SC WORKS

THE IMPACT OF RURAL RESIDENCY ON THE LIKELIHOOD OF LONG-TERM UNEMPLOYMENT IN SOUTH CAROLINA

20/22

Darla Moore School of Business

SC WORKS | BRINGING EMPLOYERS AND JOB SEEKERS TOGETHER

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Executive Summary

The onset of the COVID-19 pandemic in the United States in early 2020 led to a national economic recession in which approximately 308,000 jobs in South Carolina – or fourteen percent of the state's total workforce – were lost in the span of just sixty days between February 2020 and April 2020. Yet despite the rapid economic recovery that took place in the following months, the speed with which laid-off workers returned to the workforce varied significantly across the state. Moreover, approximately 15 percent of South Carolinians who were laid-off and began receiving unemployment insurance (UI) benefits in the spring of 2020 were still unemployed and receiving benefits in June 2021 – more than one year later.

The purpose of this study is to conduct an analysis using data from the South Carolina Department of Employment and Workforce (SCDEW) to identify the characteristics of workers who remained unemployed the longest after being laid-off as a result of the COVID-19 recession. A better understanding of characteristics associated with those at highest risk for long-term unemployment can help better inform future reemployment initiatives.

The key findings of this report are as follows:

- *Rural areas of South Carolina have historically experienced consistently higher rates of unemployment relative to the state's more urbanized areas. One of the unique aspects of the COVID-19 recession in South Carolina was the way in which it temporarily disrupted these long-term patterns, with employment losses being primarily concentrated in and around South Carolina's major metropolitan regions.*

- *Following a rapid economic recovery in 2020 and 2021, the more traditional rural-based unemployment distribution pattern was restored as the metropolitan areas of the state rebounded to pre-pandemic employment levels.*

- *Through a detailed analysis of workers who were laid-off as result of the pandemic-induced recession, this study finds that laid-off workers living in rural areas of South Carolina were more likely to still be unemployed one year later than those living in more urbanized regions.*

- *This increased likelihood of "long-term unemployment" holds even when accounting for differences in race, gender, age, income and education levels, prior industry of employment, and occupation. This implies that residing in a rural location should be considered a risk factor for long-term unemployment alongside these other worker characteristics.*

- *South Carolina's rural workforce continues to face significant challenges, including higher unemployment compared to the state average. It is important to prioritize these communities in order to both improve employment opportunities for individuals and to increase long-run rates of economic growth across all of South Carolina's 46 counties.*

Introduction

In South Carolina, as in much of the United States, rural areas are often more economically distressed and experience lower rates of long-run economic growth when compared to their more urban counterparts. For example, among the 12 counties that the S.C. Department of Revenue (DOR) currently identifies as being most economically distressed[1], none have a total population of more than 100,000. These economically distressed counties are specifically defined by the DOR as having a combination of the lowest per capita income levels along with the highest unemployment rates in the state. Many of these counties are located along the I-95 corridor, a region of South Carolina that has historically experienced consistently high unemployment, population stagnation or decline, and slower economic growth.

In addition to these trends, South Carolina's rural areas were also among those that were the most negatively impacted by the COVID-19 pandemic over the long-run. *Through a detailed analysis of workers who were laid-off as result of the pandemic-induced recession, this study finds that laid-off workers living in rural areas of South Carolina were more likely to experience long-term unemployment than those living in more urbanized regions. This result holds even when accounting for differences in worker demographics, income levels, prior industry of employment, and occupation*.

Because of the focus on the intense losses and subsequent recoveries of the state's major industries throughout 2020 and 2021, these findings on the long-run effects of the COVID-19 recession on the rural workforce have largely been underreported. However, despite a broad-based labor market recovery that has now resulted in a statewide unemployment rate of 3.2 percent (as of July 2022), South Carolina's rural workforce continues to face significant challenges including higher unemployment compared to the state average.[2] It will be increasingly important to prioritize these communities in order to both improve employment opportunities for individuals and to increase long-run rates of economic growth across all of South Carolina's 46 counties.

The remainder of this report provides a brief overview of the statewide impacts of the COVID-19 recession, highlights and specifically defines the rural areas of South Carolina, and then examines the extent to which living in rural locations impacted the probability of being unemployed long-term following layoffs during the COVID-19 recession.

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[1] The South Carolina DOR annually ranks and designates the state's 46 counties into four tiers based on their unemployment rates and per capita income levels. Tier designation directly impacts the number of Job Tax Credits that businesses in each tier can receive and are, as such, used as incentives to increase job creation in various regions.

[2] The unemployment rate in Tier 4 counties as of July 2022 was 6.5 percent compared to just 3.7 percent for Tier 1 counties. Note that unemployment rates are not generally available at the zip code level from the U.S. Bureau of Labor Statistics. However, using the American Community Survey (ACS) 5-Year 2020 estimates of zip code level unemployment, the rural areas, as defined in this study, had an average unemployment rate of 6.2 percent while the urban areas had an average unemployment of 5.3 percent. As of July 2022, the counties designated as rural by the U.S. Department of Agriculture had an average unemployment rate of 3.9 percent compared to 3.0 percent for counties designated as urban.
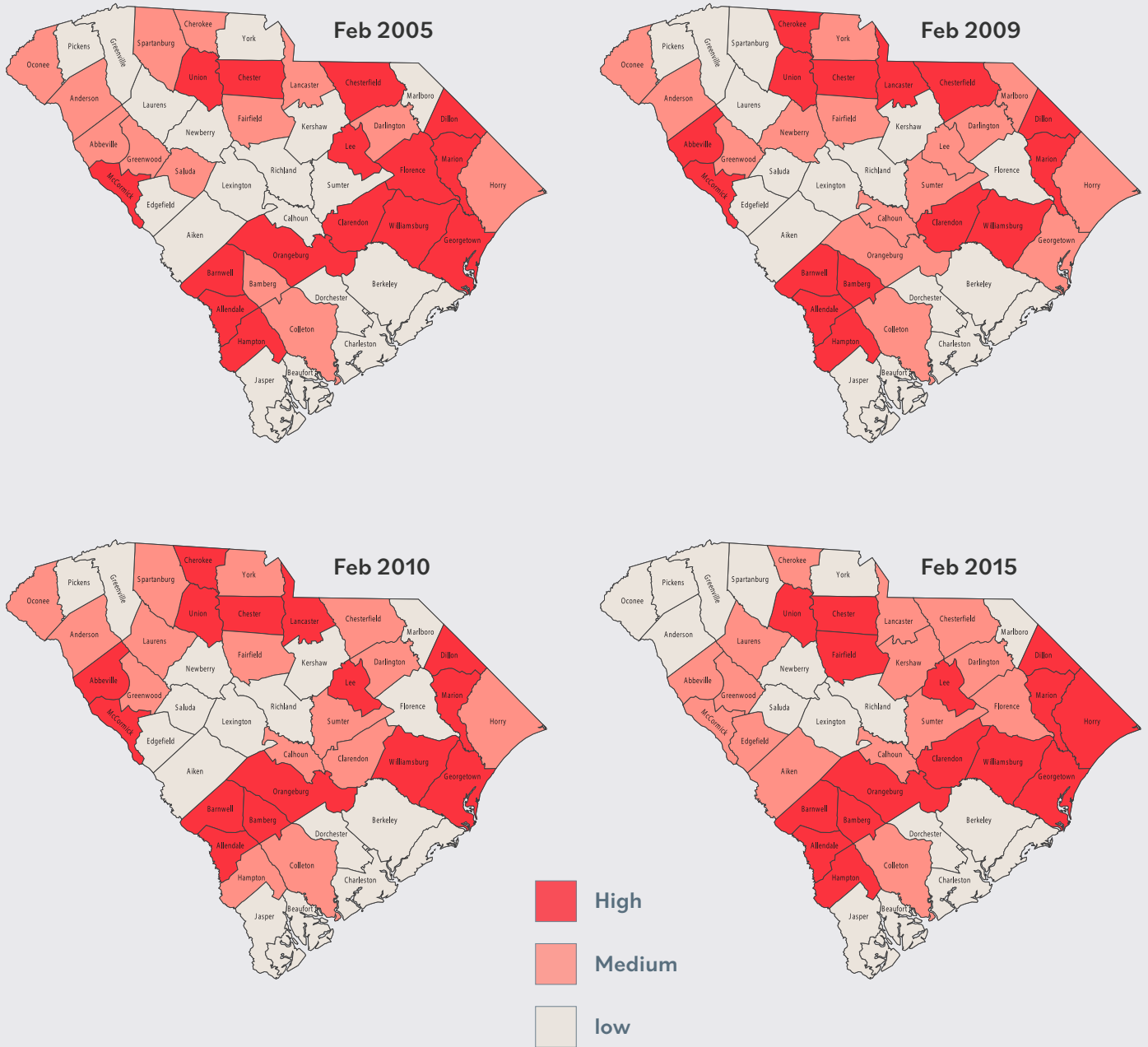
Statewide Labor Market Impacts of the COVID-19 Recession

While the primary goal of this analysis is to determine whether workers in rural South Carolina who were laid-off during the COVID-19 recession were more likely to experience long-term unemployment than their urban (or suburban) counterparts, it is important to first note that certain areas of South Carolina have experienced consistently higher rates of unemployment historically. **Figure 1** illustrates this consistency by showing county-level unemployment rates over time from February 2005 to February 2020. Notice that the distribution of unemployment across South Carolina is relatively stable, including throughout 2009 and 2010, which represents the depth of the Great Recession and its aftermath.

One of the unique aspects of the COVID-19 recession in South Carolina was the way in which it temporarily disrupted many of these long-term patterns due to the severity of the job losses that occurred. Between February 2020 and April 2020, approximately 308,000 jobs were lost statewide, which represents roughly 14 percent of South Carolina's employment base. **Figure 1** also displays the distribution of county-level unemployment rates during the COVID-19 pandemic itself. Examining unemployment rates in April 2020 reveals how these sizable employment losses extended across all of South Carolina and were especially concentrated in and around the metropolitan areas of Greenville, Spartanburg, Charleston, and Myrtle Beach – illustrating a major break in long-run unemployment patterns. The bulk of these employment losses were contained within the Manufacturing and Leisure & Hospitality industry sectors. These losses, in turn, were followed by an economic recovery in which the more traditional unemployment distribution was restored by July 2022.

Figure 1: South Carolina Unemployment Rates by County
February 2005 – July 2022

Feb 2005

Feb 2009

Feb 2010

Feb 2015

High

Medium

Figure 1: South Carolina Unemployment Rates by County
February 2005 – July 2022

Feb 2020

During the COVID-19 recession, long-run unemployment patterns in South Carolina were disrupted with employment losses concentrated in and around the metropolitan areas of Greenville, Spartanburg, Charleston, and Myrtle Beach.

Apr 2020

Jul 2022

High

Medium
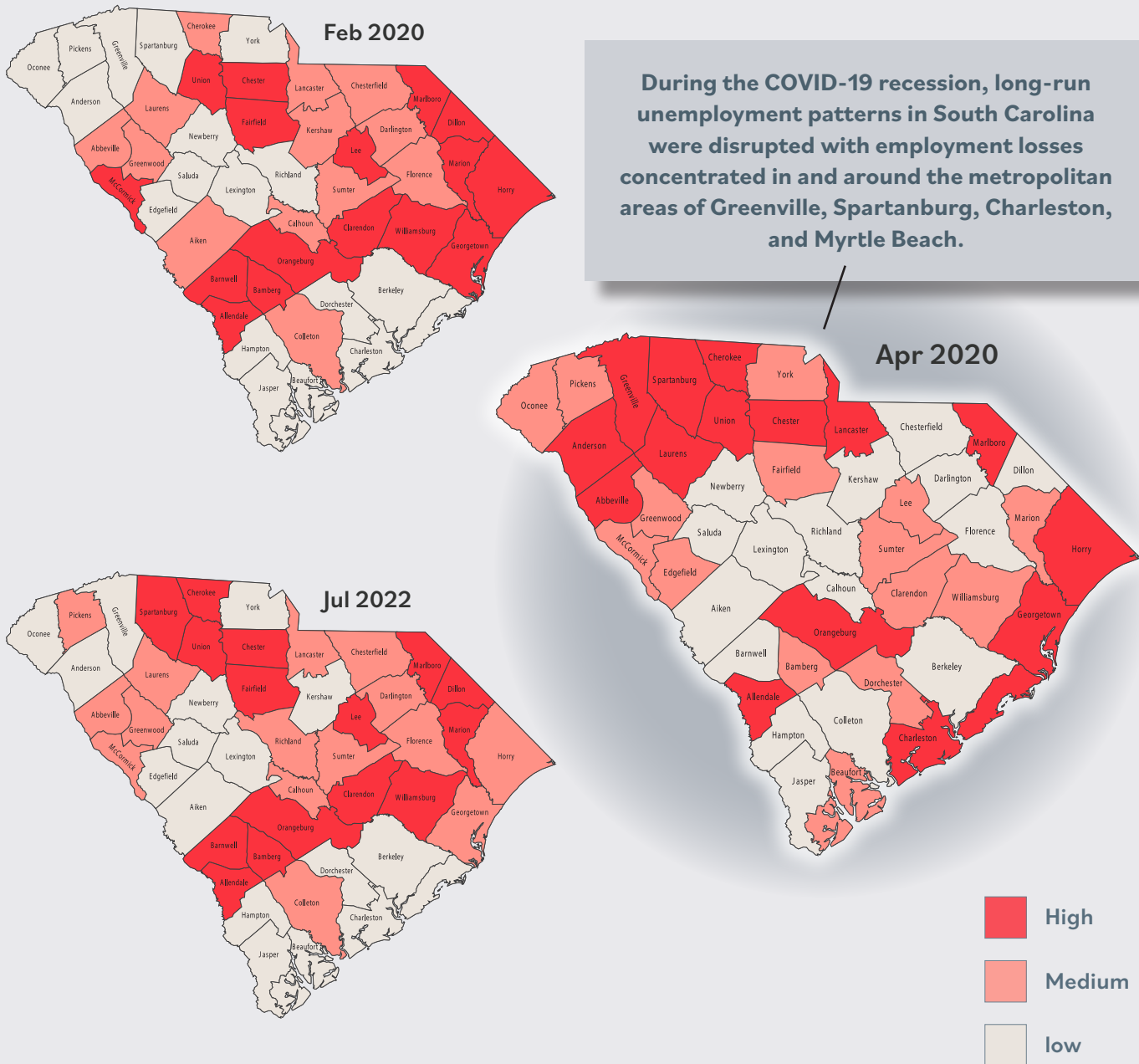
More specifically, by July 2022 South Carolina had recovered all of the employment losses incurred during the pandemic-induced recession, with total employment approximately 1.5 percent higher than it was in February 2020. This economic recovery stands in stark contrast to most other economic recoveries South Carolina has experienced because of its speed. For example, in contrast to this roughly two-year recovery period from April 2020 to July 2022, it took more than six years for South Carolina's economy to recover from the Great Recession that took place between 2007 and 2009. **Figure 2** illustrates South Carolina's job losses along with the subsequent statewide employment recovery following both the Great Recession and the COVID-19 recession, revealing a V-shaped recovery pattern for the latter.

Figure 2: South Carolina Employment as Pct. of Pre-Recession High

Source: U.S. Bureau of Labor Statistics, CES, SA
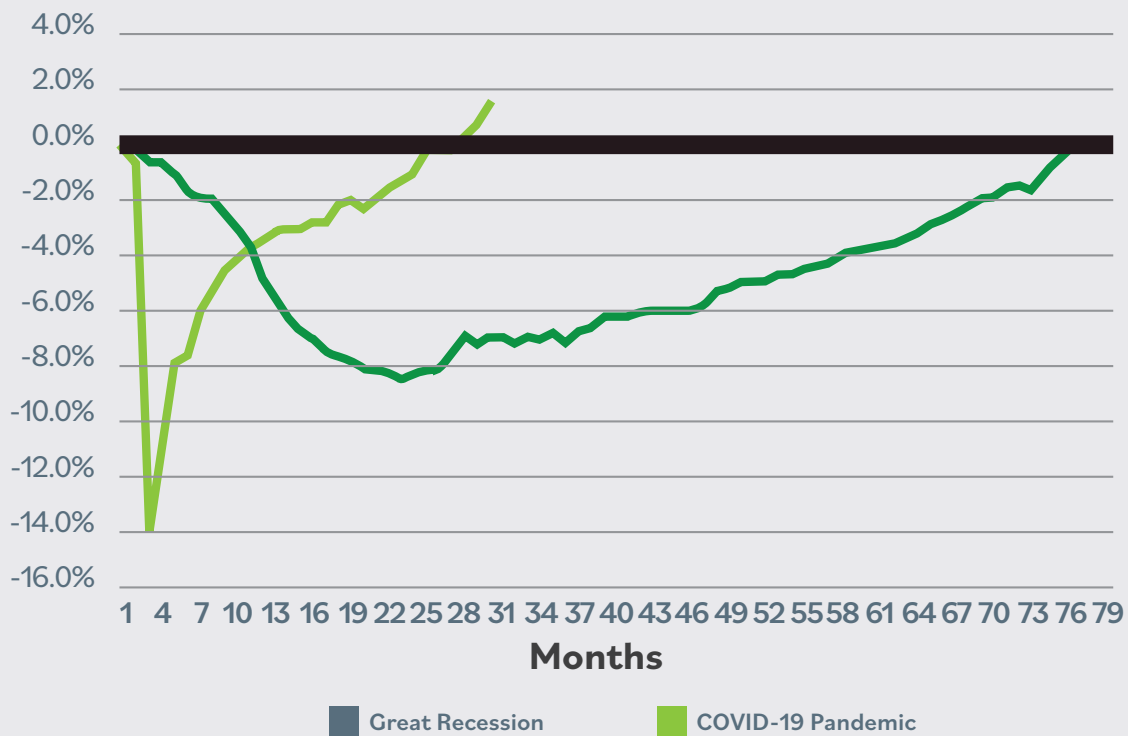
Were Rural Workers More Likely to Experience Long-Term Unemployment?

Background and Data

The fact that South Carolina's county-level long-term unemployment distribution was disrupted in 2020 and then restored by 2022 does not reveal much about the average duration of unemployment for the rural South Carolinians who were laid-off during the COVID-19 recession. In order to assess whether these rural South Carolinians were more likely to experience long-term unemployment, an analysis of unemployment insurance (UI) claimant data is required.[3]

To complete this analysis, data from the South Carolina Department of Employment and Workforce (SCDEW) were obtained for all initial UI claimants for the ten-week period from March 15, 2020 until May 31, 2020. Initial UI claimants are defined as those individuals who apply for unemployment insurance benefits for the first time following a layoff. The ten-week period identified reflects the peak layoff period of the COVID-19 recession and thus captures most of the layoffs that can be tied directly to the recession. In sum, there were 399,130 total initial claimants identified.[4]

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[3] See Appendix A for additional information on claimants and other characteristics of long-term filers.

[4] Individuals who filed an initial UI claim during this time period but never received any payments were excluded because they cannot be tracked in subsequent weeks.

Next, these initial claimants were matched to data on continued unemployment insurance claims over the following year (through the summer of 2021). A continued UI claimant is defined as any individual who files for unemployment insurance in any week following their initial claim. This matching exercise allows for a determination of how many of the 399,130 initial claimants remained unemployed over time. Continued claims data were obtained from SCDEW for each of the following five periods: weeks ending June 6, 2020; July 25, 2020; October 17, 2020; January 30, 2021; June 26, 2021.[5] Any initial claimant who was found to also be a continued claimant during each of these five periods was, for the purposes of this study, considered to be a long-term filer or long-term unemployed. By contrast, those that did not show up in all of these subsequent five periods were considered to be short-term filers. Short-term filers who did not claim UI benefits through the summer of 2021 were assumed to either have returned to work or dropped out of the labor force.

Of the 399,130 initial claimants identified during the spring of 2020, 60,229 (15.1%) filed in all five time periods and thus were considered long-term filers – or long-term unemployed. It is this 15.1 percent of UI claimants that this study focuses on to determine their unique characteristics, including the extent to which these claimants were more (or less) likely to be from rural areas of South Carolina.

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[5] The week of June 26, 2021 was chosen as the final week of analysis because this was the final week in which individuals could receive federal UI benefits that extended beyond the standard 20-week period for state UI benefits.

Defining South Carolina Regions: Rural vs. Urban

In South Carolina there is no single, official definition of what constitutes a rural area. For example, the definition of rural could prioritize any or all of the following: population thresholds, population densities, land use, distance from an urban center, accessibility of services, or geographic features. Moreover, the U.S. government relies on at least three different measures of rural as defined by the U.S. Census Bureau, the U.S. Department of Agriculture (USDA), and the U.S. Office of Management and Budget (US-OMB). This study utilizes the definition of rural developed by the USDA, which is primarily based on population density and commuting patterns.[6] Among these three measures, the USDA definition estimates that approximately 17 percent of the U.S. population lives in a rural area. This compares to 15 percent and 19 percent using the US-OMB and U.S. Census definitions, respectively. Rural areas were identified at the zip code level and are displayed in **Figure 3**. Note that in this analysis urban and suburban regions are combined in order to be explicitly compared to rural regions.

Figure 3: South Carolina Zip Codes Defined as Rural or Urban/Suburban

Urban
Suburban
Rural

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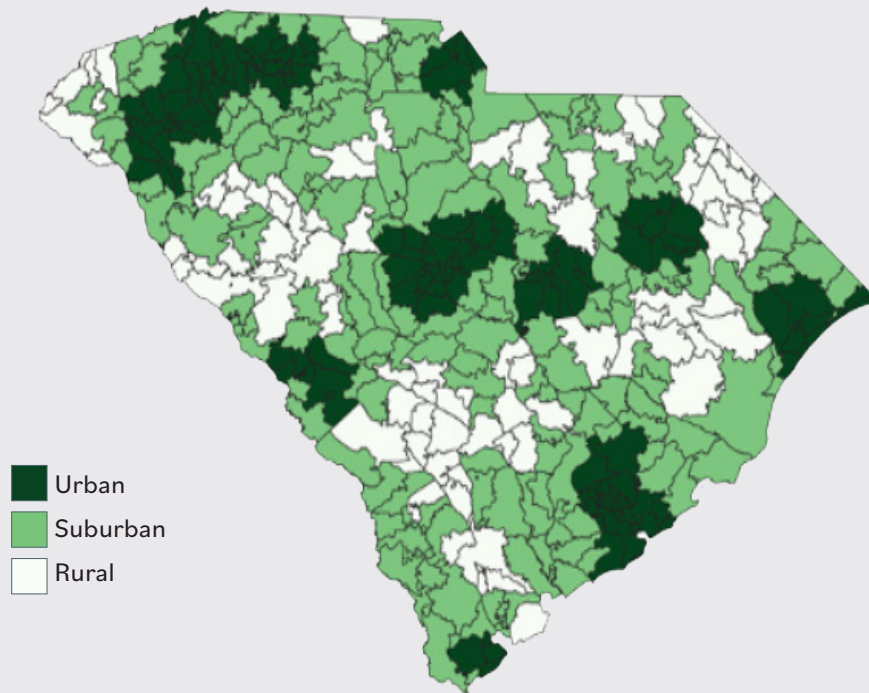
[6] Rural-Urban Commuting Area (RUCA) codes 1-4 were classified as urban/suburban, while codes 5-10 were considered rural. Using this definition, 94 South Carolina zip codes were considered rural out of a total of 477.

Primary Results

Initial UI claims were filed across all regions of South Carolina during the COVID-19 recession. However, these claims were most concentrated in and around the Greenville, Spartanburg, Charleston, and Myrtle Beach metropolitan regions – as many manufacturing facilities were temporarily shut down and tourism activity plummeted. **Figure 4** highlights this concentration by displaying initial claims per capita by zip code during the ten-week period of March 15, 2020 through May 31, 2020. Note how the distribution of initial UI claims also reflects the distribution of unemployment rates from April 2020 as previously displayed in **Figure 1**.

Figure 4: Initial Claims per Capita by Zip Code, Spring 2020

High: 7.4%+
Medium: 5.5%-7.4%
Low: <5.5%
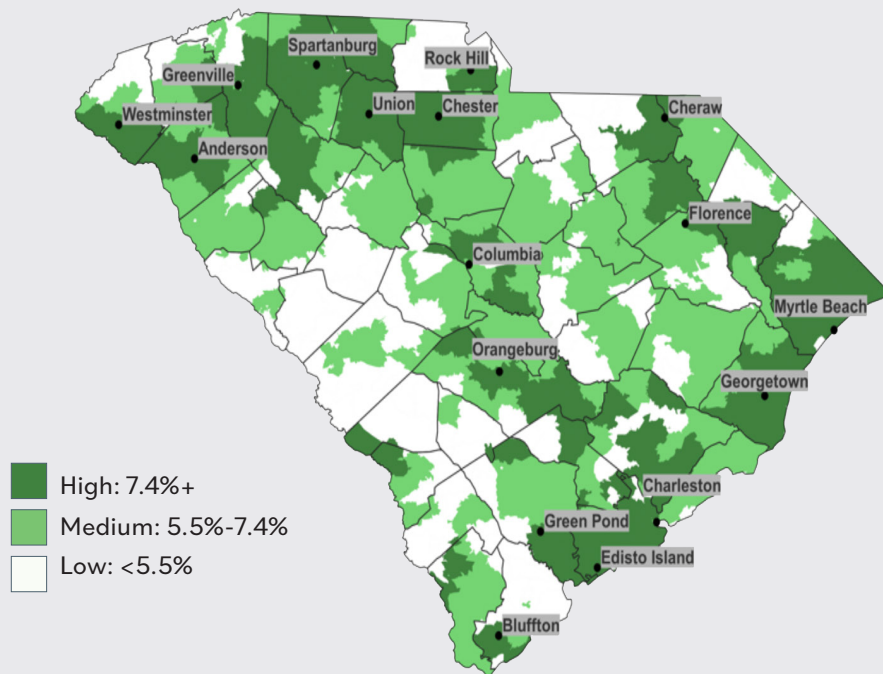
As the state's labor market recovered throughout the latter half of 2020 and into 2021, it is important to note that the 15.1 percent of initial UI claimants previously identified as long-term filers were not concentrated in the areas that were "hardest hit" in the spring of 2020. For example, while the Greenville and Spartanburg metropolitan regions experienced intense layoff activity in the spring of 2020 (previously shown in **Figure 4**), they also maintained among the lowest rates of long-term unemployment in the state (as shown in **Figure 5**). This same trend emerged in many of the coastal regions of South Carolina. The statewide unemployment pattern shown in **Figure 5** is also consistent with the state's historic county-level unemployment trends displayed in **Figure 1**.

Figure 5: Percentage of Long-Term Unemployed by Zip Code

High: 18.1%+
Medium: 13.3%-18.1%
Low: <13.3%
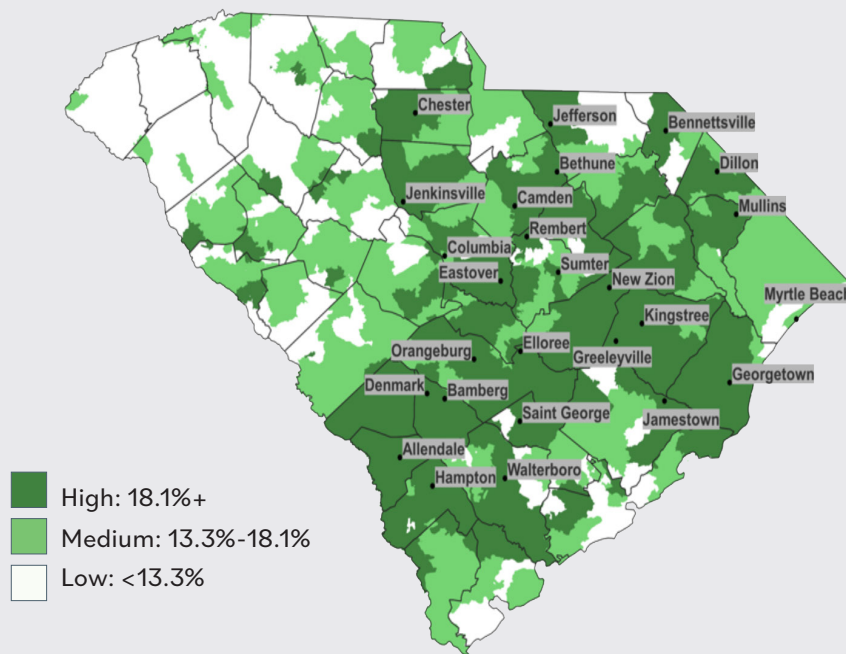
While just 6 percent of all zip codes in South Carolina were classified as rural, 45 percent of all zip codes with the highest concentrations of long-term filers were rural. Thus, it is clear that long-term unemployment is correlated with location of residence. Overall, 19.3 percent of residents living in South Carolina's rural zip codes were determined to be long term filers compared with just 14.9 percent of residents living in urban zip codes.

Given this finding, it is important to next determine whether this relationship continues to hold even when accounting for other characteristics, such as worker demographics, income levels, prior industry of employment, and occupation. For example, it could potentially be the case that older workers were more concentrated in rural geographic areas and were also more reluctant to return to the workforce due to health concerns associated with COVID-19. In such a case, rural residents would be more likely to be at high risk for long-term unemployment because of their age – not because they live in a rural region.

Methodology

In order to assess the unique characteristics of the long-term unemployed, this study applies a statistical modeling technique known as a logistic regression to the UI claimant data provided by SCDEW. A logistic regression is designed to estimate the probability that an event will occur given a set of known facts. For example, a logistic regression could be used to estimate the probability that the daily high temperature in a specific city would exceed 90 degrees Fahrenheit given that both the month of the year and the region of the world in which the city is located were known. In the case of UI claimants, a logistic regression can be estimated to determine the probability of long-term unemployment following the COVID-19 recession given a series of known facts about an individual's characteristics. While the primary focus of this analysis is to determine the extent to which long-term UI claimants are more (or less) likely to live in rural areas of South Carolina, the extent to which other characteristics matter are examined as well. These include claimant demographics, income levels, prior industry of employment, and occupation. Data on each of these elements were available from SCDEW for the individual claimants previously identified. Detailed statistical results of this analysis are shown in **Table C1** located in Appendix C.

Even after accounting for demographics, industry, occupation, education, Local Workforce Development Area (LWDA) of residence, weekly benefit amount (WBA), disability status, and veteran status, residing in a rural zip code is still associated with a higher likelihood of long-term unemployment. More specifically, the probability that a UI claimant living in a rural region experienced long-term unemployment after being laid off during the COVID-19 recession was 16.8 percent, compared to 15.1 percent for non-rural residents. This implies that there was a 1.7 percentage point difference between the probability of long-term unemployment for rural and non-rural UI claimants, even when accounting for all other claimant characteristics previously described. And while this difference of 1.7 percentage points may be considered relatively small, it is nevertheless statistically significant. As such, this implies that geography, especially residing in a rural location, should be considered a risk factor for long-term unemployment alongside other worker characteristics such as race, gender, age, and education level.

Selected claimant characteristics and their associated predicted probabilities are presented in **Table 1**. For characteristics with more than two categories, the highest and lowest probabilities are presented. For example, **Table 1** reveals that the probability that a UI claimant without a high school diploma experiences long-term unemployment is 16.5 percent. This contrasts with a probability of 13.1 percent for a UI claimant with a bachelor's degree or higher. This represents a 3.4 percentage point difference between the two levels of educational attainment.

Table 1: Predicted Probability of Long-Term Unemployment by Selected Characteristics

Note: All probabilities shown are statistically significant. For all characteristics with more than two categories, only the two categories with the highest and lowest probabilities are shown.

CHARACTERISTIC	CATEGORY	PREDICTED PROB.	DIFFERENCE
Gender	Male	14.4%	1.4 Pct. Points
	Female	15.8%	
Race	White	11.9%	7.3 Pct. Points
	Non-White	19.2%	
Education	Less than HS	16.5%	3.4 Pct. Points
	Bachelor's Degree or Higher	13.1%	
Industry	Manufacturing	9.7%	12.1 Pct. Points
	Finance and Insurance	21.8%	
Occupation	Personal Care & Service	8.5%	11.8 Pct. Points
	Farming, Fishing, & Forestry	20.3%	
Weekly Benefit Amount (WBA)	$100-$149	21.0%	11.8 Pct. Points
	$300-$326	9.2%	
Geography	Rural	16.8%	1.7 Pct. Points
	Urban	15.1%	
Age	20	11.9%	8.2 Pct. Points
	70	20.1%	

Conclusion

The purpose of this study has been to examine the characteristics of South Carolina workers who remained unemployed the longest after being laid-off as a result of the COVID-19 recession, with a specific focus on the rural-urban divide. Or put another way, this study focused primarily on the question of whether laid-off workers living in rural areas were more likely to experience a period of longer unemployment relative to their more urban counterparts following the COVID-19 recession. Because of the intense and widespread employment losses and subsequent recoveries across all of South Carolina throughout 2020 and 2021, the long-run effects of the COVID-19 recession on the rural workforce have largely been underreported.

Through an analysis of UI claimant data provided by SCDEW that revealed detailed information on various individual characteristics of workers who were laid-off as result of the pandemic-induced recession, this study finds that residing in a rural location should be considered a risk factor for long-term unemployment alongside other worker characteristics.

South Carolina's rural workforce continues to face significant challenges and higher rates of unemployment in 2022 compared to their urban counterparts despite a broad-based labor market recovery over the past two years. As such, reemployment initiatives directed towards rural areas of South Carolina will be a crucial component of any economic development strategy to help improve long-run economic growth.

Appendix A
Additional Analysis of COVID-19 Unemployment Insurance Claimants

Initial Claims Spring 2020

According to data provided by the South Carolina Department of Employment and Workforce (SCDEW) there were approximately 399,130 initial claims for unemployment benefits between March 15th and May 31st 2020 that ultimately received at least one payment from the agency. This was a uniquely high number of claims filed and paid in such a short period. Total initial claims filed during this period surpassed even the levels experienced throughout the Great Recession, although the duration of high claim levels was significantly shorter.

Figure A1: Monthly Initial Unemployment Insurance Claims, S.C.

Source: USDOL, Monthly Initial Claims
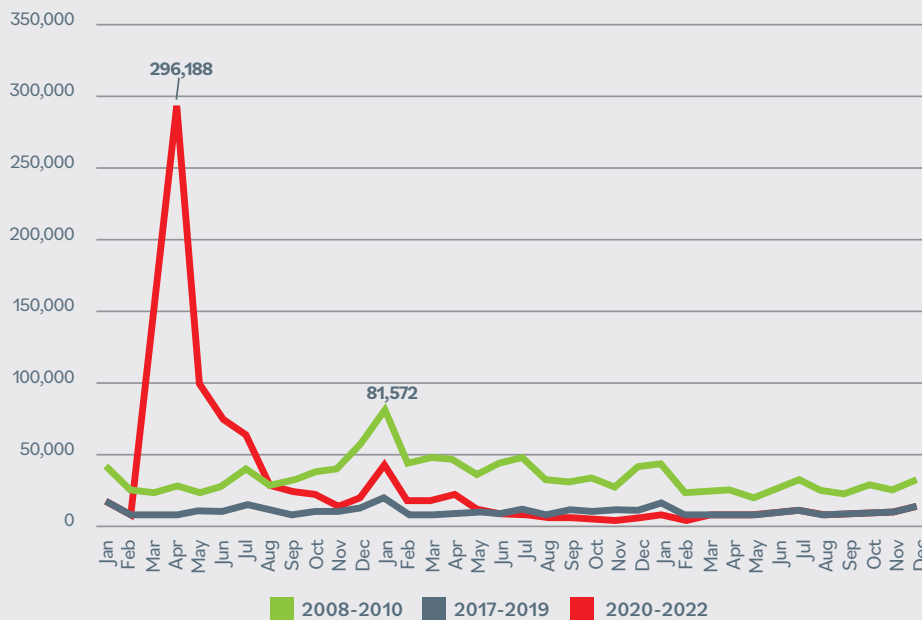
Appendix B, **Table B1** provides a detailed profile of the individuals who became unemployed during the height of the COVID-19 pandemic (March 15th-May 31st, 2020) and received at least one payment in any benefit program. Claimants during this period were significantly more likely to be:

- Female
- White
- Non-Hispanic
- High School Graduates
- Not Disabled
- Non-Veterans
- Aged 25-34
- Working in manufacturing or accommodation and food service industries
- Working in food preparation and serving, office and administrative support, or production occupations

While South Carolina's more rural counties tend to generally experience the highest levels of unemployment during "normal" times, during the COVID-19 pandemic, a higher level of claim activity was observed in such areas as Greenville, Spartanburg, Charleston, and Myrtle Beach. **Figure A2** compares the number of initial claims filed between March 15th and May 31st that received at least one payment as a percentage of the county's labor force in February 2020.

By far, the largest negative impacts from COVID-19 related layoffs occurred in the tourism-heavy Waccamaw region (Horry, Georgetown, and Williamsburg counties). Over 25 percent of the region's labor force filed for unemployment benefits during this period. This was followed by the manufacturing-heavy Upstate (Spartanburg, Cherokee, and Union counties) and Greenville regions, which experienced nearly 20 percent and over 18 percent of their labor forces filing for benefits, respectively.

Accurately assessing the true impact in border counties and border regions of South Carolina is more difficult because individuals who live in South Carolina may work for companies located in North Carolina or Georgia. They would likely have filed claims for unemployment in those states, so the percentages for regions like Catawba, Lower Savannah, Upper Savannah, and Lowcountry may be understated.

Figure A2: UI Claims as a Percent of February 2020 Labor Force

Source: SCDEW UI Claims Data and LAUS, NSA Labor Force

15.5% Oconee
16.9% Pickens
18.1% Greenville
19.3% Spartanburg
20.2% Cherokee
9.7% York
21.8% Union
18.7% Chester
10.3% Lancaster
10.6% Chesterfield
12.4% Marlboro
16.7% Anderson
14.8% Laurens
12.7% Newberry
17.2% Fairfield
15.6% Kershaw
15.4% Darlington
11.4% Dillon
12.5% Abbeville
15.5% Greenwood
6.5% Saluda
11.8% Lexington
14.7% Richland
14.1% Lee
14.9% Florence
26.2% Marion
27.8% Horry
10.2% McCormick
12.6% Edgefield
9.2% Calhoun
16.6% Sumter
15.5% Clarendon
17.1% Williamsburg
17.1% Georgetown
10.1% Aiken
20.5% Orangeburg
15.1% Barnwell
14% Bamberg
17.3% Berkeley
16.7% Dorchester
17.7% Allendale
16.1% Colleton
16.4% Charleston
13.3% Hampton
15.1% Beaufort
11.2% Jasper

COVID-19 and the Long-Term Unemployed

In total, there were 60,229 individuals out of the 399,130 total initial claimants previously cited who filed in all five of the time periods and were considered to be long-term unemployed or long-term filers. The remaining 338,901 filers did not file in each of these periods. A detailed profile of the Long-Term Unemployed is provided in Appendix B, **Table B2**.

Note that the vast majority of individuals who filed initial claims for benefits in Spring 2020 were not considered long-term unemployed. Only 15.1 percent of the original 399,130 individuals claimed benefits in each of the five periods, through June 26, 2021. Thus, the vast majority of claimants likely returned to work. This is consistent with the "V-shaped recovery" pattern experienced in the aftermath of the 2020 recession as employment quickly rebounded as the state's economy reopened, shown in **Figure A3**.

Figure A3: South Carolina Non-Farm Employment, 2020-July 2022
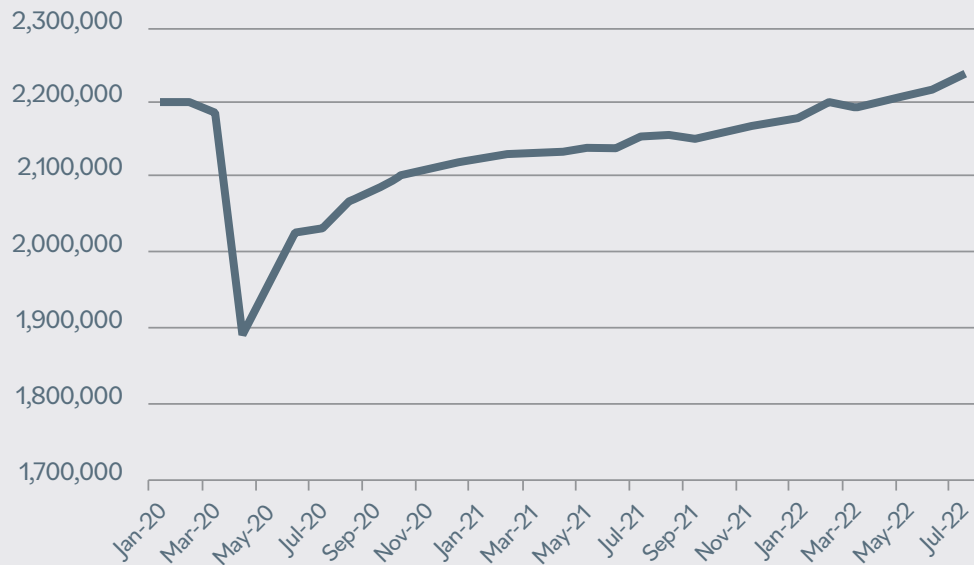
By June 2021, employment levels were at approximately 97.3 percent of their February 2020, pre-pandemic levels.

Logistic Regression Results

Using a logistic regression, it is possible to distinguish whether specific characteristics of a claimant statistical impact their likelihood of long-term unemployment. The full results of the logistic regression are presented in Appendix C in **Table C1**.

Demographic Characteristics

Several demographic characteristics were found to be statistically significant when predicting the probability of long-term unemployment. The following tables and figures provide predicted probabilities of long-term unemployment based on the claimant's demographic characteristics holding all other information about the claimant constant.

Figure A4: Probability of Long-Term Unemployment, by Demographic Characteristic
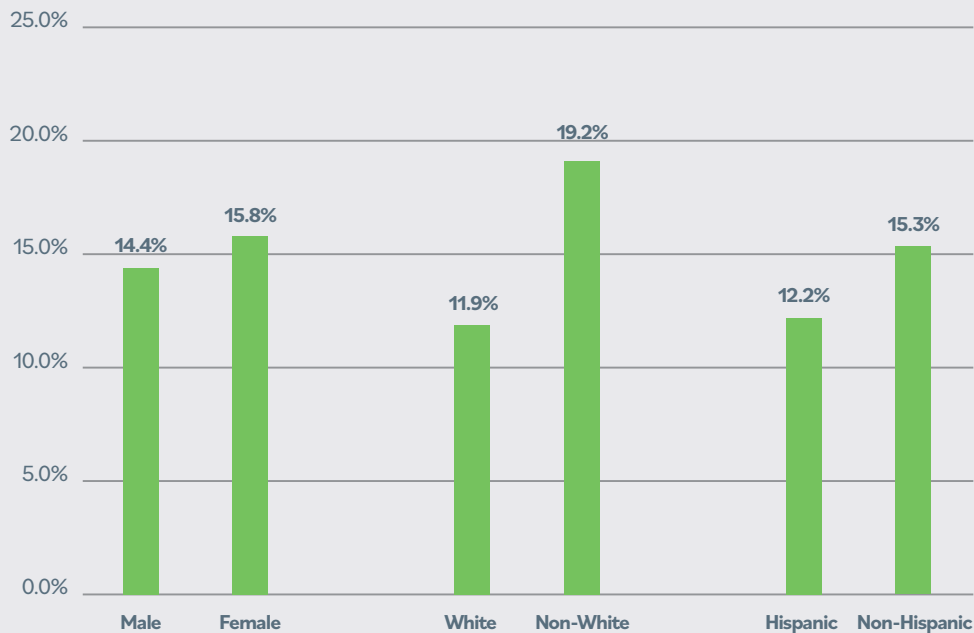
Figure A5: Probability of Long-Term Unemployment, by Educational Attainment

	Less than HS Diploma	HS Graduate	Some College or Assoc. Degree	Bachelor's Degree or Higher
Probability	16.5%	16.0%	14.7%	13.1%
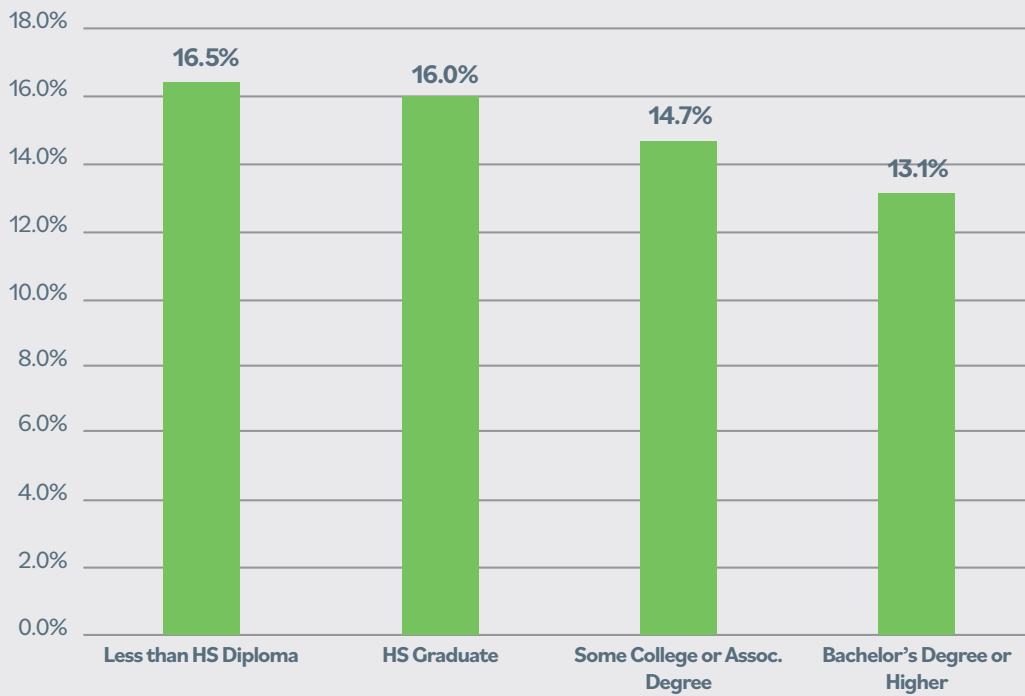
Figure A6: Probability of Long-Term Unemployment, by Age
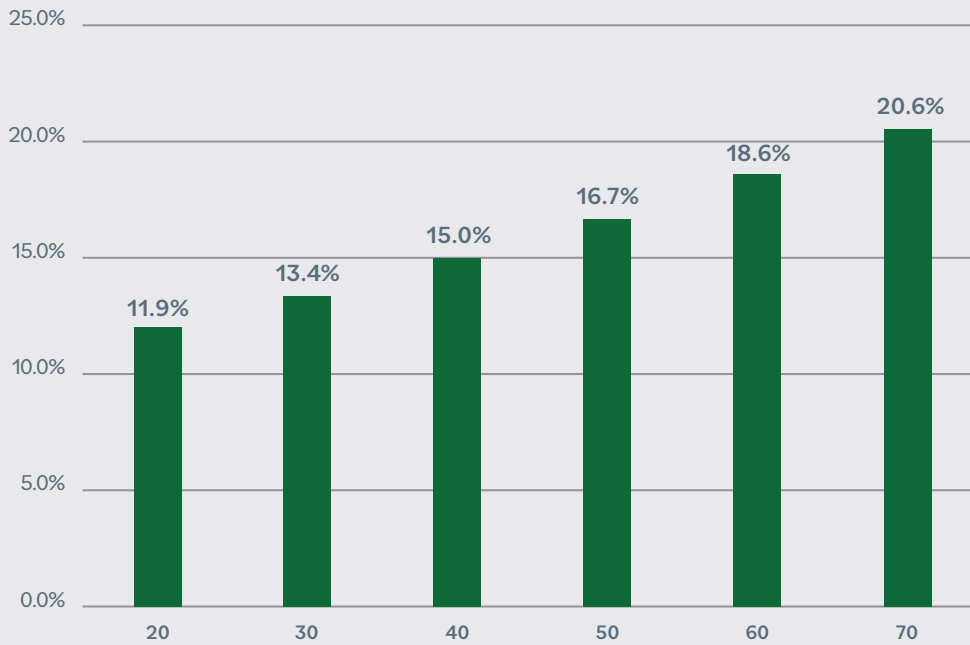
Figure A7: Probability of Long-Term Unemployment, by Demographic Characteristics
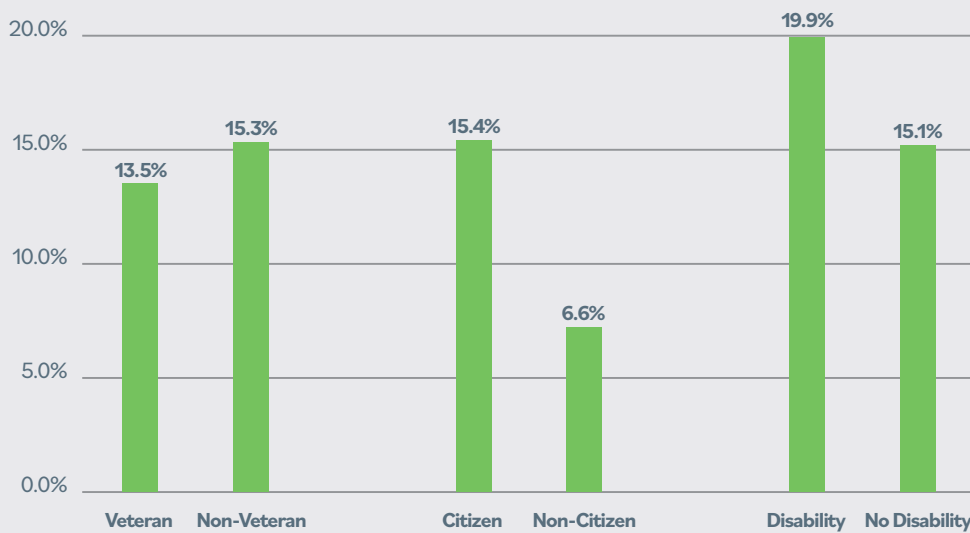
Prior Work and Financial Characteristics

Industry

Figure A8: Probability of Long-Term Unemployment, by NAICS[7] Code

Industry	Probability
Mining, Logging	8.2%
Manufacturing	9.7%
Health Care	10.9%
Arts, Entertainment, Recreation	12.0%
Retail trade	13.0%
Accommodation and Food Service	13.2%
Education	13.2%
Other Serivce	13.5%
Public Administration	14.9%
Real Estate	15.1%
Wholesale Trade	15.3%
Transportation and Warehousing	15.3%
Management	16.0%
Information	16.8%
Professional, Scientific, Technical	17.6%
Administrative Support and Waste Management	18.3%
Utilities	18.5%
Construction	19.7%
Agriculture	19.9%
Unknown Industry	20.6%
Finance	21.8%

[7] North American Industry Classification System presented at the two-digit level

Occupation

Figure A9: Predicted Probability of Long-Term Unemployment, by SOC[8] Code

Occupation	Percent
Personal Care and Service	8.5%
Unknown Occupation	11.4%
Healthcare Practitioners and Technical	12.2%
Education, Training, and Library	14.7%
Sales and Related	15.4%
Architecture and Engineering	16.2%
Life, Physical, and Social Science	16.3%
Protective Service	16.5%
Arts, Design, Entertainment, Sports, and Media	16.6%
Healthcare Support	16.8%
Business and Financial Operations	16.9%
Legal	17.0%
Management	17.2%
Production	17.5%
Food Preparation and Serving	17.6%
Building and Grounds Cleaning and Maintenance	17.6%
Office and Administrative Support	17.9%
Installation, Maintenance, and Repair	18.0%
Computer and Mathematical	18.3%
Transportation and Material Moving	18.4%
Military Specific	18.9%
Community and Social Services	19.3%
Construction and Extraction	19.8%
Farming , Fishing, and Forestry	20.3%

[8] Standard Occupational Classification system presented at the two-digit level

Financial

Figure A10: Predicted Probability of Long-Term Unemployment by WBA[9]

WBA	Predicted Probability
<$100	15.2%
$100-$149	21.0%
$150-$199	17.1%
$200-$249	15.8%
$250-$299	14.2%
$300-$326	9.2%

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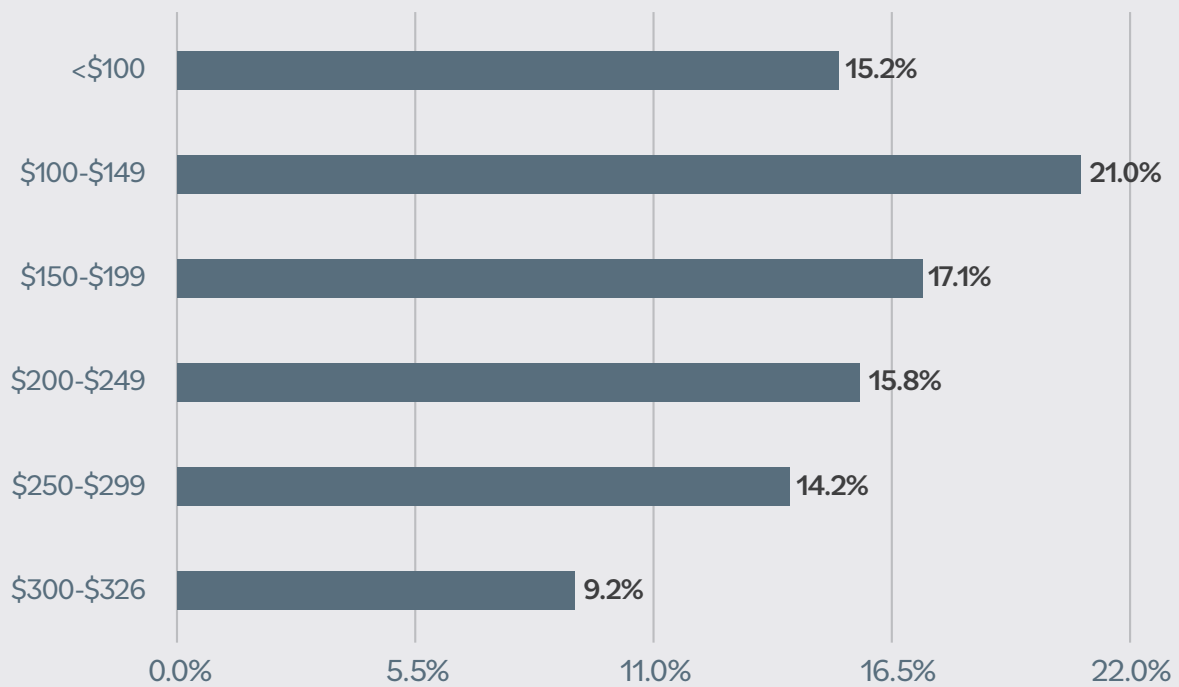
[9] Weekly benefit amount was chosen rather than base period wages due to missing base period wages for a sizable percentage of the sample.

Geographic

Figure A11: Predicted Probability of Long-Term Unemployment by LWDA

Bar chart showing predicted probability of long-term unemployment by LWDA: Lower Savannah 17.2%, Midlands 17.2%, Pee Dee 16.1%, Santee-Lynches 15.7%, Trident 15.5%, Catawba 15.1%, Upstate 14.6%, Waccamaw 14.4%, Upper Savannah 14.1%, Greenville 13.8%, Worklink 13.6%, Lowcountry 13.6%.
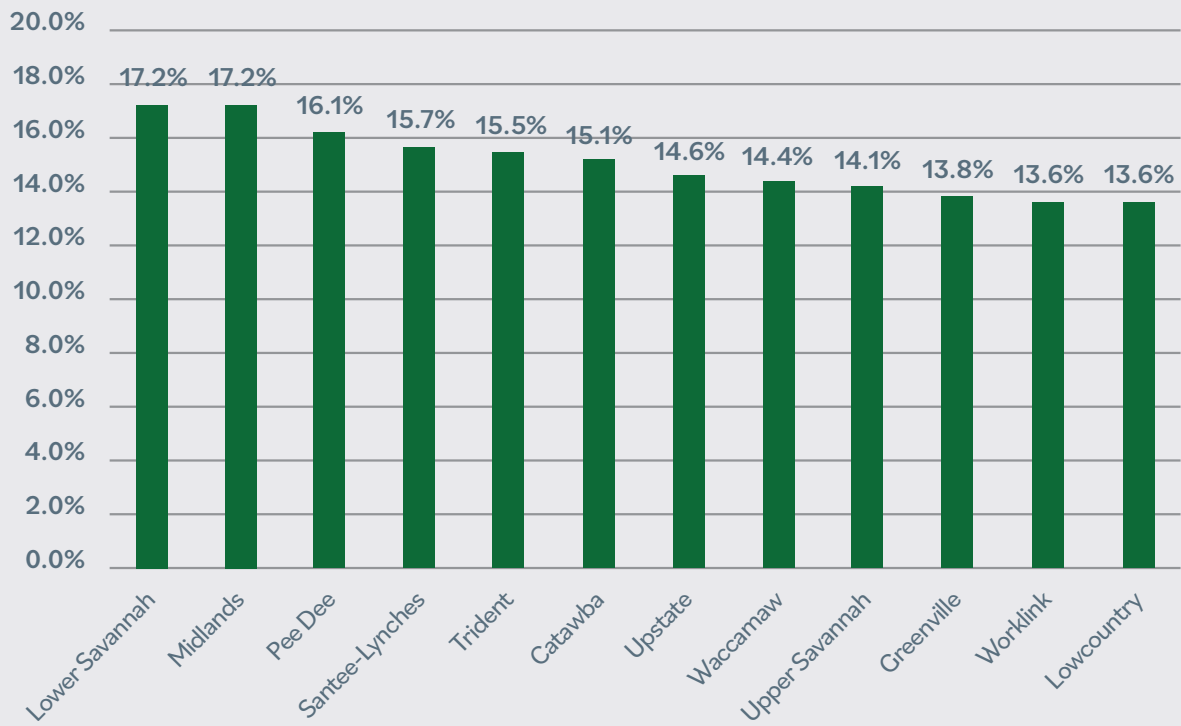
Appendix B
Profile of South Carolina Unemployment Insurance Claimants

Table B-1 provides a profile of UI claimants who filed an initial claim between March 15 and May 31, 2020 who received at least one payment. Filers during this "early pandemic" period are not necessarily representative of those filing claims during other periods of time including both pre-pandemic and today.

Table B1: Characteristics of Initial UI Claim Filers, March 15-May 31, 2020

Characteristic	Count	Percent Overall	Percent of Known
DEMOGRAPHICS			
SEX			
Male	176,925	44.3%	
Female	219,792	55.1%	
No Answer/Other	2,413	0.6%	
RACE			
Black/African-American	140,868	35.3%	
White	224,121	56.2%	
Other Race	13,709	3.4%	
No Answer	20,432	5.1%	
ETHNICITY			
Hispanic	16,113	4.0%	
Not Hispanic	351,982	88.2%	
No Answer	31,035	7.8%	
EDUCATION LEVEL			
Less than High School	40,332	10.1%	
High School or GED	159,950	40.1%	
Some College or Associate's	133,846	33.5%	
Bachelor's or Higher	65,002	16.3%	
DISABILITY STATUS			
Disabled	5,067	1.3%	
Not Disabled	371,042	93.0%	
No Answer	23,021	5.8%	
CITIZENSHIP STATUS			
Citizen	390,326	97.8%	
Not Citizen	8,804	2.2%	
No Answer	0	0.0%	
VETERAN STATUS			
Veteran	17,880	4.5%	
Not Veteran	362,467	90.8%	
No Answer	18,783	4.7%	

Characteristic	Count	Percent Overall	Percent of Known
DEMOGRAPHICS			
AGE			
<25	59,191	14.8%	
25-34	104,657	26.2%	
35-44	83,761	21.0%	
45-54	72,800	18.2%	
55-64	56,441	14.1%	
65-74	19,182	4.8%	
75+	3,085	0.8%	
Unknown Age	13	0.0%	
Median Age	39.0		
Mean Age	40.9		
PREVIOUS WORK			
INDUSTRY			
Agriculture	460	0.1%	0.1%
Mining and Logging	132	0.0%	0.0%
Utilities	353	0.1%	0.1%
Construction	8,590	2.2%	2.7%
Manufacturing	64,378	16.1%	20.0%
Wholesale	8,159	2.0%	2.5%
Retail	30,279	7.6%	9.4%
Transportation	9,894	2.5%	3.1%
Information	2,167	0.5%	0.7%
Finance	2,293	0.6%	0.7%
Real Estate	4,774	1.2%	1.5%
Prof, Sci, Technical	9,860	2.5%	3.1%
Management	1,549	0.4%	0.5%
Admin Support	34,362	8.6%	10.7%
Education	8,047	2.0%	2.5%
Health Care	38,305	9.6%	11.9%
Arts, Entertainment	8,971	2.2%	2.8
Accommodation and Food	72,240	18.1%	22.5%
Other Services	14,119	3.5%	4.4%
Public Administration	2,198	0.6%	0.7%
Missing/Unknown	78,000	19.5%	

Characteristic	Count	Percent Overall	Percent of Known
PREVIOUS WORK			
OCCUPATION			
Management	23,269	5.8%	7.6%
Business and Financial Operations	6,535	1.6%	2.1%
Computer and Mathematical	2,494	0.6%	0.8%
Architecture and Engineering	8,447	2.1%	2.8%
Life, Physical, and Social Science	3,057	0.8%	1.0%
Community and Social Services	1,617	0.4%	0.5%
Legal	816	0.2%	0.3%
Education, Training, and Library	9,017	2.3%	2.9%
Arts, Design, Entertainment, Sports, and Media	5,582	1.4%	1.8%
Healthcare Practitioners and Technical	12,300	3.1%	4.0%
Healthcare Support	11,054	2.8%	3.6%
Protective Service	1,784	0.4%	0.6%
Food Preparation and Serving Related	49,497	12.4%	16.1%
Building and Grounds Cleaning and Maintenance	10,131	2.5%	3.3%
Personal Care and Service	20,746	5.2%	6.8%
Sales and Related	30,205	7.6%	9.8%
Office and Administrative Support	35,863	9.0%	11.7%
Farming, Fishing, and Forestry	608	0.2%	0.2%
Construction and Extraction	8,896	2.2%	2.9%
Installation, Maintenance, and Repair	10,634	2.7%	3.5%
Production	31,642	7.9%	10.3%
Transportation and Material Moving	22,330	5.6%	7.3%
Military Specific	285	0.1%	0.1%
BASE PERIOD WAGES			
<$15,000[5]	108,584	27.2%	42.2%
$15,000-$19,999	34,107	8.5%	8.8%
$20,000-$24,999	31,472	7.9%	8.1%
$25,000-$29,999	29,126	7.3%	7.5%
$30,000-$34,999	25,564	6.4%	6.6%
$35,000-$39,999	21,182	5.3%	5.5%
$40,000-$44,999	16,476	4.1%	4.3%
$45,000-$49,999	13,200	3.3%	3.4%
$50,000-$74,999	37,058	9.3%	9.6%
$75,000-$99,999	10,019	2.5%	2.6%
$100,000-$149,999	4,072	1.0%	1.1%
$150,000+	1,601	0.4%	0.4%
Unknown/Missing	66,719	16.7%	
Median Base Period Wages	$23,726		
Mean Base Period Wages	$29,528		

Characteristic	Count	Percent Overall	Percent of Known
CLAIM INFORMATION			
FILING METHOD			
Filed by Claimant	370,097	92.7%	
Filed by Employer	29,033	7.3%	
WEEKLY BENEFIT AMOUNT			
WBA <$100	12,244	3.1%	
$100-$149	125,528	31.5%	
$150-$199	32,194	8.1%	
$200-$249	32,781	8.2%	
$250-$299	32,159	8.1%	
$300-$326	164,224	41.1%	
Unknown/Missing	50	0.0%	
Percent at Maximum WBA	148,322	37.2%	
Median WBA	$253		
Mean WBA	$235		

Characteristic	Count	Percent Overall	Percent of Known
GEOGRAPHY			
In-State	**375,855**	**94.2%**	
Abbeville	1,225	17.9%	
Aiken	7,547	2.0%	
Allendale	451	0.1%	
Anderson	14,848	4.0%	
Bamberg	674	0.2%	
Barnwell	1,168	0.3%	
Beaufort	11,368	3.0%	
Berkeley	18,257	4.9%	
Calhoun	587	0.2%	
Charleston	33,973	9.0%	
Cherokee	4,946	1.3%	
Chester	2,415	0.6%	
Chesterfield	2,253	0.6%	
Clarendon	1,917	0.5%	
Colleton	2,644	0.7%	
Darlington	4,545	1.2%	
Dillon	1,446	0.4%	
Dorchester	12,777	3.4%	
Edgefield	1,322	0.4%	
Fairfield	1,576	0.4%	
Florence	9,707	2.6%	
Georgetown	4,283	1.1%	
Greenville	45,656	12.1%	
Greenwood	4,769	1.3%	
Hampton	1,061	0.3%	
Horry	39,313	10.5	
Jasper	1,454	0.4%	
Kershaw	4,540	1.2%	
Lancaster	4,340	1.2%	
Laurens	4,325	1.2%	
Lee	920	0.2%	
Lexington	17,562	4.7%	
Marion	2,254	0.6%	
Marlboro	1,555	0.4%	
McCormick	333	0.1%	
Newberry	2,386	0.6%	
Oconee	5,286	1.4%	
Orangeburg	6,925	1.8%	
GEOGRAPHY			

Characteristic	Count	Percent Overall	Percent of Known
GEOGRAPHY			
Pickens	9,479	2.5%	
Richland	28,467	7.6%	
Saluda	550	0.1%	
Spartanburg	29,504	7.8%	
Sumter	7,053	1.9%	
Union	2,416	0.6%	
Williamsburg	1,931	0.5%	
York	13,781	3.7%	
In-State Unknown	66	0.0%	
Out-of-State	**15,435**	**3.9%**	
Florida	667	0.2%	
Georgia	3,036	0.8%	
North Carolina	8,147	2.0%	
Other Out-of-State	3,585	0.9%	
Unknown	**7,840**	**2.0%**	

Table B2 provides statistics on those claimants who were shown to still be filing a UI claim as of week ending June 26, 2021, more than one year after filing their initial claim. These individuals were classified as long-term filers and showed evidence of filing continuously throughout the period spring 2020 through end of June 2021. The concentration of long-term unemployed is also shown by county in **Figure B1**.

Table B2: Characteristics of Long-Term UI Claim Filers

Characteristic	Count	Percent Overall	Percent of Known
DEMOGRAPHICS			
SEX			
Male	24,958	41.4%	
Female	35,057	58.2%	
No Answer/Other	214	0.4%	
RACE			
Black/African-American	30,892	51.3%	53.4%
White	25,832	42.9%	44.6%
Other Race	1,166	1.9%	2.0%
No Answer	2,339	3.9%	
ETHNICITY			
Hispanic	1,639	2.7%	2.9%
Not Hispanic	54,423	90.4%	97.1%
No Answer	4,167	6.9%	
EDUCATION LEVEL			
Less than High School	6,903	11.5%	
High School or GED	27,071	44.9%	
Some College or Associate's	18,481	30.7%	
Bachelor's or Higher	7,774	12.9%	
DISABILITY STATUS			
Disabled	1,309	2.2%	2.3%
Not Disabled	54,765	90.9%	97.7%
No Answer	4,155	6.9%	
CITIZENSHIP STATUS			
Citizen	59,653	99.0%	
Not Citizen	576	1.0%	
No Answer	0	0.0%	
VETERAN STATUS			
Veteran	2,425	4.0%	4.2%
Not Veteran	54,717	90.8%	95.8%
No Answer	3,087	5.1%	
AGE			
<25	5,866	14.8%	
25-34	15,720	26.2%	
35-44	14,342	21.0%	
45-54	10,932	18.2%	
55-64	8,443	14.1%	
65-74	4,169	4.8%	

Characteristic	Count	Percent Overall	Percent of Known
DEMOGRAPHICS			
AGE			
<25	5,866	14.8%	
25-34	15,720	26.2%	
35-44	14,342	21.0%	
45-54	10,932	18.2%	
55-64	8,443	14.1%	
65-74	4,169	4.8%	
75+	757	0.8%	
Unknown Age	0	0.0%	
Median Age	40.5		
Mean Age	42.7		
PREVIOUS WORK			
INDUSTRY			
Agriculture	115	0.2%	0.3%
Mining and Logging	10	0.0%	0.0%
Utilities	53	0.1%	0.1%
Construction	1,693	2.8%	4.0%
Manufacturing	4,535	7.5%	10.8%
Wholesale	1,099	1.8%	2.6%
Retail	3,814	6.3%	9.1%
Transportation	1,677	2.8%	4.0%
Information	332	0.6%	0.8%
Finance	530	0.9%	1.3%
Real Estate	798	1.3%	1.9%
Prof, Sci, Technical	1,674	2.8%	4.0%
Management	214	0.4%	0.5%
Admin Support	7,688	12.8%	18.3%
Education	1,181	2.0%	2.8%
Health Care	3,445	5.7%	8.2%
Arts, Entertainment	971	1.6%	2.3%
Accommodation and Food	10,177	16.9%	24.2%
Other Services	1,645	2.7%	3.9%
Public Administration	374	0.6%	0.9%
Missing/Unknown	18,204	30.2%	

Characteristic	Count	Percent Overall	Percent of Known
PREVIOUS WORK			
OCCUPATION			
Management	3,199	5.3%	6.5%
Business and Financial Operations	1,014	1.7%	2.1%
Computer and Mathematical	378	0.6%	0.8%
Architecture and Engineering	939	1.6%	1.9%
Life, Physical, and Social Science	395	0.7%	0.8%
Community and Social Services	333	0.6%	0.7%
Legal	154	0.3%	0.3%
Education, Training, and Library	1,552	2.6%	3.2%
Arts, Design, Entertainment, Sports, and Media	995	1.7%	2.0%
Healthcare Practitioners and Technical	870	1.4%	1.8%
Healthcare Support	1,503	2.5%	3.1%
Protective Service	342	0.6%	0.7%
Food Preparation and Serving Related	7,661	12.7%	15.6%
Building and Grounds Cleaning and Maintenance	2,585	4.3%	5.3%
Personal Care and Service	2,552	4.2%	5.2%
Sales and Related	5,102	8.5%	10.4%
Office and Administrative Support	6,535	10.9%	13.3%
Farming, Fishing, and Forestry	146	0.2%	0.3%
Construction and Extraction	2,129	3.5%	4.3%
Installation, Maintenance, and Repair	1,600	2.7%	3.3%
Production	4,628	7.7%	9.4%
Transportation and Material Moving	4,453	7.4%	9.1%
Military Specific	45	0.1%	0.1%
BASE PERIOD WAGES			
<$15,000[5]	22,127	36.7%	51.3%
$15,000-$19,999	5,496	9.1%	12.7%
$20,000-$24,999	4,388	7.3%	10.2%
$25,000-$29,999	3,348	5.6%	7.8%
$30,000-$34,999	2,348	3.9%	5.4%
$35,000-$39,999	1,556	2.6%	3.6%
$40,000-$44,999	1,059	1.8%	2.5%
$45,000-$49,999	749	1.2%	1.7%
$50,000-$74,999	1,434	2.4%	3.3%
$75,000-$99,999	356	0.6%	0.8%
$100,000-$149,999	205	0.3%	0.5%
$150,000+	65	0.1%	0.2%
Unknown/Missing	17,098	28.4%	
Median Base Period Wages	$14,550		
Mean Base Period Wages	$18,840		

Characteristic	Count	Percent Overall	Percent of Known
CLAIM INFORMATION			
FILING METHOD			
Filed by Claimant	59,428	98.7%	
Filed by Employer	801	1.3%	
WEEKLY BENEFIT AMOUNT			
WBA <$100	1,849	3.1%	
$100-$149	29,573	49.1%	
$150-$199	5,820	9.7%	
$200-$249	5,391	9.0%	
$250-$299	4,609	7.7%	
$300-$326	12,987	21.6%	
Unknown/Missing	0	0.0%	
Percent at Maximum WBA		18.2%	
Median WBA	$152		
Mean WBA	$198		

Characteristic	Count	Percent Overall	Percent of Known
GEOGRAPHY			
In-State	**56,900**	**94.5%**	
Abbeville	180	0.3%	
Aiken	1,024	1.7%	
Allendale	95	0.2%	
Anderson	1,732	2.9%	
Bamberg	218	0.4%	
Barnwell	251	0.4%	
Beaufort	1,298	2.2%	
Berkeley	2,758	4.6%	
Calhoun	139	0.2%	
Charleston	4,810	8.0%	
Cherokee	639	1.1%	
Chester	460	0.8%	
Chesterfield	311	0.5%	
Clarendon	391	0.6%	
Colleton	526	0.9%	
Darlington	801	1.3%	
Dillon	335	0.6%	
Dorchester	1,913	3.2%	
Edgefield	162	0.3%	
Fairfield	292	0.5%	
Florence	1,905	3.2%	
Georgetown	900	1.5%	
Greenville	5,409	9.0%	
Greenwood	709	1.2%	
Hampton	253	0.4%	
Horry	5,427	9.0%	
Jasper	239	0.4%	
Kershaw	794	1.3%	
Lancaster	719	1.2%	
Laurens	564	0.9%	
Lee	220	0.4%	
Lexington	2,715	4.5%	
Marion	601	1.0%	
Marlboro	289	0.5%	
McCormick	59	0.1%	
Newberry	314	0.5%	
Oconee	514	0.9%	
Orangeburg	1,777	3.0%	
GEOGRAPHY			
In-State	**56,900**	**94.5%**	

Characteristic	Count	Percent Overall	Percent of Known
GEOGRAPHY			
Pickens	1,032	1.7%	
Richland	6,265	10.4%	
Saluda	85	0.1%	
Spartanburg	3,641	6.0%	
Sumter	1,271	2.1%	
Union	361	0.6%	
Williamsburg	423	0.7%	
York	2,079	3.5%	
In-State Unknown	12	0.0%	
Out-of-State	**1,948**	**2.3%**	
Florida	147	3.2%	
Georgia	351	0.2%	
North Carolina	872	0.6%	
Other Out-of-State	578	1.4%	
Unknown	**1,369**	**1.0%**	

Figure B1: Percent of Claimants Long-Term Filers, by County
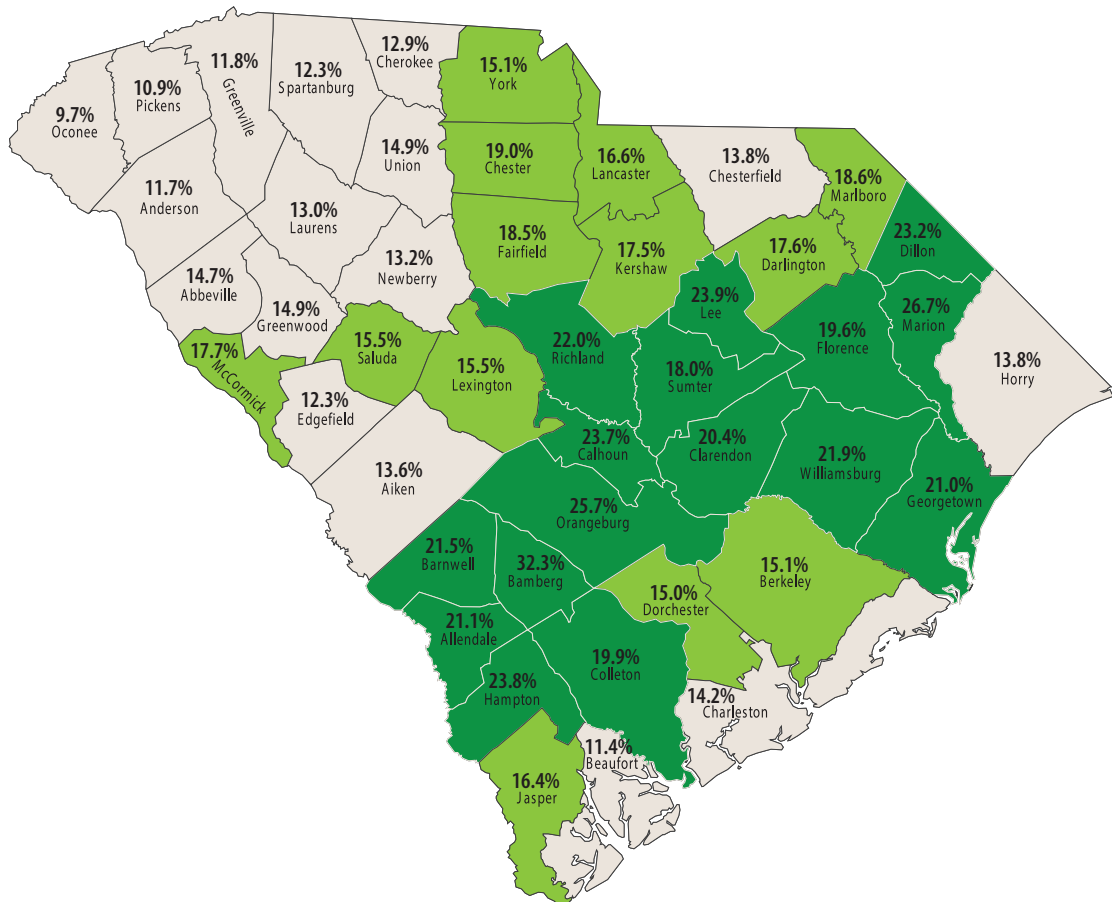
Appendix C
Logistic Regression Results

Note that "odds ratios" are used to compare the relative odds of the occurrence of the outcome of interest (long-term unemployment). An odds ratio of 1 means that the variable does not affect the odds of long-term unemployment. An odds ratio of less than 1 means the variable is associated with lower odds of long-term unemployment. An odds ratio of greater than 1 means the variable is associated with higher odds of long-term unemployment.

Rather than focusing on the numerical value of the odds ratio, one can focus on whether the odds ratio is greater than, less than, or equal to 1 as well as its statistical significance, as denoted with the asterisks in **Table C1**.

VARIABLE	ODDS RATIO	STD. ERR.	Z	P>|Z|
Male	0.891***	0.009	-10.86	0.000
White	0.546***	0.006	-59.44	0.000
Hispanic	0.757***	0.022	-9.73	0.000
Less than High School	1.336***	0.027	14.30	0.000
High School Graduate or GED	1.287***	0.020	16.04	0.000
Some College or Associate's Degree	1.157***	0.018	9.22	0.000
Age	1.014***	0.000	42.68	0.000
Agriculture	1.686***	0.199	4.42	0.000
Mining, logging	0.578	0.195	-1.63	0.103
Utilities	1.508	0.248	2.50	0.012
Construction	1.670***	0.060	14.17	0.000
Manufacturing	0.698***	0.017	-14.45	0.000
Wholesale trade	1.203***	0.046	4.84	0.000
Retail trade	1.004	0.025	0.15	0.879
Transportation and warehousing	1.198***	0.041	5.28	0.000
Information	1.354***	0.090	4.57	0.000
Finance	1.910***	0.106	11.64	0.000
Real Estate	1.185***	0.052	3.84	0.000
Professional, scientific, technical	1.441***	0.048	10.97	0.000
Management	1.274***	0.103	3.00	0.003
Administrative support and waste management	1.531***	0.033	19.72	0.000
Education	0.981	0.038	-0.50	0.617
Health care	0.797***	0.022	-8.28	0.000
Arts, entertainment, recreation	0.895***	0.034	-2.88	0.004
Other service	1.034	0.033	1.02	0.308
Public administration	1.159**	0.072	2.37	0.018
Unknown industry	1.768***	0.034	29.44	0.000

VARIABLE	ODDS RATIO	STD. ERR.	Z	P>|Z|
Management	0.972	0.026	-1.08	0.281
Business and Financial Operations	0.943	0.039	-1.42	0.155
Computer and Mathematical	1.063	0.068	0.96	0.339
Architecture and Engineering	0.899**	0.038	-2.53	0.011
Life, Physical, and Social Science	0.928	0.057	-1.23	0.218
Community and Social Services	1.134*	0.078	1.82	0.069
Legal	0.954	0.093	-0.48	0.629
Education, Training, and Library	0.791***	0.029	-6.36	0.000
Arts, Design, Entertainment, Sports, and Media	0.920**	0.038	-1.98	0.047
Healthcare Practitioners and Technical	0.629***	0.027	-10.66	0.000
Healthcare Support	0.944	0.035	-1.54	0.123
Protective Service	0.907	0.060	-1.46	0.143
Building and Grounds Cleaning and Maintenance	1.001	0.029	0.03	0.978
Personal Care and Service	0.408***	0.012	-30.26	0.000
Sales and Related	0.842***	0.021	-7.03	0.000
Office and Administrative Support	1.023	0.024	0.98	0.326
Farming, Fishing, and Forestry	1.213*	0.127	1.85	0.064
Construction and Extraction	1.176***	0.041	4.63	0.000
Installation, Maintenance, and Repair	1.028	0.036	0.79	0.430
Production	0.993	0.026	-0.27	0.786
Transportation and Material Moving	1.057**	0.028	2.08	0.038
Military Specific	1.097	0.189	0.54	0.591
Unknown Occupation	0.580***	0.012	-25.40	0.000
Veteran	0.853***	0.021	-6.36	0.000
Citizen	2.730***	0.128	21.38	0.000
Disabled	1.435***	0.051	10.19	0.000
WBA <$100	1.806***	0.052	20.47	0.000
WBA $100-$149	2.738***	0.039	70.17	0.000
WBA $150-$199	2.099***	0.040	39.08	0.000
WBA $200-$249	1.899***	0.036	33.75	0.000
WBA $250-$299	1.669***	0.033	26.15	0.000
Pandemic Unemployment Assistance	1.316***	0.027	13.53	0.000

VARIABLE	ODDS RATIO	STD. ERR.	Z	P>|Z|
Trident	1.160***	0.022	7.80	0.000
Lowcountry	0.984	0.027	-0.58	0.562
Midlands	1.327***	0.026	14.54	0.000
Upstate	1.075***	0.024	3.24	0.001
Catawba	1.127***	0.028	4.81	0.000
Santee-Lynches	1.180***	0.032	6.06	0.000
Waccamaw	1.058***	0.022	2.72	0.007
Upper Savannah	1.032	0.030	1.06	0.289
Lower Savannah	1.336***	0.034	11.41	0.000
Pee Dee	1.222***	0.030	8.22	0.000
Worklink	0.987	0.024	-0.54	0.592
Out-of-State/Unknown	1.265***	0.045	6.54	0.000
Urban	0.872***	0.017	-7.06	0.000
Constant	0.025***	0.001	-62.34	0.000

While broadly consistent, there are notable differences between LWDAs.
*Full regression results for each LWDA similar to **Table C1** are available upon request.*

SC WORKS

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