## Travel and Spending Assessment of Florida Residents During the US COVID-19 Outbreak

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## About us

Haas Center's Mission: We support communities with market research, workforce development, and industrial innovation. We are known for the breadth and depth of our data resources and have been for 25 years. We provide textured, meaningful analysis to an array of customers from the public and non-profit sectors to private industry, including manufacturing. Immersive public manufacturing laboratories, like Sea3D in Pensacola's Historic District, showcase what is possible when creative minds intersect with manufacturing and workforce partners. Our market research covers a variety of topics, including economic impact studies, consumer, and visitor profiles, as well as research on talent gaps. Our performance advisors collaborate to bring objective and reliable information and solutions to our customers.

A partnership with Northwest Florida Manufacturers Council allows us to advance manufacturing by collaborating with business leaders, scientists, and consultants. The unique teaming of these experts boosts the productivity and financial outcomes for those who aim to make more in Florida's Central Time Zone. The National Institute of Standards and Technology evaluates the success of the manufacturers we support. In three years, 46 businesses have reported more than $\$ 300$ million in direct impact to their bottom line. The Haas Center combined with Sea3D and the NWFMC fuel a practice in support of industry 4.0. Our data visualization techniques allow accurate mapping of the region's industrial resources.

## Executive Summary

The Haas Center at the University of West Florida conducted a study of the economic impacts of COVID-19 in Florida. The survey was made accessible online in English and Spanish between March 16 and April 6, 2020. More than 4,000 respondents provided 3,048 usable responses. The study aims to understand the types of travel and spending changes of Florida residents that have occurred during the COVID-19 outbreak.

The results of this survey reveal important insights into consumer behavior across the state, including:

- $61 \%$ of Floridians cancelled or postponed travel plans, and more than half of that group had more than one trip that was impacted
- $24 \%$ had already experienced some loss in wages due to COVID-19, while another $18 \%$ expected income loss to be imminent at the time they completed the survey
- $90 \%$ of Floridians reported reduced spending across many different industry sectors, including restaurant, entertainment, and retail shopping

The onset of the pandemic came at a time when seasonal employment and tourism would normally accelerate across the state as spring break vacations spur economic activity. To date, most travel plans affected were at the end of Quarter 1, continuing into Quarter 2. Fewer trips have been cancelled or postponed in July or later. In addition, many of the workers support the hospitality industry. Approximately two-thirds of survey respondents working in Accommodations and Food lost income, in addition to $58 \%$ of respondents employed in Arts, Entertainment, and Recreation. Survey data on consumer behavior show that residents are spending significantly less at non-grocery retailers, as well as restaurants and entertainment facilities. Future research will address consumer attitudes as the state recovers from the pandemic.

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## Introduction

Unprecedented Times. In February 2020, a novel coronavirus began to spread across the United States, causing COVID-19, a severe acute respiratory disease. By March 11, the World Health Organization (WHO) designated the virus a pandemic. In response, federal, state, and local governments swiftly instituted a series of policies to limit foreign and domestic travel. The Centers for Disease Control and Prevention (CDC) issued guidelines to deter the gathering of groups larger than 10 people and advised residents to maintain a distance of six feet between one another.

Like all public organizations across the state of Florida, the University of West Florida quickly took steps to prioritize the safety and well-being of the campus community, turning to remote instruction and remote work procedures. In addition, the Haas Center began working to address impacts of the virus. The University of West Florida's Haas Center, along with colleagues from the Department of Art,
 Mechanical Engineering, and Libraries began manufacturing, managing, and distributing 3D-printed full-face shield kits at its Sea3D Additive Manufacturing Laboratory in downtown Pensacola. The Haas Center utilized their dashboard and social media to distribute pertinent labor and market research, such as Northwest Florida's essential workers, vulnerable industries, and national unemployment insurance data. In addition, the Center launched a statewide survey on March 16, 2020, to understand the immediate impacts on individual spending, travel, and wages, as the COVID-19 pandemic accelerated throughout the state.

Purpose and Scope. The survey asked about individual spending and wage changes for Florida residents. It focused on three key areas: travel and tourism, loss of wages and income, and consumer spending reductions across select industry sectors. It is important to note that the scope of this survey was limited to consumer spending and wage earners. The survey did not seek to duplicate the many research efforts across the state, which assess the impact of COVID-19 on business and industry. Moreover, not all income types lost were captured in this survey. For example, retirement income linked to investment accounts may have lost significant value and will take time to recover all or some of that amount. Lastly, this survey did not seek to identify other income changes related to the virus, like stimulus payments.

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## About the Survey

Sampling Procedure. Over two weeks, Florida residents were recruited via emails to registered voters, through websites and partner links/websites, and on social media (regular posts and ads). To prevent non-Florida residents from being recruited by invitation, publicly available voter registration records were utilized to contact nearly 120,000 Florida residents spanning 32 counties. These residents were emailed survey invitations with unique survey links. Of those invited by email, 1,718 participants started the survey and 1,540 completed the entire survey ( $90 \%$ completion rate). In addition, a social media ad targeted all Florida residents to promote engagement - approximately 3,100 individuals initiated the survey from the anonymous link and 1,838 completed the survey (59\% completion rate).

Residents self-selected by either clicking on the online survey link or entering the survey website address into their internet browsers. Within the survey, two forced-response questions were included to ensure that respondents were both at least 18 years of age and Florida residents. The Qualtrics secured server prevented ballot stuffing, though IP addresses were not used in our analysis. Participants that selected any response to demographic questions - including those that chose the "prefer not to respond" option were included for analysis. In total, 3,048 completions were appropriate for data analysis (Table A, Figure A).

Sample Representation. To obtain the state's most recent resident demographic statistics, information was gathered from DemographicsNow and the Census (Table A). Florida's adult population is approximately 17 million people. Survey results were weighted by age and gender to more closely represent the overall population. This sample size (Table A, Figure A) correlates to a margin of error of $2.3 \%$ at a $99 \%$ confidence level.
representation. Sample Source: UWF Haas Center.

| Demographics | Population Florida | Sample |
| :---: | :---: | :---: |
| Population 18+ | 17,071,450 | 3,048 |
| Race ${ }^{1}$ |  |  |
| White | 74\% | 83\% |
| Black or African-American | 16\% | 3\% |
| American Indian or Alaska Native | 0.4\% | 1\% |
| Asian/ Native Hw'n/ Other Pacific Islander | 2.9\% | 1\% |
| More than one race | 3\% | 3\% |
| Other Race | 4.2\% | 0\% |
| Hispanic Origin |  |  |
| Hispanic or Latino | 25\% | 6\% |
| Age Distribution of Adults |  |  |
| Age 18-24 | 10.4\% | 10\% |
| Age 25-34 | 16.2\% | 16\% |
| Age 35-44 | 15.2\% | 15\% |
| Age 45-54 | 16.1\% | 16\% |
| Age 55-64 | 16.7\% | 16\% |
| Age 65 + | 25.5\% | 26\% |
| Households by Income |  |  |
| < \$25,000 | 19.6\% | 12\% |
| \$25,000-\$34,999 | 8.9\% | 9\% |
| \$35,000-\$49,999 | 12.4\% | 12\% |
| \$50,000-\$74,999 | 17.4\% | 18\% |
| \$75,000-\$99,999 | 12.6\% | 13\% |
| \$100,000 + | 29.2\% | 27\% |
| Unwilling to respond |  | 9\% |
| Gender |  |  |
| Male | 45.1\% | 48\% |
| Female | 54.9\% | 51\% |

source: data.census.gov, 2018: ACS 1-Year Estimates Data Profiles
'The Race categories for our Sample do not equal $100 \%$ as respondents could choose to identify as Hispanic or Latino instead of one of the categories listed in race. Also, some chose not to respond to the question

Figure A. Respondents by Florida County of Residence. Source: UWF Haas Center.


## Impacts on Travel of Florida Residents

Tourism in Florida, known for Walt Disney World Resort and beach destinations across the entire state, has experienced a drastic reduction in income because of COVID-19. Data shared by airlines, hoteliers, and entertainment venues suggested early on that COVID-19 would be devastating for tourism in Florida. Many of the state and local policies in place, like closing beaches and vacation rental properties, enforcing social distancing guidelines, and the stay-at-home orders, eliminate the possibility for tourists to travel to, or enjoy the amenities of the state. Visit Florida ${ }^{1}$ has been tracking and sharing the impacts of COVID-19 on the tourism industry. Some of their findings include:

- Hotel demand for late March and early April has been down more than 70\%, compared to the same time last year. Florida's demand numbers have been trending slightly worse than the U.S. as a whole.
- Hotel revenue compared to the same week of the previous year has been down each week since March 15, 2020, roughly between $\$ 300$ and $\$ 400$ million each week.
- New vacation bookings have been down between $70 \%$ and $90 \%$ each day since mid-March, as the industry deals with an executive order that closed them in the short term and causes uncertainty in the long term.
- Scheduled air travel seat capacity is down 60\% from other domestic airports, since February 29, 2020.
- Harris poll data suggest that the tourism industry may struggle for several months after the end of the pandemic as well. Additionally, the survey found only $15 \%$ of respondents planned to stay in a hotel in the 30 -day period following the end of the pandemic.

[^0]The Haas Center's survey sought to understand how many residents' travel plans were interrupted or cancelled because of COVID19. The survey was structured to ask about any disruptions to plans, but then asked respondents to share follow-up information, like destination and time of trip, for up to three trips that were affected.

Participants were asked to provide the status of all travel plans that were affected (Table B). To capture any travel plan changes that may have been affected for each participant, the survey allowed for respondents to provide data for up to three trips (Appendix C). In addition, participants were not required to disclose any changes to their travel plans, the number of affected trips, or the purposes for their trips.

Sixty-four percent of respondents either "Cancelled" (41\%) or "Postponed" (21\%) their travel plans. Five percent maintained travel plans. Forty-six percent of respondents had one planned trip that was affected by COVID-19, followed by two trips (34\%), three trips (11\%), and four or more trips (9\%). Overall, the main purpose for planned travel that was either cancelled or postponed was "Leisure" ( $70 \%$ of respondents). Thirteen percent of respondents indicated travel plans for "Both types of travel" were impacted. "Business" and "Trip was for other purposes" shared an equal percentage of responses for cancelled or postponed travel ( $6 \%$ of participants).

Table B. Impacts on Travel, number of Trips Impacted, and Purpose of Trip.
Source: UWF Haas Center.

| Question Category |  | \# Participants | \% Participants |
| :---: | :---: | :---: | :---: |
|  | Postponed | 660 | 22\% |
|  | Cancelled | 1,249 | 42\% |
|  | Kept Plans | 160 | 5\% |
|  | No Plans Scheduled | 1,034 | 34\% |
|  | 1 | 844 | 46\% |
|  | 2 | 624 | 34\% |
|  | 3 | 201 | 11\% |
|  | 4 or more | 168 | 9\% |
|  | Leisure | 1,280 | 70\% |
|  | Business | 110 | 6\% |
|  | Both types of travel. | 234 | 13\% |
|  | Trip was for other purposes | 104 | 6\% |

Of the 104 who chose "Trip was for other purposes," 78 participants provided additional information about the purposes for their cancelled or postponed trips. Of the 84 travel intentions, 17 responses included reasons that coincided with either "Leisure" or "Business." Accordingly, these responses were removed from the text analysis, which resulted in a total of 67 unique responses. Data analysis resulted in five categories not related to "Leisure" or "Business": "Family obligations" ( 27 responses, $40 \%$ of responses); "Medical" (13 responses, 19\%); "Event attendance" (12 responses, 18\%); "Relocation" (nine responses, 13\%); and "Academic purposes" (six responses, 9\%).

In total, survey respondents reported 2,869 trips that were either cancelled or postponed for calendar year 2020 (Table C). The second quarter had the greatest number of cancelled trips ( 1,553 cancelled or postponed trips, $54 \%$ ), followed closely by the first quarter (1,154 cancelled or postponed trips, 40\%). Quarters 3 (5\%) and 4 (1\%) had the smallest number of cancelled or postponed trips, with a combined total of 162. Considering that Quarter 1 (January 1 to March 31) coincided with both the first reported case of COVID-19 in Florida and spring break for Florida public schools ${ }^{2}$ and most colleges or universities, it is expected that a large percentage of scheduled travel plans would fall within this quarter. Quarter 2 (April 1 to June 30) overlapped with the end of many spring break schedules and the beginning of Florida school district summer vacations. ${ }^{3}$

Table C. Cancelled and Postponed Travel Plans Because of COVID-19. Source: UWF Haas Center.

| Quarter | Trip 1 | Trip 2 | Trip 3 | Total | Percent |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Q1 2020 | 814 | 248 | 92 | 1,154 | $40 \%$ |
| Q2 2020 | 835 | 496 | 222 | 1,553 | $54 \%$ |
| Q3 2020 | 39 | 59 | 34 | 132 | $5 \%$ |
| Q4 2020 | 13 | 12 | 5 | 30 | $1 \%$ |
| Total |  |  |  | 2,869 | $100 \%$ |
| Country | Trip 1 | Trip 2 | Trip 3 | Total | Percent |
| United States | 1,385 | 677 | 296 | 2,358 | $81 \%$ |
| All others | 326 | 146 | 79 | 551 | $19 \%$ |
| Total |  |  |  | $\mathbf{2 , 9 0 9}$ | $100 \%$ |
| State | Trip 1 | Trip 2 | Trip 3 | Total | Percent |
| Florida | 521 | 266 | 111 | 898 | $36 \%$ |
| All Others | 946 | 440 | 208 | 1,594 | $64 \%$ |
| Total |  |  |  | 2,492 | $100 \%$ |

[^1]Eighty-one percent of cancelled or postponed destinations were scheduled for locations within the United States (Table C). Of these, $64 \%$ ( 1,594 trips) were scheduled for outside of Florida, and $36 \%$ were to take place within the state of Florida (898 trips).

## Impact on Wages and Income

Mitigation efforts to reduce the spread of COVID-19 have affected many businesses, and the effects on employees and wages are beginning to be apparent. While some jobs required little to no human contact, many necessitated close interaction with consumers or coworkers. ${ }^{4}$ The Federal Reserve Bank of Atlanta and the Federal Reserve Bank of St. Louis are two of the organizations that are tracking key statistics for at-risk occupations. Industries that appear to be the most vulnerable are food, sales, production, and maintenance. ${ }^{5}$

Recently, 22 million U.S. workers filed for unemployment, an unprecedented figure for the U.S. economy. Despite the already high unemployment numbers, some project increases over the next few weeks. ${ }^{6}$ Service-sector employees who work within densely populated metro areas filed a higher percentage of unemployment claims than those in other industry sectors.

Economists project that over $46 \%$ of Florida jobs are categorized as high risk for unemployment. ${ }^{7}$ Occupations were considered "low risk" if they were essential to public health or safety, could easily be completed off-site, or were likely to be salaried. "High-risk" occupations were those that did not fulfill any of these criteria. Overall, Florida ranks relatively low in the high-risk rankings, 34 out of 51 states and D.C., but the analysis still suggested that approximately 4 million people are at risk for unemployment. The largest cities in Florida that could be negatively impacted include Tampa, Miami, and Orlando.

[^2]Haas Center

As shown in Figure B, nearly 1.2 million
Floridians have already filed for unemployment claims since the onset of the COVID-19 pandemic. This number will likely rise, as the state's application system improvements are ongoing.

People who work within the food sector are most likely to face financial distress, with many people facing delinquency within 30 days of unemployment. ${ }^{8}$ Nearly $11 \%$ of people employed in Florida work in food preparation and serving occupations. ${ }^{9}$ The pandemic is anticipated to cause the biggest burden for those who are already economically vulnerable.
Among all industries, the accommodation and food sectors face the highest percentage of financial distress. These same trends are evident in the results of the pandemic Haas Center's statewide survey conducted over three weeks at the onset of the pandemic.
${ }^{8}$ Sanchez, 2020
${ }^{9}$ Gacson, 2020.


Overall, $42 \%$ of Florida residents had already lost wages or income (24\%) or were expecting to do so in the immediate future (18\%) (Figure C). The closure of the survey occurred on April 6, 2020, three days after Gov. Ron DeSantis' "Safer-at-Home" order, which closed non-essential businesses.

In Appendix B, respondents' employment industries are shown alongside their associated lost wages data. Some industries employed respondents who were more likely to have experienced no reduction in income, such as "Government" (79\%), "Utilities" (77\%), and "Information" (69\%). These industries provide essential services, which are necessary to keep the economy open. Other industries had mixed results, like "Manufacturing," where half (51\%) of respondents had no reduction in income.

Critical Manufacturing is considered essential as outlined in the DHS guidelines. ${ }^{10}$ However, many types of manufacturing may be disrupted by supply chain and logistics issues, both nationally and globally.

Table D. Industry (2-Digit) Lost Hours, Hourly Wage, and Median Income Lost.
Source: UWF Haas Center.

|  |  |  |  |
| :--- | :---: | :---: | :---: |
|  | Median Hours | Median Hourly | Median Income |
| Industry (2-Digit) | Lost | Wage | $\$ 1,840.00$ |
| Professional, Scientific, and Technical Services | 40 | $\$ 40$ | $\$ 1,820.00$ |
| Wholesale Trade | 30 | $\$ 52$ | $\$ 1,000.00$ |
| Agriculture, Forestry, Fishing and Hunting | 40 | $\$ 20$ | $\$ 630.00$ |
| Construction | 30 | $\$ 29$ | $\$ 615.00$ |
| Health Care and Social Assistance | 30 | $\$ 22$ | $\$ 595.00$ |
| Transportation and Warehousing | 30 | $\$ 20$ | $\$ 576.40$ |
| Information | 24 | $\$ 40$ | $\$ 480.00$ |
| Other Services (except Public Administration) | 40 | $\$ 17$ | $\$ 416.00$ |
| Arts, Entertainment, and Recreation | 23 | $\$ 15$ | $\$ 400.00$ |
| Administrative and Support and Waste Management and | 25 | $\$ 15$ | $\$ 400.00$ |
| Remediation Services | 29 | $\$ 25$ | $\$ 385.00$ |
| Educational Services | 20 | $\$ 20$ | $\$ 360.00$ |
| Management of Companies and Enterprises | 40 | $\$ 11$ | $\$ 326.40$ |
| Real Estate and Rental and Leasing | 39 | $\$ 24$ | $\$ 319.20$ |
| Accommodation and Food Services | 16 | $\$ 13$ | $\$ 300.00$ |
| Manufacturing | 24 | $\$ 18$ | $\$ 172.80$ |
| Retail Trade | 0 | $\$ 18$ | $\$ 0.00$ |
| Government | 0 | $\$ 31$ | $\$ 0.00$ |
| Finance and Insurance | 0 |  |  |
| Mining, Quarrying, and Oil and Gas Extraction | 0 |  |  |
| Utilities |  |  |  |

Table D provides participants' work industry information at the two-digit industry level, along with their Median Hours Lost (due to COVID19), Median Hourly Wage, and Median Income Lost (due to COVID-19). More specific industry designations for participants are provided in Appendix D.

An equal number
of industries lost
40 and 30
median hours of
work. Industries
within the 40
Median Hours
Lost were
"Agriculture, Forestry, Fishing, and Hunting"; "Other Services
(except Public

[^3]Haas Center

Administration)"; "Professional, Scientific, and Technical Services," and "Real Estate and Rental and Leasing." Within the 30 Median Hours Lost were "Construction," "Healthcare and Social Assistance," "Transportation and Warehousing," and "Wholesale Trade" industries. Zero hours were lost within "Finance and Insurance"; "Government"; "Mining, Quarrying, and Oil and Gas Extraction," and "Utilities." Two industries lost 24 hours ("Retail Trade" and "Arts, Entertainment, and Recreation"). All other industries had differing median lost hours of work, with hours lost that ranged from 16 ("Manufacturing") to 39 ("Accommodation and Food Service").

Table D provides the Median Hourly Wage for participants by their two-digit industry classification. Respondents with the greatest hourly wages were those that classified themselves as workers within the "Wholesale Trade" industry (\$52 Median Hourly Wage). The next-highest Median Hourly Wage were those employed within "Mining, Quarrying, and Oil and Gas Extraction" (\$44). Participants that worked in either "Professional, Scientific, and Technical Services" or "Information" earned the same average hourly wages (\$40). Participants that worked in "Agriculture, Forestry, Fishing, and Hunting"; "Transportation and Warehousing"; and "Real Estate and Rental and Leasing" earned a Median Hourly Wage of $\$ 20$.

Also shown in Table D is the Median Income Lost by participants. Respondents with the greatest loss of income were those employed in "Professional, Scientific, and Technical Services" ( $\$ 1,840$ ). The next greatest income losses were by those employed in "Wholesale Trade" ( $\$ 1,820$ ), followed by "Agriculture, Forestry, Fishing, and Hunting" ( $\$ 1,000$ ); "Construction" (\$630); "Health Care and Social Assistance" (\$615); "Transportation and Warehousing" (\$595); "Information" (\$576); "Other Services (except Public Administration)" (\$480); and "Arts, Entertainment, and Recreation" (\$416). Both "Administrative and Support and Waste Management and Remediation Services" and "Education Services" workers lost \$400 in wages. "Finance and Insurance"; "Mining, Quarrying, and Oil and Gas Extraction"; and "Utilities" workers reported no income loss.

In some instances, employees' hourly wages may have been reduced or temporary salary reductions could have been implemented. Either of these scenarios could be a contributing factor for "Government" employees' reports for no loss in work hours and their Median Income Lost totaled \$173 (Table D). In Table E on the following page, the Haas Center estimated that more than 3 million workers may be at risk for a reduction in income due to COVID-19 based on survey responses by industry.

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Table E. Florida Jobs Income Lost by Industry. Source: Emsi Data (\# of Jobs), Survey Data and Calculations by UWF Haas Center.

| Industry (2-digit NAICS Level) | \% of Workers Reporting a Reduction in income | \# of Jobs in Florida (2020) | \# of Workers That May Have Seen a Reduction in Income |
| :---: | :---: | :---: | :---: |
| Accommodation and Food Services | 66.39\% | 1,033,915 | 686,381 |
| Administrative and Support and Waste Management and Remediation Services | 37.50\% | 696,768 | 261,288 |
| Agriculture, Forestry, Fishing and Hunting | 32.14\% | 93,957 | 30,200 |
| Arts, Entertainment, and Recreation | 56.86\% | 240,697 | 136,867 |
| Construction | 29.33\% | 587,059 | 172,204 |
| Educational Services | 19.30\% | 203,072 | 39,201 |
| Finance and Insurance | 9.59\% | 419,667 | 40,242 |
| Government | 7.69\% | 1,200,554 | 92,350 |
| Health Care and Social Assistance | 32.09\% | 1,177,302 | 377,850 |
| Information | 11.90\% | 138,768 | 16,520 |
| Management of Companies and Enterprises | 29.63\% | 115,269 | 34,154 |
| Manufacturing | 28.30\% | 384,301 | 108,764 |
| Mining, Quarrying, and Oil and Gas Extraction | 25.00\% | 4,243 | 1,061 |
| Other Services (except Public Administration) | 29.49\% | 377,672 | 111,365 |
| Professional, Scientific, and Technical Services | 19.02\% | 607,426 | 115,523 |
| Real Estate and Rental and Leasing | 35.90\% | 199,253 | 71,527 |
| Retail Trade | 48.72\% | 1,131,077 | 551,038 |
| Transportation and Warehousing | 38.71\% | 311,023 | 120,396 |
| Utilities | 3.23\% | 23,246 | 750 |
| Wholesale Trade | 15.38\% | 351,718 | 54,110 |
| Total |  | 9,296,988 | 3,021,791 |

## Impacts on Consumer Spending

In Florida, consumer confidence sentiments recently reached a historic nearly 20year high. On a scale ranging from 2-150, March 2020 consumer confidence among Floridians plummeted 13.5 points to 88.8 from a revised figure of 102.3 in February, according to the University of Florida's Bureau of Economic and Business Research (BEBR). ${ }^{11}$ However, this computation was later amended to 87.1, for a total decrease of 15.2 points between February 2020 and March 2020. In April 2020, Florida consumer confidence decreased 11.2 points to $75.9 .{ }^{12}$ National sentiment declined 11.9 points from 101 in February 2020 to 89.1 in March 2020. Between March 2020 and April 2020, national sentiment dropped 17.3 points to $71.8 .{ }^{13}$ BEBR reports that the March figure is the largest month-to-month decline on record since the series began tracking consumer sentiment in February 1985. This decline is now starker than the impacts due to Hurricane Katrina in September 2005, which caused a plunge of 11.7 points.

This decline in consumer confidence is coupled with a major decline in consumer spending across the nation and the state of Florida. Advance estimates from the U.S. Census Bureau reported that in March 2020, U.S. retail and food services sales were $\$ 483.1$ billion, a decrease of 8.7 percent ( $\pm 0.4$ percent margin of error) from the previous month, and 6.2 percent ( $\pm 0.7$ percent margin of error) decrease from

Figure D. Reduced spending on common public activities. Source: UWF Haas Center.


[^4]Haas Center

March 2019. ${ }^{14}$ A recent article from The New York Times ${ }^{15}$ provides analysis of data from Earnest Research, which tracks and analyzes credit card and debit card purchases of nearly 6 million people in the United States. Data does not include cash transactions, which according to the Federal Reserve Bank of Atlanta represent approximately $26 \%$ of transactions. ${ }^{16}$ Nevertheless, the data gives a clear picture of how consumer spending has radically changed across the nation since the COVID-19 pandemic swept the country.

Figure E suggests some drastic

Figure E. Changes in Credit and Debit Card Spending. Source: New York Times.


The chart shows the percentage change in spending from the beginning of the year. Each line is an average of
the previous two weeks, which smooths out weekly anomalies. | Source: Earnest Research changes in US consumer spending across seven main categories: travel, shopping, transportation, restaurants, entertainment, health and beauty, and groceries. In general, the data from Earnest Research shows significant declines in spending across six of these seven categories.

[^5] smaller percent share of economic activity.

Only grocery store spending increased, as consumers limited their trips to fast-food restaurants and takeout from some sit-down restaurants. Additional charts from The New York Times are provided in Appendix E.

The Haas Center's survey on individual spending in the state of Florida asked respondents to share how their consumer behavior had changed since the onset of COVID-19. Ninety-one percent of Floridians reported that they have reduced their spending on common public activities. Indeed, Florida residents reported deep reductions to spending across "Restaurants and Bars"; "Retail Shopping (not online)"; and "Admissions, Amusement, and Recreation Activities (Arts, Sports, Concerts, Movies)." Figure F below shows the average decrease in spending reported in the survey.

On average, Florida residents reported decreased spending by $80 \%$ in "Restaurants and Bars" (Figure F). However, more than a third of these respondents reported decreased spending in this category by $99 \%$ (Table F), as they chose not to purchase take-out from sit-down restaurants or frequent fast food restaurants. Restaurants were one of the first segments directly affected by state policy and procedures. On March 17, 2020, Gov. Ron DeSantis issued Executive Order 20-68 restricting bars, pubs, and nightclubs from selling alcohol and ordered every restaurant to limit its occupancy to $50 \%$ of its current building occupancy and abide by the CDC's "social distancing" guidelines. The Governor issued another order on March 20, 2020, to suspend on-premises food consumption for customers in restaurants. Such establishments could still operate their kitchens for the purpose of providing delivery or take-out services.

Figure F. Reduced Spending on Common Public Activities. Source: UWF Haas Center.


Avg. Decrease in Retail Spending


Avg. Decrease in Restaurants and Bars

Spending


Avg. Decrease in Admissions
and Entertainment Spending

The Haas Center's survey also asked about retail shopping in brick-and-mortar stores. The average reduction in "Retail Shopping (not online)" was $76 \%$ (Figure F), with nearly one-third of respondents reported they decreased this type of spending by 100\% (Table F) as part of their precautionary measures. On April 1, 2020, the governor issued another executive order closing non-essential businesses for 30 days as part of the "Safer-at-Home" mandate. Many states had already enacted such orders, and thus the Earnest Research with The New York Times reflects the same trends in declining retail spending with increases across some online categories.

Many businesses and events cater to large groups and were among the first to be negatively impacted by social distancing guidelines that limit group size. Recreational options diminished as the physical distancing measures increased. Haas Center survey respondents reported their spending declined $91 \%$ (Figure F), while $76 \%$ of respondents eliminated spending in this category (Table F).

The survey data was also used to estimate the potential impact on taxable sales for the state of Florida. The Haas Center utilized the taxable sales monthly historical data from the Florida Department of Revenue. For our purposes, these categories were defined with the following Kind Codes:

- Restaurants and Bars include sales data from Bakeries, Eating and Drinking Places (not restaurants), Restaurants, Lunchrooms, Catering Services, Drinking Places (Alcoholic beverages served on premises)
- Retail Shopping includes Apparel and Accessory Stores and Shoe Stores
- Admissions, Amusement, and Recreation Services is its own kind code.

Table F. Descriptive Statistics on the Reduced Spending on Common Public Activities. Source: UWF Haas Center.

| Spending Category | Minimum | Maximum | Mean | \# of Responses | Items of Note |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |

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Monthly data from 2019 was collected and assumed as the potential baseline of what normal economic taxable sales in these categories would have been without the pandemic. Taxable sales lost from the baseline are just one measure. Any increased sales revenue that may occur during economic growth cycles represent losses that are not estimated here. January 2020 was up $8 \%$ in taxable sales from January 2019, though the difference in annual sales between 2018 and 2019 was only $2 \%$. At the time of this report, the Haas Center has not forecasted the growth of taxable sales across the retail categories used in this analysis for a scenario if there were no pandemic.

Table G shows three sections. To provide comparisons between 2019 and 2020, the first section of the table reports Florida's taxable sales for March 2019 to May 2019. Taxable sales in March, April, and May of last year were approximately $\$ 23.2$ billion for the state, with the majority belonging to restaurants ( $\$ 13.6$ billion). In the second and third sections of the table, the reduced spending reported by survey respondents is utilized as the measure to reduce the estimated taxable sales for 2020. In both Scenario One and Scenario Two, it is assumed that the first two weeks of March were normal (i.e., the reduced spending levels reported by consumers had not yet taken effect). Scenario One assumes that the non-essential order is lifted at the end of April and that the CDC guidelines may be lifted or loosened to allow for normal economic activity. Scenario Two also assumes that decreased spending at the same

Table G Taxable Sales March - May 2019 and Reduced Spending Scenarios. Source: UWF Haas Center.

|  | Mar-19 | Apr-19 | May-19 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Restaurants and Bars | \$4,299,388,874 | \$4,904,318,848 | \$4,355,941,266 | \$13,559,648,989 | 80\% |
| Retail | \$1,405,878,112 | \$1,921,396,295 | \$1,562,430,059 | \$4,889,704,466 | 76\% |
| Admissions, Amusement, and Recreation | \$1,406,614,696 | \$1,908,457,595 | \$1,475,049,893 | \$4,790,122,184 | 91\% |
|  |  |  | Three-Month Subtotal | \$23,239,475,639 |  |
| Scenario One: Reduced Spending Levels for 1.5 months |  |  |  |  |  |
| Restaurants and Bars | \$2,579,633,324 | \$980,863,770 | \$4,355,941,266 | \$7,916,438,360 |  |
| Retail | \$871,644,430 | \$461,135,111 | \$1,562,430,059 | \$2,895,209,599 |  |
| Admissions, Amusement, and Recreation | \$766,605,009 | \$171,761,184 | \$1,475,049,893 | \$2,413,416,086 |  |
|  |  |  | Three-Month Subtotal | \$13,225,064,046 | -43\% |
| Scenario Two: Reduced Spending Levels for 2.5 Months |  |  |  |  |  |
| Restaurants and Bars | \$2,579,633,324 | \$980,863,770 | \$871,188,253 | \$4,431,685,347 |  |
| Retail | \$871,644,430 | \$461,135,111 | \$312,486,012 | \$1,645,265,552 |  |
| Admissions, Amusement, and Recreation | \$766,605,009 | \$171,761,184 | \$295,009,979 | \$1,233,376,172 |  |
|  |  |  | Three-Month Subtotal | \$7,310,327,071 | -69\% |

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reported levels will continue through the end of May. These are just two of a countless number of scenarios that could see reduced spending -but not at the same rates- in May or beyond.

The calculations in Scenario One and Scenario Two suggest that taxable sales for the state of Florida in just these categories alone are estimated to be between $43 \%$ and 69\% less, when compared to the same timeframe in 2019. In the best-case scenario, economic activity would be completely back to normal in May 2020. In the second scenario, economic activity across the three taxable sales categories would remain depressed throughout May as well. All three are visualized in Figure G.

Figure G. Reduced Spending Impact Scenarios for the State of Florida.
Source: UWF Haas Center.


## Conclusion

Initial reports of a confirmed COVID-19 diagnosis in the state of Florida occurred in Quarter 1 of 2020. As a result, travel restrictions and social distancing requirements drastically changed both personal and professional interactions throughout the U.S. Approximately two weeks following the first confirmed COVID-19 case within Florida, the University of West Florida's Haas Center launched a survey to understand some impacts of the outbreak on the state. Over 19 days, applicable data was gathered from over 3,000 Florida residents. Utilizing an online survey, respondents provided information regarding any changes made to their travel plans, employment industry, associated work hours as well as wages lost, changes in spending patterns, and demographic data.

Of all respondents, $65 \%$ planned to travel. Sixty-one percent of participants cancelled or postponed one or more trips because of the outbreak. Of those that altered their travel plans, $40 \%$ reported one or more cancellations, while $21 \%$ postponed their travel. Most cancelled trips were for leisure purposes and for a domestic location. Of these, $36 \%$ were destination locations within the state of Florida (898 trips).

Respondents hailed from diverse occupational backgrounds, which included 20 different industries. ${ }^{17}$ Approximately one quarter of the Florida residents that responded to the Haas Center's survey reported lost wages that ranged from $\$ 173$ to $\$ 1,840 .{ }^{18}$ The most heavily affected workers were those in the "Accommodations and Food" industry, where nearly $70 \%$ of respondents reported income losses. Participants employed within "essential" industries comprised the smallest percentages of workers that reported lost income (e.g., "Utilities," 3\%). Across all participants, $17 \%$ anticipated future lost income due to the outbreak.

Ninety-one percent of participants reported reduced spending on public activities. The largest reduction in spending was within "Admission, Amusement, and Recreation Activities (like Arts, Sports, Concerts, Movies)" (-91\%), followed by "Restaurants and Bars" (-80\%), and "Retail Shopping (not online)" (-76\%). The results of this survey indicate more research is needed to determine the economic impacts of this health crisis as it unfolds. Future research would benefit from re-surveying the same participants to determine any changes in travel and spending patterns over time.

[^6]
## Appendix A: Key Findings for MSA's in Northwest Florida

Pensacola-Ferry Pass-Brent MSA


Avg. Decrease in Retail Spending

Have you lost any wages due to reduced or eliminated shifts because of COVID-19?


Pensacola-Ferry Pass-Brent MSA

Number of Respondents by Zip Code


## Reduced Spending Level Impact Scenarios, Pensacola-Ferry Pass-Brent MSA



Crestview-Fort Walton Beach-Destin MSA


Have you lost any wages due to reduced or eliminated shifts because of COVID-19?

No lost wages $\quad$| Haven't lost wages |
| :--- |
| yet, but likely to do |
| so |$\quad$ Lost Wages

## Crestview-Fort Walton Beach-Destin MSA



## Reduced Spending Level Impact Scenarios, Crestview-Fort Walton Beach-Destin MSA




Have you lost any wages due to reduced or eliminated shifts because of COVID-19?


Panama City MSA

Number of Respondents by Zip Code


## Reduced Spending Level Impact Scenarios, Panama City MSA



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## Appendix B: Respondents by Industry to Income Reduction Question

## Industry (2-digit)

Accommodation and Food Services
Administrative and Support and Waste Management and Remediation Services
Agriculture, Forestry, Fishing and Hunting
Arts, Entertainment, and Recreation
Construction
Educational Services
Finance and Insurance
Government
Health Care and Social Assistance
Information
Management of Companies and Enterprises
Manufacturing
Mining, Quarrying, and Oil and Gas Extraction
Other Services (except Public Administration)
Professional, Scientific, and Technical Services
Real Estate and Rental and Leasing
Retail Trade
Transportation and Warehousing
Utilities
Wholesale Trade


| $13 \%$ | $21 \%$ | $66 \%$ |
| :---: | ---: | ---: |
| $13 \%$ | $50 \%$ | $38 \%$ |
| $54 \%$ | $14 \%$ | $32 \%$ |
| $21 \%$ | $23 \%$ | $57 \%$ |
| $37 \%$ | $33 \%$ | $29 \%$ |
| $65 \%$ | $16 \%$ | $19 \%$ |
| $64 \%$ | $26 \%$ | $10 \%$ |
| $79 \%$ | $14 \%$ | $8 \%$ |
| $49 \%$ | $19 \%$ | $32 \%$ |
| $69 \%$ | $19 \%$ | $12 \%$ |
| $41 \%$ | $30 \%$ | $30 \%$ |
| $51 \%$ | $21 \%$ | $28 \%$ |
| $50 \%$ | $25 \%$ | $25 \%$ |
| $55 \%$ | $15 \%$ | $29 \%$ |
| $56 \%$ | $25 \%$ | $19 \%$ |
| $32 \%$ | $32 \%$ | $36 \%$ |
| $28 \%$ | $24 \%$ | $49 \%$ |
| $37 \%$ | $24 \%$ | $39 \%$ |
| $77 \%$ | $19 \%$ | $3 \%$ |
| $54 \%$ | $31 \%$ | $15 \%$ |

## Appendix C: UWF Haas Center Survey Instrument

## Travel and Spending Assessment of Florida Residents during US COVID-19 Outbreak

IC Travel and Spending Assessment of Florida Residents during US COVID-19 Outbreak Informed Consent the Haas Center at the University of West Florida is conducting a study of the economic impacts of the novel coronavirus (COVID-19).

Confidentiality All data obtained from participants will be kept confidential and will only be reported in an aggregate format (by reporting only combined results and never reporting individual ones). All questionnaires will be concealed, and no one other than the primary investigator and assistant researchers will have access to them. The data collected will be stored in the HIPAA-compliant, Qualtrics-secure database until it has been deleted by the primary investigator.

Participation Participation in this research study is completely voluntary. You have the right to withdraw at any time or refuse to participate.
There are no additional benefits to participation, nor are there any risks outside of those found in daily life activities.

## Questions about the Research

If you have questions regarding this study, you may contact the Haas Center at 8504395400.

Consent Are you willing to participate in this survey and at least 18 years old?Yes (1)No (2)

[^7]Q22 Are you a Florida resident？Yes（1）No（4）

Skip To：End of Survey If Are you a Florida resident？＝No

Q1 Have you cancelled or postponed travel plans because of the novel coronavirus and the disease it causes，COVID－19？


Yes，cancelled（1）Yes，postponed（2）No，I＇ve kept my travel plans（3）No，I didn＇t have any plans（4）

```
Skip To: End of Block If Have you cancelled or postponed travel plans because of the novel coronavirus and the disease it... = No, I've kept my
travel plans
Skip To: End of Block If Have you cancelled or postponed travel plans because of the novel coronavirus and the disease it... = No, I didn't have any
plans
```

```
Display This Question:
    If Have you cancelled or postponed travel plans because of the novel coronavirus and the disease it... = Yes, cancelled
    Or Have you cancelled or postponed travel plans because of the novel coronavirus and the disease it... = Yes, postponed
```


## Q2 How many of your trips were impacted?

1 (1)2 (2)3 (3)4 or more (4)[^8]Or Have you cancelled or postponed travel plans because of the novel coronavirus and the disease it... = Yes, postponed

Q3 Was your cancelled or postponed trip(s) for leisure or business purposes?Leisure (1)I've cancelled or postponed both types of travel. (3)

Trip was for other purposes (4) $\qquad$

Display This Question:
If Have you cancelled or postponed travel plans because of the novel coronavirus and the disease it... = Yes, cancelled
Or Have you cancelled or postponed travel plans because of the novel coronavirus and the disease it... = Yes, postponed

Q4 Tell us about your cancelled/postponed trip:Month of original trip plans: (1) $\qquad$Country: (2)State: (3) $\qquad$City: (4) $\qquad$

```
Display This Question:
    If How many of your trips were impacted? != 1
```


## Q5 Tell us about your second cancelled trip:

Month of original trip plans: (1)Country: (2) $\qquad$State: (3)City: (4) $\qquad$[^9]And How many of your trips were impacted? != 2

Q6 Tell us about your third cancelled trip:Month of original trip plans: (1) $\qquad$Country: (2)State: (3)City: (4)

## End of Block: Travel

## Start of Block: Wages

Q7 Have you lost any wages due to reduced or eliminated shifts because of the coronavirus?Yes (1)Not yet, but likely to lose some in the near future (2)No (3)

## Display This Question:

If Have you lost any wages due to reduced or eliminated shifts because of the coronavirus? != No

Q8 What is your hourly wage?

```
Display This Question:
    If Have you lost any wages due to reduced or eliminated shifts because of the coronavirus? != No
```

Q9 How many total hours in compensated work do you estimate that you have lost so far?

Q10 In which industry is your job?
Industry (2-digit) (1)
Industry (4-digit) (2)

- Agriculture, Forestry, Fishing and Hunting (1) ... Government ~ Local Government, Excluding Education and Hospitals (320)

Q11 Have you reduced your spending on common public activities like eating in restaurants, going shopping, or going to the movies since the spread of the coronavirus in the US?Yes (1)No (2)

## Display This Question:

If Have you reduced your spending on common public activities like eating in restaurants, going shop... = Yes

Q12 By what percentage have you decreased your spending in each of these categories?

| Restaurants and bars |
| :--- |
| Retail shopping (not online) |
| Admissions, Amusement, and Recreation Activities |
| (Arts, Sports, Concerts, Movies) |

Instructions In the final part of the survey, we will ask you several questions for statistical purposes only. Again, all of your answers will remain confidential.

D1 What is your zip code of residence?

FL County Please select the county in which you reside.
$\boldsymbol{V}$ Select one (1) ... Washington (68)

D2 To which age group do you belong?18-24 (1)25-34(2)35-44 (3)45-54 (5)55-64 (6)65 or older (7)Prefer not to respond (8)
D3 What is your annual household income?< \$25,000 (1)\$25,000 - \$34,999 (2)\$35,000-\$49,999 (3)\$50,000 - \$74,999 (4)\$75,000-\$99,999 (5)\$100,000 - \$149,999 (6)\$150,000 - \$199,999 (7)$>\$ 200,000$ ( 8 )Prefer not to respond (9)

D4 What is your gender?Male (1)Female (2)Other (3)Prefer not to Respond (4)

D5 What is your race or ethnicity?Hispanic or Latino (1)Asian (2)Black or African American (3)American Indian or Alaska Native (4)Native Hawaiian or Other Pacific Islander (5)White or Caucasian (6)More than one race (7)Some other race (8)Unwilling to Respond (9)

D6 What's your highest level of education completed?Less than high school (1)High school graduate or equivalent (2)Some college (3)A.A. or A.S. degree (4)Bachelor's degree (5)Master's degree (6)Post-graduate degree (7)Unwilling to respond (8)

Q25 Thank you for your time. This survey was conducted by the University of West Florida and the Haas Center for research purposes. For further information on this survey, please contact Amy Newburn at anewburn@uwf.edu.

## Appendix D: Response by 4-Digit Industry Code. Source: UWF Haas Center.

| Industry (4-digit) | \# Participants | \% Participants |
| :---: | :---: | :---: |
| Accounting, Tax Preparation, Bookkeeping, and Payroll Services | 9 | 1\% |
| Activities Related to Credit Intermediation | 3 | 0\% |
| Activities Related to Real Estate | 22 | 2\% |
| Advertising, Public Relations, and Related Services | 5 | 0\% |
| Aerospace Product and Parts Manufacturing | 4 | 0\% |
| Agencies, Brokerages, and Other Insurance Related Activities | 10 | 1\% |
| Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures | 1 | 0\% |
| Amusement Parks and Arcades | 11 | 1\% |
| Animal Production | 2 | 0\% |
| Architectural, Engineering, and Related Services | 11 | 1\% |
| Automobile Dealers | 2 | 0\% |
| Automotive Parts, Accessories, and Tire Stores | 2 | 0\% |
| Automotive Repair and Maintenance | 7 | 0\% |
| Basic Chemical Manufacturing | 2 | 0\% |
| Beer, Wine, and Liquor Stores | 1 | 0\% |
| Building Material and Supplies Dealers | 7 | 0\% |
| Business Support Services | 1 | 0\% |
| Business, Professional, Labor, Political, and Similar Organizations | 36 | 2\% |
| $\begin{aligned} & \text { Eै } \\ & \text { UWF F } \end{aligned} \text { Haas Center }$ |  |  |


| Cement and Concrete Product Manufacturing | 1 | 0\% |
| :---: | :---: | :---: |
| Chemical and Allied Products Merchant Wholesalers | 2 | 0\% |
| Child Day Care Services | 1 | 0\% |
| Civic and Social Organizations | 7 | 0\% |
| Clothing Stores | 11 | 1\% |
| Colleges, Universities, and Professional Schools | 106 | 7\% |
| Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and |  |  |
| Maintenance | 2 | 0\% |
| Communications Equipment Manufacturing | 1 | 0\% |
| Community Food and Housing, and Emergency and Other Relief Services | 4 | 0\% |
| Computer Systems Design and Related Services | 23 | 2\% |
| Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly | 2 | 0\% |
| Crop Production | 3 | 0\% |
| Data Processing, Hosting, and Related Services | 5 | 0\% |
| Death Care Services | 3 | 0\% |
| Deep Sea, Coastal, and Great Lakes Water Transportation | 1 | 0\% |
| Department Stores | 9 | 1\% |
| Depository Credit Intermediation | 8 | 1\% |
| Direct Selling Establishments | 3 | 0\% |
| Drinking Places (Alcoholic Beverages) | 11 | 1\% |
| Dry cleaning and Laundry Services | 1 | 0\% |
| Education and Hospitals (Local Government) | 1 | 0\% |

```
0%
%
%
%
7%
%
%
2%
%
%
%
%
%

\begin{tabular}{|c|c|c|}
\hline Education and Hospitals (State Government) & 5 & 0\% \\
\hline Educational Support Services & 19 & 1\% \\
\hline Electric Power Generation, Transmission and Distribution & 16 & 1\% \\
\hline Electronic and Precision Equipment Repair and Maintenance & 3 & 0\% \\
\hline Electronics and Appliance Stores & 2 & 0\% \\
\hline Elementary and Secondary Schools & 87 & 6\% \\
\hline Employment Services & 1 & 0\% \\
\hline Engine, Turbine, and Power Transmission Equipment Manufacturing & 1 & 0\% \\
\hline Federal Government, Civilian & 45 & 3\% \\
\hline Federal Government, Military & 17 & 1\% \\
\hline Fishing & 3 & 0\% \\
\hline Florists & 3 & 0\% \\
\hline Forest Nurseries and Gathering of Forest Products & 2 & 0\% \\
\hline Foundation, Structure, and Building Exterior Contractors & 2 & 0\% \\
\hline Freight Transportation Arrangement & 3 & 0\% \\
\hline Furniture Stores & 1 & 0\% \\
\hline Gambling Industries & 1 & 0\% \\
\hline Gasoline Stations & 1 & 0\% \\
\hline General Freight Trucking & 1 & 0\% \\
\hline General Medical and Surgical Hospitals & 37 & 3\% \\
\hline General Merchandise Stores, including Warehouse Clubs and Supercenters & 9 & 1\% \\
\hline General Rental Centers & 1 & 0\% \\
\hline Haas Center & & \\
\hline
\end{tabular}

\section*{0\%}
\(1 \%\)
\begin{tabular}{|c|c|c|}
\hline Grocery and Related Product Merchant Wholesalers & 5 & 0\% \\
\hline Grocery Stores & 10 & 1\% \\
\hline Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers & 1 & 0\% \\
\hline Health and Personal Care Stores & 4 & 0\% \\
\hline Highway, Street, and Bridge Construction & 1 & 0\% \\
\hline Home Furnishings Stores & 2 & 0\% \\
\hline Home Health Care Services & 20 & 1\% \\
\hline Independent Artists, Writers, and Performers & 24 & 2\% \\
\hline Individual and Family Services & 17 & 1\% \\
\hline Industrial Machinery Manufacturing & 1 & 0\% \\
\hline Inland Water Transportation & 2 & 0\% \\
\hline Insurance and Employee Benefit Funds & 2 & 0\% \\
\hline Insurance Carriers & 5 & 0\% \\
\hline Investigation and Security Services & 1 & 0\% \\
\hline Jewelry, Luggage, and Leather Goods Stores & 1 & 0\% \\
\hline Junior Colleges & 7 & 0\% \\
\hline Lawn and Garden Equipment and Supplies Stores & 1 & 0\% \\
\hline Legal Services & 11 & 1\% \\
\hline Lessors of Real Estate & 14 & 1\% \\
\hline Local Government, Excluding Education and Hospitals & 31 & 2\% \\
\hline Local Messengers and Local Delivery & 1 & 0\% \\
\hline Lumber and Other Construction Materials Merchant Wholesalers & 1 & 0\% \\
\hline Haas Center & & \\
\hline
\end{tabular}

\% 1\%
0\%
\%
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing ..... 1
Management of Companies and Enterprises ..... 20 ..... \(1 \%\)
Management, Scientific, and Technical Consulting Services ..... 19 ..... \(1 \%\)
Medical and Diagnostic Laboratories ..... 10
Medical Equipment and Supplies Manufacturing ..... 2 ..... 0\%
Metal Ore Mining ..... 1
Metalworking Machinery Manufacturing ..... 1
Miscellaneous Nondurable Goods Merchant Wholesalers ..... 1
Monetary Authorities-Central Bank ..... 2
Motor Vehicle Body and Trailer Manufacturing ..... 1
Motor Vehicle Parts Manufacturing ..... 1
Museums, Historical Sites, and Similar Institutions ..... 3
Natural Gas Distribution ..... 2
Newspaper, Periodical, Book, and Directory Publishers ..... 2
Nonresidential Building Construction ..... 6
Nonscheduled Air Transportation ..... 2
Nursing Care Facilities (Skilled Nursing Facilities) ..... 9
Office Administrative Services ..... 6
Office Supplies, Stationery, and Gift Stores ..... 1
Offices of Dentists ..... 8
Offices of Other Health Practitioners ..... 6
Offices of Physicians ..... 271\%0\%0\%0\%0\%0\%0\%0\%0\%
Offices of Real Estate Agents and Brokers ..... 14 ..... 1\%
Oil and Gas Extraction ..... 2
Other Ambulatory Health Care Services ..... 10
Other Amusement and Recreation Industries ..... 16
Other Electrical Equipment and Component Manufacturing ..... 1
Other Fabricated Metal Product Manufacturing ..... 1
Other Financial Investment Activitie ..... 13
Other Furniture Related Product Manufacturing ..... 1
Other Heavy and Civil Engineering Construction ..... 1 ..... 0\%
Other Information Services ..... 18
Other Miscellaneous Manufacturing ..... 3
Other Miscellaneous Store Retailers ..... 13 ..... 1\%
Other Motor Vehicle Dealers ..... 1 ..... 0\%
Other Personal Service ..... 31
Other Professional, Scientific, and Technical Services ..... 47
Other Residential Care Facilities ..... 3
Other Schools and Instruction ..... 20
Other Specialty Trade Contractor ..... 21
Other Support Activities for Transportation ..... 6
Other Support Services ..... 3
Other Telecommunications ..... 3
Other Transit and Ground Passenger Transportation ..... 30\%\(1 \%\)1\%0\%0\%1\%0\%1\%0\%2\%
Other Wood Product Manufacturing ..... 2
Outpatient Care Centers ..... 191\%
Performing Arts Companies ..... 10
Personal and Household Goods Repair and Maintenance ..... 5
Personal Care Services ..... 18
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing ..... 1
Petroleum and Coal Products Manufacturing ..... 1
Pharmaceutical and Medicine Manufacturing ..... 1
Postal Service ..... 1
Printing and Related Support Activities ..... 1
Private Households ..... 26
Promoters of Performing Arts, Sports, and Similar Events ..... 1 ..... 0\%
Psychiatric and Substance Abuse Hospitals ..... 6 ..... 0\%
Pulp, Paper, and Paperboard Mills ..... 2
Radio and Television Broadcasting ..... 1
Rail Transportation ..... 2
Religious Organizations ..... 6
Residential Building Construction ..... 19
Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities ..... 4
Restaurants and Other Eating Places ..... 56
Rooming and Boarding Houses, Dormitories, and Workers' Camps ..... 1
Sawmills and Wood Preservation ..... 1\(1 \%\)0\%\(1 \%\)0\%0\%0\%0\%0\%2\%Haas Center
Scenic and Sightseeing Transportation, Land ..... 1
Scenic and Sightseeing Transportation, Water ..... 1
Scheduled Air Transportation ..... 6
School and Employee Bus Transportation ..... 1
Scientific Research and Development Services ..... 12
Seafood Product Preparation and Packaging ..... 1
Securities and Commodity Contracts Intermediation and Brokerage ..... 1
Securities and Commodity Exchanges ..... 1
Shoe Stores ..... 2
Social Advocacy Organizations ..... 6
Software Publishers ..... 6
Special Food Services ..... 8
Specialized Design Services ..... 1
Specialized Freight Trucking ..... 2
Specialty (except Psychiatric and Substance Abuse) Hospitals ..... 12
Specialty Food Stores ..... 3
Spectator Sports ..... 3
Sporting Goods, Hobby, and Musical Instrument Stores ..... 3
State Government, Excluding Education and Hospitals ..... 27
Steel Product Manufacturing from Purchased Steel ..... 1
Sugar and Confectionery Product Manufacturing ..... 1
Support Activities for Animal Production ..... 1
Support Activities for Crop Production ..... 3
Support Activities for Forestry ..... 1
Support Activities for Water Transportation 1
Taxi and Limousine Service ..... 6
Technical and Trade Schools ..... 2
Travel Arrangement and Reservation Services ..... 1
Traveler Accommodation ..... 11
Used Merchandise Store ..... 3
Utility System Construction ..... 1
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing ..... 1
Vocational Rehabilitation Services ..... 1
Warehousing and Storage ..... 6
Water, Sewage and Other Systems ..... 3
Wholesale Electronic Markets and Agents and Brokers ..... 2
Wired and Wireless Telecommunications Carriers ..... 2

\section*{Appendix E: Additional Charts. Source: New York Times.}

\section*{Spending on media and entertainment is mixed, with many losers and a few winners.}


Change in spending from 2019 for the week ending April 1.

\section*{Shopping is down overall, especially at brick-and-mortar stores.}


Change in spending from 2019 for the week ending April 1.

\section*{Restaurant sales have plummeted.}


Change in spending from 2019 for the week ending April 1.```


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[^3]:    ${ }^{10}$ United States, Department of Homeland Security, Cybersecurity \& Infrastructure Security Agency. "Advisory Memorandum on Identification of Essential Critical Infrastructure Workers During COVID-19 Response." 28 Mar. 2020, https://www.cisa.gov/sites/default/files/publications/CISA_Guidance_on_the_Essential_Critical_Infrastructure_Workforce_Version_2.0_Updated.pdf

[^4]:    ${ }^{11}$ University of Florida, Bureau of Economic and Business Research, "Florida Consumer Sentiment Index." 31 Mar. 2020 https://www.bebr.ufl.edu/sites/default/files/csi/csi_2020_31_march.pdf
    ${ }^{12}$ University of Florida, Bureau of Economic and Business Research, "Florida Consumer Sentiment Index." 28 Apr. 2020 https://www.bebr.ufl.edu/sites/default/files/csi/csi 2020 _ 28 april.pdf
    ${ }^{13}$ University of Michigan, "Surveys of Consumers." 28 Apr. 2020 http://www.sca.isr.umich.edu/

[^5]:    ${ }^{14}$ U.S. Census Bureau, "Advance Monthly Retail Trade Survey." 15 Mar. 2020, https://www.census.gov/retail/marts/www/marts current.pdf
    ${ }^{15}$ Leatherby, Lauren, and David Gelles. "How the Virus Transformed the Way Americans Spend Their Money." The New York Times, The New York Times, 11 Apr. 2020,
    www.nytimes.com/interactive/2020/04/11/business/economy/coronavirus-us-economy-spending.html
    ${ }^{16}$ Nevertheless, the average value of a cash transaction was $\$ 21$, compared with $\$ 206$ for the average noncash transaction (and $\$ 92$ for all transactions), suggesting that these transactions make up a

[^6]:    Twenty industries at the NAICS code two-digit level and 186 industries at the four-digit level
    ${ }^{18}$ Median lost work hours that ranged from 16 to 40.

    Haas Center

[^7]:    Skip To: End of Survey If Are you willing to participate in this survey and at least 18 years old? = No

[^8]:    Display This Question:
    If Have you cancelled or postponed travel plans because of the novel coronavirus and the disease it... = Yes, cancelled

[^9]:    Display This Question:
    If How many of your trips were impacted? != 1

