

Economic Impacts of COVID-19: The Workforce in Hampton Roads

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Executive Summary

In order to reduce the spread of the novel coronavirus, which causes the respiratory disease COVID-19 and for which there is no known cure or vaccine, much of the world has suspended routine activities. In most states in the U.S., non-essential businesses were fully or partially closed, as was the case in Hampton Roads. In this study, the Hampton Roads Planning District Commission (HRPDC) reviews data from the U.S. Bureau of Labor Statistics and the U.S. Department of Labor in attempts to understand the potential impacts these closures may have on the overall civilian workforce of Hampton Roads. This study analyzes regional civilian employment and wages in high risk industries from June 2019 and occupational employment in close-proximity jobs from May 2019 and reports the share of these of industries and positions that makes up the regional workforce. The discussion section compares the results to statewide and national shares and considers adjustments to the general methodology due to the region's unique attributes. The results show that 24% of the civilian payroll workforce in Hampton Roads are employed in what are considered "highly exposed" sectors compared to 20% in the United States. However, when adjusted to include the significant active duty military in the region, the share is lowered to 21.6%, still slightly above the national average. When adjusted even further to remove the ship and boatbuilding and repair industry from the list of at-risk sectors, the share of vulnerable workers dips below the national average to 18.1%.

Introduction and Background

On May 8th, 2020, the Bureau of Labor Statistics (BLS) released the April 2020 Employment Situation report, which stated that total nonfarm payroll employment in the United States fell by 20.5 million jobs, and the unemployment rate rose by 10.3 percentage points to 14.7 percent. The number of unemployed people rose by 15.9 million to a total of 23.1 million in April. While jobless rates rose sharply among all major worker groups, the largest employment decline occurred in leisure and hospitality, where employment plummeted by 7.7 million jobs, or 47%, in April. These drastic changes reflect the impacts of the efforts to contain the spread of COVID-19, the disease caused by the novel coronavirus that began spreading in the U.S. during January 2020. This report highlights the catastrophic collapse of the labor market that marked the worst month for job losses in American history.

To reduce the spread of COVID-19, nearly all states have issued stay-at-home orders and shut down establishments deemed nonessential, including the Commonwealth of Virginia. On March 12, Virginia Governor Ralph Northam declared a State of Emergency for the Commonwealth, and on March 23, Governor Northam issued Executive Order 53, which included the banning of all gatherings of more than 10 people, closing schools for the remainder of the academic year, closing dining and congregation areas in restaurants, breweries (excluding curbside pickup), and closing all public access to recreational and entertainment businesses. On March 30, Governor Northam issued Executive Order 55, expanding on E.O. 53, which required everyone to remain at their place of residence through June 10 unless amended or rescinded, as well as requiring people using shared or outdoor spaces to maintain social distancing of at least six feet. Finally, on May 8, Governor Northam issued Executive Order 61, Phase 1 easing of certain temporary restrictions due to COVID-19, which outlines preliminary opening of businesses that were closed in attempts to slow the spread of the virus. Under Phase 1, some retail, eating and drinking, and personal care and grooming establishments are permitted to open, as long as specific guidelines are adhered to.

As Virginia begins Phase 1 of its reopening plan, businesses across Hampton Roads are slowly beginning to open their doors (and patios), while residents can expect to live a new normal for at least the

foreseeable future. As we enter these uncharted territories, it is important to take a closer look at the makeup of the regional workforce in order to better understand the sectors and workers most at risk. Answering the following questions is crucial to assessing the potential labor market impacts of the shutdown, or any future shutdowns that may follow if there is another spike in cases: How many jobs are in the industries that are most impacted by the shut down? What wages do they pay? What occupations pose the greatest health risk to employees and customers due to their innate and necessary proximity to others?

This report attempts to answer those questions by analyzing data from the U.S. Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW) and Occupational Employment Statistics (OES) programs, as well as from the U.S. Department of Labor/Employment and Training Administration's Occupational Information Network, or O*NET. The results are not predicting the jobs that have been or could be lost or furloughed, but reporting the share of total civilian employment in the region that exists in industries and occupations that are sensitive to the impacts of a communicable disease like COVID-19.

Estimating the workforce impacts of COVID-19 in Hampton Roads

While regional payroll employment data for April 2020 is not yet available for Hampton Roads due to data lags, if the regional trend stays consistent with the national trend (over 13% loss of jobs from March to April), it's possible that the BLS could report up to 100,000 job losses in Hampton Roads. This tracks closely with the number of initial unemployment claims that have been filed in the region; as of the week ending May 9, there were 85,535 continued weekly unemployment claims.

According to a survey completed by SIR, a strategic management consulting firm, and reported by the COVID-19 Business Recovery Forum – 757, 36% of businesses in Hampton Roads reported an overall decrease in their workforce from the same period last year. Two-thirds of respondents report that COVID has been disruptive or extremely disruptive to their business. A third of businesses with reduced workforce are unsure when they may start to increase staffing again, while a quarter hope to start increasing staff in June, while 7% seem to have made these reductions permanent. Three in five have applied for some form of CARES Act relief, and nine of ten of those have applied for relief under the Paycheck Protection Program (PPP).

This survey is incredibly useful to help understand how local businesses are faring specifically in response to the pandemic. To supplement this analysis, this report explores pre-COVID data in directly exposed sectors and their employees and total wages collected, as well as at-risk occupations. Using data from the BLS current employment statistics Quarterly Census of Employment and Wages (QCEW) by detailed NAICS industry codes, this report measures how many people work in the most exposed businesses. Six of the most directly exposed sectors include: Restaurants and Bars, Travel and Transportation, Entertainment (e.g., casinos and amusement parks), Personal Services (e.g., dentists, daycare providers, barbers), other sensitive Retail (e.g., department stores and car dealers) and sensitive Manufacturing (e.g., aircraft and car manufacturing).¹ The industries used in this report are based on a

¹ NAICS Classification: Restaurants and bars: 7223-7225. Travel and Transportation: 4811,4812, 4853, 4854, 4859, 4881,4883, 7211. Personal Services: 6212, 8121,8129. Entertainment: 7111, 7112, 7115, 7131, 7132, 7139. Other sensitive retail: 4411, 4412, 4421, 4422, 4481, 4482, 4483,4511,4512, 4522, 4531, 4532, 4539, 5322, 5323, 4243, 4413, 4543. Sensitive Manufacturing: 3352, 3361, 3362, 3363, 3364, 3366, 3371, 3372, 3379, 3399, 4231, 4232, 4239, 3132, 3141, 3149, 3152.

report conducted by Joseph S. Vavra of the Becker Friedman Institute for Economics at the University of Chicago, and has been replicated by the BLS for additional study. Data was gathered from the second quarter of 2019, employment totals from the third month of the second quarter (June 2019), since this period precedes the current shutdown by roughly one year, so possible seasonality in the data is not a concern.

Finally, to look at specific occupations that may be affected by the spread of a contagious virus for which there is no known cure or preventative vaccine, this report analyzes a Department of Labor/Employment and Training Administration data set produced by O*NET titled Work Context – Physical Proximity. This data set is a list of occupations based on the physical proximity to others that takes into consideration the question “To what extent does this job require the worker to perform job tasks in close physical proximity to other people?” Occupations are scored on a scale of 0 – 100, where 0 is “I don’t work near other people (beyond 100 feet)” 25 is “I work with others but not closely” to 100 “Very close (near touching)” (see Table 1). Occupations are broken out by detailed occupation code, and HRPDC staff matched to BLS Occupational Employment Statistics (OES) survey data for the Virginia Beach-Norfolk-Newport News MSA using the most recent data available, May 2019 estimates.

It must be noted that this data does not include counts of active duty military, which is an especially important and large part of the workforce in Hampton Roads. These jobs are not at high risk of loss due to COVID-19, but they do represent a share of the total workforce that could skew the shares of impacted sectors discussed in this report. See more on this in the discussion section.

Work Context - Physical Proximity

To what extent does this job require the worker to perform job tasks in close physical proximity to other people?

0	25	50	75	100
I don't work near other people (beyond 100 ft.)	not closely (e.g. private office)	Slightly close (e.g. shared office)	Moderately close (at arm's length)	Very close (near touching)

Table 1: O*NET Work Context – Physical Proximity scale. Source: Department of Labor’s O*NET OnLine

Results

In June of 2019, employment levels in the most exposed sectors were greatest in Restaurants and Bars, followed by Sensitive Manufacturing and Other Sensitive Retail. For a complete list of each individual sector, see Table 4 in the Appendix of this report. Table 2 shows the total payroll employment levels for each exposed sector as of June 2019, as well as the total wages paid in Q2 2019 in each exposed sector.

Restaurants and Bars employed a total of 70,624 people in Hampton Roads, with wages totaling over \$300 million in the second quarter of 2019. Representing roughly half the total number of employees (37,125) but over double the amount of wages during the same period of 2019 (\$644 million), *Sensitive Manufacturing* follows as the second most exposed sector. This sector includes ship and boat building, representing nearly 30,000 high paying jobs in Hampton Roads, and is one of the industries unique to the region. Following closely behind manufacturing in terms of total payroll employment levels is *Sensitive Retail*, with over 35,000 jobs and \$268 million in Q2 2019 wages, the specific industries included in this sector are more spread out. They include automobile dealers, clothing stores, department stores, sporting goods stores, generally the types of retail that make up the base of most metropolitan areas, and what is likely to be similarly impacted across the entire nation. For graphical representation of these results, see Figures 4 and 5 in the Appendix.

Hampton Roads Payroll Employment and Wages in Most Exposed Sectors to COVID-19

Restaurants and Bars	Travel and Transportation	Entertainment	Personal services	Other sensitive retail	Sensitive manufacturing	Most exposed sectors combined
Employment levels in June 2019						
70,624	17,036	10,561	12,823	35,318	37,125	183,487
Total wages paid in second quarter 2019						
\$300,586,507	\$149,094,713	\$104,015,246	\$50,943,655	\$268,803,626	\$644,048,463	\$1,517,492,210

Table 2: Total payroll employment and wages paid in Q2 2019 in Hampton Roads in most exposed sectors to COVID-19. Source: BLS, HRPDC

Figure 1 shows the share of total payroll employment and total wages paid in Q2 2019 in these exposed sectors in Hampton Roads. This chart clearly depicts the Restaurant and Bar sector with the total number of employees but a much lower share of total wages while the sensitive manufacturing sector holds a lower share of total jobs but much larger share of total wages.

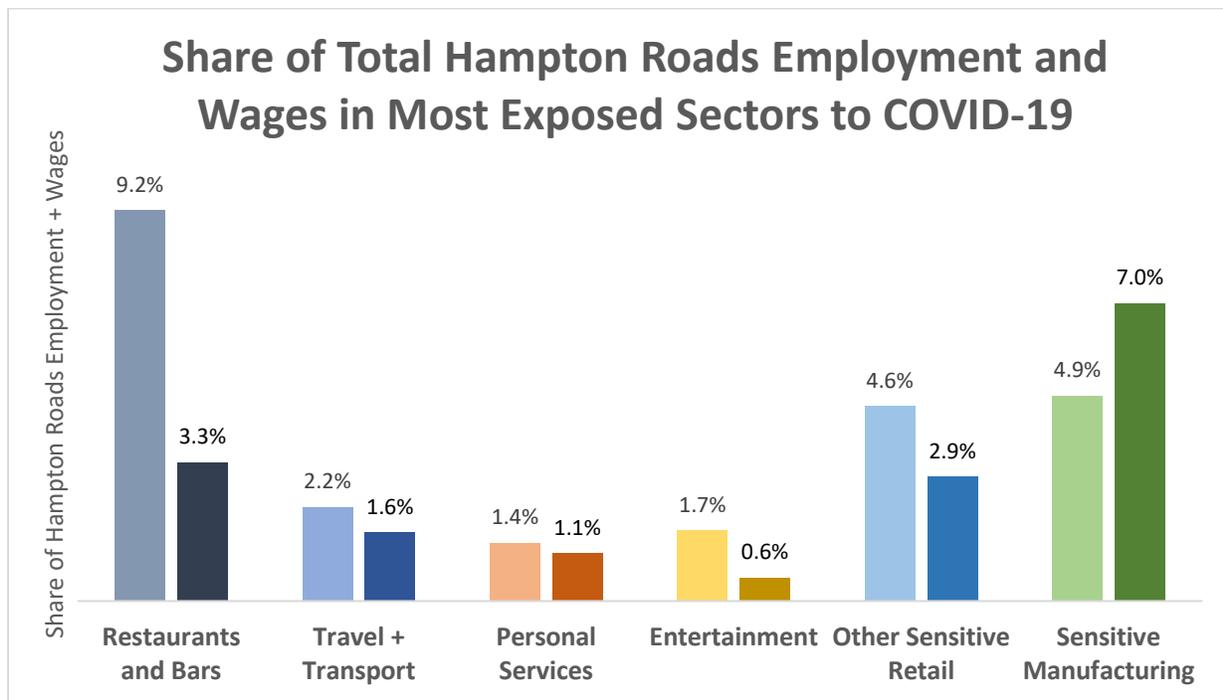


Figure 1: Share of total Hampton Roads payroll employment (June 2019) and total wages (paid in Q2 2019) in most exposed sectors to COVID-19. Source: BLS, HRPDC.

The results of the crosswalk between proximity of workers to others in their occupations in Hampton Roads, table 3 shows the total percentage of the Hampton Roads workforce that holds scores from 90-100 and from 75-100. For example, O*NET reported that physical therapists scored at 100, meaning those holding this occupation are required to be in very close physical proximity to other people, giving these jobholders a potentially higher likelihood of contracting coronavirus if working with an infected patient. Close behind with scores of 99 are dental assistants, dentists, skincare specialists, and surgical technologists. Jobs with low proximity scores are poets, lyricists and creative writers, logging equipment operators, farmworkers and crop laborers, and bridge and lock tenders. For further context, the list of close proximity occupations in Hampton Roads with scores from 90-100 and from 75-89 are included as Table 5 in the Appendix.

The share of those in Hampton Roads who hold occupations with a score of over 90 is 8.82%, while the share of those holding occupations with a score of over 75 is just shy of 33%. This essentially means that

one-third of the workforce in Hampton Roads works in occupations that require them to perform their job “moderately close,” or within arm’s length, to other people. When compared to the nation, the results for occupations with scores of over 90 the results are nearly identical with 8.8% of the nation holding those occupations, while those holding occupations over 75 are 31.94%, roughly one percentage point lower than the share of those who hold similar proximity occupations in Hampton Roads.

Proximity Score	Total Employment	Share of Hampton Roads Work Force
100	1,240	0.17%
99	3,550	0.48%
98	70	0.01%
97	370	0.05%
96	110	0.01%
95	21,190	2.84%
94	28,710	3.85%
93	800	0.11%
92	2,080	0.28%
91	800	0.11%
90	6,870	0.92%
Total 90-100	65,790	8.82%
89	4,360	0.58%
88	5,190	0.70%
87	900	0.12%
86	2,240	0.30%
85	1,800	0.24%
84	2,810	0.38%
83	8,110	1.09%
82	6,210	0.83%
81	13,440	1.80%
80	14,650	1.96%
79	22,320	2.99%
78	21,410	2.87%
77	23,340	3.13%
76	27,920	3.74%
75	25,650	3.44%
Total 75-100	246,140	32.99%

Table 3: Proximity score crosswalk in Hampton Roads. Source: U.S. DOL O*NET, HRPDC.

Discussion

In total, these sectors account for just over 20% of all US payroll employment, so shutdowns of these sectors on their own will lead to massive declines in employment. In Hampton Roads, these sectors account for 24% of civilian payroll employment, suggesting that the civilian workforce of Hampton Roads may be more vulnerable than that of the rest of the nation. This is possibly due to a heavy reliance of the regional economy on tourism, which impacts the restaurant and bar sector, as well as the unique specialization in ship and boat building, showing the sensitive manufacturing sector to employ more than twice the share of the Hampton Roads workforce than the rest of the nation. Figures 2 and 3 compare the shares of total employment and wages in the six most exposed sectors between Hampton Roads and the U.S. national averages.

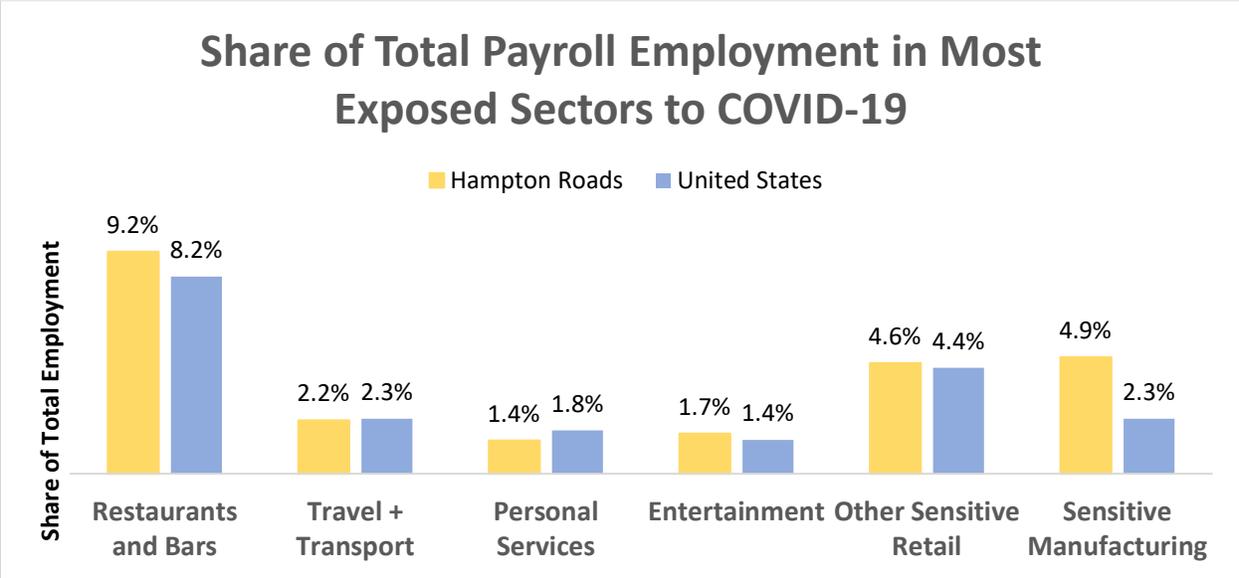


Figure 2: Share of total U.S. payroll employment in most exposed sectors to COVID-19, Hampton Roads vs. U.S. Source: BLS, HRPDC.

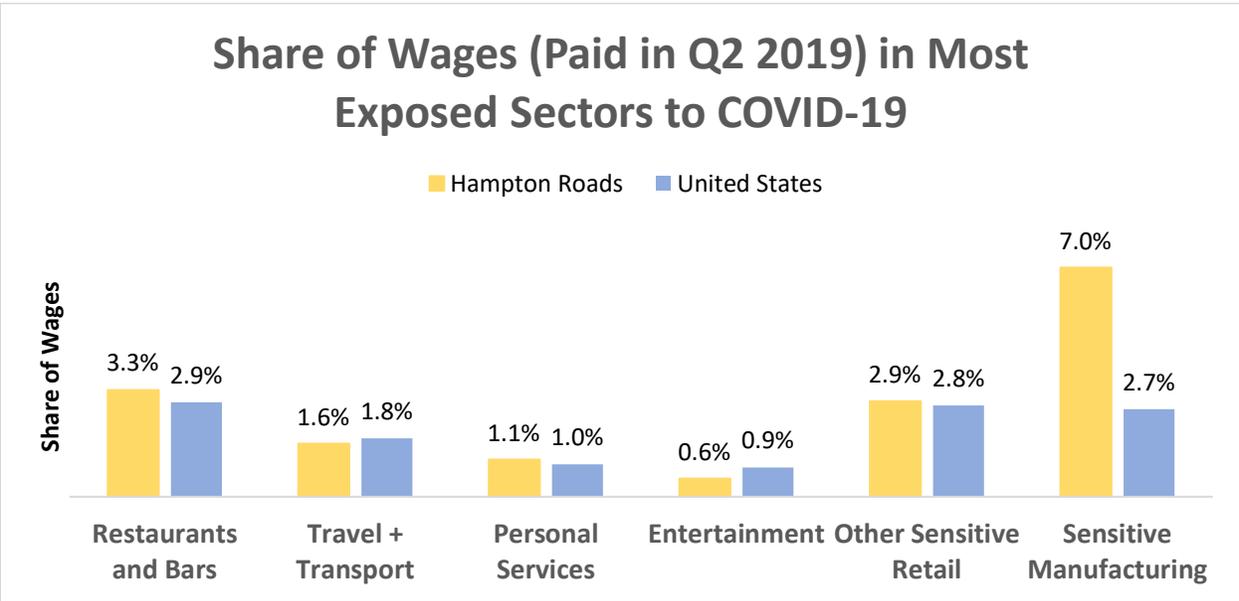


Figure 3: Share of wages (paid in Q2 2019) in most exposed sectors to COVID-19, Hampton Roads vs. U.S. Source: BLS, HRPDC.

As briefly mentioned in the introduction section of this report, the data used in this analysis is provided by the Bureau of Labor Statistics on U.S. payroll employment, which does not include active duty military employment and wages. Due to the stability of these jobs, employment in the active duty military sector is not likely to be affected in the near-term, so the gross share of each of the exposed sectors' employment and wages in Hampton Roads will be smaller once military employment is included, however, their relationship to each other remains the same. As stated above, the share of total employment in the most exposed sectors in Hampton Roads is calculated at roughly 24%, but taking into consideration the number of active duty personnel in the region the share of employment in exposed sectors is closer to 21.6% – still slightly elevated over the nation.

Since Ship & Boat Building and Repair is both a large outlier in this data set regionally and is a unique specialization in the region, it deserves additional discussion. According to Huntington Ingalls Industries (HII) chief financial officer Chris Kastner, coronavirus will continue to boost costs of doing business for Newport News Shipbuilding's parent company, but that will not result in a decline in shipbuilding revenue or profits. Given the unprecedented visibility and stability provided by HII's \$45 billion in backlog in contracts the company remains confident in their ability to minimize the impact of COVID-19 on businesses, and specifically on the ship and boatbuilding and repair industry. If the methodology in this report did not consider the ship and boat building industry to be included in the most exposed sectors, the share of the workforce and wages paid in exposed sectors decreases dramatically. By removing this industry, 20.1% of the civilian workforce is employed in an exposed sector, on par with the national average. Adjusting further to include active duty military, the regional share of employment falls below that of the nation, to 18.1%. This same relationship can be said for the share of wages in exposed industries. When the ship and boatbuilding industry is not considered exposed and wages remain intact, the share of wages considered at risk from the impacts of coronavirus drops from 16.6% to 10.6%, lower than that of the nation at 12.1%.

Overall, the analysis of the BLS data from June 2019 reveals that occupations with lower wages are more common in the shutdown sectors than elsewhere in the economy, and that higher paying jobs are less common in those sectors overall (excluding the impact that ship and boatbuilding industry has on sensitive manufacturing sector in Hampton Roads), revealing that the shutdown disproportionately affects workers in lower paying jobs.

So what might all this mean? A large number of jobs in Hampton Roads are in sectors directly affected by the COVID-19 shutdowns. The share of civilian payroll employment in exposed sectors in the Commonwealth of Virginia sits at 19.7%, slightly below the average of the nation as well as that of Hampton Roads (using the original methodology with ship and boat building remaining as an exposed sector). States with heavy reliance on tourism – Nevada, Hawaii and Florida – have the highest shares of employment in the exposed sectors while midwestern states like Minnesota, Iowa and Nebraska have a lower share. However, not a single state has a share lower than 16.3% of their employees in these exposed sectors, proving that this pandemic is impacting a large part of the workforce in every state of the nation.

The degree to which the workforce associated with these industries is impacted is not only determined by how fast or slow the virus continues to spread and the policies that are enacted at a federal, state, and local level, but also on consumer confidence and behavior. If consumers are wary about visiting restaurants or personal care facilities because they are scared of contracting the virus, the longer it may take for businesses in those industries to bounce back from the shutdown, and the associated workforce might suffer. Additionally, if consumers themselves have lost income due to the impacts of the virus, demand in certain industries may also take longer to rebound, as there may be less disposable income to spend in the restaurant and tourism industries. As data continues to be released over the next 6-12 months, HRPDC

will keep a close eye on these most exposed industries in order to gauge how the workforce has been impacted in the region.

Appendix

4-digit NAICS	
Restaurants and Bars	
7223	Special Food Services
7224	Drinking places, alcoholic beverages
7225	Restaurants and other eating places
Travel + Transport	
4811	Scheduled air transportation
4812	Non-scheduled air transportation
4853	Taxi and limousine services
4854	School and employee bus transportation
4859	Other ground passenger transportation
4881	Support activities for air transportation
4883	Support activities for water transportation
7211	Traveler accommodation
Personal Services	
6212	Offices of dentists
8121	Personal care services
8129	Other personal services
Entertainment	
7111	Performing arts companies
7112	Spectator sports
7115	Independent artists, writers, performers
7131	Amusement parks and arcades
7132	Gambling industries
7139	Other amusement and recreation industries
Other Sensitive Retail	
4411	Automobile dealers
4412	Other motor vehicle dealers
4421	Furniture stores
4422	Home furnishings stores
4481	Clothing stores
4482	Shoe stores
4483	Jewelry, luggage, and leather goods stores
4511	Sporting goods and musical instrument stores
4512	Book stores and news dealers
4522	Department stores
4531	Florists
4532	Office supplies, stationery, and gift stores
4539	Other misc store retailers
5322	Consumer goods rental
5323	General rental centers
4243	Apparel and piece goods merchant wholesalers
4413	Auto parts, accessories, and tire stores
4543	Direct selling establishments
Sensitive Manufacturing	
3352	Household appliance manufacturing
3361	Motor vehicle manufacturing
3362	Motor vehicle body and trailer manufacturing
3363	Motor vehicle parts manufacturing
3364	Aerospace product and parts manufacturing
3366	Ship and boat building
3371	Household and institutional furniture manufacturing
3372	Office furniture and fixtures manufacturing
3379	Other furniture related product manufacturing
3399	Other misc manufacturing
4231	Motor vehicle and parts merchant wholesalers
4232	Furniture and furnishing merchant wholesalers
4239	Misc durable goods merchant wholesalers
3132	Fabric mills
3141	Textile furnishings mills
3149	Other textile product mills
3152	Cut and sew apparel manufacturing

Table 4: Exposed sectors to COVID-19 by 4-digit NAICS code and description. Source: BLS, HRPDC

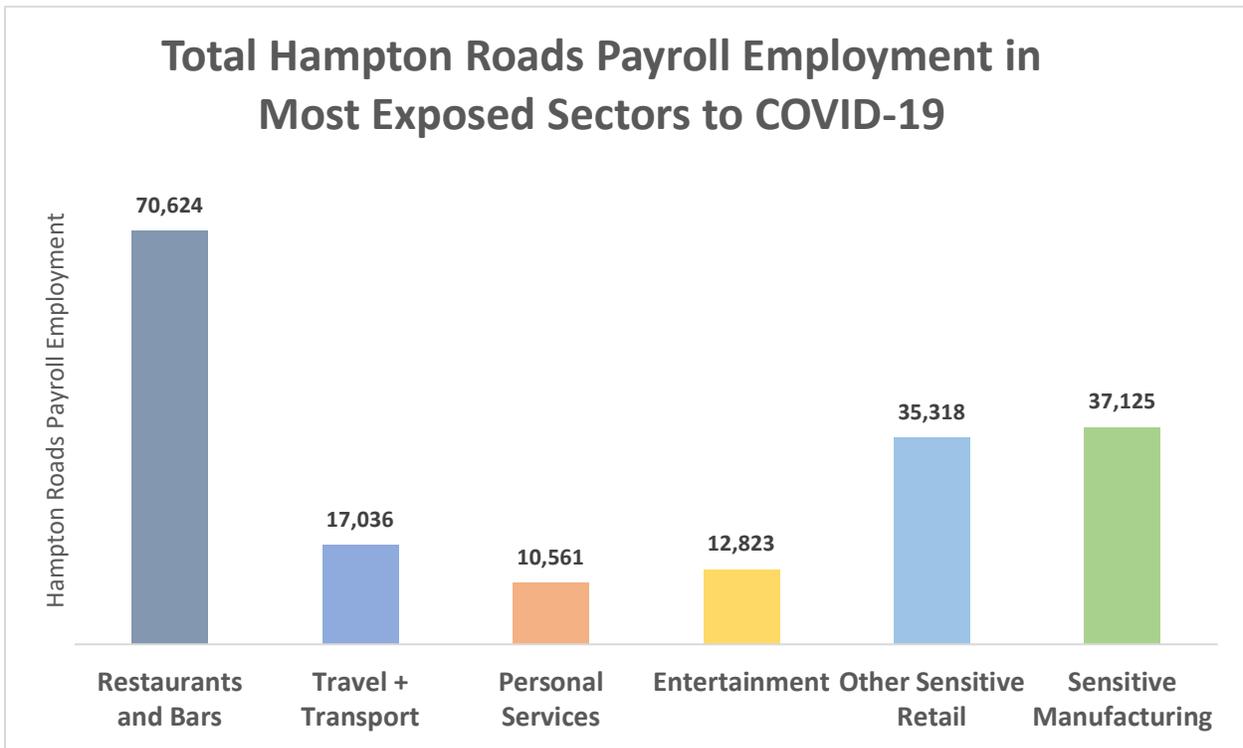


Figure 4: Total payroll employment in June 2019 in Hampton Roads in most exposed sectors to COVID-19. Source: BLS, HRPDC.

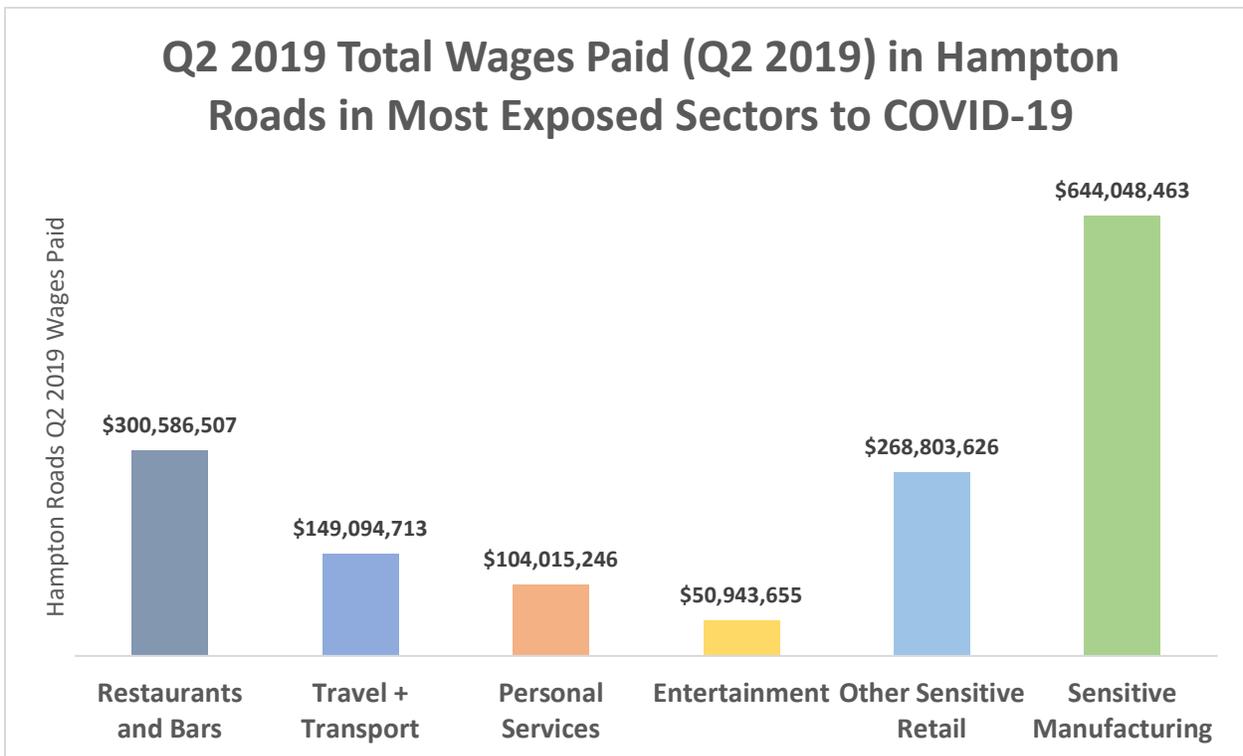


Figure 5: Total wages paid in Q2 2019 in Hampton Roads in most exposed sectors to COVID-19. Source: BLS, HRPDC.

Proximity Score	Occupation	Total Hampton Roads Employment	Share of Hampton Roads Work Force
100	Physical Therapists	1,240	0.17%
99	Dental Assistants	1,870	0.25%
99	Dentists, General	810	0.11%
99	Skincare	310	0.04%
99	Surgical Technologists	560	0.08%
98	Radiation	70	0.01%
97	Cardiovascular Technologists and Technicians	370	0.05%
96	Chiropractors	110	0.01%
95	Acute Care Nurses	13,900	1.86%
95	Diagnostic Medical	320	0.04%
95	First-Line	6,100	0.82%
95	Occupational	430	0.06%
95	Physical Therapist Aides	440	0.06%
94	Critical Care Nurses	13,900	1.86%
94	Physical Therapist Assistants	670	0.09%
94	Registered Nurses	13,900	1.86%
94	Singers	240	0.03%
93	Athletic Trainers	190	0.03%
93	Exercise Physiologists	90	0.01%
93	Respiratory Therapists	520	0.07%
92	Hairdressers, Hairstylists, and Cosmetologists	1,860	0.25%
92	Veterinary Technologists and Technicians	220	0.03%
91	Shampooers	260	0.03%
91	Veterinarians	540	0.07%
90	Adapted Physical Education Specialists	120	0.02%
90	Licensed Practical and Licensed Vocational Nurses	5,070	0.68%
90	Manicurists and Pedicurists	780	0.10%
90	Ophthalmic Medical Technicians	580	0.08%
90	Optometrists	320	0.04%

Table 5: Proximity score crosswalk in Hampton Roads, 90-100 with occupation descriptions. Source: U.S. DOL O*NET, HRPDC

References

“Employment Situation Summary.” *U.S. Bureau of Labor Statistics*, U.S. Bureau of Labor Statistics, 11 May 2020, www.bls.gov/news.release/empsit.nr0.htm.

Frequently Asked Questions: The Impact of the Coronavirus (COVID-19) Pandemic on The Employment Situation for April 2020. U.S. Bureau of Labor Statistics, 8 May 2020, www.bls.gov/cps/employment-situation-covid19-faq-april-2020.pdf.

Matthew Dey and Mark A. Loewenstein, "How many workers are employed in sectors directly affected by COVID-19 shutdowns, where do they work, and how much do they earn?," *Monthly Labor Review*, U.S. Bureau of Labor Statistics, April 2020, <https://doi.org/10.21916/mlr.2020.6>.

Ress, Dave. “Newport News Shipbuilding Parent Company Grows Profit, despite COVID-19.” *Dailypress.com*, Daily Press, 7 May 2020, www.dailypress.com/business/shipyards/dp-nw-shipyard-finances-20200507-3thc2arbhf7bgtxl6sqs3nmki-story.html.

Vavra, Joseph F. “Shutdown Sectors Represent Large Share of All US Employment.” *Key Economic Facts About COVID-19*, Becker Friedman Institute for Economics at the University of Chicago, 27 Mar. 2020, bfi.uchicago.edu/insight/blog/key-economic-facts-about-covid-19/#shutdown-sectors.

“Work Context - Physical Proximity.” *O*NET OnLine*, www.onetonline.org/find/descriptor/result/4.C.2.a.3.