publishers and colleges and universities. Both groups experienced increases of 25 percent or more when compared to 2019 levels. These categories may be correlated, as attending college level classes likely requires large investments in software due to increasing reliance on technology, especially due to the shift to remote schooling during the pandemic. See **Table 1.39** for a list of spending categories for households with less than a \$30,000 income. The increase in spending on colleges and universities may also be caused by the steadily increasing tuition from year-to-year.

**Table 1.39:** Top Fifteen Spending Categories for Housholds with Income Less Than \$30,000

Category	2019 Spending	2020 Spending	Percent Change	Changes in Total Share of Spending: 2019-2020
Imputed rental services of owner-occupied dwellings	\$472,152,367	\$430,048,412	-8.9%	-1.2%
Tenant-occupied real estate services	\$436,526,806	\$396,184,819	-9.2%	-1.4%
Hospital services	\$389,115,723	\$379,798,353	-2.4%	6.0%
Pharmaceuticals	\$246,295,934	\$219,110,285	-11.0%	-2.9%
Offices of physicians	\$184,354,015	\$192,857,608	4.6%	13.5%
Other insurance	\$184,773,733	\$179,867,313	-2.7%	6.8%

Category	2019 Spending	2020 Spending	Percent Change	Changes in Total Share of Spending: 2019-2020
<b>Monetary authorities and depository credit intermediation</b>	\$165,529,741	\$151,355,507	-8.6%	1.2%
<b>Limited-service restaurant services</b>	\$163,310,091	\$138,772,163	-15.0%	-8.5%
<b>Nursing and community care services</b>	\$142,464,811	\$138,398,461	-2.9%	4.9%
<b>Retail services – Non store retailers</b>	\$158,744,585	\$134,247,216	-15.4%	-9.6%
<b>Retail services - Food and beverage stores</b>	\$110,150,513	\$119,023,070	8.1%	19.4%
<b>Retail services - General merchandise stores</b>	\$107,600,190	\$108,950,460	1.3%	11.2%
<b>Software publishers</b>	\$83,884,294	\$101,584,259	21.1%	28.3%
<b>Funds, trusts, and other financial services</b>	\$77,559,289	\$85,172,636	9.8%	15.7%
<b>Junior colleges, colleges, universities, and professional schools</b>	\$70,761,348	\$84,958,036	20.1%	25.0%

Source: IMPLAN, 2021

**CONSUMER SPENDING EVALUATION: HOUSEHOLD INCOME \$30,000 TO \$50,000**

For households in the region making \$30,000 to \$50,000, total spending declined by around 9 percent, or \$520.9 million. Housing expenditures, including both renters and homeowners, decreased from 2019 to 2020 by nearly 10 percent. When compared to the percentage share of total spending in 2019 and 2020, expenditures on housing decreased by an average of around half a percent. Healthcare Services, including hospital services, doctors’ office visits, and pharmaceutical purchases, represented the second largest category of spending. Spending in this category declined by 3.5 percent between 2019 and 2020. However, hospital services and doctor’s offices increased in the percent of total spending share between 2019 and 2020, indicating that, even though spending amounts decreased, these categories represented a larger share of total spending in 2020 than in 2019.

Non-store retailers experienced the most decline in spending in this income group as well, decreasing by 16 percent of spending and 11 percent from its total share in 2019. This category is followed by Limited-Service Restaurants, which declined by over 15 percent in spending. The Funds, Trusts, and Other Financial Services sector was the spending category with the highest increase in 2020, followed by Food and Beverage Retail stores. This change in spending for funds and trusts could be due to households investing or saving extra income brought about by cancelled vacations or stimulus checks. Additional spending at food and beverage stores was likely attributed to safety concerns caused by the pandemic along with the restaurant closures caused by stay- or safer-at-home orders. See **Table 1.40** for a list of the top fifteen spending categories for this income group.

**Table 1.40:** Top Fifteen Spending Categories for \$30,000-\$50,00 Income Level

Category	2019 Spending	2020 Spending	Percent Change	Changes in Total Share of Spending
<b>Imputed rental services of owner-occupied dwellings</b>	\$502,485,453	\$454,841,970	-9.5%	-0.2%
<b>Hospital services</b>	\$448,923,687	\$435,876,354	-2.9%	6.5%
<b>Tenant-occupied real estate services</b>	\$284,576,963	\$256,324,262	-9.9%	-0.8%
<b>Offices of physicians</b>	\$213,542,211	\$222,403,828	4.1%	13.3%
<b>Pharmaceuticals</b>	\$224,705,485	\$198,042,042	-11.9%	-2.5%
<b>Other insurance</b>	\$193,519,743	\$186,986,582	-3.4%	7.2%
<b>Nursing and community care services</b>	\$181,348,745	\$174,359,121	-3.9%	4.9%
<b>Monetary authorities and depository credit intermediation</b>	\$168,810,115	\$152,754,909	-9.5%	-1.0%
<b>Limited-service restaurant services</b>	\$148,884,638	\$125,895,361	-15.4%	-5.0%
<b>Retail services -Non store retailers</b>	\$145,579,877	\$122,270,378	-16.0%	-11.0%
<b>Retail services - Food and beverage stores</b>	\$100,008,384	\$107,318,264	7.3%	15.2%
<b>Retail services - General merchandise stores</b>	\$97,692,882	\$98,236,200	0.6%	11.5%
<b>Funds, trusts, and other financial services</b>	\$77,492,039	\$84,301,516	8.8%	19.0%
<b>Wholesale services - Other nondurable goods merchant wholesalers</b>	\$76,895,191	\$75,306,253	-2.1%	16.7%
<b>Software publishers</b>	\$83,884,294	\$70,752,095	-15.7%	30.0%

Source: IMPLAN, 2021

**CONSUMER SPENDING EVALUATION: HOUSEHOLD INCOME \$50,000 TO \$70,000**

For households in the region making \$50,000 to \$70,000, total spending declined by over 10 percent, or a loss of \$576.9 million. Spending on Hospital Services was the largest spending category for this income group, with total share of spending increasing by nearly 8 percent. Spending on doctors' visits also increased substantially as a percentage of total share, as households in this income group spent over 16 percent more visiting physicians than when compared to 2019 spending levels.

Funds, Trusts, and Other Financial Services also had the highest percentage change for this income bracket with a spending increase of nearly 9 percent and an incline in total spending share of 25 percent. In addition, Food and Beverage Stores spending also experienced growth, with an increase of 19 percent in the total share of spending. These increases can be attributed to consumers choosing to invest extra income and buying more groceries due to restaurant closures and changes in operations. See **Table 1.41** for the spending evaluation for this income group.

**Table 1.41: Top Fifteen Spending Categories for \$50,000-\$70,000 Income Level**

Category	2019 Spending	2020 Spending	Percent Change	Changes in Total Share of Spending
Hospital services	\$501,350,331	\$484,937,226	-3.3%	7.7%
Imputed rental services of owner-occupied dwellings	\$527,099,299	\$476,485,198	-9.6%	0.4%
Tenant-occupied real estate services	\$243,314,788	\$219,209,296	-9.9%	0.7%
Offices of physicians	\$205,082,318	\$212,697,857	3.7%	16.8%
Other insurance	\$163,993,448	\$158,322,654	-3.5%	8.7%
Pharmaceuticals	\$179,332,139	\$158,191,752	-11.8%	-0.6%
Limited-service restaurant services	\$159,240,550	\$134,550,802	-15.5%	-5.6%
Monetary authorities and depository credit intermediation	\$143,892,791	\$130,505,806	-9.3%	0.6%
Retail services - Non store retailers	\$144,367,036	\$121,299,866	-16.0%	-7.4%
Retail services - Food and Beverage Stores	\$98,086,420	\$105,291,576	7.3%	19.2%
Retail services - General merchandise stores	\$95,815,417	\$96,381,026	0.6%	10.4%
Funds, Trusts, and Other Financial Services	\$75,716,876	\$82,446,301	8.9%	25.0%
Nursing and community care services	\$79,710,445	\$77,054,078	-3.3%	4.8%
Wholesale services - Other nondurable goods merchant wholesalers	\$65,438,913	\$70,437,443	7.6%	16.7%

Category	2019 Spending	2020 Spending	Percent Change	Changes in Total Share of Spending
Other financial investment services	\$60,315,967	\$60,221,557	-0.2%	9.1%

Source: IMPLAN, 2021

**CONSUMER SPENDING EVALUATION: HOUSEHOLD INCOME \$70,000 TO \$100,000**

Households making between \$70,000 to \$100,000 experienced a 9 percent decline in total spending, or a loss of \$671.3 million. Within this income range, Hospital Services was the highest spending category in 2020, increasing its total share of spending by over 7 percent when compared to 2019 levels. Spending on doctor’s visits also grew by nearly 15 percent for this income category in 2020.

Unlike other income brackets, this group spent a large portion of their earnings on software publishers while also increasing their spending by more than 20 percent when compared to 2019. This shows an increase of software development within the realms of computer software, application development, and operations management. Overall, since 2019, there was a 33 percent increase in share of spending since 2019. Another notable increase would be in Funds, Trusts, and Other Financial Services, growing 9.4 percent from 2019 to 2020. In theory, the reason for this increase could be that citizens within this income bracket decided to save their earnings for future economic uncertainties. See **Table 1.42** for the spending evaluation for this income group

**Table 1.42:** Top Fifteen Spending Categories for \$70,000-\$100,000 Income Level

Category	2019 Spending	2020 Spending	Percent Change	Changes in Total Share of Spending
Hospital services	\$790,389,749	\$767,449,778	-2.9%	7.2%
Imputed rental services of owner-occupied dwellings	\$790,098,653	\$717,229,687	-9.2%	0.0%
Offices of physicians	\$334,830,403	\$348,794,826	4.2%	14.9%
Tenant-occupied real estate services	\$245,683,556	\$222,198,664	-9.6%	0.0%
Other insurance	\$211,755,327	\$205,357,555	-3.0%	6.7%
Pharmaceuticals	\$183,737,000	\$162,759,499	-11.4%	-3.8%
Limited-service restaurant services	\$181,330,548	\$153,863,002	-15.1%	-4.0%
Retail services - Non store retailers	\$176,131,244	\$148,707,485	-15.6%	-8.0%
Retail services - Food and beverage stores	\$119,085,908	\$128,436,009	7.9%	17.6%
Retail services - General merchandise stores	\$116,328,703	\$117,566,806	1.1%	12.5%
Monetary authorities and depository credit intermediation	\$128,749,457	\$117,293,451	-8.9%	0.0%

Category	2019 Spending	2020 Spending	Percent Change	Changes in Total Share of Spending
<b>Other financial investment services</b>	\$101,028,784	\$101,356,669	0.3%	14.3%
<b>Funds, trusts, and other financial services</b>	\$83,103,251	\$90,903,169	9.4%	16.7%
<b>Wholesale services - Other nondurable goods merchant wholesalers</b>	\$79,336,216	\$85,779,482	8.1%	18.2%
<b>Software publishers</b>	\$65,365,826	\$79,248,037	21.2%	33.3%

Source: IMPLAN, 2021

**CONSUMER SPENDING EVALUATION: HOUSEHOLD INCOME \$100,000 TO \$200,000**

Total spending declined by an overall 11 percent, or \$1.35 billion for households making \$100,000 to \$200,000. The highest amount of spending was on owner-occupied dwelling expenses, though there was a decrease in spending by 10 percent since 2019. However, there was an increase in share of spending by over 1 percent. This growth in total share is likely attributed to more households having the option to telework, which increased electricity and utilities usage.

The spending category with the largest growth in total shares of spending is Funds, Trusts, and Other Financial Services, which includes pension funds and employee benefits. Spending on these services grew by 8 percent between 2019 and 2020, but the total share of spending increased by 25 percent. This incline could be explained by increases in individual pension funds.

The non-store retail sector for this income level decreased by 16 percent since 2019, and total share for this retail sector declined by 7.7 percent. However, other retail services including food and beverage businesses as well as merchandise stores experienced increases in spending in 2020. Of these retail categories, spending on Food and Beverage Stores experienced the largest expansion in total share of spending, increasing by nearly 24 percent. This growth can be attributed to the closures of restaurants and other eateries due to mandatory businesses closures and local ordinances. See **Table 1.43** for a further breakdown of the spending categories for this income level.

**Table 1.43:** Top Fifteen Spending Categories for \$100,000-\$200,000 Income Level

Category	2019 Spending	2020 Spending	Percent Change	Changes in Total Share of Spending
<b>Imputed rental services of owner-occupied dwellings</b>	\$1,516,422,456	\$1,364,209,428	-10.0%	1.6%
<b>Hospital services</b>	\$901,818,458	\$863,903,723	-4.2%	9.2%
<b>Offices of physicians</b>	\$492,793,820	\$508,344,439	3.2%	16.7%
<b>Other insurance</b>	\$295,857,507	\$283,710,811	-4.1%	8.0%
<b>Retail services - Non store retailers</b>	\$303,487,344	\$254,014,958	-16.3%	-7.7%
<b>Limited-service restaurant services</b>	\$286,909,536	\$240,807,169	-16.1%	-4.2%
<b>Pharmaceuticals</b>	\$284,119,580	\$249,195,446	-12.3%	0.0%

Category	2019 Spending	2020 Spending	Percent Change	Changes in Total Share of Spending
<b>Other financial investment services</b>	\$283,507,077	\$282,691,320	-0.3%	12.5%
<b>Retail services - Food and beverage stores</b>	\$203,512,399	\$217,500,476	6.9%	23.5%
<b>Tenant-occupied real estate services</b>	\$215,223,707	\$192,010,101	-10.8%	0.0%
<b>Retail services - General merchandise stores</b>	\$198,800,461	\$199,093,981	0.1%	11.8%
<b>Funds, trusts, and other financial services</b>	\$142,938,369	\$154,860,150	8.3%	25.0%
<b>Monetary authorities and depository credit intermediation</b>	\$171,218,306	\$154,474,539	-9.8%	0.0%
<b>Outpatient care centers</b>	\$137,924,076	\$137,430,984	-0.4%	8.3%
<b>Wholesale services - Other nondurable goods merchant wholesalers</b>	\$131,736,105	\$141,048,636	7.1%	18.2%

Source: IMPLAN, 2021

**CONSUMER SPENDING EVALUATION: HOUSEHOLD INCOME MORE THAN \$200,000**

For the approximate 5 percent of households with greater than \$200,000 in income, total spending decreased by nearly 11 percent between 2019 and 2020, or around \$640.3 million. Hospital Services was the top spending category. Though there was a 3 percent decline in spending between 2019 and 2020, Hospital Services experienced an increase of 9 percent in its total share of spending.

The category with the largest increase in total share of spending was Junior Colleges and Universities. Spending on colleges and universities increased by 20 percent since 2019, with a total share of spending increase to 35 percent. These increases may be attributed to increasing tuition prices.

Another prominent change in spending came from contributions to religious organizations. In 2020, spending increased by 6 percent within this category, and the total share of spending rose by 19 percent. During the pandemic, many religious organizations that provide services to people in need increased fundraising efforts, so these efforts could be a contributing factor for the increase in this income category. Households with more than \$200,000 in income likely have more disposable income than other income brackets, which may also play a role in explaining the growth in these spending categories. In addition, the CARES Act included provisions that increased tax incentives for charitable contributions.

**Table 1.44:** Top Fifteen Spending Categories for Greater Than \$200,000 Income Level

<b>Category</b>	<b>2019 Spending</b>	<b>2020 Spending</b>	<b>Percent Change</b>	<b>Changes in Total Share of Spending</b>
<b>Hospital services</b>	\$706,242,763	\$685,419,915	-3%	9%
<b>Imputed rental services of owner-occupied dwellings</b>	\$712,896,848	\$647,999,962	-9%	2%
<b>Other financial investment services</b>	\$357,997,299	\$358,721,381	0%	12%
<b>Offices of physicians</b>	\$231,433,295	\$241,475,555	4%	17%
<b>Junior colleges, colleges, universities, and professional schools</b>	\$125,556,695	\$150,609,720	20%	35%
<b>Monetary authorities and depository credit intermediation</b>	\$130,649,355	\$118,991,283	-9%	2%
<b>Other insurance</b>	\$110,234,250	\$106,918,191	-3%	9%
<b>Retail services - Non store retailers</b>	\$120,775,171	\$102,456,814	-15%	-5%
<b>Limited-service restaurant services</b>	\$107,567,513	\$91,505,033	-15%	-5%
<b>Retail services - Food and beverage stores</b>	\$81,857,088	\$88,619,310	8%	21%
<b>Funds, trusts, and other financial services</b>	\$80,364,034	\$87,894,997	9%	23%
<b>Retail services - General merchandise stores</b>	\$79,961,845	\$81,119,690	1%	14%
<b>Pharmaceuticals</b>	\$89,615,631	\$79,471,987	-11%	-1%
<b>Elementary and secondary schools</b>	\$61,618,303	\$62,829,247	2%	14%
<b>Religious Organizations</b>	\$58,629,110	\$62,132,458	6%	19%

Source: IMPLAN, 2021

### OTHER SPENDING CATEGORIES

When evaluating consumer spending patterns and changes, it is also imperative to analyze categories that were likely to be most impacted due to the business closures and stay-at-home orders caused by the pandemic. Though many sectors could be selected for review, four spending categories were chosen for this analysis:

- Restaurants and Food Services
- Hotel and Motel Services
- Funds, Trusts, and Other Financial Services
- Hospital Services

Selected Sector	Justification
<b>Restaurants and Food Services</b>	Sector decline due to dependence on customers traveling outside the home and/or dining in
<b>Hotel and Motel Services</b>	Sector decline due to reliance on consumers choosing vacations or traveling for work
<b>Funds, Trusts, and Other Financial Services</b>	Sector increases caused by access to additional forms of income through stimulus checks
<b>Hospital Services</b>	Sector increases due to illness caused by coronavirus cases

### RESTAURANT AND FOOD SPENDING

The food and beverage industry, primarily in the forms of restaurants, took impactful revenue losses across the nation during the pandemic, as necessary stay-at-home orders and increased public safety restrictions made it difficult to sustain regular service operations. Restaurants had to be creative with reopening measures as well, offering unprecedented amounts of delivery and carry out services. Estimates from the National Restaurant Association suggest nearly 110,000 restaurants were closed indefinitely due to the pandemic as of December 2020.<sup>19</sup> For the purposes of this analysis, three types of food and beverage establishments are evaluated:

- a. **Full-Service Restaurants:** Includes restaurants that provide table service and waiting staff, and where meals are usually consumed, such as fine dining establishments.
- b. **Limited-Service Restaurants:** Entities where consumers pay before eating and consume meals on the premises or carry-out, such as casual or fast-food restaurants and food trucks.
- c. **Food and Beverage Retail Establishments:** Businesses in which merchandise is sold from fixed point-of-sale locations, such as grocery stores.

These establishments were selected to compile a comprehensive evaluation on how spending on food and food services changed during the pandemic, as well as how these alterations could have affected employment figures and revenue generation for local governments.

<sup>19</sup> National Restaurant Association, "Restaurant Industry in Free Fall; 10,000 Close in Three Months," National Restaurant Association, December 7, 2020, <https://restaurant.org/research-and-media/media/press-releases/restaurant-industry-in-free-fall;-10,000-close-in-three-months/>.

**FULL SERVICE RESTAURANTS**

The coronavirus pandemic was especially impactful to full-service restaurants. In the Birmingham region alone, the shutdowns caused several of these businesses to close permanently, and it created a loss of nearly 4,000 jobs during the pandemic. Though the recovery of these establishments began to positively incline in Summer 2021, especially as vaccines became more widely distributed, spending deficits for these businesses may continue to impact these restaurants in the future.

In every income category, spending on full-service restaurants decreased by about 55 percent. In terms of changes in total share of spending, all income levels saw significant declines, decreasing by at least 47 percent or more. The income categories that showed the greatest decreases in the total share of spending in 2020 were representing households with less than \$30,000 or between \$30,000 to \$50,000 in annual income. See **Table 1.45** for an evaluation of spending changes for Full-Service Restaurants between 2019 and 2020.

**Table 1.45:** Full-Service Restaurant Spending Evaluation, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$98,811,848	\$44,346,010	-55.1%	1.7%	0.8%	-52.9%
<b>\$30,000-\$50,000</b>	\$98,180,485	\$43,828,632	-55.4%	1.7%	0.8%	-52.9%
<b>\$50,000-\$70,000</b>	\$116,437,158	\$51,942,148	-55.4%	2.1%	1.0%	-52.4%
<b>\$70,000-\$100,000</b>	\$134,250,651	\$60,144,937	-55.2%	1.9%	0.9%	-52.6%
<b>\$100,000-\$200,000</b>	\$243,950,415	\$108,225,870	-55.6%	2.1%	1.0%	-52.4%
<b>Greater Than \$200,000</b>	\$125,192,362	\$56,217,999	-55.1%	2.1%	1.1%	-47.6%
<b>Total Spending</b>	\$816,822,919	\$364,705,596	-55.4%			

Source: IMPLAN, 2021

**LIMITED-SERVICE RESTAURANTS**

Limited-service restaurants are establishments whose patrons order or select items and pay before eating. Customers can choose to eat the food on the premises, opt for takeout, or have their meals delivered to the customers' location. For the region, total spending on limited-service restaurants declined by 15.5 percent. These types of restaurants experienced significantly less financial damage when compared to full-service restaurants, which experienced a total spending loss of 55.4 percent. This is likely due to the ability of limited-service entities to continue operations through drive-thru windows and other capacities that were not available to full-service restaurants.

Though spending in this category declined in every income group, the decreases experienced for these types of restaurants were not as severe as their full-service counterparts. The largest decline in total amount spent on this category occurred within households making between \$100,000 to \$200,000, spending 16 percent less on these restaurants in 2020 when compared to 2019. The income bracket that experienced the highest decrease in total share of spending on limited-service restaurants was comprised of households in the income bracket of \$30,000 to \$50,000. See **Table 1.46** for the spending details of limited-service restaurants in the region for 2019 and 2020.

**Table 1.46:** Limited-Service Restaurants Spending Evaluation, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$163,310,091	\$138,772,163	-15.0%	2.7%	2.5%	-7.4%
<b>\$30,000-\$50,000</b>	\$148,884,638	\$125,895,361	-15.4%	2.6%	2.4%	-7.7%
<b>\$50,000-\$70,000</b>	\$159,240,550	\$134,550,802	-15.5%	2.9%	2.7%	-6.9%
<b>\$70,000-\$100,000</b>	\$181,330,548	\$153,863,002	-15.2%	2.5%	2.4%	-4.0%
<b>\$100,000-\$200,000</b>	\$286,909,536	\$240,807,169	-16.1%	2.4%	2.3%	-4.2%
<b>Greater Than \$200,000</b>	\$107,567,513	\$91,505,033	-14.9%	1.8%	1.7%	-3.3%
<b>Total Spending</b>	\$1,047,242,877	\$885,393,530	-15.5%			

Source: IMPLAN, 2021

### FOOD AND BEVERAGE RETAIL STORES

Household spending on food and beverage retail stores contrasts from spending patterns of restaurants. Spending on these retailers increased in almost every income category, with an increase of 7.5 percent. Households with more than \$200,000 in income had the largest percent increase in spending of an additional 8.3 percent. The smallest percent change occurred in the \$100,000 to \$200,000 income bracket, with a 6.9 percent increase.

The money spent on food and beverage retailers increased significantly when comparing total spending shares from 2019 to 2020. Though the total spending on food and beverage stores increased by 7.5 percent between 2019 and 2020, the percent of total share increased by at least 16 percent throughout the region. Inclines in food and beverage spending were likely due to the closures of restaurants and relevant local ordinances in place for safety precautions. **Table 1.47** provides a list of income categories and spending changes for food and beverage retail stores.

**Table 1.47:** Food and Beverage Retail Stores Spending Evaluation, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$110,150,513	\$119,023,070	8.1%	1.8%	2.2%	22.2%
<b>\$30,000-\$50,000</b>	\$100,008,384	\$107,318,264	7.3%	1.7%	2.0%	17.7%
<b>\$50,000-\$70,000</b>	\$98,086,420.00	\$105,291,576	7.4%	1.8%	2.1%	16.7%
<b>\$70,000-\$100,000</b>	\$119,085,908	\$128,436,009	7.9%	1.7%	2.0%	17.7%
<b>\$100,000-\$200,000</b>	\$203,512,399	\$217,500,476	6.9%	1.7%	2.1%	23.5%
<b>Greater Than \$200,000</b>	\$81,857,088.00	\$88,619,310.00	8.3%	1.4%	1.7%	20.7%
<b>Total Spending</b>	\$712,700,712	\$766,188,705	7.5%			

Source: IMPLAN, 2021

**HOTEL AND MOTEL SERVICES SPENDING**

Hotels and motels across the country experienced negative impacts to revenues and employment during the pandemic. In 2020, the hotel industry within the United States underwent record-breaking low occupancy rates and revenue declines, as the pandemic critically impaired business, holiday, and vacation travel. National Public Radio (NPR) reported the industry surpassed an estimated 1 billion unsold room nights for the first time in history, a significant increase from the previous record of 786 million held during the financial crisis of 2008.<sup>20</sup> Alabama was not immune to these deficiencies—the state was projected to lose a staggering \$105.2 million in state and local tax revenue due to the declines in the hotel and motel industry.<sup>21</sup>

These projections are reflected on a consumer spending level within the Birmingham region. Households within the region spent 67.5 percent less on this industry than they did in 2019, and these declines are represented similarly in every income bracket. In terms of percentages of total spending, serious declines also occurred when comparing 2019 and 2020 spending levels. On average, the percent of total spending shares between 2019 and 2020 decreased by over 63 percent for hotels and motels. See **Table 1.48** below for a detailed evaluation of these spending changes.

**Table 1.48:** Hotel and Motel Services Spending Evaluation, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$42,104,446	\$13,759,665	-67.3%	0.7%	0.3%	-57.1%
<b>\$30,000-\$50,000</b>	\$33,673,387	\$10,931,786	-67.5%	0.6%	0.2%	-66.7%
<b>\$50,000-\$70,000</b>	\$44,263,175	\$14,386,121	-67.5%	0.8%	0.3%	-62.5%
<b>\$70,000-\$100,000</b>	\$57,882,329	\$18,889,761	-67.4%	0.8%	0.3%	-62.5%
<b>\$100,000-\$200,000</b>	\$139,073,649	\$45,113,232	-67.6%	1.2%	0.4%	-66.7%
<b>Greater Than \$200,000</b>	\$102,476,114	\$33,472,410	-67.3%	1.7%	0.6%	-64.7%
<b>Total Spending</b>	\$419,473,101	\$136,552,975	-67.5%			

Source: IMPLAN, 2021

**FINANCE AND INVESTMENT SPENDING**

From savings accounts to retirement funds, the pandemic had a significant impact on personal financial situations. As unemployment rose, it is estimated that many people saw major declines in saving accounts and other monetary funds. However, according to a CNBC and Acorns study, not all factors pointed to negative outcomes. An increasing percentage of people surveyed claimed to consider themselves as more of a “saver” rather than “spender” when compared to pre-pandemic levels. In addition, reports from investment funds also documented increases from 2019 to 2020.<sup>22</sup>

20 Claire Miller, “2020 Was The Worst Year Ever For U.S> Hotels. Here’s What’s Next,” NPR, January 27, 2021, <https://www.npr.org/2021/01/27/960384171/2020-was-the-worst-year-ever-for-u-s-hotels-heres-whats-next>.

21 William Thornton, “Alabama will lose \$105 million in hotel tax revenue because of COVID-19, report says,” Alabama Local News, Advance Local, June 18, 2020, <https://www.al.com/business/2020/06/alabama-will-lose-105-million-in-hotel-tax-revenue-because-of-covid-19-report-says.html>.

22 Annie Nova, “Americans are saving more during the pandemic: CNBC+ Acorns Invest in You survey,” CNBC, CNBC LLC, September 1, 2020, <https://www.cnbc.com/2020/09/01/americans-are-more-savers-than-spenders-during-the-pandemic.html>.

Individual financial and investment strategies can give important insights into consumer spending in economically turbulent times. Additionally, changes in budgetary behaviors can reflect the relationship between the perception of the market’s wellbeing and consumer decisions regarding finance and investment. For this report, two financial spending categories are evaluated:

- a. **Funds, Trusts, and Other Financial Services:** This category includes services organized to pool assets on behalf of employees or other shareholders, such as pension funds and employee benefits.
- b. **Other Financial Investment Services:** This category includes all other general investment spending, such as banks and real estate brokers.

### FUNDS, TRUSTS, AND OTHER FINANCIAL SERVICES

Regardless of income level, households spent around 9 percent more on Funds, Trusts, and Other Financial Services in 2020 than in 2019. The highest increase in spending occurred in households with less than \$30,000, followed by households in the \$70,000 to \$100,000 income range. In addition, percentage of total shares of spending also grew across all income categories, with the largest increase occurring in households with \$100,000 to \$200,000 in income. **Table 1.49** outlines spending on this category by income group.

**Table 1.49:** Funds, Trusts, and Other Financial Services Spending Evaluation, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$77,559,289	\$85,172,636	9.8%	1.3%	1.5%	15.4%
<b>\$30,000-\$50,000</b>	\$77,492,039	\$84,301,516	8.8%	1.3%	1.6%	23.1%
<b>\$50,000-\$70,000</b>	\$75,716,876	\$82,446,301	8.9%	1.4%	1.7%	21.4%
<b>\$70,000-\$100,000</b>	\$83,103,251	\$90,903,169	9.4%	1.2%	1.4%	16.7%
<b>\$100,000-\$200,000</b>	\$142,938,369	\$154,860,150	8.3%	1.2%	1.5%	25.0%
<b>Greater Than \$200,000</b>	\$80,364,034	\$87,894,997	9.4%	1.4%	1.7%	19.3%
<b>Total Spending</b>	\$537,173,858	\$585,578,769	9.0%			

Source: IMPLAN, 2021

### OTHER FINANCIAL INVESTMENT SERVICES

This spending category includes expenses on of a variety of financial firms, such as banks, investment houses, lenders, finance companies, real estate brokers, and insurance companies. Unlike spending on funds and trusts, households generally saw miniscule movement on the amount spent on Other Financial Investment Services. The fluctuations in spending on this category, whether increasing or decreasing, changed in small amounts, or less than 1 percent across all income categories. However, as seen in other spending evaluations, a decline in annual total spending does not necessarily indicate that households spent less on these services than in 2019. All households increased their total share of spending on Other Financial Investment Services regardless of income level. These increases could be explained by several factors, from opening new savings or investment accounts or the purchasing of homes and other real estate. The largest incline occurred in households with less than \$30,000 income, which increased by 20 percent. Spending changes for this income category are recorded in **Table 1.50**.

**Table 1.50:** Other Financial Investment Services Evaluation Spending, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$32,076,796	\$32,350,853	0.9%	0.5%	0.6%	20.0%
<b>\$30,000-\$50,000</b>	\$62,234,195	\$62,389,321	0.3%	1.1%	1.2%	9.1%
<b>\$50,000-\$70,000</b>	\$60,315,967	\$60,221,557	-0.2%	1.1%	1.2%	9.1%
<b>\$70,000-\$100,000</b>	\$101,028,784	\$101,356,669	0.3%	1.4%	1.6%	14.3%
<b>\$100,000-\$200,000</b>	\$283,507,077	\$282,691,320	-0.3%	2.4%	2.7%	12.5%
<b>Greater Than \$200,000</b>	\$357,997,299	\$358,721,381	0.2%	6.1%	6.8%	11.8%
<b>Total Spending</b>	\$897,160,118	\$897,731,101	0.1%			

Source: IMPLAN, 2021

**HOSPITAL SERVICES SPENDING**

Hospital Services include all general and specialized hospital care given to patients, from physical rehabilitation services to pediatric facilities. Spending on these services was impacted during the pandemic due to several factors. Many people infected with COVID-19 were hospitalized, decreasing the capacity of local hospitals and other facilities. The State of Alabama has recorded nearly 46,000 coronavirus hospitalizations by February 2022, according to estimates from The COVID Tracking Project.<sup>23</sup> Due to these limitations and other safety concerns, many procedures and other operations were either postponed or cancelled. The impacts of increases in hospitalizations and declines in routine operations caused fluctuations in spending.

Total spending decreased for every income group in these services in 2020 compared to 2019 levels. However, though there was a decrease in total spending, the percent of total shares in spending increased for Hospital Services across income categories. The largest increases in total share of spending occurred in households with greater than \$200,000 in income. **Table 1.51** shows these spending trends reflected in each income category.

**Table 1.51:** Hospital Services Spending Evaluation, 2019 to 2021

Income Level	2019 Spending	2020 Spending	Percent Change 2020	Percent of Total Share: 2019	Percent of Total Share: 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$389,115,723	\$379,798,353	-2.4%	6.5%	6.90%	6.0%
<b>\$30,000-\$50,000</b>	\$448,923,687	\$435,876,354	-2.9%	7.8%	8.30%	6.5%
<b>\$50,000-\$70,000</b>	\$501,350,331	\$484,937,226	-3.3%	9.0%	9.70%	7.7%
<b>\$70,000-\$100,000</b>	\$790,389,749	\$767,449,778	-2.9%	11.1%	11.9%	7.2%
<b>\$100,000-\$200,000</b>	\$901,818,458	\$863,903,723	-4.2%	7.6%	8.3%	9.2%
<b>Greater Than \$200,000</b>	\$706,242,763	\$685,419,915	-2.9%	12.0%	13.04%	8.9%
<b>Total Spending</b>	\$3,737,840,710	\$3,617,385,349	-3.2%			

Source: IMPLAN, 2021

23 Covid Tracking Project, "The Data: Alabama," The Covid Tracking Project, The Atlantic Monthly Group, March 7, 2021, <https://covidtracking.com/data/state/alabama>.

## RETAIL ASSESSMENT SPENDING

The retail industry includes a diverse array of sectors, from convenience stores to pharmacies to clothing entities. The retail industry comprises a large share of the private sector within the region. According to ACS estimates in 2018, the Greater Birmingham region housed more than 6,000 retail businesses which employed nearly 71,000 people. It is the largest business sector in the area by far, making up over 15 percent of businesses, and it is the third largest employment sector, comprising around 13 percent of total regional employment.

Retail is not only important as an employer, but retail spending is also critical to the well-being of a local economy. Consumer spending is one of the primary drivers of local economic growth, and retail stores play a crucial role in keeping an economic environment stable. In 2019, over 9 percent of total consumer spending for the region, or nearly \$4.1 billion, was spent in the retail sector. The onset of the pandemic caused concern about how retailers would sustain considering business closures and stay at home ordinances. However, though spending declined, Alabama’s retail industry was not hit nearly as hard as other states.

The purpose of this section is to identify and evaluate the changes in spending levels between 2019 and 2020 for 10 different retail sectors. These sectors were established through IMPLAN Economic Modeling Software and are listed below:

- a. Clothing and Accessories
- b. Electronics and Appliances
- c. Furniture and Home
- d. Gas
- e. General Merchandise
- f. Health and Personal Care
- g. Miscellaneous
- h. Motor Vehicles
- i. Non-store Retail
- j. Sporting Goods, Hobby, Musical Instrument, and Book Stores

Since it was evaluated previously, Food and Beverage retailers are not discussed in this section. The retail assessment will evaluate each category by the same income brackets used to analyze other types of consumer spending groups

In the 10 categories evaluated, regional retail spending rates declined by around 16 percent. The largest decline occurred within the \$100,000 to \$200,000 income bracket, with a decrease of nearly 16.5 percent. However, in terms of percentage of total spending shares, consumer spending on these retail sectors in the region declined by 6.6 percent. See **Table 1.52** for an evaluation of total retail spending between 2019 and 2020 for the six-county area, and **Table 1.53** for a regional spending summary each retail category.

**Table 1.52:** Total Retail Spending Evaluation, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$630,410,782	\$532,200,616	-15.6%	10.5%	9.7%	-8.2%
<b>\$30,000-\$50,000</b>	\$573,817,320	\$481,088,780	-16.2%	10.0%	9.2%	-7.8%
<b>\$50,000-\$70,000</b>	\$564,374,598	\$473,342,040	-16.1%	10.1%	9.5%	-6.4%
<b>\$70,000-\$100,000</b>	\$686,058,939	\$578,133,025	-15.7%	9.6%	8.9%	-7.0%
<b>\$100,000-\$200,000</b>	\$1,174,930,576	\$981,227,369	-16.5%	10.0%	9.4%	-5.7%
<b>Greater Than \$200,000</b>	\$471,288,485	\$398,755,303	-15.4%	8.0%	7.6%	-5.1%
<b>Total Spending</b>	\$4,100,880,700	\$3,444,747,133	-16.0%	9.7%	9.1%	-6.6%

Source: IMPLAN, 2021

**Table 1.53:** Regional Spending Summary for Retail Categories, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Changes in Total Share of Spending: 2019-2020
<b>Clothing and Accessories</b>	\$458,129,003	\$224,404,648	-51.0%	-45.5%
<b>Electronics and Appliances</b>	\$189,645,448	\$166,296,226	-12.3%	-2.5%
<b>Furniture and Home</b>	\$210,252,751	\$147,012,411	-30.1%	-22.3%
<b>Gas</b>	\$253,121,551	\$267,801,149	5.8%	17.6%
<b>General Merchandise</b>	\$696,199,498	\$701,348,163	0.7%	12.0%
<b>Health and Personal Care</b>	\$395,531,379	\$363,246,232	-8.2%	2.1%
<b>Miscellaneous</b>	\$288,114,671	\$217,874,568	-24.4%	-15.9%
<b>Motor Vehicles</b>	\$389,331,525	\$350,917,854	-9.9%	0.2%
<b>Non-store Retail</b>	\$1,049,085,257	\$882,996,717	-15.8%	-6.4%
<b>Sporting Goods, Hobby, Musical Instrument, and Book Stores</b>	\$458,129,003	\$224,404,648	-51.0%	-45.5%

Source: IMPLAN, 2021

Many reasons can help explain why spending on retail decreased substantially due to the pandemic. As unemployment levels increased and more households used their savings to buy necessities, it can be rationalized that spending on non-necessities, like accessories, was likely decreased as a result. In addition, consumer certainty in the market can also be used to evaluate spending habits. As the pandemic created economic instability across the nation, consumers likely felt more uncertain about the future, which resulted in households choosing to spend less money in general.

### CLOTHING AND ACCESSORIES

Consumer spending within the Clothing and Accessories retail industry decreased substantially between 2019 and 2020. In every evaluated income group, spending on clothes and accessories fell by at least 50 percent. The highest level of decline of 51.7 percent occurred within households making greater than \$200,000 in income. The percentage of total spending shares also declined by large amounts for each income group, decreasing regionally by around 46 percent. The highest decline as a percentage of total shares was within households with less than \$30,000 in income. See **Table 1.54** for a breakdown of the spending for clothing and accessories.

**Table 1.54:** Household Spending on Clothing and Accessories, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
Less Than \$30,000	\$70,805,520	\$34,859,990	-50.8%	1.2%	0.6%	-46.4%
\$30,000-\$50,000	\$64,286,089	\$31,431,835	-51.1%	1.1%	0.6%	-44.2%
\$50,000-\$70,000	\$63,050,637	\$30,838,250	-51.1%	1.1%	0.6%	-45.4%
\$70,000-\$100,000	\$76,549,255	\$37,616,892	-50.9%	1.1%	0.6%	-45.8%
\$100,000-\$200,000	\$130,819,193	\$63,702,476	-51.3%	1.1%	0.6%	-45.0%
Greater Than \$200,000	\$52,618,309	\$25,955,205	-50.7%	0.9%	0.5%	-44.7%
<b>Total Spending</b>	<b>\$458,129,003</b>	<b>\$224,404,648</b>	<b>-51.0%</b>	<b>1.1%</b>	<b>0.6%</b>	<b>-45.5%</b>

Source: IMPLAN, 2021

### ELECTRONICS AND APPLIANCES

Total spending on electronics and appliances declined in every income category between 2019 and 2020. In the region, spending in this category declined by more than 12 percent. The largest decrease occurred within households with a \$100,000 to \$200,000 income range, and the lowest decline was found in households with more than \$200,000 in income. The share of total spending for this category decreased by 2.5 percent throughout the region. See **Table 1.55** for a list of the spending comparisons on electronics and appliances.

**Table 1.55:** Household Spending on Electronics and Appliances, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
Less Than \$30,000	\$29,310,401	\$25,833,176	-11.9%	0.5%	0.5%	-4.1%
\$30,000-\$50,000	\$26,611,640	\$23,292,724	-12.5%	0.5%	0.4%	-3.8%
\$50,000-\$70,000	\$26,100,217	\$22,852,845	-12.4%	0.5%	0.5%	0.0%
\$70,000-\$100,000	\$31,688,056	\$27,876,192	-12.0%	0.4%	0.4%	0.0%
\$100,000-\$200,000	\$54,153,447	\$47,207,050	-12.8%	0.5%	0.5%	0.0%
Greater Than \$200,000	\$21,781,687	\$19,234,239	-11.7%	0.4%	0.4%	0.0%
<b>Total Spending</b>	<b>\$189,645,448</b>	<b>\$166,296,226</b>	<b>-12.3%</b>	<b>0.4%</b>	<b>0.4%</b>	<b>-2.5%</b>

Source: IMPLAN, 2021

**FURNITURE AND HOME**

The furniture and home spending group includes items such as house furnishings and décor. Consumer spending declined in every income level between 2019 and 2020 for this retail category. The Birmingham region spent over 30 percent less on this sector, which was a decline of around \$63.2 million. However, as with other small retail categories, the decrease of the percent of total spending share was less severe than the yearly spending comparisons. The overall decrease in the percentage of total consumer expenditures was about 22 percent, declining from 0.50 percent to 0.4 percent. **Table 1.56** lists the spending evaluation for furniture and home items between 2019 and 2020.

**Table 1.56:** Household Spending on Furniture and Home, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$32,495,335	\$22,837,544	-29.7%	0.5%	0.4%	-23.5%
<b>\$30,000-\$50,000</b>	\$29,503,321	\$20,591,685	-30.2%	0.5%	0.4%	-23.3%
<b>\$50,000-\$70,000</b>	\$28,936,325	\$20,202,815	-30.2%	0.5%	0.4%	-22.1%
<b>\$70,000-\$100,000</b>	\$35,131,352	\$24,643,651	-29.9%	0.5%	0.4%	-22.6%
<b>\$100,000-\$200,000</b>	\$60,037,883	\$41,732,891	-30.5%	0.5%	0.4%	-21.5%
<b>Greater Than \$200,000</b>	\$24,148,535	\$17,003,825	-29.6%	0.4%	0.3%	-21.0%
<b>Total Spending</b>	\$210,252,751	\$147,012,411	-30.1%	0.5%	0.4%	-22.3%

Source: IMPLAN, 2021

**GAS**

Gasoline is a necessity for most households, especially for those who rely on their own transportation modes to complete daily tasks like commuting to work, the grocery store, or the doctor’s office. In 2020, every household income group spent more on gas than the groups did in 2019. The highest spending change occurred in households with more than \$200,000 of income, which increased spending by 6.5 percent. The income bracket with the smallest increase was \$100,000 to \$200,000, with an incline of 5.2 percent. In addition to spending levels, all income categories had a notable increase in the percentage of spending compared to the previous year. Households with less than \$30,000 had the smallest increase in share of spending at roughly 16 percent, and the largest incline occurred in households with more than \$200,000 by nearly 20 percent.

These increases can be contributed to many factors. For example, the price of gas has traditionally been an indicator of how much gas is purchased. Like other necessities, as the price of gas declines, the more that gas is bought. According to a consumer spending study conducted by JP Morgan, as price of gasoline declines, Americans choose to buy more expensive, types of gas. Since the average price of gas in 2020 was \$2.17 per gallon, a decrease from \$2.60 per gallon in 2019, in the United States, the increases in spending can at least partially be explained by the increase in gallons bought and the higher incline to buy traditionally more expensive grades of gas. See **Table 1.57** for an evaluation on gas spending within the region.

**Table 1.57:** Household Spending on Gas, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$39,120,866	\$41,601,390	6.3%	0.7%	0.8%	15.7%
<b>\$30,000-\$50,000</b>	\$35,518,804	\$37,510,282	5.6%	0.6%	0.7%	16.1%
<b>\$50,000-\$70,000</b>	\$34,836,203	\$36,801,906	5.6%	0.6%	0.7%	17.9%
<b>\$70,000-\$100,000</b>	\$42,294,345	\$44,891,435	6.1%	0.6%	0.7%	17.1%
<b>\$100,000-\$200,000</b>	\$72,279,111	\$76,021,582	5.2%	0.6%	0.7%	18.7%
<b>Greater Than \$200,000</b>	\$29,072,222	\$30,974,554	6.5%	0.5%	0.6%	19.5%
<b>Total Spending</b>	\$253,121,551	\$267,801,149	5.8%	0.6%	0.7%	17.6%

Source: IMPLAN, 2021

### GENERAL MERCHANDISE

The general merchandise spending category consists of establishments that sell a variety of different items from the same store location. Consumer spending within this category stayed relatively consistent despite the pandemic, and there was an increase of roughly 0.7 percent for households across the region. The highest increase was within the income category of greater than \$200,000 at 1.5 percent. Though the percentage change in spending was minimal, the changes in total spending shares were more substantial. The total share of spending for regional households on general merchandise increased by 12 percent in 2020. The largest increase occurred in the greater than \$200,000 income bracket, which grew by nearly 14 percent. See **Table 1.58** for general merchandise spending evaluation for all the income categories.

**Table 1.58:** Household Spending on General Merchandise

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$107,600,190	\$108,950,460	1.3%	1.8%	2.0%	10.1%
<b>\$30,000-\$50,000</b>	\$97,692,882	\$98,236,200	0.6%	1.7%	1.9%	10.5%
<b>\$50,000-\$70,000</b>	\$95,815,417	\$96,381,026	0.6%	1.7%	1.9%	12.2%
<b>\$70,000-\$100,000</b>	\$116,328,703	\$117,566,806	1.1%	1.6%	1.8%	11.5%
<b>\$100,000-\$200,000</b>	\$198,800,461	\$199,093,981	0.1%	1.7%	1.9%	13.1%
<b>Greater Than \$200,000</b>	\$79,961,845	\$81,119,690	1.5%	1.4%	1.5%	13.8%
<b>Total Spending</b>	\$696,199,498	\$701,348,163	0.7%	1.7%	1.8%	12.0%

Source: IMPLAN, 2021

**HEALTH AND PERSONAL CARE**

From 2019 to 2020, Health and Personal Care spending decreased for all income levels. This sector includes a wide range of stores, including pharmacies, cosmetics stores, and medical equipment supply establishments. Regionally, spending on this retail category declined by over 8 percent. Households within the \$100,000 to \$200,000 income range presented the highest decline, at 8.7 percent. The income bracket with the least change was the bracket of people greater than \$200,000 at 7.5 percent. Overall, the spending on Health and Personal Care did not fluctuate over the course of the pandemic, with the percentage of total share of spending increasing marginally at 2 percent for the region. **Table 1.59** lists the spending changes for the Health and Personal Care sector for each income category.

**Table 1.59:** Household Spending on Health and Personal Care, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$61,130,828	\$56,428,242	-7.7%	1.0%	1.0%	0.4%
<b>\$30,000-\$50,000</b>	\$55,502,195	\$50,879,052	-8.3%	1.0%	1.0%	0.8%
<b>\$50,000-\$70,000</b>	\$54,435,552	\$49,918,209	-8.3%	1.0%	1.0%	2.3%
<b>\$70,000-\$100,000</b>	\$66,089,752	\$60,890,869	-7.9%	0.9%	0.9%	1.7%
<b>\$100,000-\$200,000</b>	\$112,944,380	\$103,115,888	-8.7%	1.0%	1.0%	3.1%
<b>Greater Than \$200,000</b>	\$45,428,672	\$42,013,972	-7.5%	0.8%	0.8%	0.0%
<b>Total Spending</b>	\$395,531,379	\$363,246,232	-8.2%	0.9%	1.0%	2.1%

Source: IMPLAN, 2021

**MISCELLANEOUS**

The Miscellaneous spending category includes retail merchandise not described in the other categories. Generally, establishments in this sector are establishments with specific and unique items, such as florists or pet groomers. Therefore, this is the smallest retail category, as it only contributed 0.6 percent, or around \$110.5 million, to the total spending in 2020. However, spending in this category decreased by about 24 percent in the region during the pandemic. This is likely due to reasons explained in other categories, such as the decrease in income leading to restricted spending decisions. **Table 1.60** displays the changes regarding miscellaneous spending in the region between 2019 and 2020.

**Table 1.60:** Household Spending on Miscellaneous Goods, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$44,529,181	\$33,845,579	-24.0%	0.7%	0.6%	-17.3%
<b>\$30,000-\$50,000</b>	\$40,429,148	\$30,517,182	-24.5%	0.7%	0.6%	-17.0%
<b>\$50,000-\$70,000</b>	\$39,652,179	\$29,940,870	-24.5%	0.7%	0.6%	-15.8%
<b>\$70,000-\$100,000</b>	\$48,141,382	\$36,522,256	-24.1%	0.7%	0.6%	-16.3%
<b>\$100,000-\$200,000</b>	\$82,271,432	\$61,848,761	-24.8%	0.7%	0.6%	-15.1%
<b>Greater Than \$200,000</b>	\$33,091,349	\$25,199,920	-23.8%	0.6%	0.5%	-14.6%
<b>Total Spending</b>	\$288,114,671	\$217,874,568	-24.4%	0.7%	0.6%	-15.9%

Source: IMPLAN, 2021

### MOTOR VEHICLES

The majority of households in the region rely heavily on motor vehicles as their primary mode of transportation. This spending category represents establishments selling domestically produced automobiles, such as cars, SUVs, minivans, and light-duty trucks. Spending on these vehicles declined during the pandemic by nearly 10 percent. The highest level of decline was in the \$100,000 to \$200,000 income group, with a 10.4 percent decrease. However, as a percentage of total share of spending, motor vehicles experienced an increase of 0.2 percent overall. The less than \$30,000 and \$30,000 to \$50,000 income groups experienced decreases in the total shares of spending for this category, while the top two income categories had increases by this measure. This contrast in percentage of total shares can likely be attributed to the amount of disposable income within the larger income groups. See **Table 1.61** for more information regarding spending changes in this category.

**Table 1.61:** Household Spending on Motor Vehicles, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$60,172,618	\$54,513,098	-9.4%	1.0%	1.0%	-1.5%
<b>\$30,000-\$50,000</b>	\$54,632,212	\$49,152,245	-10.0%	0.9%	0.9%	-1.1%
<b>\$50,000-\$70,000</b>	\$53,582,289	\$48,224,013	-10.0%	1.0%	1.0%	0.4%
<b>\$70,000-\$100,000</b>	\$65,053,812	\$58,824,266	-9.6%	0.9%	0.9%	-0.2%
<b>\$100,000-\$200,000</b>	\$111,174,005	\$99,616,191	-10.4%	0.9%	1.0%	1.2%
<b>Greater Than \$200,000</b>	\$44,716,589	\$40,588,041	-9.2%	0.8%	0.8%	1.8%
<b>Total Spending</b>	\$389,331,525	\$350,917,854	-9.9%	0.9%	0.9%	0.2%

Source: IMPLAN, 2021

**NON-STORE RETAIL**

Non-store retailers include establishments that use solely the internet or other alternatives, such as broadcasting or mailed out catalogs, to sell their products. In 2020, spending in this category declined for regional households by about 16 percent compared to 2019 levels. This is possibly due to the heavy in-person nature of retail vendors included in this retail category. Though it includes electronic shopping and home delivery sales, it also includes street vendors (except food), vending machine operators, door-to-door sales, and party planning sales.

The largest decrease of 16.3 percent occurred in households within the \$100,000 to \$200,000 income bracket. However, the decline for this retail category is not as severe when evaluating the changes in total spending shares. For the region, non-store retail total share of spending only declined by 6 percent in 2020, or from 2.6 to 2.4 percent. The largest decline in this measure occurred within households with less than \$30,000 in income. **Table 1.62** lists the evaluation of spending changes for Non-Store Retailers in each regional income category.

**Table 1.62:** Household Spending on Non-Store Retailers, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
Less Than \$30,000	\$158,744,585	\$134,247,216	-15.4%	2.7%	2.4%	-8.0%
\$30,000-\$50,000	\$145,579,877	\$122,270,378	-16.0%	2.5%	2.3%	-7.7%
\$50,000-\$70,000	\$144,367,036	\$121,299,866	-16.0%	2.6%	2.4%	-6.3%
\$70,000-\$100,000	\$176,131,244	\$148,707,485	-15.6%	2.5%	2.3%	-6.8%
\$100,000-\$200,000	\$303,487,344	\$254,014,958	-16.3%	2.6%	2.4%	-5.5%
Greater Than \$200,000	\$120,775,171	\$102,456,814	-15.2%	2.0%	1.9%	-4.8%
<b>Total Spending</b>	<b>\$1,049,085,257</b>	<b>\$882,996,717</b>	<b>-15.8%</b>	<b>2.5%</b>	<b>2.3%</b>	<b>-6.4%</b>

Source: IMPLAN, 2021

**SPORTING GOODS, HOBBIES, MUSICAL INSTRUMENTS, AND BOOK STORES**

The Sporting Goods, Hobbies, Musical Instruments, and Book Stores spending category includes establishments that sell a wide array of equipment pertaining to a variety of leisure activities. The past year presented many challenges for various types of sporting events and hobbies, like event cancellations due to the restrictions on large crowds and gatherings. These obstacles likely impacted the product sales within this retail sector, which can be contributed to the decreases in total spending across all income groups.

Regional household spending for this category decreased by 51 percent in 2020, or over \$233.7 million. The largest spending decline occurred within the \$100,000 to \$200,000 income group, which experienced a decrease of over 51 percent. Though this category represented a marginal percent of total spending, the total shares of spending on this retail sector declined by considerable margins, decreasing by at least 44 percent in every income bracket. **Table 1.63** below details the household spending evaluation of this retail group.

**Table 1.63:** Household Spending on Sporting Goods, Hobbies, Musical Instruments, and Book Stores, 2019 to 2020

Income Level	2019 Spending	2020 Spending	Percent Change: 2020	Percent of Total Share 2019	Percent of Total Share 2020	Changes in Total Share of Spending: 2019-2020
<b>Less Than \$30,000</b>	\$70,805,520	\$34,859,990	-50.8%	1.2%	0.6%	-46.4%
<b>\$30,000-\$50,000</b>	\$64,286,089	\$31,431,835	-51.1%	1.1%	0.6%	-44.2%
<b>\$50,000-\$70,000</b>	\$63,050,637	\$30,838,250	-51.1%	1.1%	0.6%	-45.4%
<b>\$70,000-\$100,000</b>	\$76,549,255	\$37,616,892	-50.9%	1.1%	0.6%	-45.8%
<b>\$100,000-\$200,000</b>	\$130,819,193	\$63,702,476	-51.3%	1.1%	0.6%	-45.0%
<b>Greater Than \$200,000</b>	\$52,618,309	\$25,955,205	-50.7%	0.9%	0.5%	-44.7%
<b>Total Spending</b>	\$458,129,003	\$224,404,648	-51.0%	1.1%	0.6%	-45.5%

Source: IMPLAN, 2021

## CHAPTER SUMMARY

### GROSS REGIONAL PRODUCT

- Alabama's GDP level declined by 9 percent from December 2019 to June 2020, decreasing from nearly \$230.8 billion to \$209.9 billion. However, during the third quarter of 2020, the state's GDP increased to 2019 levels, rising by 9 percent from the previous quarter.
- The state revenue streams most affected by the economic downturn were taxes on production and imports, which includes sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments.
- The closure of businesses and the implementation of stay-at-home orders decreased areas of the region's GRP for 2020, which declined by 4 percent by June 2020, dropping from approximately \$69.6 billion to \$66.7 billion.

### CONSUMER SPENDING

- Economic uncertainty caused by the pandemic resulted in consumer spending to decline in the region by nearly 10 percent from 2019 to 2020.
- Households within incomes between \$100,000-\$200,000 experienced the largest consumer spending decline, with expenditures declined by nearly 11 percent.
- The Nonstore Retailers and Limited-Service Restaurants sectors experienced the largest declines in total share of spending for nearly every income group between 2019 and 2020.
- The Funds, Trusts, and Other Financial Services and Software Publishers sector experienced increases in consumer spending between 2019 and 2020, regardless of income group.
- Households making less than \$70,000 were more likely to increase spending on Food and Beverage retailers, and households making more than \$70,000 were more likely to increase spending on Wholesale Retail Services.
- Full-Service Restaurants were one of the most impacted sectors, with consumer spending declining regionally by 55.4 percent.

### RETAIL ASSESSMENT

- The Clothing and Accessories and Sporting Goods, Hobby, Musical Instrument, and Book Stores retail categories experienced the most consumer spending decline in 2020, both decreasing by 51 percent from 2019 levels.
- The Gas and General Merchandise categories were the only categories to experience increases as a percentage of total spending between 2019 and 2020.
- Both Health and Personal Care and Motor Vehicles has declines in percentage of total spending between 2019 and 2020, but increases as a percentage of total share, meaning though household overall spent less on these categories in 2020 than 2019 levels, consumers spent a greater share of their overall income on these categories.



# **PART TWO**

## **REGIONAL RESILIENCE**

## INTRODUCTION

Measuring and understanding the economic resilience of a local economy is becoming an increasingly necessary tool for government officials, administrators, and policymakers. Economic downturns caused by anything from natural disasters to manmade crises have shown that communities without proper economic resiliency measures fare much worse than others. The COVID-19 Pandemic of 2020 highlighted the needs for economic resiliency as a global market shock rippled across the globe, leaving behind unemployment rates and economic uncertainties that have not been felt since the financial crisis of 2008. As discussed in Section I, the Greater Birmingham region was not immune to these market insecurities, as many communities throughout the region faced record unemployment and labor force stagnation.

However, the Greater Birmingham region seems to have recovered quicker than counterpart regions, with employment and labor participation rates reaching pre-pandemic levels by the end of 2021. This section aims to identify the areas of the regional economy that assisted in the economic recovery, as well as evaluate trends and factors that are less resilient to economic disruptions. Identifying areas of economic vulnerability is critical to understanding the impacts of disruptions on the local economy and evaluating opportunities that bolster these areas is necessary in developing strategies to improve overall resilience.

Part II is broken in 4 chapters, as outlined in **Table 2.1**. These chapters will focus on describing the historic local economic trends of the Greater Birmingham region, measuring the region's current economic resilience, and outlining strategic goals to guide actions and projects in the region to develop its ability to withstand, avoid, or recover from the next inevitable economic shock. These resiliency goals developed in this section will be used to inform and guide the Action Strategies that will appear in the five-year full rewrite of the region's Comprehensive Economic Development Strategy (CEDS).

**Table 2.1:** Part Two Outline

Chapter	Purpose
<b>Overview of Regional Resilience</b>	Describes the history of the region through the lens of economic resiliency
<b>Resiliency Index Comparison</b>	Compares four different Resiliency Indexes and the regional trends that emerge from Index data
<b>Local Government Survey Analysis</b>	Summarizes the responses of local government officials on the impact of COVID-19 in their community
<b>Regional Vulnerabilities and Assets</b>	Identifies regional vulnerabilities and assets that inhibit or advance economic resilience
<b>Regional Resiliency Goals</b>	Builds upon findings from the Pandemic Analysis Report to identify goals for the region that will serve as a foundation for the CEDS

## CHAPTER ONE

# OVERVIEW OF REGIONAL RESILIENCE

As the primary federal agency involved with economic development, the Economic Development Administration (EDA) defines economic resilience as the ability for a community to quickly recover, withstand, and avoid an economic shock.<sup>1</sup> Over the course of the last century alone, the need for local economies to have the ability to withstand economic shocks has become apparent in a variety of ways, as regional economic prosperity is increasingly linked to an area’s ability to endure major disruptions to its economic base.

## HISTORY OF REGIONAL RESILIENCE

The Birmingham region was founded and built around its potential to become a global industrial hub. It relied heavily on the mining, production, and transportation of steel, coal, and iron until the mid- to late-twentieth century. The world wars accelerated the growth of the Birmingham economy, and the external dependence on steel allowed it to survive many economic downturns and depressions since its founding.<sup>2</sup> Though the heavy dependence on the coal, steel, and iron industry propelled the region through the Great Depression and world wars, eventually, increased globalization, technological innovation, and the steel crisis in the early 1970s forced the Greater Birmingham area to diversify and expand its economy beyond its previous economic dependence. Without this diversification, the closing of mines, outsourcing of manual labor, and the boom of the financial and technological sectors in the late 1990s could have been the catalyst for the region’s decline. Instead, the addition of 140 new industries in the 1950s launched an era of increasing economic diversification still being seen today. Birmingham and its surrounding areas have become home to world-class medical facilities, one of the nation’s largest banking centers, and a transportation hub for global companies such as Amazon and FedEx. The region is also becoming increasingly notable for its food and drink scene, with an array of locally owned eateries, restaurants, and breweries.

A resilient economy is determined not only by whether economic shocks can be prevented, as some may be unavoidable, but also by how well it recovers from an unforeseeable or unavoidable disruption. In October 2008, approximately one month following the financial crisis, Alabama’s unemployment rate was 5.9 percent. A year later in October 2009, the rate had shot up to 11.9 percent, the highest in the state’s recent history. Alabama’s Gross Domestic Product (GDP) fell by \$6 billion in the two years following the financial crisis, and the state had the fourth highest rate for bankruptcy filings in the United States.

The Birmingham region’s local economy also felt the hardships of the Great Recession. Home sales in the area dropped by 29 percent in one year.<sup>3</sup> The region experienced the highest unemployment rate of the four largest metropolitan areas in the state, declining at a steeper rate than the national and state average.<sup>4</sup> In addition, according to reports in 2019, the Birmingham-Hoover region still had not returned to the employment levels it experienced pre-recession, making it the only major metro-area in the state to not reach full recovery.

1 Economic Development Administration, “Comprehensive Economic Development Strategy: Content,” U.S. Economic Development Administration, <https://www.eda.gov/ceds/content/economic-resilience.htm>.

2 Herbert J. Lewis, “Birmingham,” Encyclopedia of Alabama, Alabama Humanities Alliance, Accessed June 16, 2022, <http://encyclopediaofalabama.org/article/h-1421>.

3 William Thornton, “Here’s why Alabama may not be over the Great Recession,” Alabama Local News, Advance Local, October 23, 2018, <https://www.al.com/business/2018/10/how-alabama-hasnt-yet-recovered-from-the-great-recession.html>.

4 Ryan Poe, “Study: Recession hit Alabama, Birmingham job markets hard,” Birmingham Business Journal, August 22, 2011, <https://www.bizjournals.com/birmingham/news/2011/08/22/study-recession-hit-alabama.html>.

Beginning in March 2020, the COVID-19 Pandemic caused economic disruptions across the state, resulting in high unemployment rates, job loss, and economic uncertainty. Though the factors and implications of these recessions differ greatly, many of the same economic metrics impacted during the Great Recession were also affected by the pandemic. This section aims to outline the similarities and differences between these two economic events to determine which factors contributed to the economic resiliency and vulnerability of industries and employment within the region. The analysis of each of these industries will assist in developing the economic resiliency goals and strategies for the Comprehensive Economic Development Strategy for the region.

## REGIONAL ECONOMIC RESILIENCE TRENDS

Economic downturns tend to impact certain industries over others. Susceptibility to market changes is measured by employment loss during times of economic disturbances and the length of recovery after the economic event. This section identifies the most and least susceptible industries within the region throughout the last two decades and defines how these industries fared during times of economic uncertainty. In addition, it analyzes other industries where growth or loss remained persistent or experienced little change during these periods of economic disturbance. **Table 2.2** identifies the industries reviewed in this analysis, as well as each industry's percent of total regional employment for 2000, 2010, and 2020. Since the purpose of this analysis is to evaluate the private sector, the Government industry is not included.

**Table 2.2:** Industry by Total Employment, 2000 to 2020

Industry	2000	2010	2020
Trade, Transportation, and Utilities	21.9%	21.2%	20.1%
Government	14.5%	17.0%	16.3%
Professional and Business Services	12.4%	12.1%	13.0%
Education and Healthcare Services	10.6%	13.2%	14.0%
Manufacturing	10.2%	7.0%	7.1%
Financial Activities	7.9%	8.0%	8.2%
Leisure and Hospitality	7.6%	8.6%	8.4%
Construction	6.2%	4.9%	5.5%
Other Services	5.3%	5.6%	5.6%
Information	2.8%	1.9%	1.4%
Logging and Mining	0.6%	0.6%	0.5%

Source: Bureau of Labor Statistics, 2000 to 2020

### MOST SUSCEPTIBLE INDUSTRIES

For the Birmingham metropolitan area, the most susceptible industries to economic distress caused by the pandemic in terms of employment were Professional and Business Services, Trade, Transportation, and Utilities, and Construction.

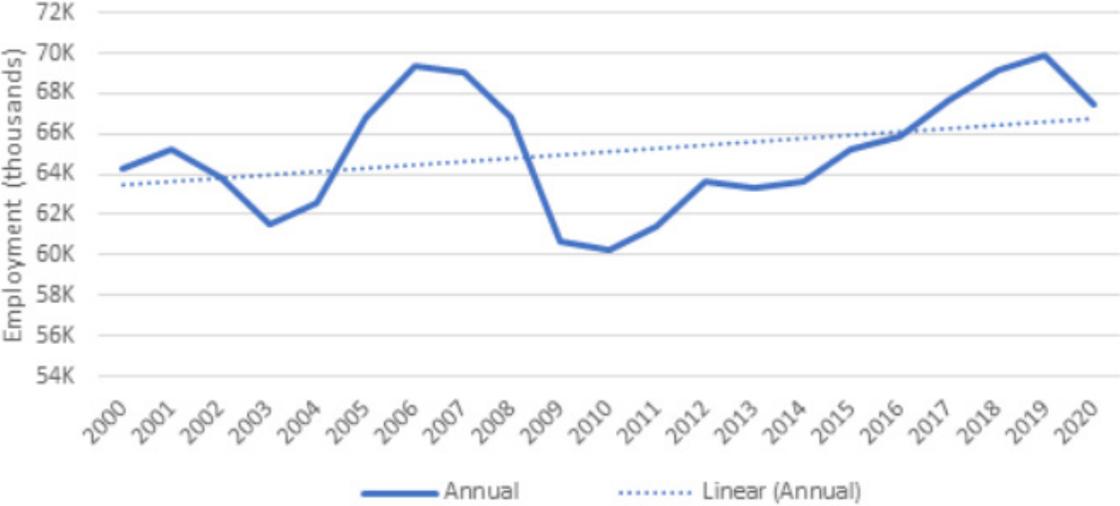
### PROFESSIONAL AND BUSINESS SERVICES

**Figure 2.1** outlines the employment trends for the Professional and Business Services industry from 2000 to 2020. As illustrated, this industry experienced severe declines in employment after the Great Recession, losing approximately 9,000 jobs between 2007 and 2010. It also underwent declines during the pandemic, losing approximately 7,000 jobs between February and April 2020 alone. The recovery timeframe for this industry also lags slower than other industries, reaching pre-recession levels in 2019,

over 10 years after the Great Recession began. However, the average employment level for Professional and Business Services in 2021 is estimated at 73,000, which is higher than pre-recession levels. Though this industry has recovered from the shocks of the pandemic and recession and is steadily increasing employment in the region, it still proves to be susceptible to economic disruptions. **Figures 2.2 and 2.3** give a comparison of this industry’s employment levels in 2007 and 2010 as well as 2019 and 2020 to illustrate the employment trends between the two recessions.

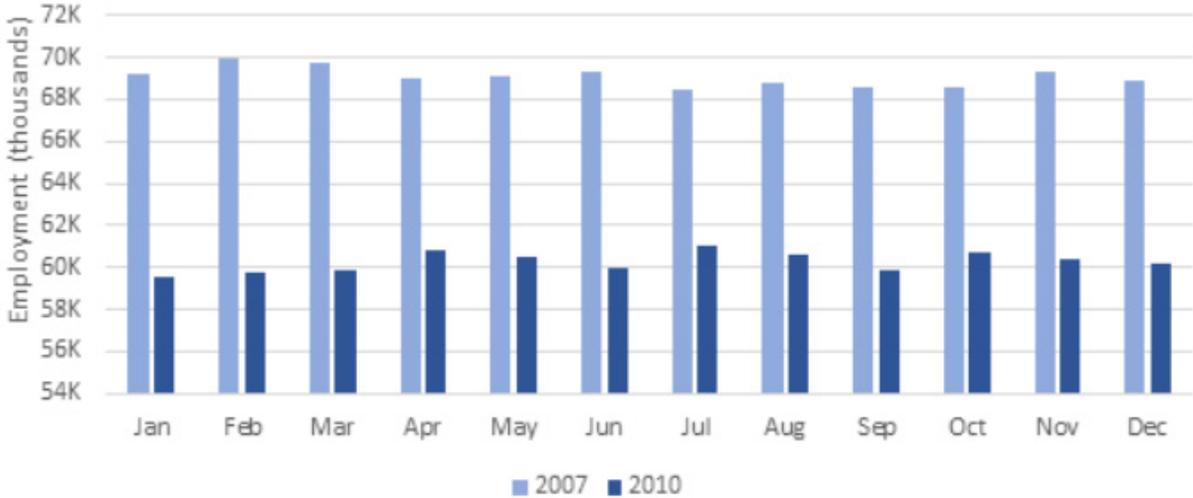
**TRADE, TRANSPORTATION, AND UTILITIES**

**Figure 2.1:** Professional and Business Services, 2000 to 2020



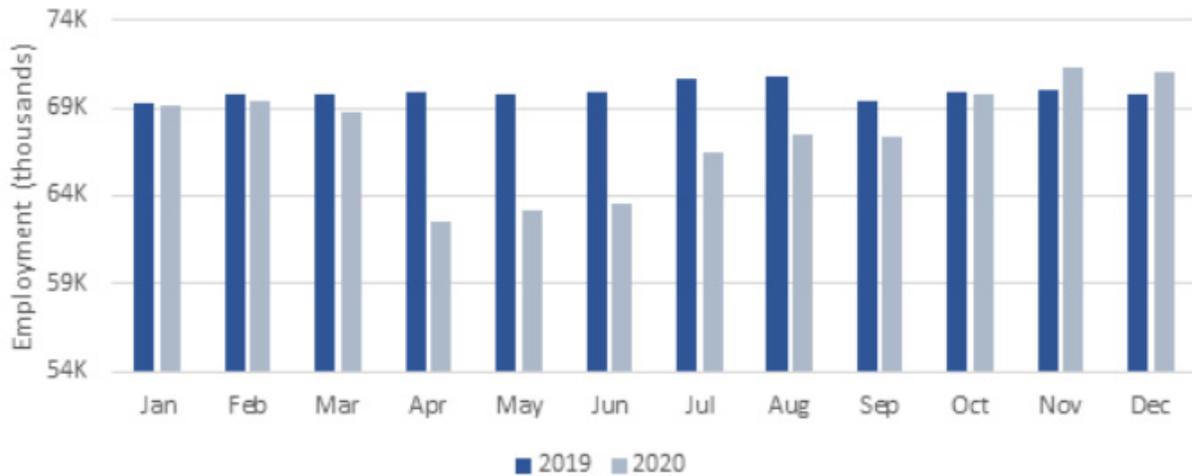
Source: Bureau of Labor Statistics, 2000 to 2020

**Figure 2.2:** Professional and Business Services, 2007 and 2010



Source: Bureau of Labor Statistics, 2007 and 2010

**Figure 2.3:** Professional and Business Services, 2019 and 2020



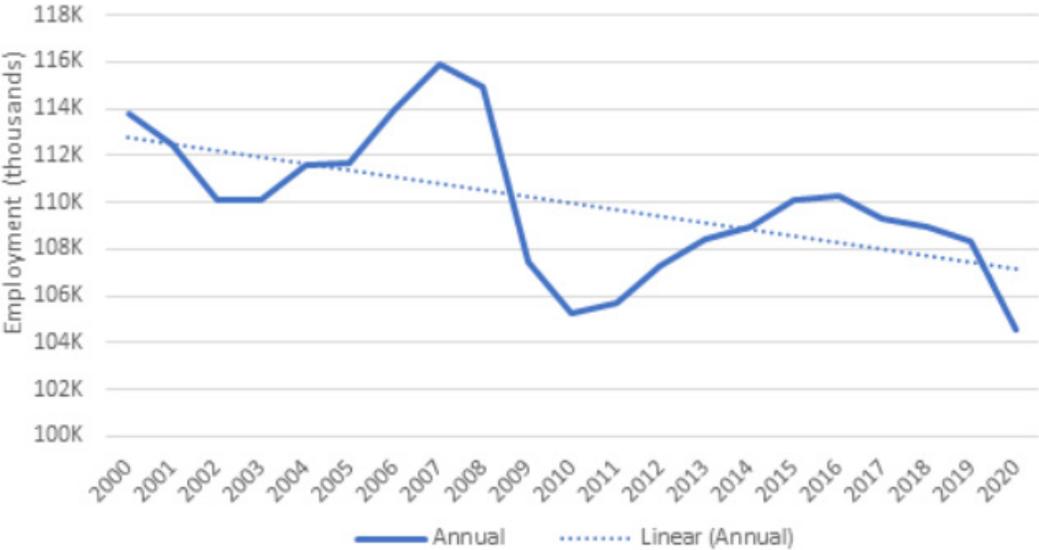
Source: Bureau of Labor Statistics, 2019 and 2020

The Trade, Transportation, and Utilities industry represents the largest industry in terms of employment within the region by a large margin. This gap is likely due to the broad categorization of employment in this industry. Also, the economic diversification of the region may explain this large influx of employment, as the focus of the region has moved away from producing and manufacturing goods to a services-based economy. However, these jobs are often seasonal, and pay low wages, making the employment opportunities in this industry more susceptible to downturns, especially during the pandemic.<sup>5</sup>

This industry lost nearly 11,000 jobs between 2007 and 2010, and approximately 9,000 between February and April of 2020. As shown in **Figure 2.4**, recovery in this industry has been stagnant, and employment, which experienced a sharp incline until 2007, has steadily declined since the Great Recession. Employment rose to 110,300 in 2016, the closest to pre-recession employment in 2007, but had already fallen to 108,300 in 2019, prior to the pandemic. By 2020, this industry had lost 3,700 jobs due to the shutdowns and closures during the pandemic. Though estimates from 2021 suggest 2,500 more jobs were created since 2020, this measure is still 1,200 lower than pre-pandemic levels. **Figures 2.5** and **2.6** give a comparison of this industry’s employment levels in 2007 and 2010 as well as 2019 and 2020 to illustrate the employment trends between the two recessions.

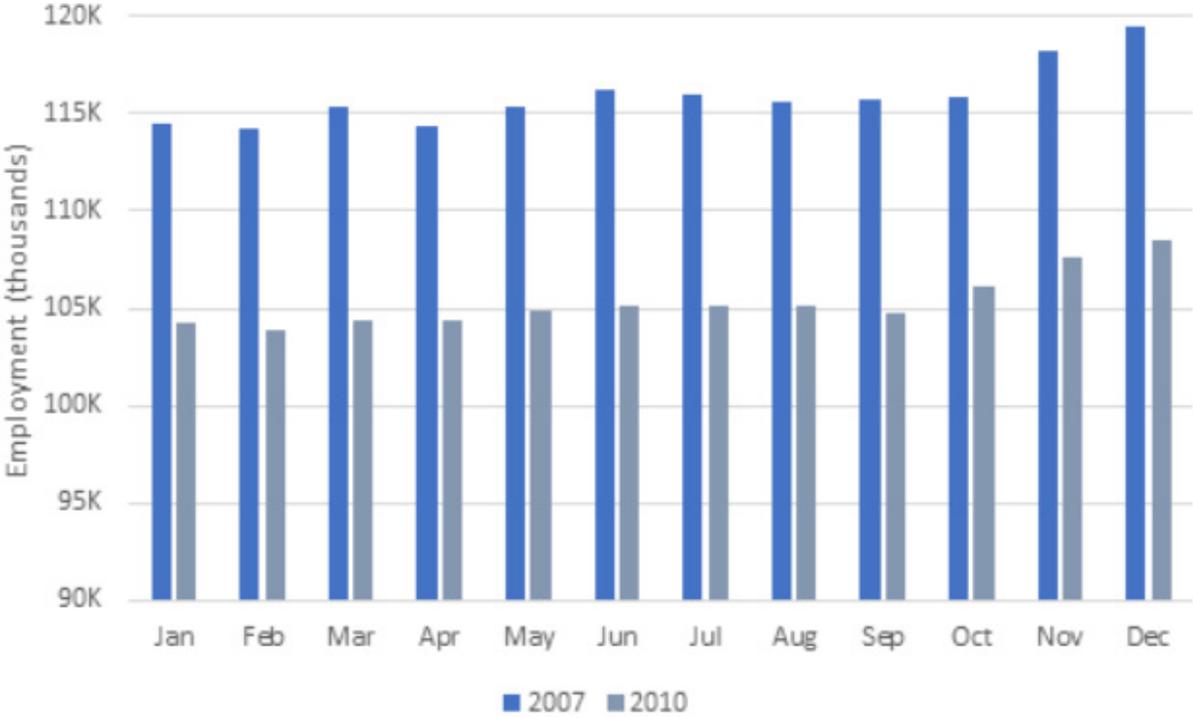
5 Nicole Bateman and Martha Ross, “The pandemic hurt low-wage workers the most – and so far, the recovery has helped them the least,” Brookings, The Brookings Institution, July 28, 2021, <https://www.brookings.edu/research/the-pandemic-hurt-low-wage-workers-the-most-and-so-far-the-recovery-has-helped-them-the-least/>.

**Figure 2.4:** Trade, Transportation, and Utilities, 2000 to 2020



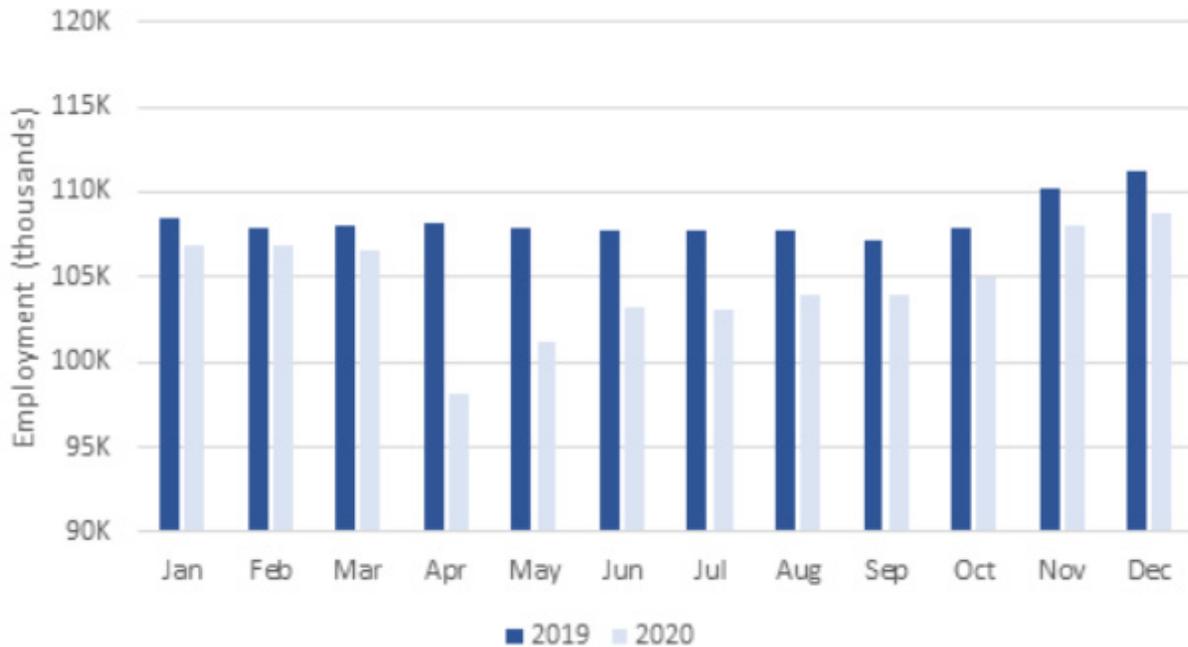
Source: Bureau of Labor Statistics, 2000 to 2020

**Figure 2.5:** Trade, Transportation, and Utilities, 2007 and 2010



Source: Bureau of Labor Statistics, 2007 and 2010

**Figure 2.6:** Trade, Transportation, and Utilities, 2019 and 2020



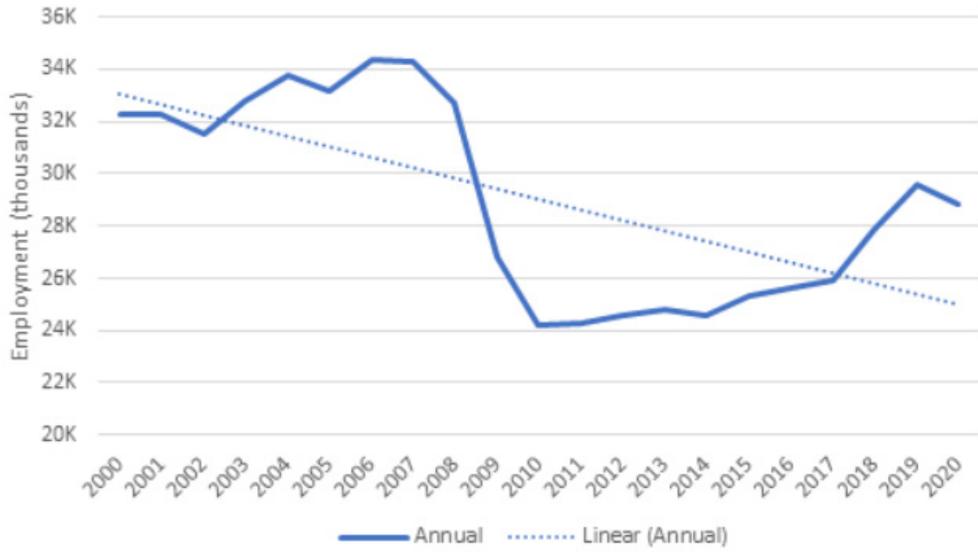
Source: Bureau of Labor Statistics, 2019 and 2020

**CONSTRUCTION**

The Construction industry’s employment within the region has declined by over 11 percent in the last two decades. As illustrated in **Figure 2.7**, the most significant loss was experienced after the Great Recession, where the Construction industry declined by more than 10,000 jobs between 2007 and 2010. Construction also experienced a lag in recovery compared to other industries, with employment still short of pre-recession levels by 2019. However, this industry was impacted more severely by the financial crisis than by the pandemic. Around 1,200 construction jobs were lost between February and April 2020, but an average of only 800 jobs were lost on average in the region between 2019 and 2020. The loss of construction employment could be explained by the increased demand for housing construction and remodeling services, a trend established by the increasing number of homeowners working from home and supported by relevantly low interest rates.<sup>6</sup> **Figures 2.8** and **2.9** give a comparison of this industry’s employment levels in 2007 and 2010 and 2019 and 2020 to illustrate the employment trends between the two recessions.

6 Nate DiCamillo, “The US construction industry is larger now than it was before the pandemic,” Quartz, G/O Media Inc., April 1, 2022, <https://qz.com/2149827/the-us-construction-industry-is-larger-now-than-it-was-before-the-pandemic/>.

**Figure 2.7:** Construction, 2000 to 2020



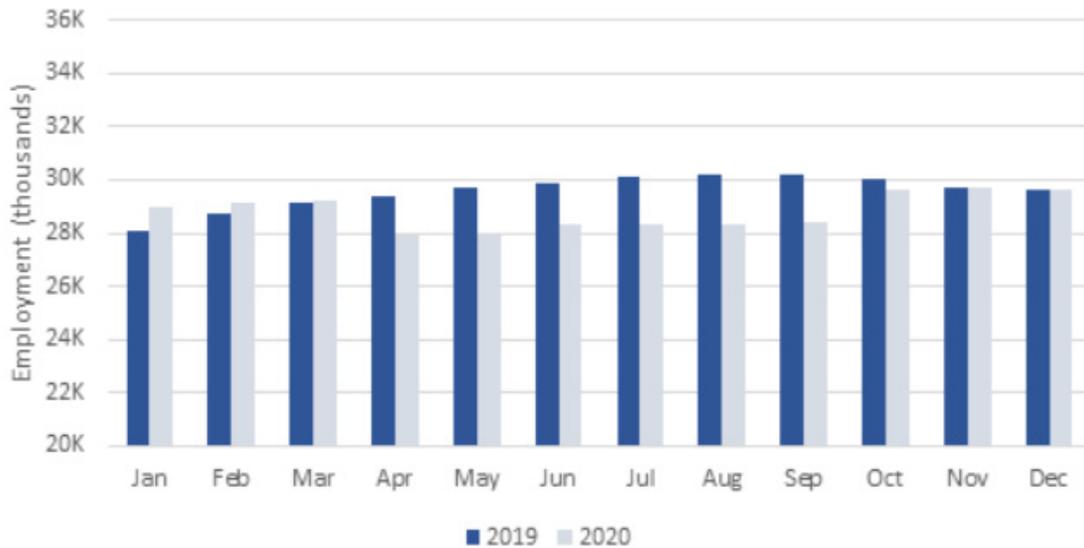
Source: Bureau of Labor Statistics, 2000 to 2020

**Figure 2.8:** Construction, 2007 and 2010



Source: Bureau of Labor Statistics, 2007 and 2010

**Figure 2.9:** Construction, 2019 and 2020



Source: Bureau of Labor Statistics, 2019 and 2020

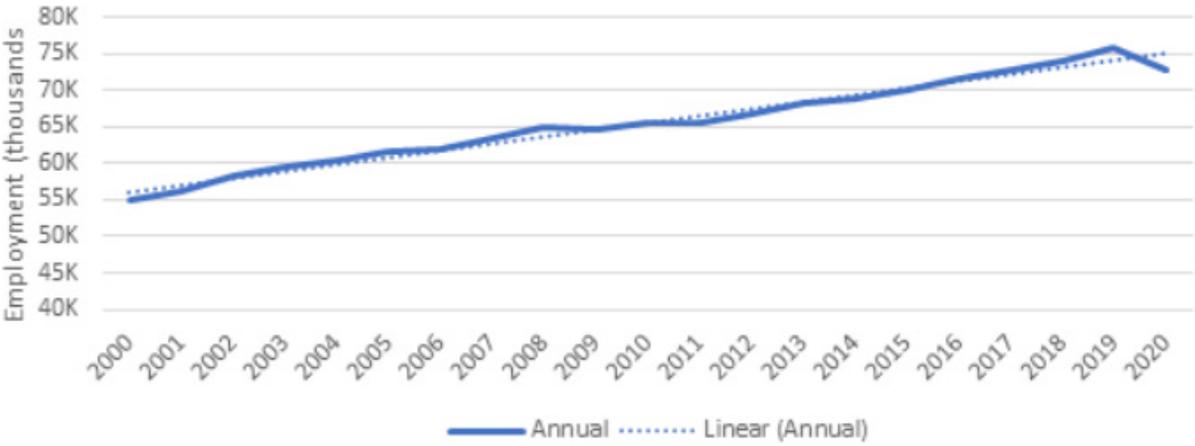
**LEAST SUSCEPTIBLE INDUSTRIES**

The Education and Healthcare Services industry experienced sustained employment growth over the past two decades, and employment loss was not a major factor during any impacts from economic disruptions.

**EDUCATION AND HEALTHCARE SERVICES**

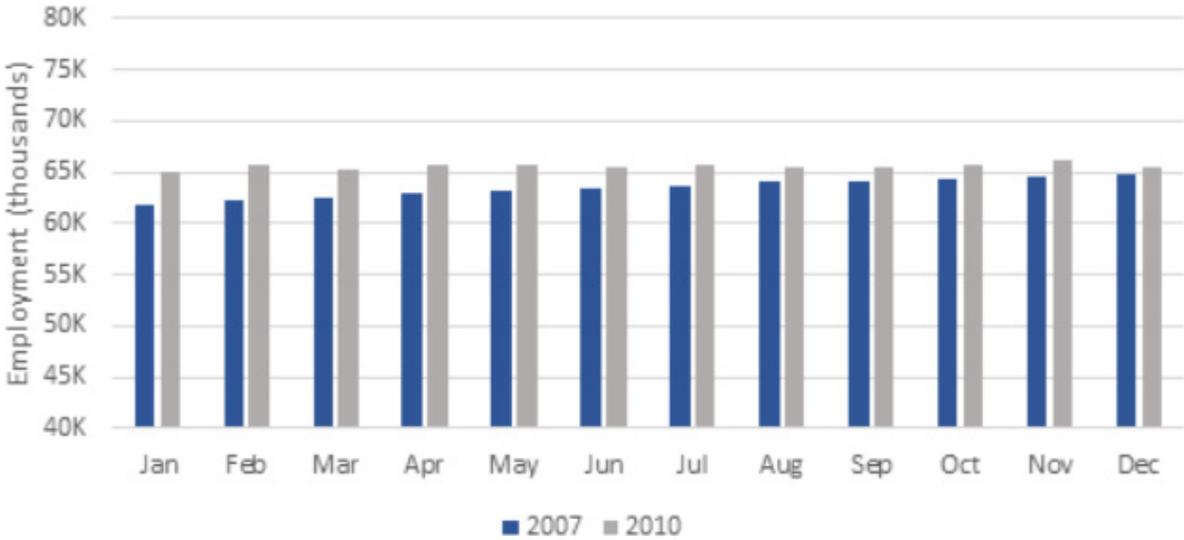
Employment within the Education and Healthcare Services industry has been rising steadily for the past two decades in the Birmingham region, increasing by over 32 percent since 2000. As illustrated in **Figure 2.10**, this industry is also one of the most resilient during times of economic shock. From 2007 to 2010, Education and Healthcare Services added over 2,000 jobs to the regional economy, when most industries lost jobs. Though around 3,000 jobs were lost in this industry between 2019 and 2020, estimates for 2021 surpass pre-pandemic levels. **Figures 2.11** and **2.12** give a comparison of this industry’s employment levels in 2007 and 2010 and 2019 and 2020 to illustrate the employment trends between the two recessions.

Figure 2.10: Education and Healthcare Services, 2000 to 2020



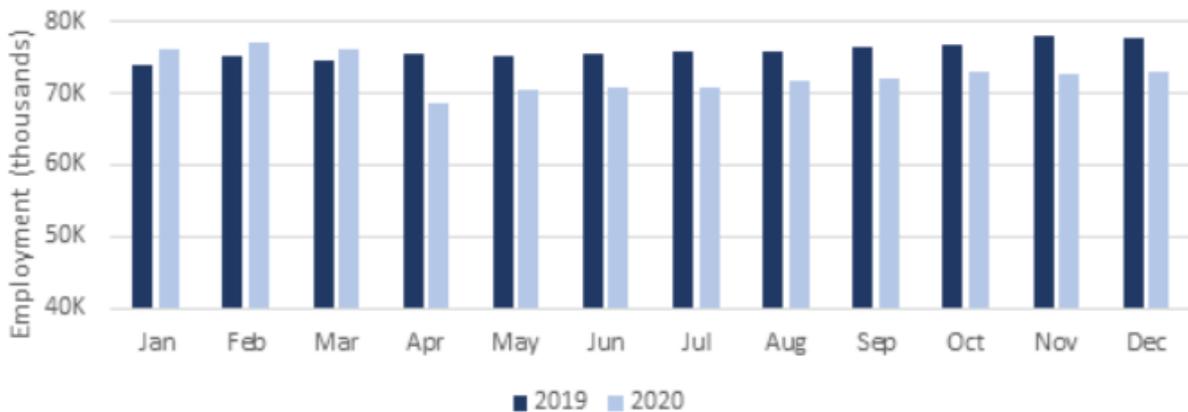
Source: Bureau of Labor Statistics, 2000 to 2020

Figure 2.11: Education and Healthcare Services, 2007 and 2010



Source: Bureau of Labor Statistics, 2007 and 2010

**Figure 2.12:** Education and Healthcare Services, 2019 and 2020



Source: Bureau of Labor Statistics, 2019 and 2020

**UPWARD TRENDING INDUSTRIES**

The Leisure and Hospitality and Other Services industries experienced increasing employment over the past three decades, and they both have upward trends in job growth despite initial impacts of economic disruptions.

**LEISURE & HOSPITALITY**

The Leisure and Hospitality Industry experienced the second largest gains in employment in the last two decades. This industry includes occupations in arts, entertainment, and recreation services, as well as accommodation and food services. Prior to the pandemic, which caused this industry’s most severe employment decline, job opportunities had grown by nearly 14,000 since 2000. Annual average employment decreased most significantly between 2019 and 2020, with a loss of 4,400 jobs. However, this phenomenon was not specific to the Birmingham area. Leisure and Hospitality was the hardest hit industry across the nation during the pandemic, primarily due to the face-to-face nature of most service providing jobs have within this industry.<sup>7</sup>

However, the gains in this industry, though steady in growth of jobs, may point to lower wages for workers. Studies from 2018 show that despite recovery in job numbers since the Great Recession, Alabamians made on average \$1,000 less than they were making prior to the recession.<sup>8</sup> These reports point to the growth in the Leisure and Hospitality industry in the last decade as a possible source of lower wage earnings. Much if not most of the employment growth in this industry has been low wage jobs, which are disproportionately impacted by economic shocks.<sup>9</sup>

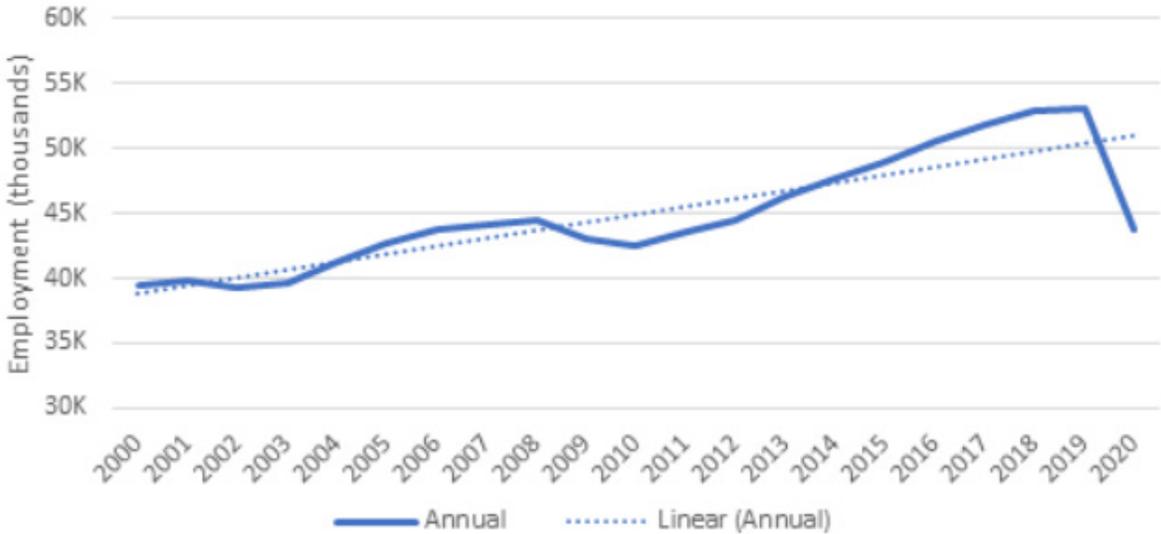
7 Elise Gould and Melat Kassa, “Low-wage, low-hours workers were hit hardest in the COVID-19 recession: The State of Working America 2020 employment report,” Economic Policy Institute, May 20, 2021, <https://www.epi.org/publication/swa-2020-employment-report/>.

8 William Thornton, “Here’s why Alabama may not be over the Great Recession,” Alabama Local News, Advance Local, October 23, 2018, <https://www.al.com/business/2018/10/how-alabama-hasnt-yet-recovered-from-the-great-recession.html>.

9 Nicole Bateman and Martha Ross, “The pandemic hurt low-wage workers.”

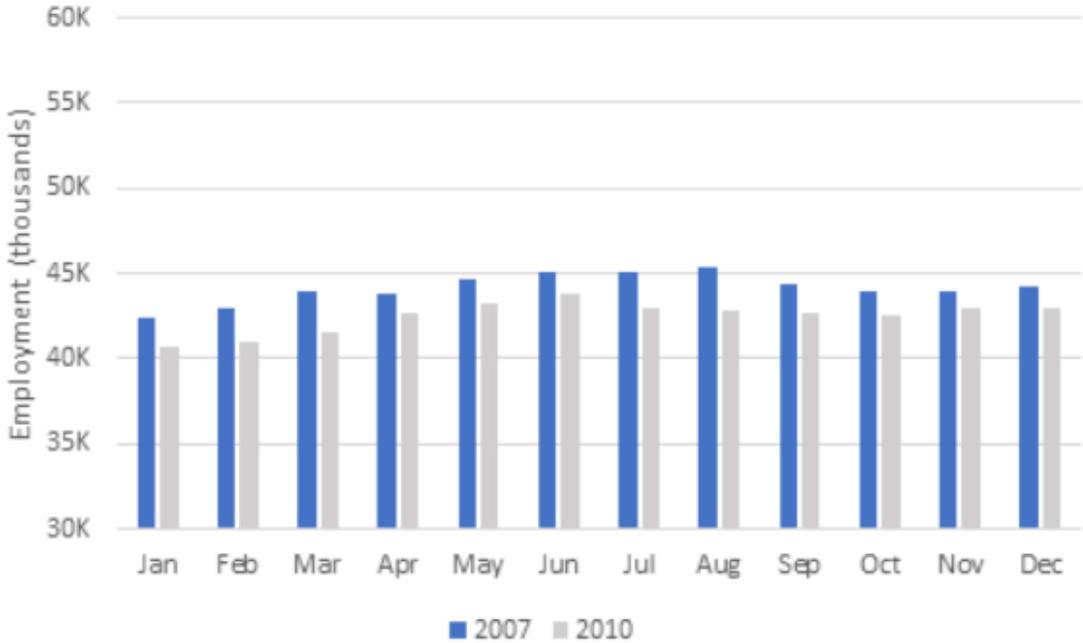
**Figure 2.13** shows the employment trends within the Leisure and Hospitality Industry between 2000 and 2020, and **Figures 2.14** and **2.15** illustrate employment impacts during the last two recessions for this industry.

**Figure 2.13:** Leisure and Hospitality, 2000 to 2020



Source: Bureau of Labor Statistics, 2000 to 2020

**Figure 2.14:** Leisure and Hospitality, 2007 and 2010



Source: Bureau of Labor Statistics, 2007 and 2010

**Figure 2.15:** Leisure and Hospitality, 2019 and 2020

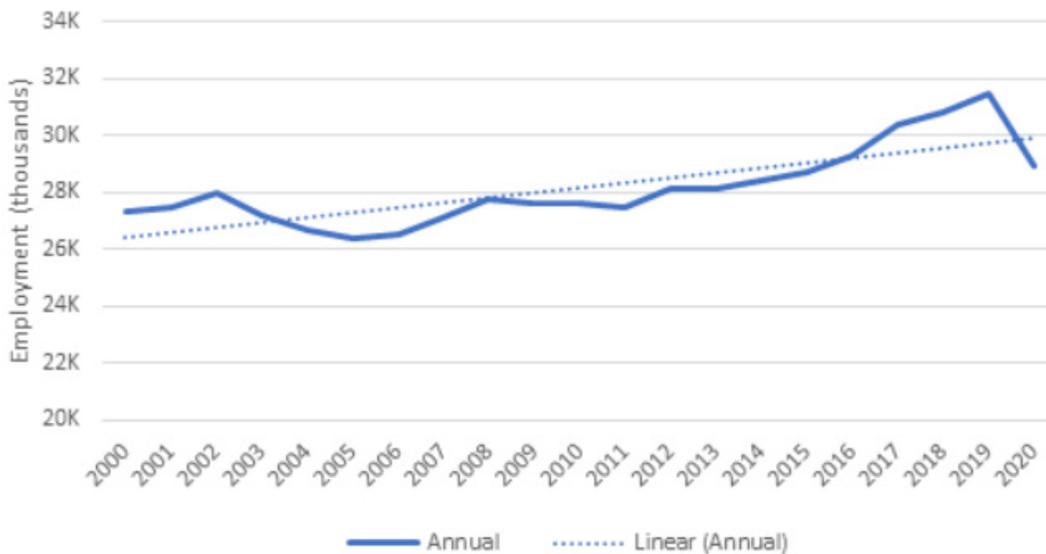


Source: Bureau of Labor Statistics, 2019 and 2020

**OTHER SERVICES**

Employment in the Other Services industry has also steadily increased within the region in the past twenty years. It is the third largest growing industry in the region, with an increase of nearly 6 percent since 2000 (see **Figure 2.16**). Despite the economic downturn in 2008, this industry added 500 jobs to the regional economy between 2017 and 2010. The pandemic’s initial impact on this industry was when 5,000 jobs were lost between February and April 2020, and estimates from 2021 suggest recovery is still lagging, as job numbers have stagnated since 2020. The overall resiliency for Other Services could be due to its broad reach in business categorization, as occupations within this industry include equipment and machinery repairs, dry-cleaning and laundry service providers, personal care services, pet care services, and photofinishing services. See **Figures 2.17** and **2.18** for employment trends from 2007 to 2010 and 2019 to 2020.

**Figure 2.16:** Other Services, 2000 to 2020



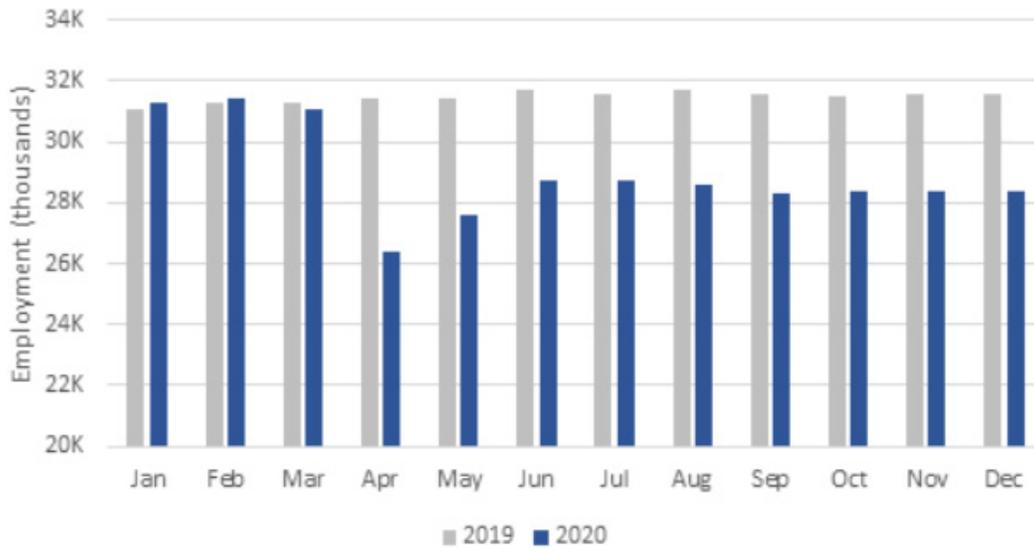
Source: Bureau of Labor Statistics, 2000 to 2020

Figure 2.17: Other Services, 2007 and 2010



Source: Bureau of Labor Statistics, 2007 and 2010

Figure 2.18: Other Services, 2019 and 2020



Source: Bureau of Labor Statistics, 2019 and 2020

**DOWNWARD TRENDING INDUSTRIES**

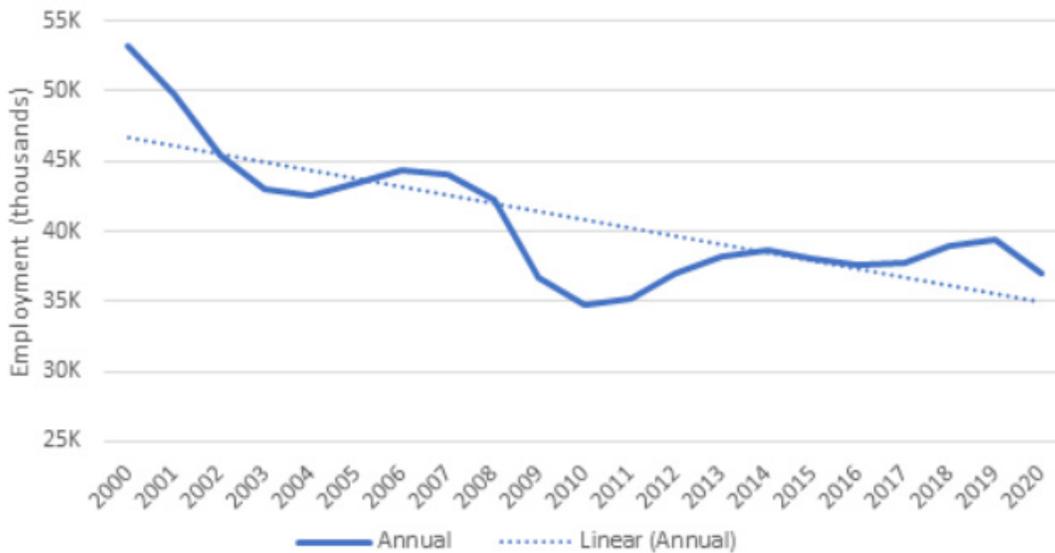
The Manufacturing, Information, and Logging and Mining industries exhibited general declining employment over the past three decades, irrespective of economic disruptions.

**MANUFACTURING**

The Manufacturing industry has been progressively declining in the region for decades. Since 1990, the industry has lost over 20,000 jobs within the region, and total employment has decreased by over 30 percent since 2000. The increasing diversification of the regional economy towards service-oriented industries instead of goods-producing sectors can help explain this shift. However, the technology boom at the turn of the century may also explain the decline of this industry within the region. By the beginning of the Great Recession, the industry had already lost over 9,000 regional jobs. Manufacturing continued to decline between 2007 and 2010, losing an additional 7,000 jobs. Some employment had been recovered by 2019, but the pandemic caused over 50 percent of the growth made over the last decade to be lost.

**Figure 2.19** illustrates the employment trends in this industry since 2000, and **Figures 2.20** and **2.21** outlines the changes in employment between 2007 and 2010 as well as 2019 and 2020.

**Figure 2.19:** Manufacturing, 2000 to 2020



Source: Bureau of Labor Statistics, 2000 to 2020

Figure 2.20: Manufacturing, 2007 and 2010



Source: Bureau of Labor Statistics, 2007 and 2010

Figure 2.21: Manufacturing, 2019 and 2020

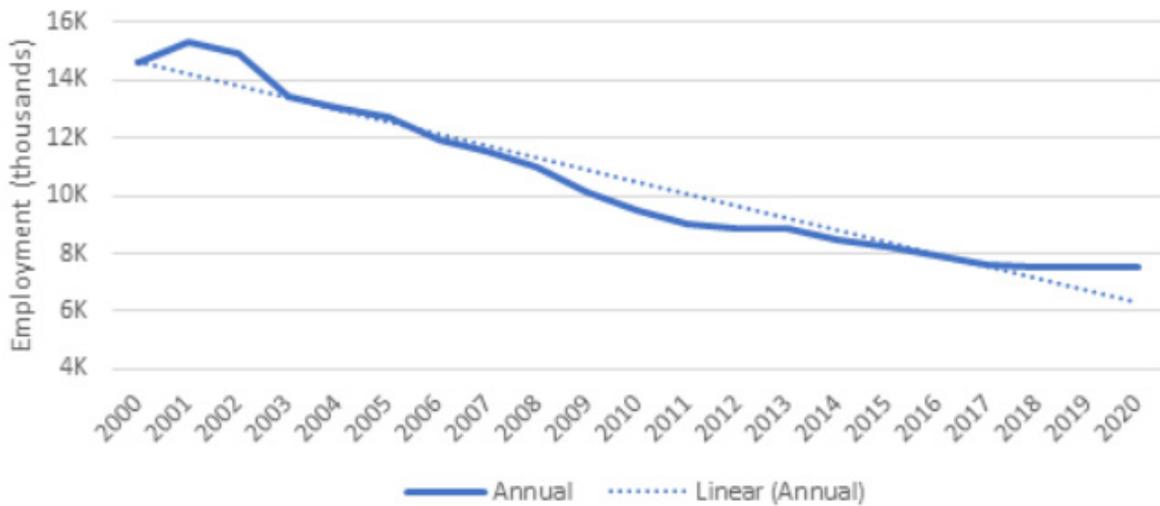


Source: Bureau of Labor Statistics, 2019 and 2020

**INFORMATION**

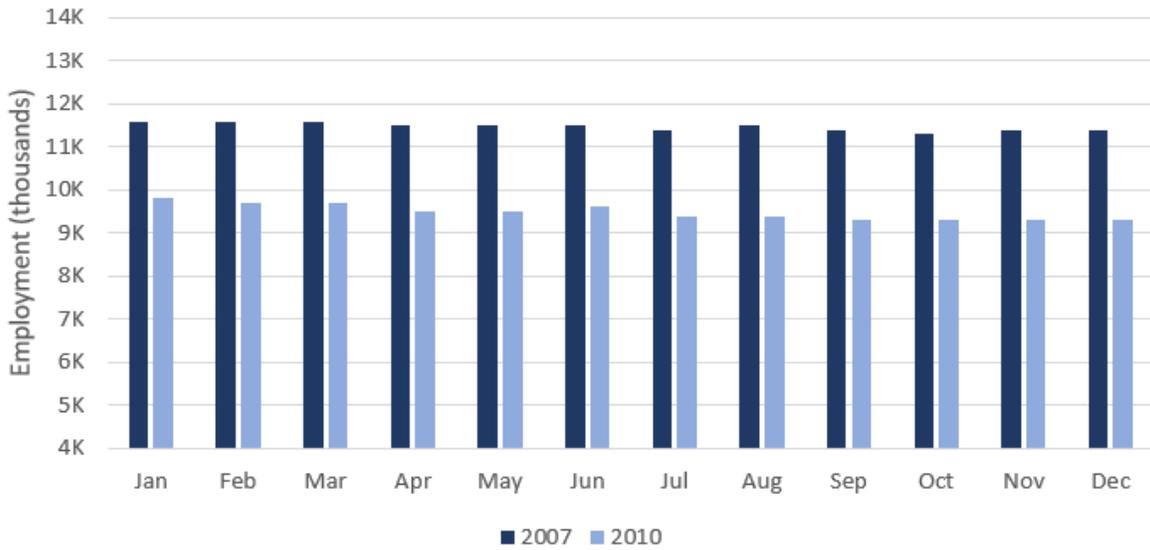
Like in manufacturing, employment in the Information Industry has also been sharply declining within the region, losing more than 50 percent of employment since 2000. This industry includes occupations within the Telecommunications and Broadcasting sectors, as well as Software and Data Publishing sectors. However, unlike Manufacturing, the Information industry has not historically been a large employment presence in the region. Information reached its largest occupational point in 2001 at 15,300 jobs, less than 3 percent of total employment. In the last 20 years, this industry has continued to weaken, losing 3,800 jobs between 2000 and 2007 and an additional 2,000 during the Great Recession. However, Information added employment during the pandemic, with 2021 estimates suggesting an average of 500 jobs created between 2020 and 2021. **Figure 2.22** illustrates the employment trends in this industry since 2000, and **Figures 2.23** and **2.24** outlines the changes in employment between 2007 and 2010 as well as 2019 and 2020.

**Figure 2.22:** Information, 2000 to 2020



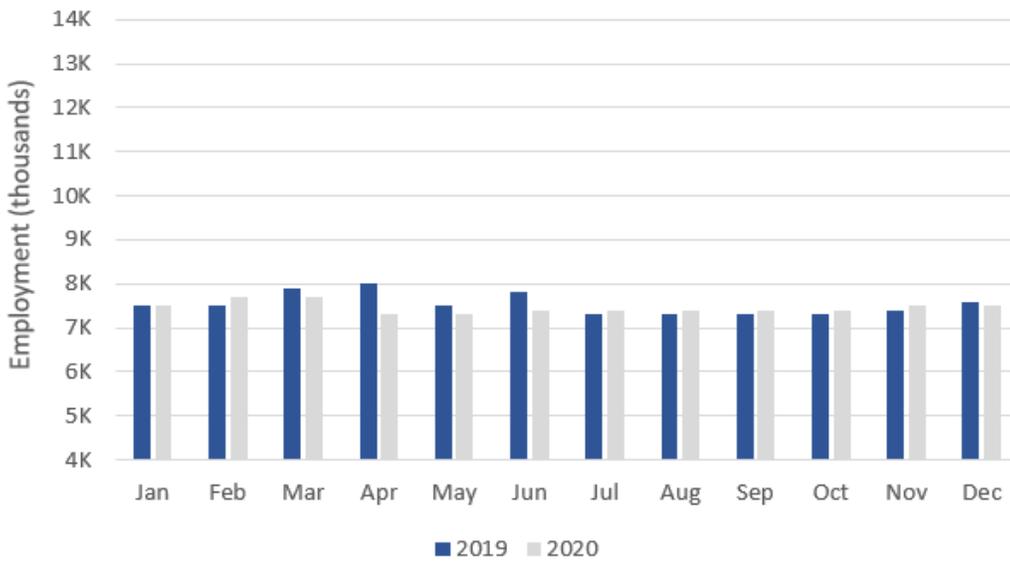
Source: Bureau of Labor Statistics, 2000 to 2020

**Figure 2.23:** Information, 2007 and 2010



Source: Bureau of Labor Statistics, 2007 and 2010

**Figure 2.24:** Information, 2019 and 2020

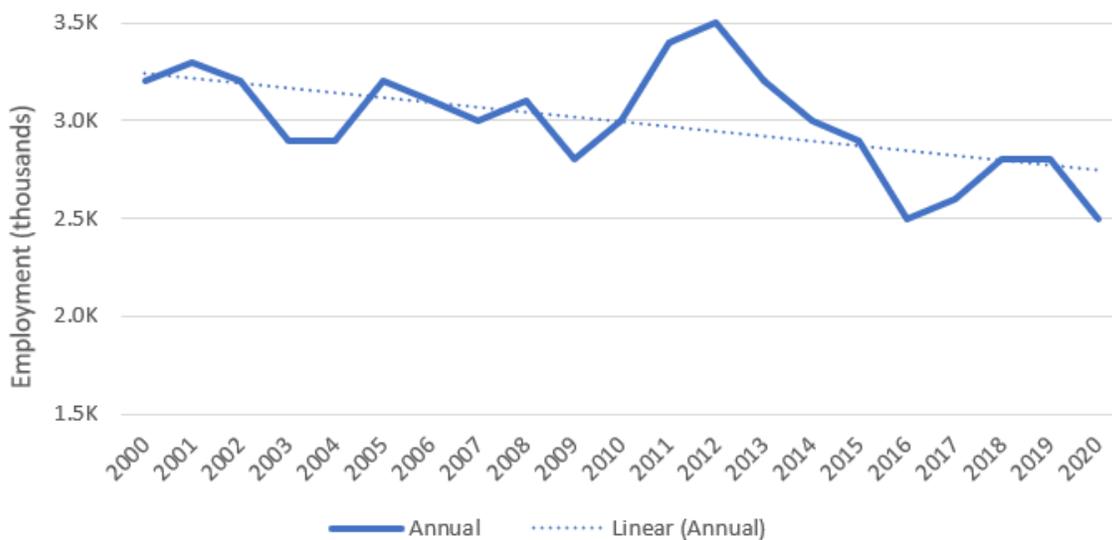


Source: Bureau of Labor Statistics, 2019 and 2020

**LOGGING AND MINING**

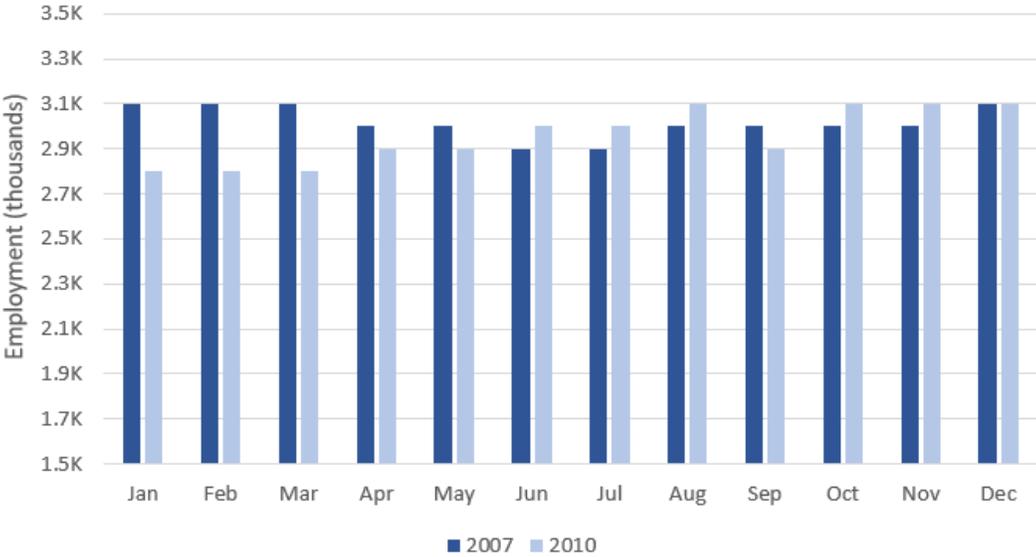
The Logging and Mining industry within the region has declined by nearly 25 percent since 2000. Unlike Manufacturing, this industry has historically represented a low percentage of total employment, less than 1 percent in the past 20 years. Logging and mining also had increases in employment during timeframes when other industries lost employment. The largest spike in employment for Logging and Mining was between 2009 and 2012, when many other industries were still recovering from the Great Recession. However, these gains were relatively small compared to total employment, with only 700 jobs added. The estimates from 2020 recorded the lowest number of jobs in recent history, with only 2,500 jobs. The averages for 2021 are even lower, with only 2,100 jobs. **Figure 2.25** outlines the employment trends within this industry in the last two decades, and **Figures 2.26** and **2.27** compare employment metrics during the past two recessions.

**Figure 2.25:** Logging and Mining, 2000 to 2020



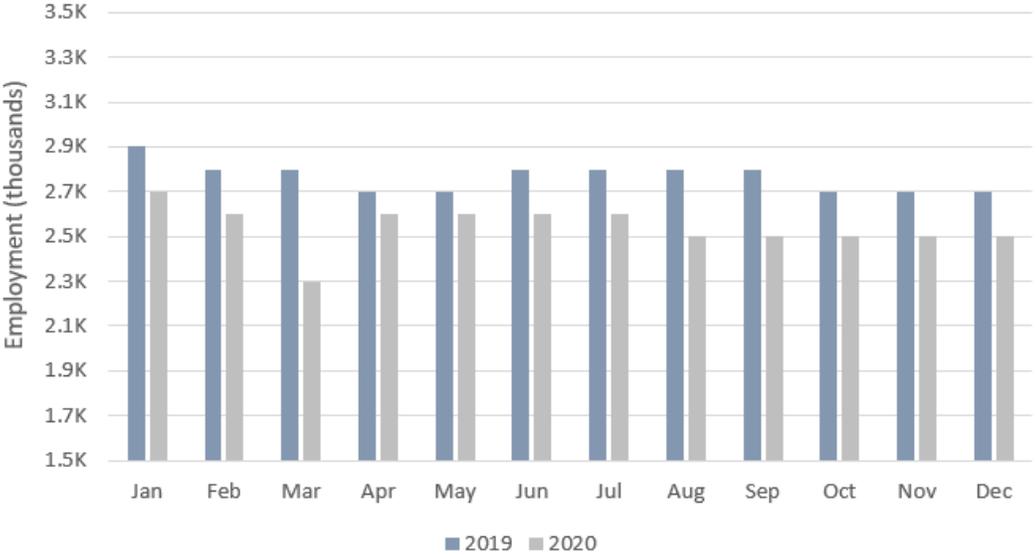
Source: Bureau of Labor Statistics, 2000 to 2020

Figure 2.26: Logging and Mining, 2007 and 2010



Source: Bureau of Labor Statistics, 2007 and 2010

Figure 2.27: Logging and Mining, 2019 and 2020



Source: Bureau of Labor Statistics, 2019 and 2020

## CHAPTER TWO

# RESILIENCY INDEX COMPARISON

Many different resiliency indexes have been developed by various organizations to measure the multiple facets of community resilience. For example, some indexes that measure the vulnerability of an area to natural disasters such as tornadoes and pandemics. There are others that measure the innovative capacity of a community to grow and lead other areas into the future. Regardless of these many ways to define resilience, these indexes all measure the ability of a community to avoid, withstand and grow from economic disruptions. The indexes that will be used to study Greater Birmingham's resilience during the pandemic are the following:

- Social Vulnerability Index, developed by the Center for Disease Control
- Disaster Resilience Index, developed by APRED
- Community Resilience Estimates, developed by the United States Census Bureau
- Innovation Index, developed by StatsAmerica

These four indexes were chosen for their detail and their capacity to garner a more comprehensive view of the region's strengths and weaknesses concerning the economic shock of the pandemic on the local economy. The information gathered from this index analysis will help inform the following Strengths and Weaknesses Assessment in Chapter 3 and, finally, the development of the Regional Resilience Goals in Chapter 4.

## RESILIENCY INDEX ANALYSIS

The Resiliency Index Analysis examines the Greater Birmingham's region and county scores for each of the four indexes. For some of the indexes with additional subcategories or themes, the analysis will illuminate notable trends that will then be discussed in the following section, Regional Resilience Trends. Overall, the Resiliency Index Analysis will help identify areas of strengths and weaknesses in the local economy and provide a foundation for gauging the region's potential opportunities and threats to future economic development efforts.

## SOCIAL VULNERABILITY INDEX

The Social Vulnerability Index was developed by the Center for Disease Control. It uses U.S. Census data to determine the ability of a census tract to prepare for and respond to hazardous events, both natural and human made. The index ranks each tract on 15 factors and groups them into four related themes: Socioeconomic Status, Household Composition, Minority Status and Language, and Housing Type and Transportation.<sup>10</sup> The following list breaks down each of the main four themes and details which of the 15 social factors were used in construction of the theme:<sup>11</sup>

- Socioeconomic status: below poverty, unemployed, income, no high school diploma
- Household composition & disability: aged 65 or older, aged 17 or younger, older than age 5 with a disability, single-parent households

10 "CDC SVI 2018 Documentation," Center for Disease Control, January 31, 2020, [https://svi.cdc.gov/Documents/Data/2018\\_SVI\\_Data/SVI2018Documentation.pdf](https://svi.cdc.gov/Documents/Data/2018_SVI_Data/SVI2018Documentation.pdf), 3.

11 "SVI At A Glance," Agency for Toxic Substances and Disease Registry, August 30, 2021, [https://www.atsdr.cdc.gov/placeandhealth/svi/at-a-glance\\_svi.html](https://www.atsdr.cdc.gov/placeandhealth/svi/at-a-glance_svi.html).

- Minority status and language: minority, speak English “less than well”
- Housing type and transportation: multi-unit structures, mobile homes, crowding, no vehicle, group quarters

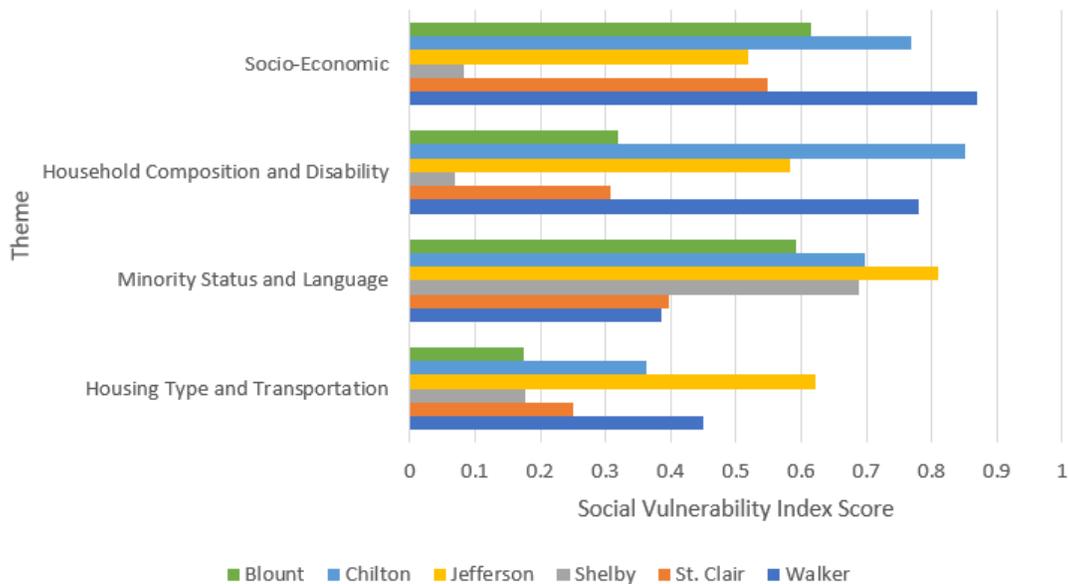
Rankings are based on percentiles with values ranging from 0 to 1, with higher values indicating greater vulnerability. **Table 2.3** shows a comparison of the index scores for each county by their overall vulnerability score and thematic vulnerability scores.

**Table 2.3:** Social Vulnerability Index scores for each county by theme

County	Overall Score	Socio-economic	Household Composition and Disability	Minority Status and Language	Housing Type and Transportation
<b>Blount</b>	0.4242	0.6143	0.3187	0.5915	0.1741
<b>Chilton</b>	0.7602	0.7685	0.8513	0.6966	0.3636
<b>Jefferson</b>	0.6621	0.5185	0.5833	0.8099	0.6211
<b>Shelby</b>	0.1169	0.0841	0.0691	0.6877	0.1764
<b>St. Clair</b>	0.3656	0.5475	0.3088	0.3961	0.2502
<b>Walker</b>	0.7452	0.8685	0.7813	0.3862	0.4492

Source: Center for Disease Control

**Figure 2.28:** Social Vulnerability Index scores by theme and county



Source: Center for Disease Control

These scores indicate Shelby and St. Clair counties are the least vulnerable to economic disruptions, whereas Chilton County and Walker County are the most vulnerable. Three out of the six counties are vulnerable to disruptions because of socioeconomic factors such as high poverty rates, unemployment rates, and low income and education levels. Additionally, for half of the counties in the region, the lack of certain housing types—multi-unit structures, mobile homes, group quarters, and crowding in homes, and multiple sources of transportation, or the absence of “no vehicle” households, made them less vulnerable to economic disruptions.

**DISASTER RESILIENCE INDEX**

The Disaster Resilience Index measures the capacity of counties to recover from disaster events without losing their socioeconomic capacity. These scores are calculated using formulas designed by Susan Cutter, Christopher Burton and Christopher Emrich, with U.S. Census data as inputs.<sup>12</sup> The lowest achievable score is 0.0 which indicates little to no disaster resilience. The highest achievable score is 1.0 which indicates a high level of disaster resilience. There are four categories of resilience for this index: Social, Economic, Infrastructure, and Community Capital.

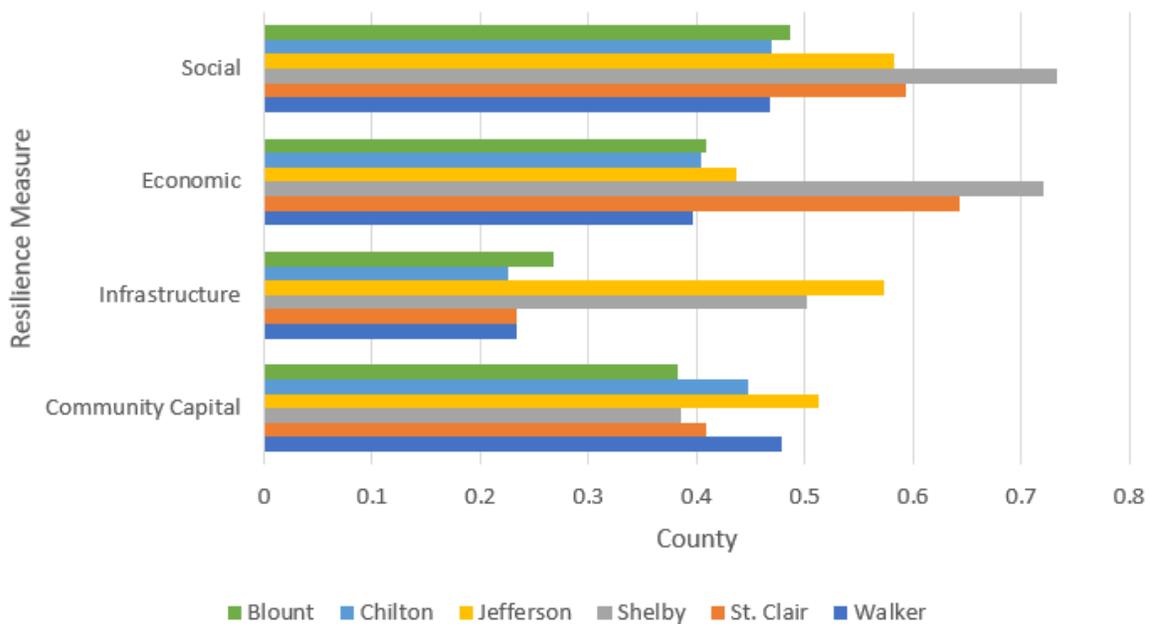
Specific data for each attribute in each county can be found on the CTIL APRED official disaster resilience platform.<sup>13</sup> **Table 2.4** indicates the score for each county by category. Please see **Appendix A** for details regarding the attributes of each resiliency category.

**Table 2.4:** Disaster Resilience Index scores for each county by resilience measure

County	Social	Economic	Infrastructure	Community Capital
Blount	0.487	0.409	0.268	0.382
Chilton	0.470	0.404	0.226	0.447
Jefferson	0.583	0.437	0.573	0.513
Shelby	0.733	0.720	0.502	0.385
St. Clair	0.593	0.643	0.234	0.409
Walker	0.468	0.397	0.233	0.478

Source: CTIL APRED, Disaster Resilience Index

**Figure 2.29:** Disaster Resilience Scores by resilience measure for each county



Source: CTIL APRED, Disaster Resilience Index

12 Susan L. Cutter, Christopher G. Burton, Christopher T. Emrich, "Disaster Resilience Indicators for Benchmarking Baseline Conditions," Journal of Homeland Security and Emergency Management 7, no. 1 (2010), [http://resiliencesystem.com/sites/default/files/Cutter\\_jhsem.2010.7.1.1732.pdf](http://resiliencesystem.com/sites/default/files/Cutter_jhsem.2010.7.1.1732.pdf), 8.

13 Crisis Technologies Innovation Lab, "Analysis Platform for Risk, Resilience, and Expenditure in Disasters," Indiana University, accessed June 16, 2022, <https://ctil.iu.edu/projects/apred/#/>.

Within the six-county region, Blount, Chilton, Jefferson, and Shelby counties had the highest disaster resilience scores in terms of Social Resilience. For the two other counties, St. Clair and Walker, Social Resilience was the second highest area of disaster resilience. This finding indicates that certain social aspects, such as education equity, younger population, transportation access, language capacity, and health coverage, are positively impacting the region. Communities are stronger because of the advancements in these areas and continued emphasis on these social attributes will increase county resiliency.

However, Blount, Chilton, St. Clair, and Walker counties were the least resilient to disasters in terms of their infrastructure and housing capacity. Finding ways to attract residential and housing investors to the region will greatly impact the overall resilience of the area. This includes residential single-family home subdivisions, hotels and motels, newer and more affordable homes, and apartment complexes. These aspects of the economy are crucial in times of disaster, whether it is natural and man-made, because access to shelter provides stability and safety to communities, ultimately allowing for greater resilience to economic shocks.

### COMMUNITY RESILIENCE ESTIMATES

The Census Bureau has developed Community Resilience Estimates (CRE) that use small area data to identify communities where resources and information may effectively mitigate the impact of disasters. Some groups are less likely to have the capacity and resources to overcome the obstacles presented during a hazardous event, therefore the CRE considers multiple variables in determining the level of risk that currently exists within a community. Variation in individual and household characteristics are determining factors in the differential impact of a disaster.

Resilience estimates can aid stakeholders and public health officials in modeling these differential impacts and developing plans to reduce a disaster’s potential effects. Individual and household characteristics from the 2019 American Community Survey (ACS) were modeled, in combination with data from the Population Estimates Program to create the Community Resilience Estimates (CRE).

The risk factors from the 2019 ACS that are used in the build of the CRE include:<sup>14</sup>

- Income to Poverty Ratio
- Single or Zero Caregiver Household
- Crowding (household with more than .75 persons per room)
- Communication Barrier
- Disability
- Households without Full-time, Year-round Employment
- No Health Insurance
- Age 65+
- No Vehicle Access
- No Broadband Access

These risk factors are critical to understanding resilience and economic growth. Without some of the basic needs encompassed in these risk factors, communities’ development and future success will be stunted. **Table 2.5** shows the percentage of each county’s population that lives with zero, one to two, or three or more risk factors. A high proportion of residents experiencing a low number of risk factors is a good indicator of the community’s resilience to economic shocks.

14 United States Census Bureau, “2019 Community Resilience Estimates,” United States Census Bureau, accessed June 16, 2022, <https://experience.arcgis.com/experience/b0341fa9b237456c9a9f1758c15cde8d/>.

**Table 2.5:** Community Resilience Estimates by county and number of risk factors

County	% Residents with 0 Risk Factors	% Residents with 1-2 Risk Factors	% Residents with 3+ Risk Factors
Blount	31.53	41.51	26.97
Chilton	28.16	45.97	25.88
Jefferson	34.50	40.03	25.47
Shelby	42.66	40.06	17.28
St. Clair	32.95	44.42	22.62
Walker	29.52	40.11	30.38
Region	33	42	25

Source: United States Census Bureau, Community Resilience Estimates

Apart from Shelby County, all counties in the region have the highest percentage of its residents living with one to two of the ten identified risk factors from the 2019 American Community Survey. Though the data does not indicate which of the risk factors were flagged for each county, this information remains indicative of the broader problem of underdeveloped resource and communication networks within the region. For the region to become more resilient to future economic disasters, such as a pandemic, it is critical for local officials and policy makers to center initiatives around the gaps in the local economy that exacerbate the current risk factors within the community.

**INNOVATION INDEX 2.0**

The Innovation Index 2.0 allows states, counties, and municipalities to understand their region’s innovative capacity. Innovative capacity is an all-encompassing measure of a region’s strengths, weaknesses, and potential for growth. From this information, stakeholders and policy makers can guide their decision-making to a common vision by analyzing their area’s assets and liabilities in detail.

The “headline” Innovation Index, or summary index, is calculated from five subindex categories. Three of these subindexes—Human Capital and Knowledge Creation, Business Dynamics, and Business Profile—are innovation inputs, and the remaining two subindexes—Employment and Productivity and Economic Well-Being—are based on innovation outputs. The sub-indexes are then equally weighted at 20 percent and aggregated to form the headline index. One method for interpretation the index scores is by comparing their regions against other benchmark or peer regions that share characteristics like population density, access to transportation infrastructure, or presence of federal research laboratories.<sup>15</sup> **Appendix B** lists the five index inputs and outputs and the measures that are included in their calculation.

In **Table 2.6**, the headline index, the innovation input and innovation output scores are shown for each county and the region. Because these scores are a numerical sum of different measures and not intended to represent a “good” or “bad” level of innovation, they will be interpreted against one another, between counties, and between regions.

<sup>15</sup> StatsAmerica, “Innovation Index 2.0,” Indiana Business Research Center, Indiana University Kelley School of Business, accessed June 16, 2022, <https://www.statsamerica.org/ii2/overview.aspx>.

**Table 2.6:** Headline index, innovation input and innovation output scores for each county and the Greater Birmingham region

County	Headline Index	Innovation Inputs			Innovation Outputs	
		Human Capital and Knowledge Creation	Business Dynamics Index	Business Profile Index	Employment and Productivity Index	Economic Well-Being Index
<b>Blount</b>	79.0	83.8	47.0	62.4	95.5	116.7
<b>Chilton</b>	81.1	88.2	49.4	83.6	94.0	86.7
<b>Jefferson</b>	104.5	124.2	90.9	106.5	101.2	98.2
<b>Shelby</b>	112.0	139.1	76.2	92.8	124.2	131.5
<b>St. Clair</b>	86.7	96.3	64.5	58.6	104.8	114.0
<b>Walker</b>	76.1	82.8	50.4	95.5	73.8	82.4
<b>Region</b>	107.0	118.7	97.7	116.1	101.6	100.3

Source: StatsAmerica, Innovation Index 2.0

The headline index score for each county illustrates the overall innovative and economic health of the county. Jefferson and Shelby counties had the highest headline index score with both of their highest sub-index scores being Human Capital and Knowledge Creation. This indicates that these counties greatest assets are their educational attainment, high level of STEM education opportunities and occupations, and amount of knowledge creation and technology diffusion, such as patent technology, university-based knowledge spillovers, and business incubator spillovers. Jefferson and Shelby counties had the lowest scores in the Business Dynamics Index. The biggest liabilities for these two counties are low or decreasing amounts of venture capital spent towards new technology and company expansion, as well as the overall presence of business dynamism in the local market. Of the six-county region only Shelby County was higher than the regional score for the headline index, and the individual sub-index scores of Blount, Jefferson, Shelby, and St. Clair counties all ranked higher than the region in at least one area.

In addition to intra-regional comparison, inter-regional comparisons are also important in understanding an area’s strengths and weaknesses. **Table 2.7** shows the same index breakdown as the previous table, but for three regions that are similar in population, industry and geography to the Greater Birmingham region. These regions include the Southwestern Pennsylvania Commission, the Greater Nashville Regional Council, and the Crater Planning District.

**Table 2.7:** Headline Index, Inter-Regional Comparison

County	Headline Index	Innovation Inputs			Innovation Outputs	
		Human Capital and Knowledge Creation	Business Dynamics Index	Business Profile Index	Employment and Productivity Index	Economic Well-Being Index
<b>Greater Birmingham Region</b>	107.0	118.7	97.7	116.1	101.6	100.3
<b>Southwestern Pennsylvania Commission</b>	118.7	149.8	114.8	116.1	105.5	109.1
<b>Greater Nashville Regional Council</b>	125.0	134.3	122.1	118.1	125.1	124.0
<b>Crater Planning District Commission</b>	96.0	93.5	65.9	97.6	115.0	101.0

Source: StatsAmerica, Innovation Index 2.0

When compared to the three regions’ above, the Greater Birmingham region consistently ranks in third or fourth in every category. There are many areas in the Greater Birmingham region that can be improved to increase regional resilience such as employment and productivity and economic well-being. In these areas, the region has the lowest scores when compared to the three similar regions above. Analyzing the practices and strategies of similar high-achieving regions can help the Greater Birmingham community learn from their successes and implement them in the local community.

**FINDINGS**

Throughout all four indexes there are a few factors that show up consistently as either strengths or weaknesses. In terms of the region’s strengths, high educational attainment, transportation access, and a variety of job opportunities, frequently appeared as the main drivers of a county’s resilience. Education, transportation, and job opportunities are essential to creating and sustaining economic health and reducing vulnerability because they provide a reliable, skilled, and high-quality workforce that will attract private investment, individuals, and families to the region.

Additionally, in Jefferson and Shelby counties, which contain the main urban centers of the region, the Innovation Index by StatsAmerica indicated that the extensive presence of STEM education and occupations provides the region with opportunities in some of the highly demanded industries in the world. In Blount, Chilton, St. Clair, and Walker counties, which contain most of the rural areas of the region, the Innovation Index reported high job growth, employment, GDP per worker, and industry cluster strength and diversity. These factors are critical to regional resilience because they set the foundation for future workforce development and economic opportunity.

There are also many factors that are present throughout the indexes that contribute to areas of weakness and vulnerability for the region. Most notably the indexes identify, high poverty rates, unemployment, low income, and a lack of business dynamism regardless of the county. These factors contribute to the region’s overall social and economic health, and are driving forces behind migration inflows and outflows, insider and outsider perception of the region, and the number of opportunities available for the area’s residents and businesses.

Fortunately, the strengths of the region that have previously been established directly affect these weaknesses and threats. High educational attainment, strong industry clusters in highly demanded fields, high transportation access, and diverse job base will ultimately result in a highly skilled workforce with high-paying jobs, innovative businesses, and extensive private investment opportunities.

## CHAPTER THREE

### LOCAL GOVERNMENT SURVEY ANALYSIS

In the fall of 2020, RPCGB’s Economic Development (ED) Team designed a survey to be sent out to member governments to analyze the immediate effects of COVID-19 on local communities in the region. This survey consisted of 25 questions spanning multiple themes that the ED Team anticipated would help garner a better understanding of the initial economic shock within the region. Out of the 90 member governments that received the survey, there were 35 submitted responses, spanning all six-counties, encompassing both the rural and urban areas in the region. Mayors, Councilmen, Clerks, and County Managers were all represented in the responses. The following section summarizes the responses of the survey and prepares the findings to support the Regional Resiliency Strategies. To see the complete list of the questions that were in the survey, refer to **Appendix A**.

### GOVERNMENT REVENUE STREAMS

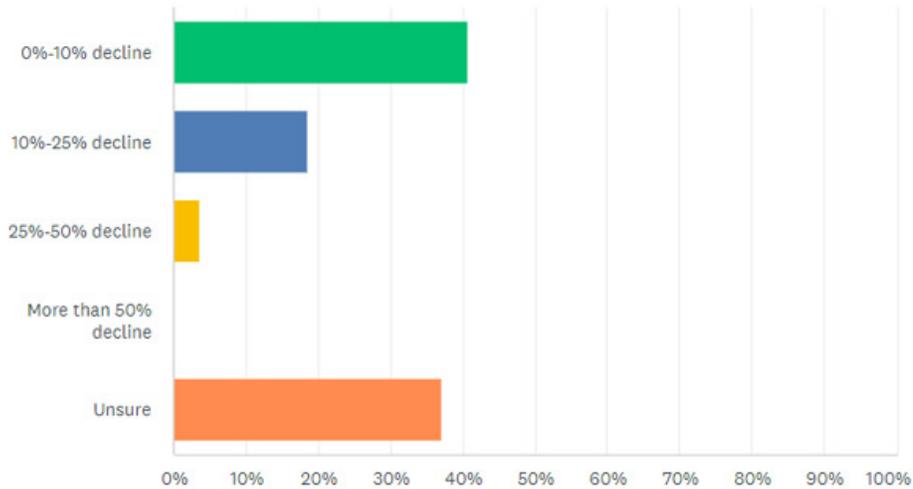
The first questions asked to the survey participants pertained to the impact of the pandemic on local governments’ revenue streams. The table below lists the survey questions concerning this theme.

Question Number in the Survey	Question Asked in the Survey
Q3	Has your municipality/ jurisdiction experienced any revenue loss due to the fiscal impacts of the pandemic?
Q4	If yes, what range of revenue decline would you estimate your municipality/jurisdiction has experienced?
Q5	Which source of revenue would you identify as having experienced the most decline due to the pandemic?

Surprisingly, the proportion of respondents who answered “Yes” to question three equaled the proportion of respondents who answered “No” – 45.71 percent. Those respondents that answered “Yes” to question three were then prompted to question four which inquired about the percentage of revenue decline in the participant’s municipality or jurisdiction. The largest proportion of respondents, 40.74 percent, indicated that their municipality experienced “0% - 10%” in revenue decreases since the start of the pandemic.

**Figure 2.30** depicts the survey responses.

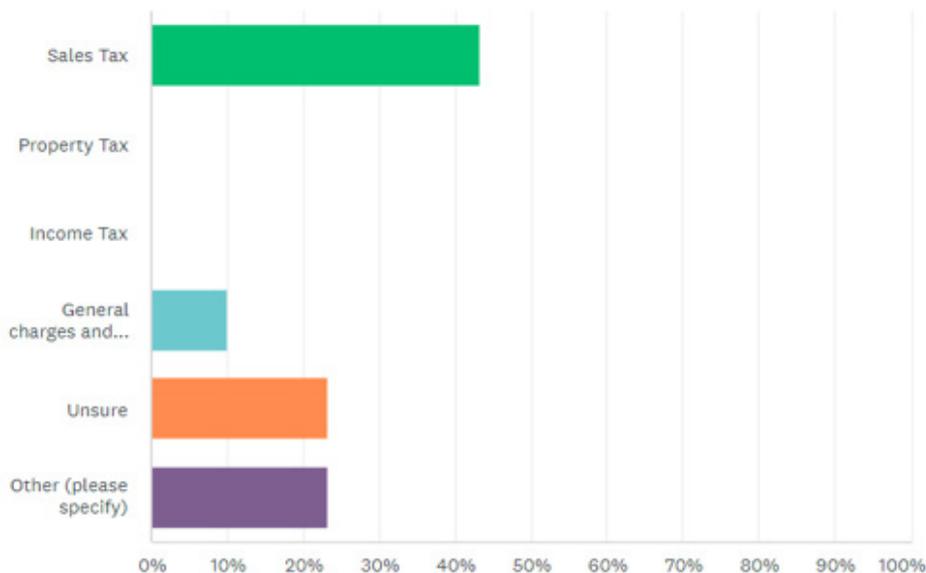
**Figure 2.30:** Government Survey Responses to Q4 of the “Pandemic Impact Survey”



Question five asked respondents to further specify the impact on their municipality or jurisdiction’s revenue streams due to the pandemic. The highest percentage of respondents (43.33 percent) indicated that “Sales Tax” was their hardest hit source of revenue. 23.33 percent of respondents answered “Other (please specify)”, making it tied with the response “Unsure” for the second highest percentage of respondent answer. Those who responded “Other” indicated that other forms of tax revenue such as lodging tax and gas taxes, as well as programmatic and operations revenue in the park and recreation and the court were notable areas of revenue declines.

**Figure 2.31** illustrates the complete survey response for Question 5.

**Figure 2.31:** Government Survey Responses to Q5 of the “Pandemic Impact Survey”



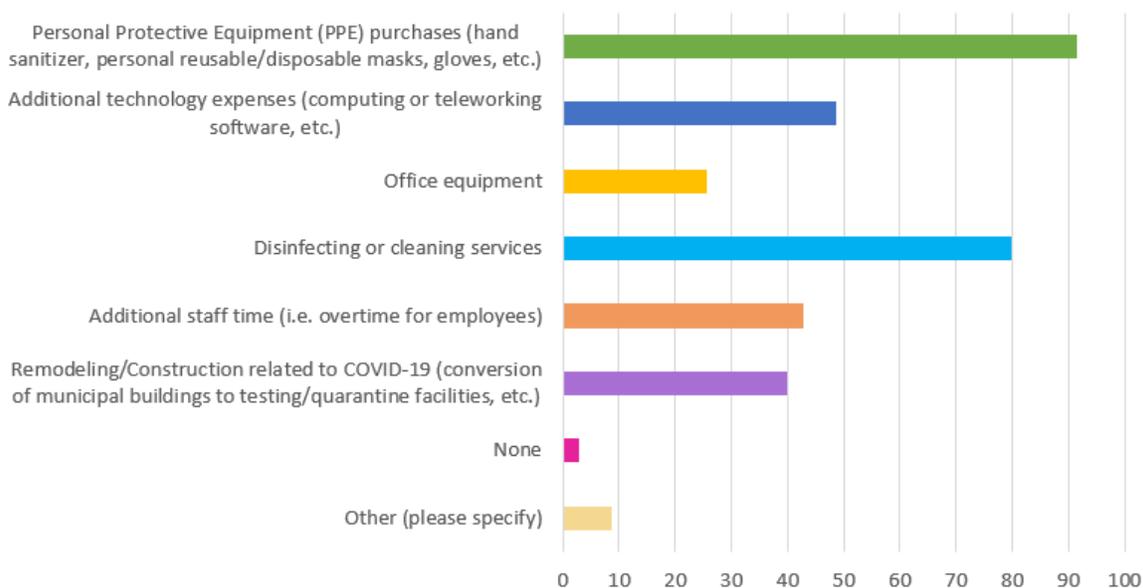
## SPENDING AND EXPENSES

In addition to impacts on revenue streams, participants were also asked questions regarding changes in their spending and expenses because of the pandemic. The table below lists the survey questions concerning this theme.

Question Number in the Survey	Question Asked in the Survey
Q6	Has your municipality/jurisdiction had to make spending cuts or adjustments due to the fiscal impacts of the pandemic?
Q7	Has your municipality/jurisdiction had to make any of the following spending decisions due to the impacts of the pandemic? (Please select all that apply.)
Q8	Has your municipality/jurisdiction incurred any significant unexpected expenses due to the pandemic? (Personal protective equipment, disinfecting services, etc.)
Q9	What types of unanticipated expenses has your municipality/jurisdiction incurred due to COVID-19? (Please select all that apply.)
Q10	What is your municipality/jurisdiction's estimated amount of COVID-19 related expenses to date?
Q12	Has your municipality/jurisdiction had to furlough or discharge employees due to revenue changes caused by the pandemic?

Notably, the majority of respondents indicated that their municipality or jurisdiction has not had to make any spending cuts or adjustments due to the fiscal impacts of the pandemic (54.29 percent) or had to furlough or discharge any employees (85.71 percent). However, they did not indicate that their community has incurred significant unexpected expenses due to the pandemic. Most of these unexpected expenses came from purchasing PPE (claimed by 91.43 percent of respondents) and disinfecting and cleaning services (claimed by 80 percent of respondents). **Figure 2.32** depicts the response results for Question 9, which shows the percentage of unexpected expenses incurred due to COVID-19.

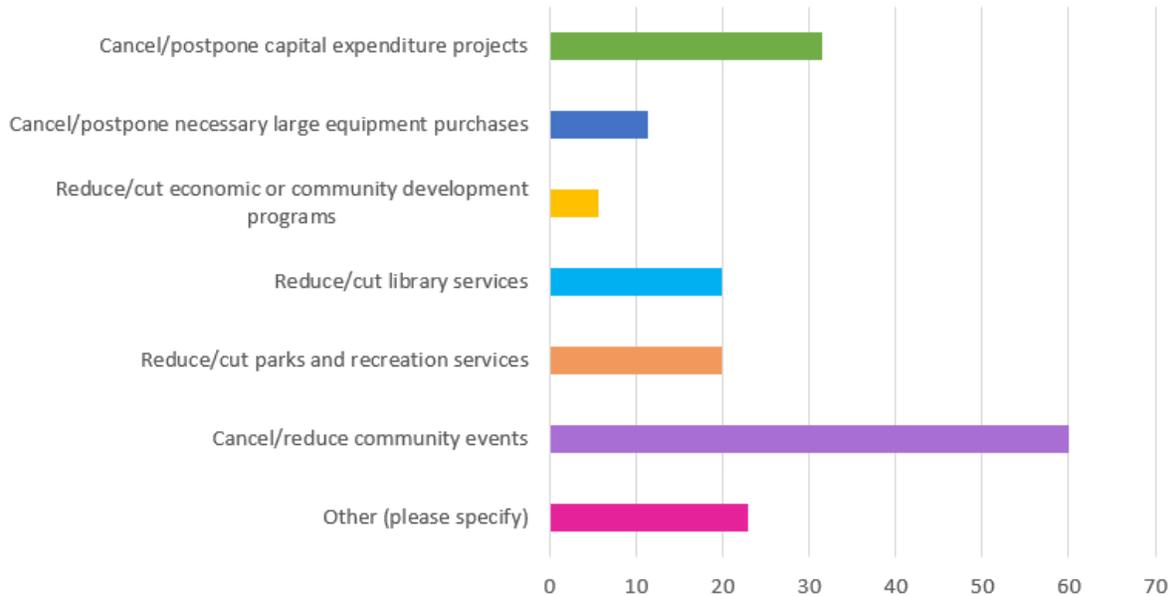
**Figure 2.32:** Government Survey Responses to Q9 of the “Pandemic Impact Survey”



Though over 50 percent of respondents indicated that they did not have to make spending cuts or adjustments due to the fiscal impacts of the pandemic, 60 percent of participants claimed that they had to cancel or reduce community events. The pandemic also largely impacted capital expenditures projects, as 31.43 percent of respondents had to cancel or postpone these expenditures due to the pandemic.

**Figure 2.33** illustrates the responses to Question 7 which concerns impacts on spending decisions.

**Figure 2.33:** Government Survey Responses to Q7 of the “Pandemic Impact Survey”



## OVERALL IMPACT OF THE PANDEMIC

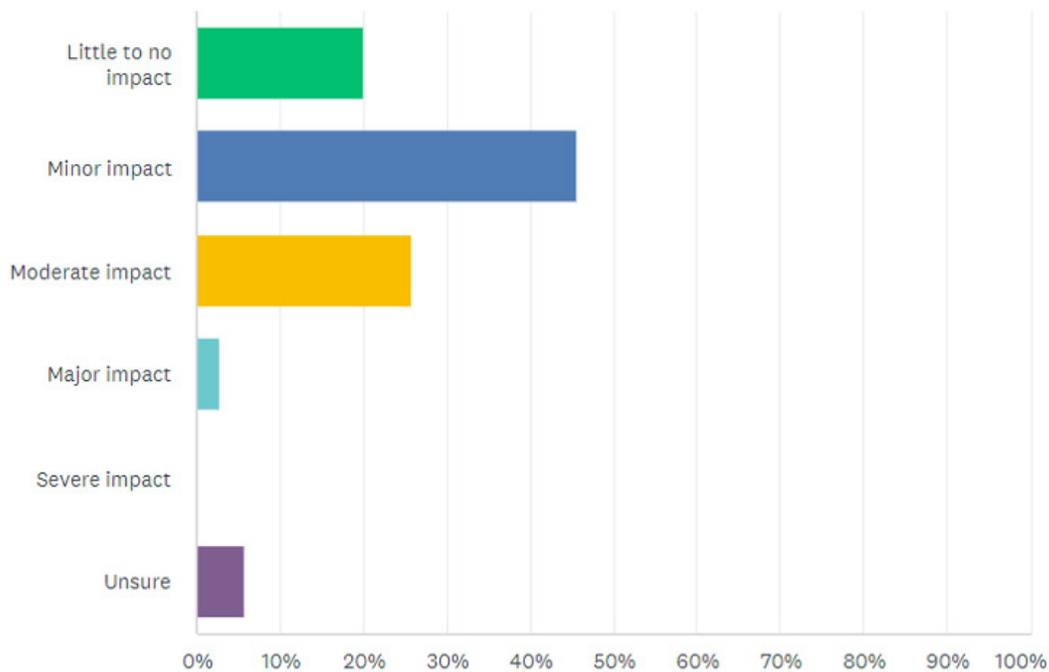
To supplement the analysis conducted in Section I: Regional Economic Impact Assessment, respondents were asked questions regarding the overall impact of the pandemic on their community. The table below lists the survey questions concerning this theme.

Question Number in the Survey	Question Asked in the Survey
<b>Q13</b>	How would you describe the pandemic's overall economic impact on your municipality?
<b>Q14</b>	How would you estimate the overall job loss your municipality/ jurisdiction had experienced?
<b>Q15</b>	To your knowledge, which industry within your municipality/ jurisdiction would account for the most job loss due to the pandemic?
<b>Q16</b>	For your municipality/jurisdiction, did the number of positive cases within your city and surrounding areas correlate to the decline in business activity and revenue streams?
<b>Q21*</b>	Which of the following items would you identify as possible long-term impact(s) of COVID-19 on your community? (Please select all that apply.)*

*\*Note: Question 21 and Question 23 are the same question and were unintentionally duplicated in the original survey. Question 23 is omitted here for clarity. Please see **Appendix A** for the full list of survey questions.*

The largest proportion of respondents (45.71 percent) indicated that the pandemic had a “minor impact” on their community, with the second highest proportion of respondents saying the pandemic had a “moderate impact” on their community. These varying impact levels are possibly due to the largely rural nature of the region and the delayed initial onset of cases compared to other areas of the country since the region’s communities were able to somewhat prepare for the pandemic before it had fully hit the area. **Figure 2.34** depicts the distribution of responses to Question 13 which asks participants to describe what the pandemics overall impact on their community was.

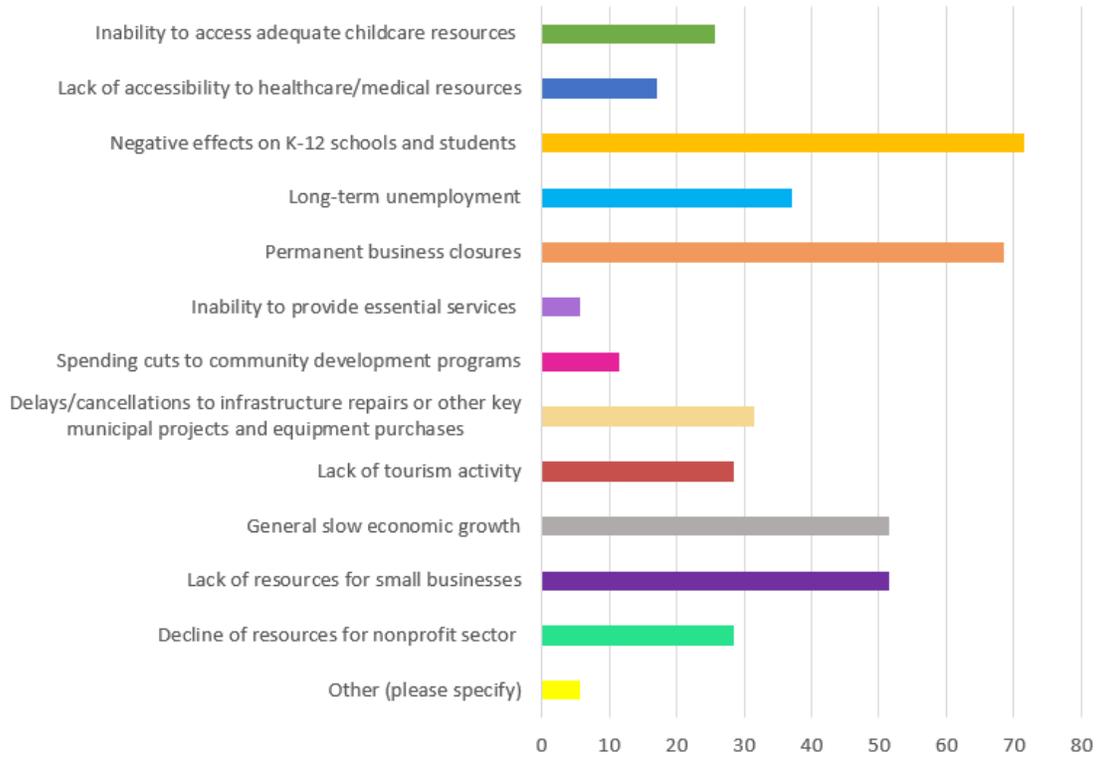
**Figure 2.34:** Government Survey Responses to Q13 of the “Pandemic Impact Survey”



Furthermore, respondents indicated that very few jobs were lost within their communities. Responses showed 41.18 percent of participants estimated that “0 – 50” jobs were lost since the beginning of the pandemic until the fall of 2020 to the spring of 2021. The jobs that were lost during this time frame were likely in the Retail and Wholesale Trade industry, according to member governments. This finding supports the results of Part One: Regional Economic Impact Assessment.

The last question focused on the overall impact of the pandemic, asking respondents to list possible long-term impacts of the pandemic on their community. Answers to this question varied greatly. The largest proportion of respondents (71.43 percent) indicated that the “negative effects on K-12 schools and students” would be a possible long-term impact of COVID-19. Following this response, “permanent business closures”, “general slow economic growth”, and “lack of resources for small business”, all had high response rates. These answers highlight potential weaknesses in the region’s economic resilience and may be a source of vulnerability in the regional economy. **Figure 2.35** depicts the respondents’ answers for Question 21.

**Figure 2.35:** Government Survey Responses to Q21 of the “Pandemic Impact Survey”



**AVENUES OF FUNDING**

Respondent also answered questions on additional avenues of funding for their municipality or jurisdiction. The table below lists the survey questions concerning this theme.

Question Number in the Survey	Question Asked in the Survey
<b>Q11</b>	What new or additional sources of funding is your municipality/ jurisdiction seeking or planning to seek to assist with anticipated revenue shortfalls? (Please select all that apply.)
<b>Q17</b>	Has your municipality/jurisdiction received funding through the CARES Act?

A near majority of respondents indicated that their municipality or jurisdiction was seeking funds through state and federal grant opportunities (45.71 percent each), while a few others were also interested in foundation or nonprofit grants, loans and bonds, or not seeking funding at all. In addition, a majority of participants (68.57 percent) had received CARES Act funding to help their municipality or jurisdiction.

However, 25.71 percent of participants responded “No” they had not received CARES Act funding or that they were “Unsure” if they had received CARES Act funding, pointing to a potential weakness in information sharing and technical assistance networks within the region.

## RECOVERY EFFORTS

The final theme explored in the survey questions regarded respondents' recovery efforts. The table below lists the survey questions concerning this theme. Questions 18 and 20 asked respondents to rank their recovery needs and their confidence in their community's ability to recover within a given timeline.

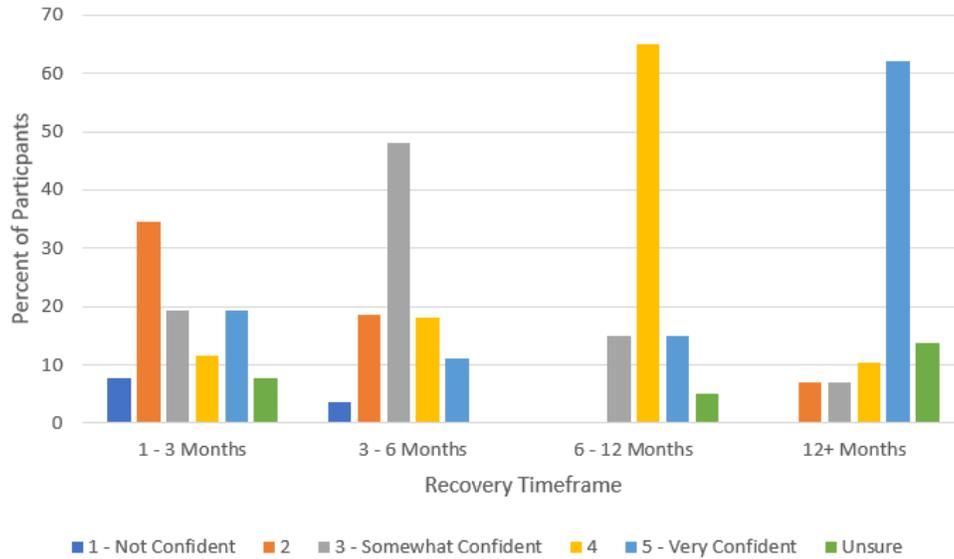
Question Number in the Survey	Question Asked in the Survey
Q18	From 1-7, how would you rank the following options in terms of the most prominent needs you expect your municipality to encounter as it recovers from the pandemic? (With 1 being the most prominent need)
Q19	Is there another need your municipality/jurisdiction is likely to encounter that is not included in the list above?
Q20	From 1-5, how would you rank your confidence regarding your municipality/jurisdiction's ability to economically recover from the pandemic in the following time frames?
Q22	In your opinion, which of the following would you select as your top 3 priorities for recovery/resilience strategies for your municipality/jurisdictions?
Q24	Aside from financial assistance, what resources would best support your municipality/jurisdiction?

Overall, 42.86 percent of participants believed that “financial support for small businesses” was their community's most prominent need, followed by “teleworking software/equipment for city employees” and “access to quality jobs.” These findings will be highlighted in further detail in the following sections.

Furthermore, respondents were asked to identify any other needs their community might face during recovery efforts. Though most respondents either skipped the question or answered with “N/A” or “No”, some participants named telecommunications and middle- to upper-level housing development.

These needs were likely the driving force behind the respondents' confidence in their communities' ability to recover from the pandemic within certain time frames. As the timeline for recovery increased, so did confidence in a successful recovery. For the 1-to-3-month recovery timeframe, the largest proportion of participants chose the “2” on a scale of 1 to 5, from not confident to very confident. However, by month 12 or more, 62.07 percent of participants felt “very confident” in their community's recovery. **Figure 2.36** depicts the respondents answers to Question 20 regarding their confidence in pandemic recovery efforts.

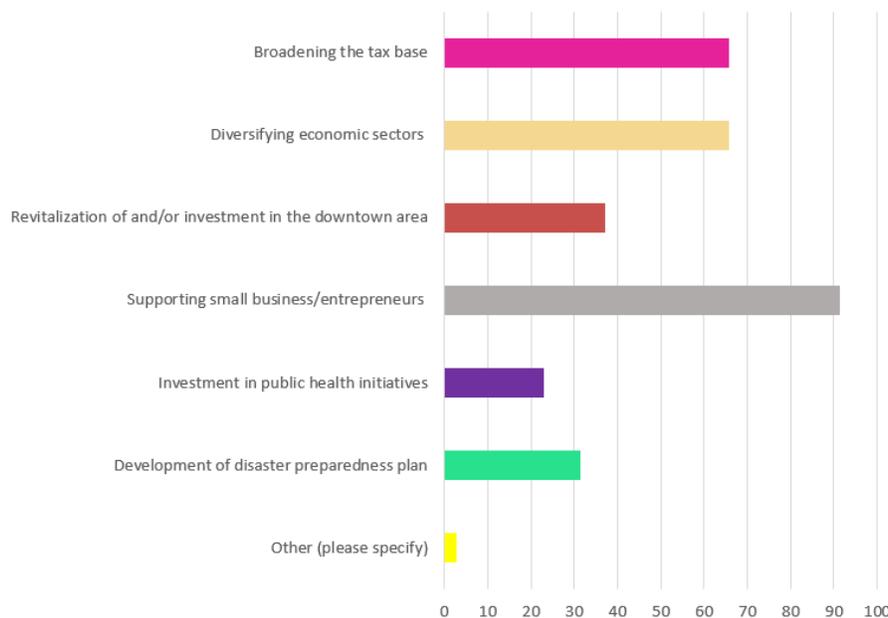
**Figure 2.36:** Government Survey Responses to Q20 of the “Pandemic Impact Survey”



Additionally, survey participants were asked to identify their top three recovery and resilience strategies for their community. The most common strategy chosen by 91.43 percent of respondents was “supporting small businesses/entrepreneurs.” Many respondents, 65.71 percent, also identified “broadening the tax base” and “diversifying economic sectors” as one of their top three strategies. **Figure 2.37** depicts the survey results for this question, Q22.

These answers align with the analysis of the regional economic impact on demographics, employment, industries, and consumer spending completed in Part One. These strategies are pertinent to successful and sustained economic recovery and development for any community and will lead the discussion on regional vulnerabilities in the following sections.

**Figure 2.37:** Government Survey Responses to Q22 of the “Pandemic Impact Survey”



Lastly, participants were asked to identify resources, other than financial assistance, that would best support their community. The most common answers included technical assistance and training programs and assistance for new and small businesses. These answers are consistent with needs, and areas of vulnerability discussed throughout the survey will be explained in greater detail throughout the next sections.

## CHAPTER FOUR

### REGIONAL VULNERABILITIES

The information and findings from the preceding assessment of the economic impacts of COVID-19 on the Greater Birmingham region has exposed many vulnerabilities that were created or exacerbated by the pandemic. Most notably, prominent industries, occupational sectors, and lack of access to certain resources became critical deficiencies as the region attempted to stabilize its economy after the initial shock of the pandemic. These vulnerabilities are both weaknesses of and threats to the region’s economic resilience and development.

This analysis will provide a better understanding of the economic vulnerabilities the region faces to develop a comprehensive resiliency strategy for use by regional governments and policy makers. Furthermore, identifying specific weaknesses will allow the Regional Planning Commission of Greater Birmingham to aid regional governments in prioritizing economic development projects and initiatives that focus on the region’s most susceptible areas.

### INDUSTRY VULNERABILITIES

Within the Greater Birmingham area, Retail Trade and Other Service establishments comprise nearly a third of all regional businesses and generate nearly 20 percent of total local employment. Both industries are critical to providing goods and services to consumers across the region, and they both provide large contributions to the local economy. The growth in these sectors over the past several decades is indicative of the region’s service-based economy, as the focus of the local economy has shifted from the production of goods to the provision of services.

However, these industries are both susceptible to economic disruptions and changes, as illustrated by the financial impacts caused by the pandemic. Businesses in the Retail Trade and Other Services industries were among the largest industries to have mass closings during the country’s implementation of stay-at-home orders and other necessary local ordinances, and these closures highlighted some of the vulnerabilities these industries have in terms of economic shocks.

### RETAIL TRADE

The Retail Trade industry is highly concentrated within the Greater Birmingham area. This industry comprises the largest number of small businesses in the region, primarily concentrated in Jefferson County,

and it provides employment to nearly 55,000 people.<sup>16</sup> In addition, the location quotient for Retail Trade for the region is 1.17, signifying that it is concentrated at a higher rate is more concentrated at the local level than the national level. These factors position this industry to be a critical driver of the local economy. According to the National Retail Federation report for 2021, the retail industry in the State of Alabama supports over 702,000 jobs and is the third largest Gross Domestic Product (GDP) producer, following Manufacturing and Real Estate.<sup>17</sup>

However, the size of this industry also leaves it susceptible to economic fluctuations. Retail Trade experienced large unemployment spikes due to the closures and shutdowns during the spring of 2020 due to the pandemic. Nearly 5,000 jobs were lost in this industry between September 2019 and September 2020 within the state.<sup>18</sup> In addition to losses in employment, economic shocks like the one caused by the pandemic often disrupt supply chains, as consumer preferences change in response to uncertainties in the market, causing shortages in products needed to stock retail stores and shops. This leaves this sector with little flexibility to adapt to quick changes, which can affect how the industry is able to function during economic downturns.

However, employment in Retail Trade rose by nearly 3,000 jobs between June 2020 and June 2021, indicating that a loss in this employment area is recovering. This indicates that though this industry is negatively impacted initially by fluctuations in the market, it is able to recover in the long-term. The BLS projects that the Trade, Transportation, and Utilities sector has recovered over 100 percent of the jobs lost in 2020 through the pandemic. In addition, more options to shop like e-commerce and online stores have increased Retail Trade's state GDP consecutively the last 3 years. Between 2019 and 2020, the estimated GDP generation for this industry was an additional \$228 million.<sup>19</sup>

Nevertheless, the large concentration of this industry along with its high susceptibility to disruptions makes it vulnerable to economic downturns. These factors highlight the need for evaluating the stature of this industry when analyzing the overall resiliency of the regional economy.

### OTHER SERVICES

The Other Services industry includes a variety of service-related employment, from pet groomers to lawn care services. This industry is the second largest small business industry in terms of the number of establishments within the region, with over 5,500 businesses employing nearly 33,000 people. Despite its large employment levels within the region, this industry is far less concentrated than Retail Trade. With a location quotient of 0.26, this industry has proportionally less workers in the industry than the nation.

However, Other Services was also weakened by the closures and shut-downs due to the pandemic, causing a large amount of unemployment within this industry at the onset of the pandemic. This industry was particularly restricted, since many of the types of services included in this category involved being in close contact with others. Between February and April 2020, approximately 5,000 jobs were lost due to the economic disruptions in the Birmingham MSA alone. The pandemic also left this industry with less contributions to the state level GDP than in recent years, declining by nearly \$19 million from 2019 to 2020.<sup>20</sup>

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16 Alabama Department of Labor, "May 2022 Data," Alabama Labor Market Information News, no. 5 (June 2022), <http://www2.labor.alabama.gov/Newsletter/LMI%20Newsletter.pdf>, 4.

17 National Retail Federation, "Retail Impact: Alabama – 26% of jobs in Alabama are supported by the retail industry," National Retail Federation, accessed June 16, 2022, <https://nrf.com/retails-impact/alabama>.

18 Samuel Addy et al., "Alabama Economic Outlook 2021," University of Alabama Culverhouse School of Business, January 2021, <https://hsvchamber.org/wp-content/uploads/2021/02/2021-Alabama-Outlook-2021.pdf>, 15.

19 Ibid., 19.

20 Ibid.

The concentration of businesses and employment within Other Services makes the region reliant on this industry for employment and economic growth. However, economic indicators, such as demand and consumer preference, are impactful drivers of the growth and projection of the businesses within Other Services. These factors enhance this industry’s vulnerability to shocks during economic downturns, making this an important industry to evaluate when analyzing the region’s economic resiliency.

## OCCUPATIONAL VULNERABILITIES

Certain occupational vulnerabilities arose from the local government survey, resilience index analysis, and the broader regional economic impact assessment of Chapter One. These vulnerabilities can be classified under two themes: lack of quality jobs and lack of high-skill workers.

### LACK OF QUALITY JOBS

Although, low unemployment rates and high annual job openings are important, they are not enough for a region to be resilient and experience sustainable economic growth. Currently, most of the Greater Birmingham’s regional workforce is made up of jobs in the Office and Administrative Support, Sales, and Food Preparation and Serving Related occupational groups. These are also the lowest paid occupational groups in both the nation and region and were the most impacted by the pandemic.

For the local economy to attract and retain high-skilled workers, jobs that are offered in the region must be in-demand, high-paying, and high-skill jobs, private investors, and local, national, and international revenue streams. A report on the Greater Birmingham regional economy, titled *Building It Together* found that “the local workforce is not lacking the bodies to fill the 59,000 annual openings; it is not broadly struggling to fill the positions today in demand from employers. However, today’s workforce skews towards lower-skill jobs that do not readily support a growth-oriented talent and economic development agenda.”<sup>21</sup> Expanding industries in high-demand and high-paying sectors will help increase the local high-skill labor pool and draw in private investment from outside the community, spurring sustainable economic growth.

Additionally, much of the local economy in the region is made up of service-based, non-tradable industries. The *Building It Together* report also found that “the local economy is heavily reliant on non-traded industries such as Health Care and Retail, which enable economic activity, but do not attract dollars from outside the community. As a result, the regional economy follows national trends, but has limited opportunity to grow at a rapid pace and is less resilient during economic downturns. Birmingham must look for growth by expanding its industrial base in traded industries and increasing economic interaction with the rest of the nation and world.”<sup>22</sup> Maintaining the balance between independence and interconnectedness is a key component of building a resilient economy.

### LACK OF HIGH-SKILLED WORKERS

The jobs in the region must also match the skills of the local workforce. Currently, the largest percentage of the regional population (39 percent) has an educational attainment of only a high school diploma or less. Additionally, as previously stated, most of the major employment industries are focused in low-skilled occupations, requiring the local workforce to seek out and maintain low-skill, low-paying jobs that do not successfully promote a sustainable and resilient economy. The *Building It Together* report states, “As the region looks to develop its ability to recruit employers in the advanced manufacturing, biotech, and IT sectors, it needs a skilled workforce that can meet the needs of those industries.”<sup>23</sup>

21 Ben Bradley, Chris Rudnicki, Rachel Neumann, and Dan Restuccia, “Building (It) Together,” <https://secureservercdn.net/198.71.233.27/kbc.ecd.myftpupload.com/wp-content/uploads/2018/06/Building-it-Together-Report.pdf?time=1644530712>, 15.

22 Ibid., 10.

23 Ibid., 15.

Local governments currently recognize this need, but may not have the support, capacity, or training to implement workforce development programs. As part of the Pandemic Impact Survey given to local governments in the region, respondents identified “access to quality jobs” as a top priority, or need, for their community’s pandemic recovery efforts. Most respondents also classified “workforce development training” as a second most prominent need. Therefore, current plans for economic development should emphasize workforce development and high-skilled labor as necessary and critical piece of their economic future.

### RESOURCE VULNERABILITIES

Lastly, there is a lack of access to and availability of certain resources within the region that were either exacerbated by the pandemic or arose because of the pandemic. The preceding assessment of the pandemic’s economic impact, the analysis of the region’s resilience index scores, and the responses from the local government survey identified three key areas of vulnerability in the region tied to resource scarcity: small businesses, broadband access, and affordable housing. The following subsection discusses these vulnerabilities and their ties to regional resilience in greater detail.

#### LIMITED RESOURCES FOR SMALL BUSINESSES

Small businesses are an asset for many economies as they help to stimulate growth, innovation, and workforce participation. Attracting small businesses, as well as providing support and resources to small businesses, allow regions to diversify and strengthen their local economies and workforces. In 2019, the Greater Birmingham region was home to over 25,000 small business establishments, encompassing a wide variety of industries and employing over 3 million people.

However, small businesses were negatively impacted by the pandemic, with many still wrestling with issues caused by the economic disruptions. Though the small size of these establishments is often an asset in terms of their agility within the market, it also means they have a shallower resource and asset pool to draw from during economic downturns. In May 2020, a study by Goldman Sachs reported that approximately 75 percent of a survey of 15,000 small business owners said that they might not be able to maintain operations within three months because of the lack of incoming sales revenue.

Additionally, the local government survey data indicated that support for small businesses was and continues to be a major threat posed by the pandemic to the local economy. Most survey respondents identified a lack of resources for small businesses as a possible long-term impact of the pandemic on their community while 42.9 percent of respondents claimed that financial support for small businesses will be the most prominent need as their municipality recovers from the pandemic. Furthermore, in an April 2020 study conducted by researchers at the Harvard Business School, 13 percent of small business survey respondents indicated that they would not use CARES Act funding to curb the negative financial impacts of the pandemic despite growing concerns over business sustainability. Most of these respondents cited their reasons as eligibility concerns (30 percent), trust in the government to forgive the loan (20 percent), or administrative burden (15 percent). This reluctance to apply for government funding despite growing financial distress illustrates a deficiency in communication with and resources for small businesses that poses a major threat to economic sustainability and diversification.

#### BROADBAND ACCESS

As discussed in Chapter One, only two counties in the six-county region meet the upload and download speed thresholds established by the Federal Communications Commission (25 Mbps download, 3 Mbps upload). Additionally, an average of 19.9 percent of households in the region have no internet access. Though this lack of broadband coverage in the region existed before the pandemic, the shutdown of the economy drastically shifted day-to-day life for many people to almost a completely virtual experience. From interacting with family and friends to buying groceries and working, all aspects of life became, and in some respects continue to be, dependent on the ability for individuals to access reliable and fast internet. Many of the region’s communities were disproportionately crippled economically and socially because of poor broadband accessibility. According to responses from the Local Government survey,

“Reliable Broadband Connectivity” was ranked the third most prominent need for pandemic recovery efforts by the most respondents (25.7 percent).

Broadband is becoming increasingly more important in the daily life of individuals, but also for the marketability and survivability of towns and cities. Private investment, education levels, high quality jobs, community attractiveness, home values, economic health, and other indicators of economic prosperity depend on the availability and reliability of an area’s broadband.<sup>24</sup> To increase resiliency and become a successful economic competitor locally and abroad, the Greater Birmingham region must prioritize high-quality, reliable broadband in every community, in both rural and metropolitan areas.

**HOUSING AFFORDABILITY**

Just as the pandemic drastically exacerbated the need for broadband access in the region, it has also accelerated the depletion of affordable housing. As discussed in Chapter One, housing prices for the Greater Birmingham region have risen consistently since even before the pandemic. From 2009 to 2021, housing prices for the region has risen by over 59 percent. In January 2021, housing prices reached their 12-year peak at \$343,500. Though housing prices began increasing years before the pandemic, supply-chain issues and the consumer preference shift towards homebuying (as discussed in Chapter One) have made housing prices skyrocket further within recent months. According to the Federal Reserve Bank of Dallas, national housing prices hit their peak increase of 19.3 percent in July 2021, since the COVID-19 recession in mid-2020.<sup>25</sup> The pandemic has exacerbated the pre-existing lack of affordable housing with because of the lower supply of housing due to business closures and the higher demand for home-buying as a result in a shift to teleworking and consumer preferences.

This trend is occurring across the country, in both rural and metro areas. However, in areas, like the Greater Birmingham region, with high levels of poverty and low-wage jobs, affordable housing is a critical and immediate need that must be met to achieve even the most basic levels of economic resilience and sustainable growth.

24 Lara Fishbane and Adie Tomer, “Broadband is too important for this many in the US to be disconnected,” Brookings, The Brookings Institution, August 14, 2019, <https://www.brookings.edu/blog/the-avenue/2019/08/14/broadband-is-too-important-for-this-many-in-the-us-to-be-disconnected/>.

25 John V. Duca and Antony Murphy, “Why House Prices Surged as the COVID-19 Pandemic Took Hold,” Federal Reserve Bank of Dallas, December 28, 2021, <https://www.dallasfed.org/research/economics/2021/1228.aspx>.

## CHAPTER FIVE

### REGIONAL ASSETS

The Greater Birmingham region also showcased had an array of economic assets despite the economic uncertainty caused by the pandemic. This section will identify prominent industries, occupational sectors, and regional resources that has proved critical to the region's economic recovery and enhanced its economic resilience. Regional economic assets can be defined in two ways: economic strengths and economic opportunities. This section will highlight both types of resilience assets and outline how they can be further utilized for economic diversification and recovery.

#### ECONOMIC STRENGTHS

Economic strengths are a region's relative competitive advantages, and they are often internal in nature. Examples of strengths can be an area's industry supply chains and clusters, infrastructure like port, rail, and broadband, specialized workforce skills, higher education levels, and collaboration among stakeholders. Though many factors contribute to the Greater Birmingham region's economic successes, three main economic strengths have been identified: the Healthcare and Social Assistance Industry Cluster; the Education Services Industry Cluster; and the regional connectivity infrastructure.

#### HEALTHCARE AND SOCIAL ASSISTANCE

The Healthcare and Social Assistance industry represents nearly 9 percent of total business establishments in the region and employs over 15 percent, or 88,000, of workers. It is also the fastest growing industry in the region, as it is projected to

increase by 18.6 percent by 2024. Therefore, an opportunity for investment exists within this industry's supply chain needs to support the growth of local industries. The supply chain for Healthcare and Social Assistance includes many activities, from biomedical research for medicinal development to the production and manufacturing of durable and non-durable products for patient care, so a variety of sectors can be evaluated for further advancement.

Additionally, this industry is highly concentrated within the region. The Location Quotient for Healthcare and Social Assistance is 1.11, indicating this industry is 11 percent more concentrated in this region when compared to the national average. In addition, consumer spending within this sector increased or remained the same throughout the pandemic for the majority of households. Due to its health-related in nature, the pandemic highlighted the need for accessible healthcare services across all household income groups.

The Healthcare and Social Assistance industry is also a source of some of the highest quality employment opportunities in the region. Healthcare practitioner and technician occupations are listed within the top 5 highest paid occupations in the region. However, this industry also represents some of the lowest earning opportunities, with healthcare support-typed occupations listed in the top five lowest paid. This gap in earning potential will need to be evaluated as the industry continues to grow, as it is projected to, to ensure workers in the lower earning position are not left behind during the industry's expansion. Four of the top 10 regional employers are within the Healthcare and Social Assistance industry, with the University of Alabama at Birmingham (UAB) being the largest with over 23,000

workers alone. Healthcare and Social Assistance also includes opportunity to access high quality jobs. In addition, the recent investments in broadband could also impact the ways these services are traditionally held, as expansions in telehealth could increase vital access and continue the growth of resiliency in this industry.

**EDUCATION SERVICES**

The Education Services industry accounts for only 2.4 percent of regional establishments, but it serves as the second largest employment industry, accounting for nearly 84,000 employees. This industry has the highest location quotient of any other regional industry at 6.4, signifying the Greater Birmingham region has a significantly higher concentration in Education Services than the national average. Jefferson County Board of Education represents the only Education Services industry employer in the top ten largest employers with 4,400 employees.

Education services include sectors ranging from elementary and secondary schools to higher education institutions and technical and trade schools, indicating that the six-county region has ample opportunities for educational resources to be utilized as an occupational prospect. The region’s workforce is also more educated than the state’s at large, as 30 percent of residents have at least a bachelor’s degree, compared to the state’s average of 22 percent.<sup>26</sup> However, nearly 39 percent of the region’s residents have only a high school diploma or less, which emphasizes the economic opportunities existing in the collaboration and development of education pipelines, where the gap between workers and industry demands can be narrowed. The need for additional education has impacted consumer spending for households within the region as well, as spending increased by 20 percent between 2020 and 2021 for households with less than \$30,000 and more than \$200,000 in annual income.

**CONNECTIVITY & TRANSPORT ACCESS**

The Greater Birmingham region is a central connection point for major transportation hubs in the southeast. The current transportation infrastructure allows for the efficient movement of raw materials and finished products to Atlanta, Memphis, Nashville, New Orleans, and Mobile. There are approximately 292 miles of interstate systems and over 1,200 miles of U.S. and State highways within the region, including the completed I-22 corridor connecting Birmingham to Memphis, I-65, which runs south to north between Nashville, Tennessee and Mobile, Alabama, and I-20/59, which runs west to east from Atlanta, Georgia to Dallas-Fort Worth, Texas. Birmingham’s international airport, as well as the region’s local airports, give the region access to various opportunities for air transportation of goods, and BirminghamPort’s river access and terminals give local employers opportunities for water transport. In addition, the region is crisscrossed by an extensive rail network, including Class A railroads. These options are essential to the transport of raw materials throughout the state and southeast, and they are a competitive advantage for the region in terms of recruiting and maintaining industry.

The ability for goods to pass through the Greater Birmingham region through multiple modes is an asset that many regions do not have. The Birmingham area’s central location makes the market more competitive and increases supply chain opportunities for suppliers and buyers in the surrounding regions. There is an opportunity to expand on this existing asset by improving current infrastructure. This is a focus of the federal government, as signified by the passage of the Infrastructure Investments and Jobs Act of 2021 (IIJA), which is providing large federal investment in local infrastructure projects.

26 Center for Business and Economic Research, “Alabama Shows Dramatic Improvement.”

## ECONOMIC OPPORTUNITIES

Economic opportunities are chances for regional improvement or progress, and they are often external in nature. Opportunities include potential activities such as the expansion of a biomedical research lab in the region or improvements of existing assets to improve the local market's competitiveness. Though the region has a wide variety of economic development opportunities, three central themes will be discussed in this section to enhance the region's resiliency: Expansion of the Professional, Scientific, and Technical Services Industry Cluster, Upskilling Local Talent, and Broadband Access Expansion.

## PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES

The Professional, Scientific, and Technical Services industry is the third fastest growing industry within the region and currently represents the third largest industry business group in the region, representing around 9 percent of regional businesses. In addition, Professional, Scientific, and Technical Services is the second largest regional small business industry, behind only retail, with its highest concentrations in Jefferson and Shelby Counties. Professional, Scientific, and Technical Services also encompasses the three target investment areas recommended for the Birmingham region in the Building (IT) Together report: Advanced Manufacturing, Life Sciences and Biotech, and Information Technologies.<sup>27</sup> These sectors were identified to address and enhance economic opportunities for the region.

Though this industry is included in the list of most susceptible industries in terms of employment, the job loss during the pandemic illustrates its resiliency and ability to recover from economic shock. The region lost 7 percent of jobs within this industry by April 2020 but had fully recovered and even made additional hires by December 2020. In addition, the region gained nearly 10,000 Professional, Scientific, and Technical Services jobs from 2010 to 2020, indicating it has had a positive growth pattern since the Great Recession. The recovery patterns of this industry illustrate a potential for investments to bolster the employment opportunities to make them less susceptible to initial economic shocks and disturbances.

Occupations within Professional, Scientific, and Technical Services also include some of the highest paying professions, including computer science and mathematics as well as engineering and architecture. Continued investment in this industry also represents local interests identified through the Local Government Survey, described in Chapter 3, which included access to quality jobs and workforce training. Since this industry is projected to grow, an opportunity exists to invest in the education, recruitment, retention, and spatial needs for these occupations to prepare for its expansion.

## UPSKILLING LOCAL TALENT IN VULNERABLE INDUSTRIES

Though the regional industry environment tends to be resilient in terms of employment gains and investment growth, it is important to evaluate the industry areas that are prevalent in the region that are more susceptible to economic shock and disruptions. **Table 2.8** lists the top five largest unemployment claims by occupation and industry measured during 2020, as well as the top five largest employment groups in the region. As highlighted in yellow in **Table 2.8**, the food and service, and the office and administration support areas, account for two of the largest employment groups in the region but were also two of the largest areas of unemployment in the region during the pandemic. These industries have contributed to the overall economic growth of the region over the past couple of decades, as the regional economy has shifted away from manufacturing-focused to a services-centered economy. However, factors such as automation enhancement threaten the resilience of these industries, emphasizing the need for investment or workforce training in these groups.

Upskilling local talent is also a recommendation developed by the Building (IT) Together report, which determined that the educational requirements of the local workforce will increase over the coming decade. According to the report's findings, 40 percent of the workforce is currently in Bachelor-level jobs, and 44 percent of the projected growth will come from these roles, for a total projection of 19,000 annual openings in Bachelor's-level positions.

27 Bradley, "Building (IT) Together," 7.

**Table 2.8:** Largest Employment vs. Unemployment Claims Comparison Table

Rank	Unemployment Claims 2020: Occupations	Unemployment Claims 2020: Industry	Largest Employment Groups
1	Production	Unclassified	Office and Administrative Support
2	Food Preparation and Serving Related	Manufacturing	Sales and Related
3	Office & Administrative Support	Accommodations & Food Service	Food Preparation and Serving Related
4	Sales & Related	Administrative Support, Waste Management & Remediation Services	Healthcare Practitioners & Technicians
5	Transportation & Moving	Retail Trade	Transportation & Moving

Source: *Pandemic Analysis Report, Part One*

### **BROADBAND ACCESS EXPANSION**

The pandemic highlighted the importance of accessible quality broadband services not as just means for connection, but also for necessities like work and learning. It also underscored the gaps in services across the region, and often illustrated that access to employment and school were tied to having reliable internet access. Reliable broadband access was identified as one of the top four most prominent needs communities expected to encounter as they recovered from the pandemic (see Question 18 of “Local Government Survey” in **Appendix C**).

In addition, the State of Alabama has invested in the 2021 Alabama Connectivity Plan<sup>28</sup> and developed an action list to increase connectivity in underserved areas of the state. According to the plan, the state’s 10-year goal is for “98 percent of Alabama consumers and businesses (to) have access to 100/20 Mbps service over networks capable of cost-effectively scaling to 100/100 Mbps ” (page 38). The State of Alabama is committed to the expansion of connectivity within the state, so grants and other types of funding will likely be available to assist jurisdictions with broadband expansion over the next couple of years.

### **SMALL BUSINESS SUPPORT**

Though the region is home to Innovation Depot, one of the largest start-up company incubators in the state, small business support was listed as the primary need and priority concern for respondents in the Local Government Survey to combat the negative impacts of the pandemic and support the full recovery of the regional economy (see Question 18 of “Local Government Survey” in **Appendix C**). In addition, respondents listed “lack of resources for small businesses” as one of the top five possible long-term impact of COVID-19 on their communities (see Question 23 of “Local Government Survey” in **Appendix C**). As more entrepreneurs begin to seek out funding for their start-up companies due to subsiding economic stresses, jurisdictions will have opportunities to support and encourage these businesses’ growth. Jurisdictions could connect their local small businesses with lenders and technical assistance providers, such as Community Development Finance Institutions (CDFIs) like Sabre Finance, or provide information on relevant tax credits and incentives locally available.

28 “The Alabama Connectivity Plan,” Alabama Department of Economic and Community Affairs, December 2021, <https://adeca.alabama.gov/wp-content/uploads/Alabama-Connectivity-Plan.pdf>, 1.

## CHAPTER SIX

# REGIONAL ECONOMIC RESILIENCY GOALS

Long-term, regional economic prosperity is linked to a local area's ability to prevent, withstand, and recover from economic disturbances. As defined by the EDA, economic resilience, in terms of economic development, is bolstered by three primary factors: the ability to quickly recover from, withstand, and avoid an economic shock. Establishing economic resilience requires developing the region abilities to anticipate risk, evaluate the potential impacts that risks will have on major economic assets, and building up capacity to respond effectively. Economic shocks often manifest in three ways: Recessions or other significant events within the national economy; downturns in a particular industry that represents a critical area in the regional economy; and other external shocks caused by natural or man-made disasters.<sup>29</sup> This section aims to identify the region's potential economic risks based on the economic activity during the pandemic to develop resiliency strategies for the region's Comprehensive Economic Development Strategy.

The economic resiliency goals for the region are categorized by the two avenues for achieving resiliency as defined by the EDA. The federal agency identifies two types of initiatives for communities to utilize when building their local economic resilience: "responsive" and "steady state". These two initiatives will help structure the following analysis of regional resilience and these efforts that RPCGB and local communities already have in place. The initiatives outlined in this document were developed in reference to the ten best practices outlined in the Appalachian Regional Commission's (ARC) report, "Strengthening Economic Resilience in Appalachia: A Guidebook for Practitioners", published in 2019.

<sup>29</sup> "The Alabama Connectivity Plan," Alabama Department of Economic and Community Affairs, December 2021, <https://adeca.alabama.gov/wp-content/uploads/Alabama-Connectivity-Plan.pdf>, 1.

## RESPONSIVE INITIATIVES

Responsive initiatives establish capabilities for economic development organizations and communities to help them respond to the region's recovery needs before or initially following an initial shock to the local economy. Examples of responsive economic resilience measures include preparing pre-disaster recovery plans, establishing information networks, and connecting key stakeholders in the region. The following list outlines the recommended responsive initiatives for the region; projects that support these initiatives

# 1

## PRE-DISASTER PLANNING

Pre-disaster planning to define key stakeholders, assign regional roles and responsibilities, and create responsive short, intermediate, and long-term action plans

# 2

## **ENHANCE REGIONAL COOPERATION**

Enhance coordination and cooperation among regional leaders and agencies in terms of planning for economic shocks and developing economic resilience

# 3

## **ESTABLISH INFORMATION NETWORKS**

Establish information networks or develop telecommunications initiatives among regional stakeholders to:

- Foster interconnection between metropolitan and rural areas to share resources and strategies for regional economic growth

# 3

## **CONT.**

- Encourage active communication between public, private, and nonprofit groups to collaborate for existing and potential future economic challenges and encourages long-term engagement and buy-in
- Increase the region's capacity for communication during and following an economic shock to define needs and develop responsive projects

# 4

## **WORKFORCE DEVELOPMENT PIPELINE**

Workforce development planning associated with strengthening talent to industry pipeline, such as defining private sector needs and workforce talent gaps

## **STEADY-STATE INITIATIVES**

Steady-state initiatives are longer-term efforts that seek to bolster a community's capacity for growth and its ability to withstand and avoid a shock. Examples of steady-state resilience measures include diversifying the industrial base, supporting emerging industries and clusters, especially those in high-demand and high-paying fields, creating workforce training and development programs, and establishing reliable and affordable telecommunications and broadband networks. The following list are the recommended steady-state initiatives for the region; projects that support these initiatives will serve as the basis for project prioritization in the region's CEDS:

# 1

## **DEVELOP A REGIONAL RECOVERY PLAN**

Development of a Regional Economic Recovery Plan that coordinates with regional jurisdictions and economic development agencies, and reflects other regional plans, such as hazard mitigation.

# 2

## **BROADEN REGION'S INDUSTRIAL BASE**

Broaden and diversify the region's industrial base, specifically projects that target the development of emerging clusters or industries that either:

- Build on the region's unique assets and competitive strengths
- Provide stability during downturns to industries that have historically been disproportionately impacted by them (like Leisure and Hospitality)
- Create programs and/or projects focused on supporting the growth and development of new industries, providing high-quality jobs, assisting local entrepreneurs and start-up businesses, and preparing the current workforce for economic diversification through skills training

# 3

## **BUILD RESILIENT LOCAL WORKFORCE**

Build a resilient, local workforce by supporting projects that strengthen the workforce development pipeline, with desired outcomes being:

- Decreasing the gap between local industrial employment needs and local workforce skills through investments in workforce development and training
- Enhancing the ability for workers to better shift between jobs and industries
- Strengthen the capacity of local workforce development agencies or initiatives
- Identify, mentor, and support young leaders of the next generation to encourage retention of talent

# 4

## **SUPPORT SMALL BUSINESSES**

Support the establishment of business retention/expansion programs to support local small/start-up firms during and post-economic disruption, including, but not limited to:

- Initiating entrepreneurial support programs such as economic gardening initiatives
- Developing pipeline for entrepreneurial investment and access to technical assistance and capital

# 5

## **CONDUCT COMPREHENSIVE PLANNING EFFORTS**

Comprehensive planning efforts to the define the public's vision for community resilience and design an action plan for its implementation to create communities where all residents and workers would want to live and work.

# 6

## **INVEST IN CRITICAL INFRASTRUCTURE**

Investments in critical infrastructure to improve regional recruiting and retention efforts, including but not limited to:

- Increasing broadband accessibility throughout the region, especially in under-served and under-invested areas
- Rehabilitating, expanding, and constructing infrastructure
- Investing in multi-modal transportation measures to enhance the region's competitive advantages associated with connectivity
- Investing in site development resources to assist municipalities and counties with preparing locally owned land parcels



# APPENDIX A

## DISASTER RESILIENCE INDEX

**Table 2.1:** Disaster Resilience Index Variables

<b>Resilience Measure</b>	<b>Definition of the resilience measure</b>	<b>Contributing Attribute</b>	<b>Definition of contributing attribute</b>
<b>Social</b>	Deals with attributes of the individual members of communities.	Education equity	Ratio of persons with more than a high school degree to those with a high school degree.
		Age	Proportion of the population below the age of 65.
		Transportation access	Households with access to a vehicle for transportation.
		Communication capacity	Households/units with access to telephone.
		Language capacity	English-speaking population.
		Special needs	Population without a disability.
		Health coverage	Population with health insurance.
<b>Economic</b>	Economic resilience deals with the financial and economic factors that contribute to the resilience of communities.	Housing Capital	Proportion of owned or mortgaged housing units.
		Employment	Proportion of the population in the workforce.
		Single Sector Employment Dependence	Proportion of the population employed in single sector workforce.
		Employment (Female)	Female participation in the workforce.
		Health Access	Relative number of physicians per capita.
<b>Infrastructure</b>	Infrastructure resilience deals with physical structures (housing, shelter, medical capacity, etc.) that exist within communities.	Housing Type	Proportion of non-mobile homes.
		Shelter Capacity	Proportion of unoccupied rental units in an area.
		Housing Age	Proportion of housing units built between 1970 and 1989.
		Sheltering Need	Number of hotels and motels per square mile.

<b>Resilience Measure</b>	<b>Definition of the resilience measure</b>	<b>Contributing Attribute</b>	<b>Definition of contributing attribute</b>
<b>Community Capital</b>	Community Capital deals with the relationships between the individual and the community as a whole.	Place Attachment – Migration	Proportion of the population that is not foreign-born.
		Place Attachment – Born	Proportion of the population that resides in the same state of birth.
		Social Capital – Religion	Number of religious organizations per capita.
		Social Capital – Civic Involvement	Number of civic organizations per capita.
		Social Capital – Advocacy	Number of social advocacy organizations per capita.
		Innovation	Proportion of the population employed in a creative class occupation.



# APPENDIX B

## STATSAMERICA

## INNOVATION INDEX

## 2.0

**Table 2.2:** StatsAmerica Innovation Index 2.0, Innovation Inputs

<b>Innovation Inputs</b>			
<b>Input</b>	<b>Definition of Input</b>	<b>Core Index</b>	<b>Measure</b>
<b>Human Capital and Knowledge Creation</b>	This category suggests the extent to which a region's population and labor force are able to engage in innovative activities.	n/a	"Salad Days" Population Growth (Ages 25-44)
		<b>Educational Attainment</b>	High School Attainment (Ages 18-24)
			Some College, No Degree (Age 25+)
			Associate Degree (Age 25+)
			Bachelor's Degree (Age 25+)
			Graduate Degree (Age 25+)
		<b>Knowledge Creation and Technology Diffusion</b>	Patent Technology Diffusion
			University-Based Knowledge Spillovers
			Business Incubator Spillovers
		<b>STEM Education and Occupations</b>	STEM Degrees (per 1,000 population)
			Technology-Based Knowledge Occupation Clusters
			High-Tech Industry Employment Share
		<b>Business Dynamics</b>	This category gauges the competitiveness of a region by investigating the entry and exit of individual firms—the creative destruction measures.
Traded Sector Establishment Births to All Establishments Ratio			
Jobs Attributes to Establishment Births to Total Employment Ratio			
Change in Establishment Births to All Establishments Ratio			
<b>Establishment Dynamics</b>	Establishment Expansions Divided by Establishment Contractions		
	Establishment Births Divided by Establishment Deaths		
	Traded Sector Establishment Dynamics		
<b>Venture Capital Dollar Measures</b>	Venture Capital (Average Annual \$)		
	Expansion Stage Venture Capital \$		
	High-Tech Venture Capital \$		
	Change in Venture Capital \$		
<b>Venture Capital Count Measures</b>	Initial Public Offerings		
	Venture Capital Deals (Average Annual)		
	Change in Venture Capital Deals		

<b>Innovation Inputs</b>			
<b>Input</b>	<b>Definition of Input</b>	<b>Core Index</b>	<b>Measure</b>
<b>Business Profile</b>	<b>This category measures local business conditions and resources available to entrepreneurs and businesses.</b>	<b>Foreign Direct Investment Attractiveness</b>	<b>FDI Employment Index, Foreign Source</b>
			<b>FDI Employment Index, National Source</b>
			<b>FDI \$ Investment Index, Foreign Source</b>
			<b>FDI \$ Investment Index, National Source</b>
		<b>Connectivity</b>	<b>Residential High-Speed Connection Density</b>
			<b>Change in Residential High-Speed Connections</b>
			<b>Farm Operators with Internet Access</b>
		<b>Dynamic Industry Profile</b>	<b>Small Establishments (Average)</b>
			<b>Large Establishments (Average)</b>
			<b>High-Tech, Early-in-Life-Cycle Establishment Ratio</b>
		<b>Proprietorship</b>	<b>Proprietorship Rate</b>
			<b>Change in Proprietorship Rate</b>
			<b>Proprietor Income to Total Wages and Salaries</b>
			<b>Availability of Capital from All Banks</b>

**Table 2.3:** StatsAmerica Innovation Index 2.0, Innovation Outputs

Innovation Outputs			
Input	Definition of Input	Core Index	Measure
<b>Employment and Productivity</b>	This category describes economic growth, regional desirability, or direct outcomes of innovative activity.	n/a	Job Growth to Population Growth Ratio
		n/a	Change in Share of High-Tech Industry Employment
		Industry Performance	Cluster Diversity
			Cluster Strength
			Cluster Growth Factor
		Gross Domestic Product (GDP)	GDP per Worker
			Change in GDP per Workers
		Patents	Change in Average Patenting Rate
			Patent Diversity
		<b>Economic Well-Being</b>	This category explores standard of living and other economic outcomes.
Compensation	Growth in Wage/Salary Earnings per Worker (Average Annual)		
	Change in Proprietors' Income per Proprietor (Average Annual)		
n/a	Income Inequality (Mean to Median Ratio)		
n/a	Poverty Rate (Average)		
n/a	Unemployment Rate (Average)		
n/a	Dependency Based on Income Sources (Ratio)		
n/a	Net Migration (Average)		



# APPENDIX C

## LOCAL GOVERNMENT SURVEY

**Table 3.1:** Local Government Survey Questions

Question Number in the Survey	Question Asked in the Survey
Q1	What municipality/jurisdiction do you represent?
Q2	What is your title?
Q3	Has your municipality/jurisdiction experienced any revenue loss due to the fiscal impacts of the pandemic?
Q4	If yes, what range of revenue decline would you estimate your municipality/jurisdiction has experienced?
Q5	Which source of revenue would you identify as having experienced the most decline due to the pandemic?
Q6	Has your municipality/jurisdiction had to make spending cuts or adjustments due to the fiscal impacts of the pandemic?
Q7	Has your municipality/jurisdiction had to make any of the following spending decisions due to the impacts of the pandemic? (Please select all that apply.)
Q8	Has your municipality/jurisdiction incurred any significant unexpected expenses due to the pandemic? (Personal protective equipment, disinfecting services, etc.)
Q9	What types of unanticipated expenses has your municipality/jurisdiction incurred due to COVID-19? (Please select all that apply.)
Q10	What is your municipality/jurisdiction's estimated amount of COVID-19 related expenses to date?
Q11	What new or additional sources of funding is your municipality/jurisdiction seeking or planning to seek to assist with anticipated revenue shortfalls? (Please select all that apply.)
Q12	Has your municipality/jurisdiction had to furlough or discharge employees due to revenue changes caused by the pandemic?
Q13	How would you describe the pandemic's overall economic impact on your municipality?
Q14	How would you estimate the overall job loss your municipality/jurisdiction has experience
Q15	To your knowledge, which industry within your municipality/jurisdiction would account for the most job loss due to the pandemic?
Q16	For your municipality/jurisdiction, did the number of positive cases within your city and surrounding areas correlate to the decline in business activity and revenue streams?
Q17	Has your municipality/jurisdiction received funding through the CARES Act?

Question Number in the Survey	Question Asked in the Survey
<b>Q18</b>	From 1-7, how would you rank the following options in terms of the most prominent needs you expect your municipality to encounter as it recovers from the pandemic? (With 1 being the most prominent need)
<b>Q19</b>	Is there another need your municipality/jurisdiction is likely to encounter that is not included in the list above?
<b>Q20</b>	From 1-5, how would you rank your confidence regarding your municipality/jurisdiction's ability to economically recover from the pandemic in the following time frames?
<b>Q21*</b>	Which of the following items would you identify as possible long-term impact(s) of COVID-19 on your community? (Please select all that apply.)*
<b>Q22</b>	In your opinion, which of the following would you select as your top 3 priorities for recovery/resilience strategies for your municipality/jurisdictions?
<b>Q23*</b>	Which of the following items would you identify as possible long-term impact(s) of COVID-19 on your community? (Please select all that apply.)*
<b>Q24</b>	Aside from financial assistance, what resources would best support your municipality/jurisdiction?
<b>Q25</b>	Any additional thoughts or concerns you would like to share?

*\*Note: Question 21 and Question 23 are the same question and were unintentionally duplicated in the original survey. They are included in this list for transparency.*

## BIBLIOGRAPHY

- ACRE Alabama Cabinet. "Birmingham Residential 1st Quarter Report – 2021." Alabama Center for Real Estate, University of Alabama Culverhouse College of Business.
- Addy, Samuel, Nyasha Black, Ahmad Ijaz, Stephanie Normanyo, Kilungu Nzaku, Susannah Robichaux. "Alabama Economic Outlook 2021." University of Alabama Culverhouse School of Business. January 2021. <https://hsvchamber.org/wp-content/uploads/2021/02/2021-Alabama-Outlook-2021.pdf>.
- Alabama Department of Labor/ "May 2022 Data." Alabama Labor Market Information News, no. 5 (June 2022). <http://www2.labor.alabama.gov/Newsletter/LMI%20Newsletter.pdf>.
- Archibald, Ramsey. "Alabama population older than national average, and keeps growing grayer." Alabama Local News. Advance Local, December 30, 2019. <https://www.al.com/news/2019/12/alabama-population-older-than-national-average-and-keeps-growing-grayer.html>.
- Bateman, Nicole and Martha Ross. "The pandemic hurt low-wage workers the most – and so far, the recovery has helped them the least." Brookings, The Brookings Institution. July 28, 2021. <https://www.brookings.edu/research/the-pandemic-hurt-low-wage-workers-the-most-and-so-far-the-recovery-has-helped-them-the-least/>.
- Bradley, Ben, Chris Rudnicki, Rachel Neumann, and Dan Restuccia. "Building (It) Together." <https://secureservercdn.net/198.71.233.27/kbc.ecd.myftpupload.com/wp-content/uploads/2018/06/Building-it-Together-Report.pdf?time=1644530712>.
- Brynjolfsson, Erik, John Horton, Adam Ozimek, Daniel Rock, Garima Sharma, and Hong Yi Tu Ye. "COVID-19 and Remote Work: An Early Look at US Data." National Bureau of Economic Research Working Paper Series (2020). <https://mitsloan.mit.edu/shared/ods/documents?PublicationDocumentID=6322>.
- "CDC SVI 2018 Documentation." Center for Disease Control. January 31, 2020. [https://svi.cdc.gov/Documents/Data/2018\\_SVI\\_Data/SVI2018Documentation.pdf](https://svi.cdc.gov/Documents/Data/2018_SVI_Data/SVI2018Documentation.pdf).
- Center for Business and Economic Research, Culverhouse School of Business. "Alabama Shows Dramatic Improvement in Education Attainment; State Remains Below National Average." University of Alabama, Center for Business and Economic Research, Culverhouse School of Business. August 7 2019. <https://cber.culverhouse.ua.edu/2019/08/07/alabama-shows-dramatic-improvement-in-education-attainment-state-remains-below-national-average/>.
- "COVID-19 Pandemic's Impact on Household Employment and Income." Congressional Research Service. November 9, 2020. <https://crsreports.congress.gov/product/pdf/IN/IN11457>.
- Covid Tracking Project. "The Data: Alabama." The Covid Tracking Project, The Atlantic Monthly Group. March 7, 2021. <https://covidtracking.com/data/state/alabama>.
- Crisis Technologies Innovation Lab. "Analysis Platform for Risk, Resilience, and Expenditure in Disasters." Indiana University. Accessed June 16, 2022. <https://ctil.iu.edu/projects/apred/#/>.
- Cutter, Susan L., Christopher G. Burton, and Christopher T. Emrich. "Disaster Resilience Indicators for Benchmarking Baseline Conditions." Journal of Homeland Security and Emergency Management 7, no. 1 (2010). [http://resiliencesystem.com/sites/default/files/Cutter\\_jhsem.2010.7.1.1732.pdf](http://resiliencesystem.com/sites/default/files/Cutter_jhsem.2010.7.1.1732.pdf).

- DeSanctis, Adam. "August New Home Purchase Mortgage Applications Increased 33.3 Percent." Mortgage Bankers Association. September 15, 2020. <https://www.mba.org/news-and-research/newsroom/news/2020/09/15/august-new-home-purchase-mortgage-applications-increased-33-3-percent>.
- DeSanctis, Adam. "December New Home Purchase Mortgage Applications Increased 42.2 Percent." Mortgage Bankers Association. January 14, 2021. <https://www.mba.org/news-and-research/newsroom/news/2021/01/14/december-new-home-purchase-mortgage-applications-increased-42-2-percent-x275788>.
- DiCamillo, Nate. "The US construction industry is larger now than it was before the pandemic." Quartz, G/O Media Inc. April 1, 2022. <https://qz.com/2149827/the-us-construction-industry-is-larger-now-than-it-was-before-the-pandemic/>.
- Economic Development Administration. "Comprehensive Economic Development Strategy: Content." U.S. Economic Development Administration. Accessed June 16, 2022. <https://www.eda.gov/ceds/content/economic-resilience.htm>.
- Frey, William H. "America's largest cities saw the sharpest population losses during the pandemic, new census data shows." Brookings, The Brookings Institution. June 8, 2021. <https://www.brookings.edu/research/the-largest-cities-saw-the-sharpest-population-losses-during-the-pandemic-new-census-data-shows>.
- Garcia, Manny. "Financial Anxiety, Ongoing Uncertainty Keeping Sellers on the Sideline." Zillow, Zillow, Inc. October 27, 2020. <https://www.zillow.com/research/why-arent-sellers-selling-2020-28224>.
- Glynn, Chris. "Homes Are Selling Incredibly Fast, Regardless of Price – Defying Seasonal Norms." Zillow, Zillow, INC. October 15, 2020. <https://www.zillow.com/research/days-on-market-by-tier-2020-28167/>.
- Gould, Elise and Melat Kassa. "Low-wage, low-hours workers were hit hardest in the COVID-19 recession: The State of Working America 2020 employment report." Economic Policy Institute. May 20, 2021. <https://www.epi.org/publication/swa-2020-employment-report/>.
- Leonhart, Megan. "64% of Americans changed their spending habits during the pandemic – here's how." Your Money Mindset, CNBC LLC. September 29, 2020. <https://www.cnbc.com/2020/09/29/americans-have-changed-their-spending-habits-during-the-pandemic-heres-how.html>.
- Lewis, Herbert J. "Birmingham." Encyclopedia of Alabama, Alabama Humanities Alliance. Accessed June 16, 2022. <http://encyclopediaofalabama.org/article/h-1421>.
- Miller, Claire. "2020 Was The Worst Year Ever For U.S. Hotels. Here's What's Next." NPR. January 27, 2021. <https://www.npr.org/2021/01/27/960384171/2020-was-the-worst-year-ever-for-u-s-hotels-heres-whats-next>.
- Montgomery, David. "Who Owns a Home in America, in 12 Charts." Bloomberg, Bloomberg L.P. August 8, 2018. <https://www.bloomberg.com/news/articles/2018-08-08/who-rents-their-home-here-s-what-the-data-says>.
- National Restaurant Association. "Restaurant Industry in Free Fall; 10,000 Close in Three Months." National Restaurant Association. December 7, 2020. <https://restaurant.org/research-and-media/media/press-releases/restaurant-industry-in-free-fall;-10,000-close-in-three-months/>.

National Retail Federation. "Retail Impact: Alabama – 26% of jobs in Alabama are supported by the retail industry." National Retail Federation. Accessed June 16, 2022, <https://nrf.com/retails-impact/alabama>.

Nova, Annie. "Americans are saving more during the pandemic: CNBC+ Acorns Invest in You survey." CNBC, CNBC LLC. September 1, 2020. <https://www.cnbc.com/2020/09/01/americans-are-more-savers-than-spenders-during-the-pandemic.html>.

Poe, Ryan. "Study: Recession hit Alabama, Birmingham job markets hard." Birmingham Business Journal. August 22, 2011. <https://www.bizjournals.com/birmingham/news/2011/08/22/study-recession-hit-alabama.html>.

Regional Planning Commission of Greater Birmingham. Community Profiles. 2021.

State of Missouri, Missouri Economic Research and Information Center. "Cost of Living Data Series." Official State of Missouri Website. Accessed June 16, 2022. <https://meric.mo.gov/data/cost-living-data-series>.

"SVI At A Glance." Agency for Toxic Substances and Disease Registry. August 30, 2021. [https://www.atsdr.cdc.gov/placeandhealth/svi/at-a-glance\\_svi.html](https://www.atsdr.cdc.gov/placeandhealth/svi/at-a-glance_svi.html).

"The Alabama Connectivity Plan." Alabama Department of Economic and Community Affairs. December 2021. <https://adeca.alabama.gov/wp-content/uploads/Alabama-Connectivity-Plan.pdf>.

Thornton, William. "Alabama will lose \$105 million in hotel tax revenue because of COVID-19, report says." Alabama Local News, Advance Local. June 18, 2020. <https://www.al.com/business/2020/06/alabama-will-lose-105-million-in-hotel-tax-revenue-because-of-covid-19-report-says.html>.

Thornton, William. "Here's why Alabama may not be over the Great Recession." Alabama Local News, Advance Local. October 23, 2018. <https://www.al.com/business/2018/10/how-alabama-hasnt-yet-recovered-from-the-great-recession.html>.

Thornton, William. "'It's now or never': 250,000 Alabamians left their jobs during 'The Great Resignation.'" Alabama Local News, Advance Local. January 19, 2022. <https://www.al.com/business/2022/01/its-now-or-never-250000-alabamians-left-their-jobs-during-the-great-resignation.html>.

United States Census Bureau. "2019 Community Resilience Estimates." United States Census Bureau. Accessed June 16, 2022. <https://experience.arcgis.com/experience/b0341fa9b237456c9a9f1758c15cde8d/>. StatsAmerica. "Innovation Index 2.0." Indiana Business Research Center, Indiana University Kelley School of Business. Accessed June 16, 2022. <https://www.statsamerica.org/ii2/overview.aspx>.

Yurkanin, Amy. "The pandemic 'she-cession' could bolster efforts to help women workers in Alabama." Alabama Local News, Advance Local. March 5, 2021. <https://www.al.com/news/2021/03/the-pandemic-she-cession-could-bolster-efforts-to-help-women-workers-in-alabama.html>.

Zedeck, Nicole. "People leaving the workforce at alarming rates; many calling it 'The Great Resignation.'" WAAY 31, Allen Media Broadcasting. January 11, 2022. [https://www.waaytv.com/news/people-leaving-the-workforce-at-alarming-rates-many-calling-it-the-great-resignation/article\\_b5b8a498-7271-11ec-997c-d3a27b69fadd.html](https://www.waaytv.com/news/people-leaving-the-workforce-at-alarming-rates-many-calling-it-the-great-resignation/article_b5b8a498-7271-11ec-997c-d3a27b69fadd.html).

