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**An Incoming Shock:  
A First Estimate of the Impact of COVID-19 on Virginia's Local Governments**

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**Abstract**

As the COVID-19 virus spreads across the United States, and measures to contain the spread of the virus become more onerous, the impact on local government revenues will soon materialize as collections lag economic activity. Local revenues, once lost, typically cannot be recovered as cities and counties are constrained in the Commonwealth in the ability to levy new or higher taxes. These reductions in revenue present an immediate challenge to local governments that must concurrently increase public health, law enforcement, and other expenditures in preparation and response to the COVID-19 pandemic. Using data from the Virginia State Auditor of Accounts for Fiscal Year 2018, we estimate that local governments in the Commonwealth are losing approximately \$60 million a month in local tax revenue. Local governments, which are required to balance their budgets annually, face the possibility of draconian cuts to local expenditures in FY 2021.

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## **An Incoming Shock: A First Estimate of the Impact of COVID-19 on Virginia's Local Governments**

As the COVID-19 virus continues to spread across the United States and measures to contain the spread of the virus become more onerous, the impact on local government revenues will soon materialize as collections lag economic activity. Local revenues, once lost, typically cannot be recovered as cities and counties are constrained in the Commonwealth in their ability to levy new or higher taxes. These reductions in revenue present an immediate challenge to local governments that must concurrently increase public health, law enforcement, and other expenditures in preparation and response to the COVID-19 pandemic.

In FY 2018, local governments in Virginia generated almost \$2.8 billion from tax bases that we consider vulnerable to the COVID-19 associated disruption in economic activity. Sales and use taxes, business and professional license taxes, restaurant and meal taxes, and admissions taxes are likely to be adversely impacted by ongoing declines in economic activity. These vulnerable taxes, on average, raised 13.1 percent of local tax revenue and comprised 8.2 percent of all local revenue.

Using data from the Virginia State Auditor of Accounts for Fiscal Year (FY) 2018, we estimate that local governments in the Commonwealth are losing approximately \$60 million a month in local tax revenue. Local governments, which are required to balance their budgets annually, face the possibility of draconian cuts to local expenditures in FY 2021.

Sales and use taxes generated \$1.2 billion for local governments in Virginia in FY 2018. While internet sales, grocery stores, and pharmacies have reported increases in sales, many other sectors of the economy have significantly reduced activity. We expect sales and use tax revenues to decline by 10 percent in the near term. Business and Professional Occupational Licenses (BPOL) generated \$772.0 million in revenue for local governments in FY 2018. Social distancing measures have either limited the number of customers or required some businesses to completely close. BPOL is collected annually based on the gross receipts from the prior year, so the full impact of the revenue loss will not appear until early 2021. We estimate a 20 percent decline in BPOL tax revenue as a result of the COVID-19 pandemic.

Restaurant and meal taxes generated \$612.9 million in revenue for local governments in FY 18, while hotel and motel taxes generated \$244.4 million during the same period. Both sectors have reported significant declines in traffic. We estimate that restaurant and meal taxes and hotel and motel taxes will decline by 50 percent in the near term and up to 75 percent if social distancing measures continue over an extended period of time. Lastly, admissions taxes generated \$21.8 million in local tax revenue in FY 2018. Social distancing measures have reduced activity in this sector to zero. We estimate a 70 percent decline in tax revenue and recognize that we may be overly optimistic regarding activity in this sector.

Without immediate state and federal aid, local governments in Virginia will face a revenue shock in the coming months that will lead to significant budget cuts in FY 2021.

## Introduction

Estimating the impact of the COVID-19 (“Coronavirus”) pandemic on economic activity is an exercise fraught with uncertainty. The infection mortality rates associated with COVID-19 of the general and vulnerable populations is dependent on data from China, Italy, South Korea, Spain, and other nations. Differences in demographics, national and subnational public health responses, and timing appear to influence the health outcomes related to COVID-19. Recent modeling estimates suggest  $R_0$  equals 2.4<sup>1</sup>, an infection fatality ratio of 0.9, and 4.4 percent of infections result in hospitalization (Ferguson et al., 2020). The COVID-19 pandemic and associated social distancing measures will place a significant strain on public health systems in the United States and have lasting impacts on economic activity.

While current discussions surrounding COVID-19 focus on suppressing the spread of virus, we must recognize that the COVID-19 pandemic will have significant and dire economic impacts on individuals, businesses, and governments. Quantifying these impacts is imperative to prepare, mitigate, and respond to the emerging downturn in economic activity and the downward pressure on state and local government revenues. While local governments will not be able to avoid declines in revenues, awareness and planning can provide some relief from the forthcoming revenue shock.

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<sup>1</sup>  $R_0$  is the basic reproduction number of an infection or the expected number of individuals who will, on average, become infected by one case in the population.  $R_0$  describes a state where no other individuals are infected or immunized against the infection (Delamater et al., 2019).

In this working paper, we estimate the impact of COVID-19 on local governments in the Virginia Beach – Norfolk – Newport News Metropolitan Statistical Area (MSA). With a population of 1.73 million in 2018, the region is considered to rest on three economic pillars: defense, the Port of Virginia, and tourism and hospitality. Two of the three pillars, the Port and the tourism and hospitality industry, are either entering or already experiencing a severe economic shock. The synchronized supply and demand shocks will depress economic activity, increase unemployment, and erode local revenues. As the COVID-19 outbreak is ongoing, we will revise this working paper on a regular basis to capture changes in local economic conditions.

### **Much of the Economic Data at the Local Level Are Significantly Lagged**

Measuring economic performance at the local level typically is a difficult undertaking because of the many factors specific to the time period and region in question. The inflows and outflows of military personnel and ships that distinguish the region are but one example. Nevertheless, in 2018 the BEA released prototype estimates of GDP for counties in the United States.<sup>2</sup> The most recent release in December 2019 provided county level estimates from 2008 to 2018. Though significantly lagged, these estimates provide comparable measures of economic activity across counties in the United States. While by no means perfect, these estimates provide insight into economic activity at the local level in Hampton Roads.<sup>3</sup>

Table 1 illustrates that, in real (inflation-adjusted) terms, the cities and counties of the Virginia Beach – Norfolk – Newport News MSA generated about \$89.7 billion in output in 2018.

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<sup>2</sup> Bureau of Economic Analysis, Prototype Estimates of County Level GDP, 2018, <https://www.bea.gov/data/gdp/gdp-county>

<sup>3</sup> We must caveat our discussion with two points. First, these estimates (as with the metro-level estimates) are likely to be revised annually. Second, the county-level and metro estimates are not directly comparable; that is, the county estimates do not sum to the metro estimates. For a discussion of the methodology and comparison of the county and MSA GDP estimates, see <https://apps.bea.gov/scb/2019/03-march/0319-county-level-gdp.htm>

Of the metropolitan areas in the Commonwealth, only Northern Virginia produced a higher share of economic activity in 2018. Three metro regions – Hampton Roads, Northern Virginia and Richmond – accounted for approximately three-quarters of Virginia’s real GDP in 2018. The leisure and hospitality sector is a substantial tax base in each of these regions.

In 2018, four cities, Norfolk (23.0 percent), Virginia Beach (22.4 percent), Newport News (13.4 percent), and Chesapeake (10.8 percent) accounted for 69.6 percent of real GDP in the metropolitan area. Adding Hampton (7.3 percent), Portsmouth (6.4 percent), and Suffolk (4.9 percent), and the combined area of James City County and Williamsburg (4.6 percent) illustrates that 92.8 percent of real GDP emanated from the Seven Cities and the Williamsburg area<sup>4</sup>. We focus our analysis on these cities as they generate approximately 93 cents of every dollar of economic activity in the metropolitan area.

Table 2 illustrates the variation in economic activity by selected city in the metropolitan area in 2018. Of note is that the government and government enterprises sector accounted for 28.0 percent of metropolitan real GDP, ranging from a high of 52.5 percent in Portsmouth to a low of 12.9 percent in Chesapeake. Portsmouth, which has struggled economically in the most recent decade, may be more insulated economically as it is less dependent on the most vulnerable sectors of the regional economy.

The arts, entertainment, recreation, accommodation, and food services sector generated approximately 3.4 percent of economic activity in the metropolitan area (Table 3). This sector provides significant employment opportunities. Approximately 12.8 percent of employees in the

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<sup>4</sup> We include the Williamsburg area in the analysis due to the proportion of economic activity derived from tourism and hospitality. The BEA combines James City County and Williamsburg into one area.

metropolitan area worked in this sector. Williamsburg is most vulnerable to a downturn in traffic with 48.6 percent of all jobs in 2018 in this sector. Virginia Beach, the largest city in the metropolitan area, had 17.3 percent of all jobs in 2018 in this sector. A significant downturn would undoubtedly affect employment in each of the major cities in the region.

### **What Timely Data Are Available Suggest A Significant Contraction is Underway**

While many official indicators of economic activity lag the actual state of the economy, we can infer what is happening from a variety of private and public sources. We find that economic activity is contracting in the metropolitan region. Anecdotal evidence suggests that small businesses are bearing the brunt of the COVID-19 pandemic and associated social distancing measures.

**Hotels and Motels:** STR publishes weekly hotel data that provides insight into the emerging economic downturn. In Table 4, we present data from the STR Hotel Revenue report for the United States and the Norfolk/Virginia Beach area for the week of March 8, 2020 to March 14, 2020. We also present data for Seattle and the San Francisco area as it is likely the downturns in hotel traffic in these regions foreshadow what will soon occur in the Norfolk/Virginia Beach hotel area. The declines in hotel revenue will rapidly manifest in declines in hotel and motel tax revenue for local governments in Virginia and across the United States. Coupled with the significant declines in airline passenger traffic and guidance against congregating in larger groups, we expect similar data to emerge for other parts of the hospitality and tourism industry.

**Restaurants:** Data from OpenTable illustrates the steep decline in traffic for participating restaurants in the United States. As illustrated in Figure 1, restaurant traffic for participating OpenTable vendors in Virginia on March 17, 2020 declined by 99 percent compared to the same

period in 2019 (OpenTable, 2020). With governors ordering bars and restaurants closed, it is not likely that many will be able to make up the business in meal delivery.

**Unemployment:** Recently released unemployment claims data illustrates the emerging downturn in employment. Nationally, seasonally adjusted unemployment claims were 281,000 for the week of March 14, 2020 and a historic 3.28 million for the week of March 21, 2020 (U.S. Department of Labor, 2020). In Virginia, the advance estimate of initial unemployment claims was 2,883 for the week of March 14, 2020 and a historic 46,885 for the week of March 21, 2020. The sharp increase in unemployment applications relative to the same period in 2019 is indicative of job losses in the state economy.

### **Estimating the Impact of COVID-19 on Local Government Revenues**

Social distancing measures, to include limits on the number of patrons, will decrease business activity in the metropolitan region. Coupled with ongoing declines in travel and tourism, we should expect businesses to shed employees and, in some cases, close outright in the coming months. While limited epidemiological data are available on the spread and mortality of COVID-19, it is difficult to state with any degree of certainty how long the social distancing measures will last. At this point, we must recognize that any estimates of impact are fraught with uncertainty.

Cities and counties in Virginia receive revenue from three general sources: (1) own-source revenues, (2) inter-governmental revenues from the Commonwealth, and (3) inter-governmental revenues from the federal government. For the selected cities in the Hampton Roads metropolitan region, over 50 percent of general revenues were derived from local sources in FY 2018 (Table 5). Taxes on property are the most significant source of revenue for local



government, followed by other local taxes (Table 6). Other local taxes comprise 41.2 percent of local revenues in Williamsburg to a low of 9.68 percent of local revenues in Portsmouth.

Other local taxes include sources vulnerable to the impact of the COVID-19 virus. Local sales and use taxes, business license taxes, hotel and motel room taxes, restaurant and food taxes, and admissions taxes rest on tax bases that are directly affected by consumption of goods and services. Hotel and motel room taxes and restaurant and food taxes will, due to downturns in customer traffic, be adversely impacted by social distancing measures. Local sales and use taxes may see increases for grocery stores but as consumer expectations decline, durable purchases by consumers are also likely to decline. Business license taxes are likely to be pressured by business failures, though the lag on revenue declines may take some time to appear. As events are cancelled, admissions taxes should decline also.

We group local sales and use taxes, business license taxes, hotel and motel room taxes, restaurant and food taxes, and admissions taxes into the category 'vulnerable taxes.' We recognize that an economic downturn will adversely impact all tax bases, but our focus is on the immediate revenue impact of COVID-19 on localities in the metropolitan area. In FY 2018, these taxes accounted for \$637.16 million in local tax revenue (Table 7). On average, this amounted to 21 percent of local tax revenue and 13 percent of all local revenue (Table 8).

To estimate the static decline in revenues, we must assume the decline in activity that corresponds to the decline in tax revenue. We then apply these assumptions to monthly average tax revenue for each of the aforementioned taxes to estimate the monthly decline in tax revenue for each locality. As tax collections are lagged relative to the decline in economic activity, we recognize that we will need to refine our estimates over the coming weeks.

We estimate tax collections for the major cities in Hampton Roads will fall by approximately \$16 million a month under our initial set of assumptions (Table 9). We examine a more dire scenario in Table 10 where economic activity declines more precipitously in the near term. In this case, hotel and restaurant traffic declines by 90 percent while local sales and use taxes fall by 25 percent. As a result, monthly tax revenues decline by approximately \$26 million.

On a quarterly basis, tax revenues could fall by \$49.0 to \$77.9 million for the major cities in the metropolitan area. To put this into perspective, this represents a 25 to 35 percent decline in tax revenues from the vulnerable taxes. The cities will face a revenue shock soon and need to plan now how to close this revenue gap. Federal or state aid could be forthcoming, but most of the discussion to date has been about providing relief to individuals and businesses.

Table 1  
Real Gross Domestic Product in Thousands of 2012 Dollars  
Cities and Counties of Hampton Roads  
2010 and 2018

Location	2010 Real GDP	2018 Real GDP	Annualized Growth in Real GDP	Percent of Hampton Roads 2018 Real GDP
Camden	224,529	150,096	-4.9%	0.2%
Chesapeake	9,266,588	9,671,615	+0.5%	10.8%
Currituck	525,247	632,304	+2.3%	0.7%
Gates	160,776	148,159	-1.0%	0.2%
Gloucester	821,678	839,170	+0.3%	0.9%
Hampton	6,908,712	6,525,663	-0.7%	7.3%
Isle of Wight	1,698,348	1,608,390	-0.7%	1.8%
James City & Williamsburg	4,152,334	4,089,508	-0.2%	4.6%
Mathews	193,012	181,338	-0.8%	0.2%
Newport News	11,213,678	12,053,270	+0.9%	13.4%
Norfolk	21,688,665	20,628,226	-0.6%	23.0%
Portsmouth	5,290,236	5,719,664	+1.0%	6.4%
Southampton & Franklin	718,082	703,487	-0.3%	0.8%
Suffolk	4,023,458	4,409,998	+1.2%	4.9%
Virginia Beach	18,788,299	20,081,231	+0.8%	22.4%
York & Poquoson	2,356,377	2,332,335	-0.1%	2.6%
Hampton Roads	88,030,767	89,775,562	+0.2%	---

Sources: Bureau of Economic Analysis, Prototype Estimates of County Level GDP, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Real GDP in 2012 chained dollars. Percentages may not sum to 100 percent due to rounding. When necessary, the BEA combines localities to produce GDP estimates. Estimated annual growth is the compound annual growth rate. September 2018 definition of the Virginia Beach-Norfolk-Newport News MSA.

Table 2  
 Industry Contribution of Real Gross Domestic Product  
 Selected Cities and Counties of Hampton Roads  
 2018

Location	Arts, Entertainment, Recreation, Accommodation, And Food Services	Educational Services, Health Care, And Social Assistance	Retail Trade	Professional and Business Services	Finance, Insurance, Real Estate, Rental, And Leasing	Government and Government Enterprises
Chesapeake	3.2%	6.3%	13.1%	16.1%	19.7%	12.9%
Hampton	2.8%	8.1%	6.9%	12.4%	37.7%	37.7%
James City & Williamsburg	10.8%	8.7%	4.7%	11.7%	16.3%	16.3%
Newport News	2.1%	8.1%	5.9%	10.5%	19.2%	19.2%
Norfolk	2.1%	9.1%	3.9%	9.4%	44.9%	44.9%
Portsmouth	1.4%	7.5%	3.3%	6.0%	52.5%	52.5%
Suffolk	2.3%	7.4%	5.7%	11.7%	13.9%	13.9%
Virginia Beach	4.7%	9.7%	8.6%	13.1%	21.8%	21.8%
Hampton Roads	3.4%	8.3%	6.8%	11.5%	28.0%	28.0%

Sources: Bureau of Economic Analysis, Prototype Estimates of County Level GDP, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Real GDP in 2012 chained dollars. Percentages may not sum to 100 percent due to rounding. When necessary, the BEA combines localities to produce GDP estimates. Estimated annual growth is the compound annual growth rate. September 2018 definition of the Virginia Beach-Norfolk-Newport News MSA.

Table 3  
 Industry Share of Total Employment  
 Selected Cities and Counties of Hampton Roads  
 2018

Location	Leisure and Hospitality	Education and Health Services	Trade, Transportation, and Utilities	Professional and Business Services	Financial Activities	Public Administration
Chesapeake	10.7%	18.5%	24.4%	16.5%	4.8%	4.3%
Hampton	12.2%	24.9%	17.2%	17.3%	2.4%	13.1%
Newport News	8.4%	14.0%	14.2%	13.3%	3.2%	5.7%
Norfolk	9.2%	21.5%	17.2%	15.4%	5.3%	12.8%
Portsmouth	6.3%	24.7%	13.0%	10.1%	2.1%	6.9%
Suffolk	10.6%	25.0%	24.6%	12.7%	1.9%	7.4%
Virginia Beach	17.3%	14.8%	17.8%	15.9%	7.1%	4.4%
Williamsburg	48.6%	17.0%	15.2%	11.1%	2.8%	2.9%
Hampton Roads	12.8%	18.3%	18.3%	14.6%	4.6%	6.9%

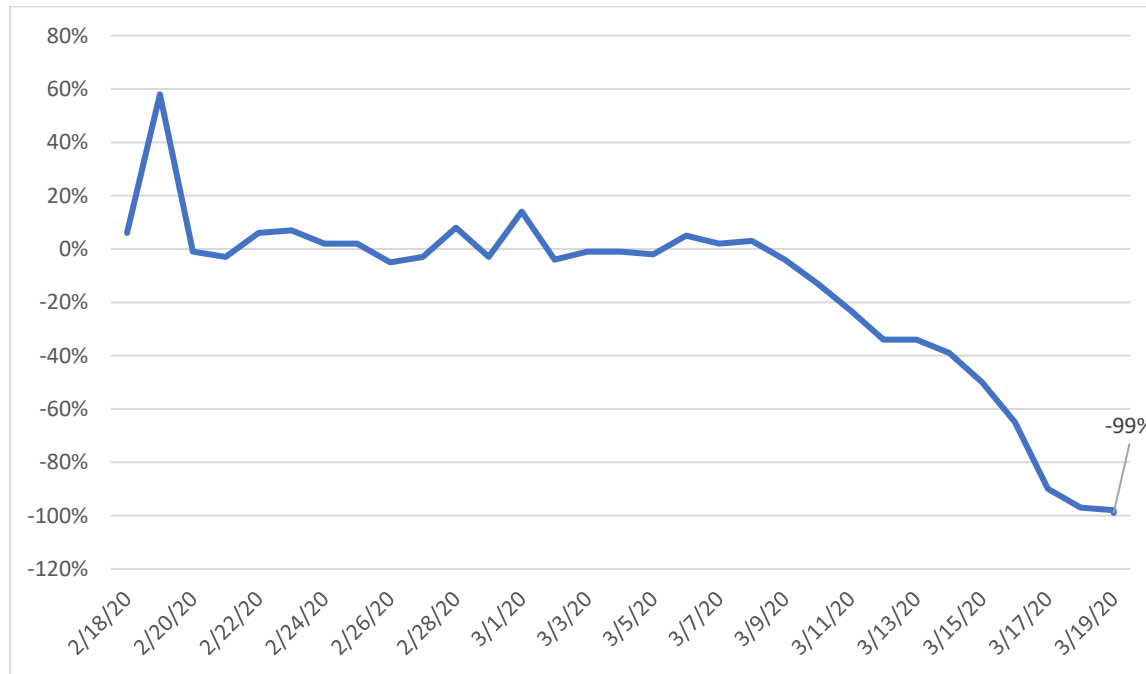
Sources: Bureau of Labor Statistics Quarterly Census of Employment and Wages, Estimates of annual average employment levels by industry sector and county, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Percentages may not sum to 100 percent due to rounding. Missing data for Camden County and Gates County due to confidentiality restrictions. September 2018 definition of the Virginia Beach-Norfolk-Newport News MSA.

Table 4  
STR Hotel Revenue Data  
March 08, 2020 – March 14, 2020

	2019 Occupancy	2020 Occupancy	2019 ADR	2020 ADR	2019 RevPAR	2020 RevPAR	Change in Occupancy	Change in ADR	Change in RevPAR
United States	70.1%	53.0%	\$134.67	\$120.30	\$94.40	\$63.74	-24.4%	-10.7%	-32.5%
Norfolk / Virginia Beach	63.9%	50.6%	\$92.28	\$84.74	\$58.97	\$42.89	-20.8%	-8.2%	-27.3%
Seattle	73.2%	32.9%	\$145.07	\$109.28	\$106.13	\$35.97	-55.0%	-24.7%	-66.1%
San Francisco	80.4%	38.9%	\$232.56	\$176.38	\$186.86	\$68.56	-51.6%	-24.2%	-63.3%

Source: STR, Hotel Revenue Report, March 8, 2020 to March 14, 2020

Figure 1  
 Year-Over-Year Change in OpenTable Restaurant Traffic Data  
 February 18 – March 20, 2020  
 Virginia



Source: OpenTable. This data shows year-over-year seated diners at restaurants on the OpenTable network across all channels: online reservations, phone reservations, and walk-ins.

Table 5  
Sources of Revenue of Local Governments  
Selected Cities in the Virginia Beach – Norfolk – Newport News Metropolitan Statistical Area  
Fiscal Year 2018

	Local Revenue	Revenue from the Commonwealth	Revenue from the Federal Government	Total Revenue	Local Revenue as Percent of Total Revenue
Chesapeake	\$547,006,007	\$364,957,758	\$45,751,251	\$957,715,016	57.12%
Hampton	\$313,515,767	\$211,677,950	\$42,200,541	\$567,394,258	55.26%
Newport News	\$433,380,823	\$277,791,666	\$62,024,412	\$773,196,901	56.05%
Norfolk	\$533,087,917	\$277,791,666	\$103,538,359	\$979,030,572	54.45%
Portsmouth	\$198,513,407	\$342,404,296	\$33,798,773	\$398,662,706	49.79%
Suffolk	\$216,534,937	\$140,946,517	\$20,566,336	\$378,047,790	57.28%
Virginia Beach	\$1,146,487,939	\$570,182,370	\$123,229,395	\$1,839,899,704	62.31%
Williamsburg	\$37,538,879	\$8,479,294	\$1,775,202	\$47,793,375	78.54%

Source: Comparative Report of Local Government Revenues and Expenditures for the Fiscal Year Ended June 30, 2018, Auditor of Public Accounts, Commonwealth of Virginia.



Table 6  
Sources of Local Revenue  
Major Cities in the Virginia Beach – Norfolk – Newport News Metropolitan Statistical Area  
2018

	Local Revenue	General Property Taxes	Other Local Taxes	Other Local Taxes as Percent of Local Revenue	Other Local Taxes as Percent of Total Local Revenue
Chesapeake	\$547,006,007	\$340,460,730	\$130,358,798	23.83%	13.61%
Hampton	\$313,515,767	\$171,691,850	\$69,348,676	22.12%	12.22%
Newport News	\$433,380,823	\$256,126,372	\$93,696,890	21.62%	15.74%
Norfolk	\$533,087,917	\$281,884,258	\$154,118,220	28.91%	23.40%
Portsmouth	\$198,513,407	\$120,126,853	\$38,604,748	19.45%	9.68%
Suffolk	\$216,534,937	\$130,942,950	\$42,645,227	19.69%	11.28%
Virginia Beach	\$1,146,487,939	\$675,696,414	\$276,345,875	24.10%	15.02%
Williamsburg	\$37,538,879	\$13,089,822	\$30,889,061	38.07%	41.19%

Source: Comparative Report of Local Government Revenues and Expenditures for the Fiscal Year Ended June 30, 2018, Auditor of Public Accounts, Commonwealth of Virginia.

Table 7  
 Vulnerable Taxes  
 Major Cities in the Virginia Beach – Norfolk – Newport News Metropolitan Statistical Area  
 2018

	Local Sales and Use Taxes	Business License Taxes	Hotel and Motel Room Taxes	Restaurant and Food Taxes	Admissions Taxes	Vulnerable Taxes
Chesapeake	\$40,912,255	\$27,319,871	\$5,609,887	\$26,690,755	\$983,446	\$101,516,214
Hampton	\$15,092,986	\$12,800,674	\$3,942,078	\$20,912,114	\$1,255,268	\$54,003,120
Newport News	\$25,693,286	\$17,239,148	\$4,345,781	\$26,263,697	\$984,277	\$74,526,189
Norfolk	\$32,798,796	\$28,528,845	\$10,756,491	\$37,989,576	\$4,555,453	\$114,629,161
Portsmouth	\$7,468,580	\$6,705,156	\$720,837	\$8,066,771	\$92,157	\$23,053,501
Suffolk	\$10,977,388	\$7,552,220	\$1,787,927	\$10,134,186	\$387,581	\$30,839,302
Virginia Beach	\$63,511,403	\$48,676,655	\$35,493,796	\$66,264,685	\$6,349,234	\$220,295,773
Williamsburg	\$4,706,583	\$2,049,988	\$4,482,207	\$7,062,010	\$0	\$18,300,788

Source: Comparative Report of Local Government Revenues and Expenditures for the Fiscal Year Ended June 30, 2018, Auditor of Public Accounts, Commonwealth of Virginia. We define vulnerable taxes as local sales and use taxes, business license taxes, hotel and motel room taxes, restaurant and food taxes, and admissions taxes. Other taxes will also erode as economic activity contracts but over a longer period of time.

Table 8  
 Vulnerable Taxes  
 Major Cities in the Virginia Beach – Norfolk – Newport News Metropolitan Statistical Area  
 2018

	Vulnerable Taxes as Percent of Local Own-Source Revenues	Vulnerable Taxes as Percent of Total Revenues
Chesapeake	18.56%	10.60%
Hampton	17.23%	9.52%
Newport News	17.20%	9.64%
Norfolk	21.50%	11.71%
Portsmouth	11.61%	5.78%
Suffolk	14.24%	8.16%
Virginia Beach	19.21%	11.97%
Williamsburg	48.75%	38.29%
Average	21.04%	13.21%

Source: Comparative Report of Local Government Revenues and Expenditures for the Fiscal Year Ended June 30, 2018, Auditor of Public Accounts, Commonwealth of Virginia. We define vulnerable taxes as local sales and use taxes, business license taxes, hotel and motel room taxes, restaurant and food taxes, and admissions taxes. Other taxes will also erode as economic activity contracts but over a longer period of time. Author’s calculations for percentages and averages.

Table 9

## Estimated Declines by Tax Base and Monthly Average Decline

	Local Sales and Use Taxes	Business License Taxes	Hotel and Motel Room Taxes	Restaurant and Food Taxes	Admissions Taxes	Total
Assumed Decline	10%	20%	50%	50%	70%	--
Chesapeake	\$340,935	\$455,331	\$233,745	\$1,112,115	\$57,368	\$2,199,494
Hampton	\$125,775	\$213,345	\$164,253	\$871,338	\$73,224	\$1,447,935
Newport News	\$214,111	\$287,319	\$181,074	\$1,094,321	\$57,416	\$1,834,241
Norfolk	\$273,323	\$475,481	\$448,187	\$1,582,899	\$265,735	\$3,045,625
Portsmouth	\$62,238	\$111,753	\$30,035	\$336,115	\$5,376	\$545,517
Suffolk	\$91,478	\$125,870	\$74,497	\$422,258	\$22,609	\$736,712
Virginia Beach	\$529,262	\$811,278	\$1,478,908	\$2,761,029	\$370,372	\$5,950,848
Williamsburg	\$39,222	\$34,166	\$186,759	\$294,250	\$0	\$554,397
Totals	\$1,676,344	\$2,514,543	\$2,797,459	\$8,474,325	\$852,099	\$16,314,769

Table 10

## Estimated Declines by Tax Base and Monthly Average Decline (Alternative Scenario)

	Local Sales and Use Taxes	Business License Taxes	Hotel and Motel Room Taxes	Restaurant and Food Taxes	Admissions Taxes	Total
Assumed Decline	25%	30%	75%	75%	90%	--
Chesapeake	\$852,339	\$682,997	\$350,618	\$1,668,172	\$73,758	\$3,627,884
Hampton	\$314,437	\$320,017	\$246,380	\$1,307,007	\$94,145	\$2,281,986
Newport News	\$535,277	\$430,979	\$271,611	\$1,641,481	\$73,821	\$2,953,169
Norfolk	\$683,308	\$713,221	\$672,281	\$2,374,349	\$341,659	\$4,784,818
Portsmouth	\$155,595	\$167,629	\$45,052	\$504,173	\$6,912	\$879,362
Suffolk	\$228,696	\$188,806	\$111,745	\$633,387	\$29,069	\$1,191,702
Virginia Beach	\$1,323,154	\$1,216,916	\$2,218,362	\$4,141,543	\$476,193	\$9,376,168
Totals	\$4,190,860	\$3,771,814	\$4,196,188	\$12,711,487	\$1,095,556	\$25,965,905

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