Greater Seattle Region
Covid-19 Economic Impacts Analysis

July 2020

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THE CHAMBER

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Prepared by:

cai community attributes inc

Community Attributes Inc. tells data-rich stories about communities that are important to decision makers.

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Critical Concerns

The economic outlook is highly dependent on control of the virus

Economic recovery projections depend on predictability of the control of the virus and whether people can safely and confidently resume a wide range of in-person activities, such as on-site school, on-site work, business travel, dining, and in-store shopping.

Until a vaccine or acceptable treatment is widely available, the regional economy will operate at a rate substantially lower than pre-Covid-19 levels of productivity. As of June 2020, the most optimistic forecasts of vaccine availability are early 2021. Distribution of the vaccine may require much of 2021.

The “tail” of the recovery is uncertain

As of June 2020, the unemployment rate for the Seattle MSA was 9.3%, down from an unprecedented 14.5%, a level much higher than any period since the Great Depression of the 1930s. Even during the depths of the Global Financial Crisis, the Seattle MSA’s unemployment rate peaked just shy of 10%

It is possible that employment could recover to pre-COVID levels by 2022. However, previous recessions have lasted much longer. For reference, after August 2008, it took 60 months for regional employment to reach pre-recession levels. Following the economic effects of the Dot.com bust and 9/11, it took 67 months for regional employment to recover.

The uneven economic impacts may exacerbate existing inequities

The virus has had uneven impacts across races, ethnicities, and education level. In the Seattle Metro area, more than 41% of individuals filing for unemployment between March 1 and July 11 were a person of color or Hispanic. Additionally, approximately 32% of new filers had no more than a high school diploma, compared with 26% of the regional adult population overall with a high school diploma or less.

Low income workers have been more severely impacted by COVID-19. According to the Federal Reserve, 39% of people working in February with a household income below $40,000 reported a job loss in March. Additionally, low income households are more susceptible to food scarcity. The week ending on May 26, 0.1% of adults in the Seattle Metro area reported sometimes or often not having enough to eat.

Various policy levers could help or hurt recovery

Many of our region’s industries are experiencing major disruptions that may extend for months or even years, affecting business revenues and employment. These changes are and will continue to significantly impact tax collections that support state and municipal spending.

State and local sales and business and occupation tax revenues are declining and projected to take time to recover along with economic activity. Hotel and motel taxes are also expected to experience decreases due to impacts to the hospitality and tourism industries, which are among the hardest hit by COVID-19.

The decisions that policymakers pursue to backfill lost revenue and/or to reduce services may create secondary impacts for residents and businesses that could either promote or stall economic recovery. These decisions will also take place as businesses face rising costs in other areas such as unemployment insurance.

The virus may accelerate lasting economic changes

Some of these changes were already underway, such as the growth of online consumption platforms, in-home entertainment and streaming platforms, technology advancements that support remote work, and restructuring of global supply chains diversifying away from China.

The virus may also bring previously unanticipated changes, including reduction in business travel, increased household savings rate, adjustments to household consumption which may lead to decreased demand for outside leisure, recreation, and entertainment.

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Executive Summary

In June 2020, the Seattle Metropolitan Area continues to grapple with the public health crisis of the Covid-19 virus and its resulting economic impacts. The virus began to affect the regional economy in early 2020, and by mid-March much of the economy had shut down to slow its infectious spread.

Economy wide Impacts

The region has experienced:

- $13.4 billion in lost gross business revenue comparing the first six months of 2020 with the same period in 2019.
- $8.1 billion in lost wages and earnings in the second quarter of 2020.
- 828,900 new unemployment claims filed in 2020, with 801,800 new claims between March 1 and July 11. The unemployment rate in the region is currently 9.3% for the Seattle MSA (June), down from 14.5% in May.
- $900 million in lost taxable retail sales.

Impacts by Industry

The economic impacts of the virus were felt across the entire economy and every industry is adapting to life during a pandemic.

The **hospitality and tourism industries** are among the hardest hit industries by COVID-19.

- **Hotels.** Since March, hotel occupancy rates in Seattle have been hovering around 10%. The American Hotel & Lodging Association estimates that more than 29,000 direct hotel-related jobs and 85,000 total jobs supporting the hotel industry were lost to date in Washington state due to the pandemic.
- **Cruise ships.** Cruise ships are cancelled through all of 2020. The estimated total losses in economic impact due to the pause in the cruise season are more than $800 million.
- **Conferences and conventions.** As of June 2020, 32 citywide conventions booked at the Washington state Convention Center have been cancelled. This translates to roughly 216,000 contracted hotel room nights and $221.7 million in lost economic output.

The **retail industry** was already under great transformation with the impacts of on-line retail. The pandemic brought additional challenges and shut down businesses that relied on day-time population near employment centers. Employment levels in the region dropped by nearly 2% through May 2020 year-to-day (YTD) from a year earlier, based on official payroll data, or a decline of nearly 4,000 jobs.

Air travel was down 85% year-over-year as of June 7, forcing several airlines across the globe to restructure or shut down permanently. Surviving airline companies have taken drastic measures to reduce cash burn, including making historic capacity cuts and selling off assets. U.S. passenger airlines have grounded 47% of their active fleets, leaving 2,882 passenger aircraft sitting idle. These developments spell bad news for trade in the region, as civilian aircraft and parts constituted $25.4 billion or 42.2% of Washington state's exports in 2019.

Passenger air travel through Sea-Tac International Airport plummeted 56% in March and 94% in April compared to the same period in 2019. This translates to fewer planes and belly freight capacity, higher transportation costs and narrower margins for exporters. In addition, air cargo volumes dropped by 10% in April.

Aerospace, dominated by Boeing in the region, was already down due to the 737-MAX troubles from 2019. Production was cut prior to the virus, and the virus shut down factories altogether. Dramatically reduced air travel through 2021 will curtail demand for new airplanes and the sector will take years to recover to pre-Covid-19 levels.

The Boeing Company reported a first quarter loss of $641 million and a 26% drop in revenues. The company has announced plans to reduce more than 15% of jobs in 2020 at its commercial jet business, mainly in the Seattle area. Regional aerospace employment is projected to decline 12% in 2020. While there are some signs of recovery in 2021, the number of regional aerospace jobs is projected to remain below the pre-pandemic levels over the next five years.

Outlook

The remainder of 2020 and well into 2021 is anticipated to be characterized by great economic uncertainty tied to continued efforts to mitigate virus risk, without the help of a vaccine or stay-at-home treatments. Each industry will work through this uncertainty with different success and needs.

- The Seattle MSA is projected to experience a 4% economic contraction in output in 2020, compared with 6.9% contraction for the U.S. overall.
- Labor force participation rate in the Seattle MSA is projected to decline from 68.6% in 2019 to 61.2% in 2020.
- Nonfarm employment in the Seattle Metro Area is expected to return to its pre-Covid-19 level by 2022.

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Introduction

Background and Purpose

The advent of the Covid-19 pandemic brings unprecedented economic costs and disruptions to the global economy and to the Seattle Metropolitan Area. The severity of the virus became known in early 2020 and by March the global and local impacts had severely affected Seattle area businesses and Seattle's way of life.

In June 2020, businesses plan to re-open according to the Governor's phased approach, and civic leaders must assess the damage inflicted and anticipated, in order to plan recovery. This study, produced for the Seattle Metropolitan Chamber of Commerce, provides a detailed analysis of impacts of the pandemic on the regional economy.

Methods

The analysis relies on primary and secondary research, including business impact surveys led by the City of Seattle and other entities, as well as data produced by government agencies, such as departments in the State of Washington. Data analysis is supplemented with telephone interviews of business leaders and data representatives to inform interpretation and address data gaps.

Organization of Report

- **Virus impacts overview**. A brief reminder of what has happened.
- **Global and national developments**. Context critical to understanding Seattle's global connections.
- **Seattle Metropolitan Area impacts.** Impacts to regional output, industries, and labor force.
- **Equity considerations**. The uneven impacts of the virus by income level, demographic characteristics, and occupation and work category.
- **Business revenues and taxable retail sales**. Lost sales among businesses, particularly among small businesses.
- **Regional trade impacts**. Disruptions to trade and the many workers engaged in global logistics at our local ports, warehouses, intermodal operations, and supply chain management systems.
- **Fiscal policy and impacts**. Federal relief and stimulus spending, as well as lost tax revenues to the region.
- **Challenges to recovery**. How the economy might fundamentally change as a result of the virus, such as in household consumption and business operations, and challenges to the labor market and re-employment of dislocated workers as a result of these changes.

Overview of the Virus and Public Health Response

Origins and Crisis Response

During the early stages of the outbreak in China, in 2019, the virus forced widespread factory closures and economywide lockdowns in areas throughout the country. These disruptions created a supply shock to global value chains. Reduced production of product components delayed receipts of orders internationally. China's ports and logistics system halted movement of intermediate and finished goods through to the rest of the world, including to many Washington-based manufacturers.

By early 2020, the virus had spread to other countries, with large outbreaks across Europe and Asia, and spread to the U.S. By mid-March, state and local governments across the U.S. instituted shelter-at-home orders. Residents practiced social distancing and consumer-facing businesses shut down operations. Public policies intended to contain the virus have included border closures, business and school closures, limited access to public spaces, and prohibitions on large gatherings. The measures resulted in an abrupt and steep reduction in economic activity and what would become the largest surge in U.S. and Washington state unemployment claims in history.

Phased Re-Opening, No Vaccine, No Treatment

In May 2020, Washington state and areas around the world began to work through tentative re-openings of the economy and social systems. Washington counties will each re-open as they reach public health confidence measures, and designed by Governor Jay Inslee in four phase plan, summarized briefly as follows:

- Phase 1. No gatherings, public or private. Essential travel primarily, limited non-essential travel. Outdoor businesses only.
- Phase 2. Gather with no more than 5 people outside your household per week. Essential travel with limited non-essential travel. Re-opening to include manufacturing; In-home/domestic services; Retail; Real estate; Professional services; Personal Grooming; Restaurants at less than 50% capacity.
- Phase 3. Gatherings up to 50 people. Restaurants at less than 75% capacity; Movie theaters at less than 50% capacity; Customer-facing government services; Libraries; Museums; All other business activities.
- Phase 4. Resume all activity, including Nightclubs; Concert venues; Large sporting events; Resume unrestricted staffing of worksites; but continue to practice physical distancing and hygiene.

As of July 9, 2020, 17 counties are in Phase 3, 17 counties are in Phase 2 and 5 counties are in modified Phase 1, or Phase 1.5. King County, with the most jobs and residents is in Phase 2, but has not yet applied for Phase 3. Of the, 17 counties still in Phase 2, 7 have applied for Phase 3. As the rate per 100,000 of newly diagnosed cases has increased in Washington as a whole, Phase 3 applications are on hold.

Throughout the U.S. and the world, Covid-19 cases have increased in June, along with hospitalizations. Hospital capacity limitations may cause states to retreat on openings and return to economic shut-downs. As of July 10, 2020, 7 U.S. states had reversed some elements of their openings.

This cyclical opening and shutting down could continue throughout the U.S. and Washington until the public health fears of Covid-19 subside. In general, public health fears will subside in one of three ways: a vaccine is found; an at-home treatment is established; or the virus dies out through herd immunity (roughly 70% of the populace having been infected). As of June 2020, 0.3% of Washington's population has been diagnosed positive with the virus.

As of June 2020, the most optimistic forecasts of vaccine availability is early 2021.[1]

Economic Recovery

The region now requires a recovery strategy that reaches beyond the current crisis to address longstanding issues in our region. Until the vaccine is available, as discussed in Washington's phased approach, the regional economy will operate at a rate substantially lower than pre-Covid-19 levels of productivity.

This report presents an analysis of economic activity levels in mid-2020 and beyond the time when public health concerns subside for unrestrained activities.

[1] https://www.nytimes.com/interactive/2020/science/coronavirus-vaccine-tracker.html

Global and National Developments

Pre-Covid-19 Challenges

After the 2008 financial crisis, the U.S. economy experienced a weak recovery marked by sustained damage to the housing sector. The unemployment nationwide was more than 10% in 2009, but by early 2020 national unemployment reach a near record low of 3.5%. National employment had increased month-over-month for a record 113 consecutive months.

Throughout 2019, the U.S. economy showed signs of impending challenges, due to both domestic and international factors. In the last several years, the U.S.-China trade war created significant obstacles to world economic growth. In April 2019, fears of a looming recession increased as the International Monetary Fund (IMF) reported that the world economy was slowing.[2] Some areas of the country saw continued sustained growth, including Seattle, but other areas of the U.S. remained behind.

Covid-19 Era U.S. and Global Projections

Major contributors to the economic downturn include mass shut-downs; stay-at-home directives; weakened consumer confidence; a sharp rise in unemployment; and the effective collapse of consumer-facing industries.

In the first quarter of 2020, U.S. GDP contracted by 1.3% (a quarterly declined, which if annualized would be equivalent to more than a 5% decline). In the second quarter of 2020, GDP is expected to have declined by 12.0%, quarterly, despite massive spending at the federal level. National economic growth is forecasted to increase by 4.1% in the third quarter, which presumably assumes that most statewide and local lockdowns are lifted by then. (**Exhibit 1**).

The latest International Monetary Fund forecast for the U.S., released on June 24, shows a decline of 8% for the U.S. overall in 2020, and 4.9% decline for the world economy. Forecasts are highly uncertain and subject to the unknown trajectory of the virus and availability of either a vaccine or treatments. The IMF has adjusted its GDP forecasts downward for all trading partners of the United States. **Exhibit 2** lists Washington's greatest trading partners in order of export value from the state, comparing previous GDP forecasts for 2020 with those adjusted in April 2020. On average, the IMF has reduced its projections for these countries by 6.6 percent points.

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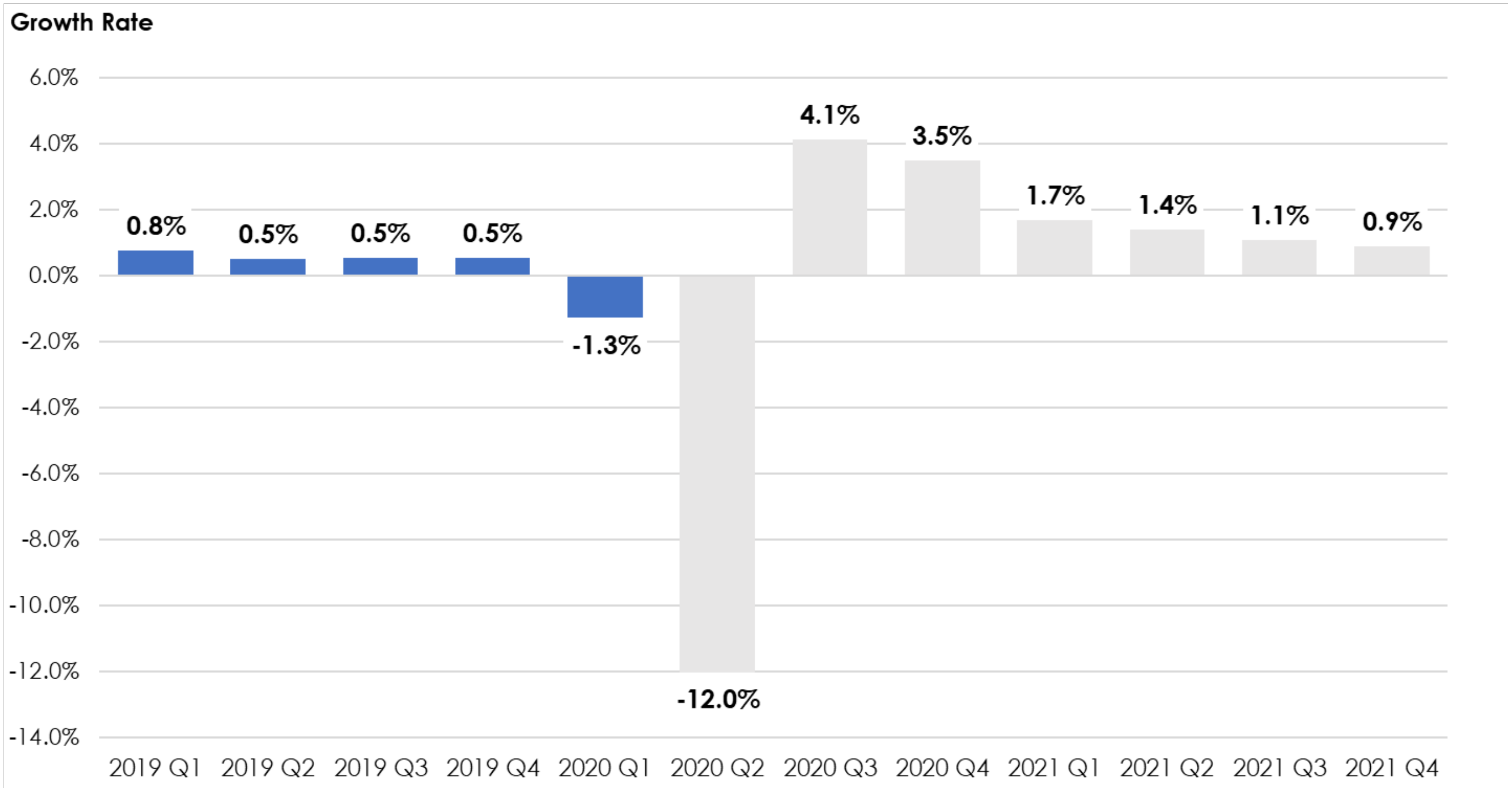
[2] International Monetary Fund, *The World Economy: Synchronized Slowdown, Precarious Outlook*, https://blogs.imf.org/2019/10/15/the-world-economy-synchronized-slowdown-precarious-outlook/.

Exhibit 1. U.S. Quarterly Historic and Forecast GDP



Sources: U.S. Bureau of Economic Analysis, 2020; Federal Reserve Bank of Atlanta, 2020; The Wall Street Journal, 2020; International Monetary Fund, 2020; Community Attributes Inc., 2020.

Note: Data shown are quarter over quarter changes. GDP changes are often published showing annualized data. During relatively stable times, annualized representation of seasonal change is useful for a normalized reference. During such volatile quarters in 2020 (unprecedented), showing an annualized rate forQ2 equivalent to more than 40% is of very little utility and can actually cause harm in misrepresenting economic activity.

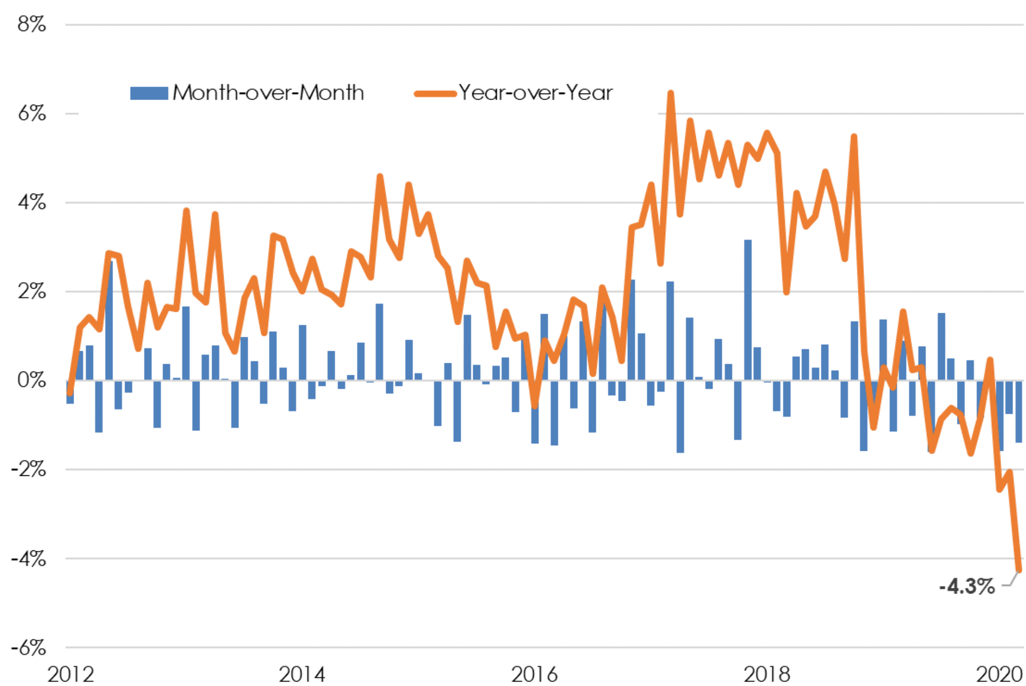
Exhibit 2. GDP Forecasts and Adjustments by Country, IMF, 2020

Country	IMF June 2020 Forecast for 2020	IMF Oct. 2019 Forecast for 2020	Change	WA Exports 2019 (mils $)
Canada	-8.4%	1.8%	-10.2%	$8,255
Japan	-5.8%	0.5%	-6.3%	$6,905
China	1.0%	5.8%	-4.8%	$4,725
South Korea	-2.1%	2.2%	-4.3%	$2,388
Mexico	-10.5%	1.3%	-11.8%	$2,366
Qatar	-4.3%	2.8%	-7.1%	$2,200
United Kingdom	-10.2%	1.4%	-11.6%	$1,851
Germany	-7.8%	1.2%	-9.0%	$1,737
Taiwan	-4.0%	1.9%	-6.0%	$1,604
Turkey	-5.0%	3.0%	-8.0%	$1,418
Rest of the world				*$20,278*
World	**-4.9%**	**3.6%**	**-6.6%**	**$53,727**

Sources: U.S. Census Bureau, 2020; International Monetary Fund World Economic Outlook Database, October 2019 and June 2020; Community Attributes Inc., 2020.
Export figures have been adjusted for pass-throughs.

Disruptions to the global supply chain will have significant and lingering effects on the U.S. economy. **Exhibit 3** shows changes in world trade volumes month-over-month and year-over-year, calculated in constant dollar prices of import/export value. Trade growth had been slowing since 2018 amid the U.S.-China trade war and weak business confidence.

Exhibit 3. Change in Global Merchandise Trade Volumes, Monthly

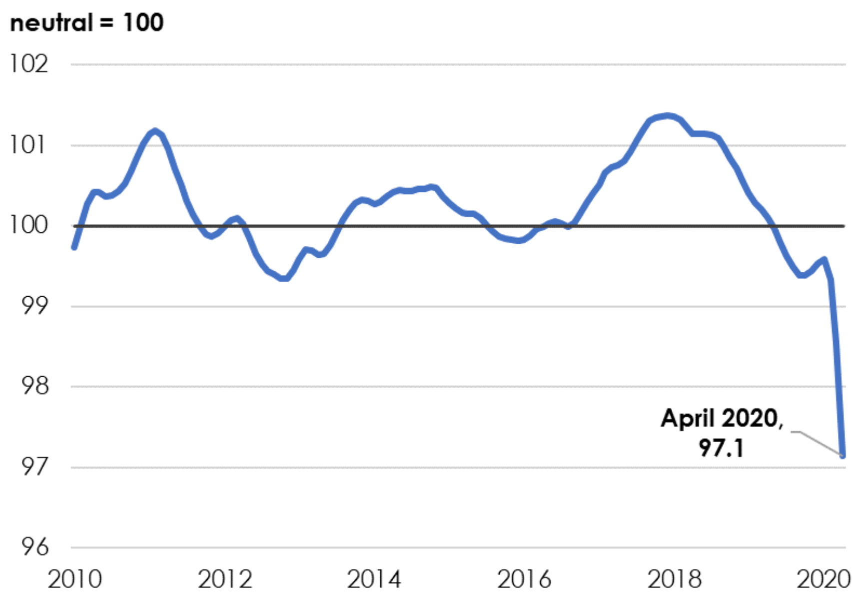


Source: Netherlands Bureau of Economic Policy Analysis, 2020.

The pandemic worsened this trend in 2020. First Covid-19 disrupted manufacturing in China. Closed factories and quarantined workers in the world's largest manufacturing assemblage hub and second largest economy reduced the volume of goods produced and shipped to the United States and other markets. This supply shock transitioned to a global demand shock amid border closures, travel restrictions, and shutdowns. In March, global trade fell 4.3% from a year earlier in the largest decline since 2009. The continued severity of this hit to global trade will depend on how long virus containment policies must remain in effect.

The fall in global trade volumes coincides with a precipitous drop in international business confidence. Using 100 as an index for neutral business confidence, **Exhibit 4** shows business pessimism deepening across member economies of the Organisation for Economic Co-operation and Development (OECD). This indicator is based upon opinion surveys on developments in production and orders of finished goods in the industry sector.

Exhibit 4. Global Business Confidence Index, OECD Economies, Monthly

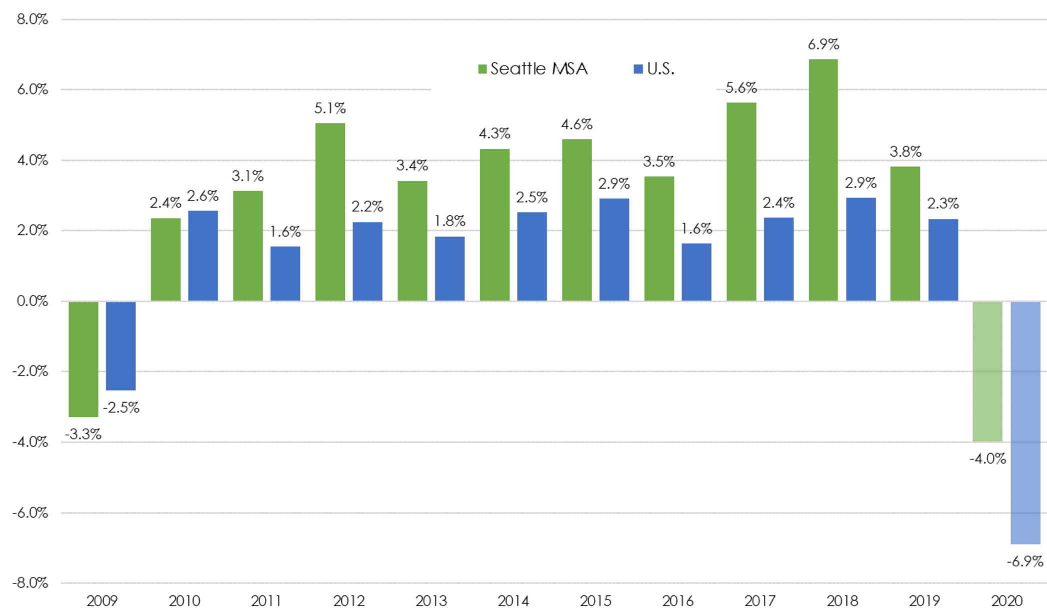


Source: OECD, 2020.

Regional Economic Overview

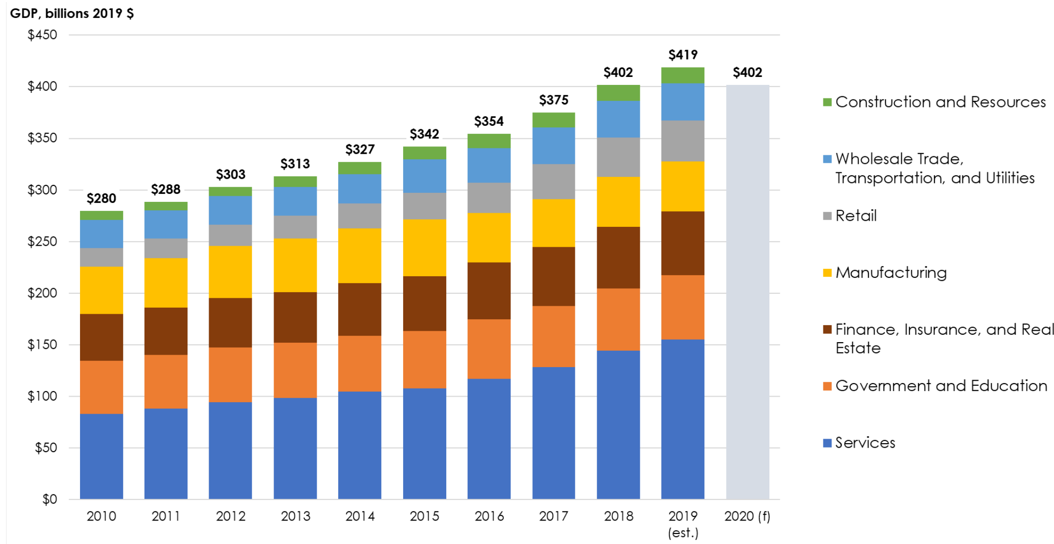
The Seattle MSA is projected to experience a 4% economic contraction in output in 2020, compared with 6.9% contraction for the U.S. overall, based on CAI forecasts (**Exhibit 5**). However, as events develop, such as an extended period of social distancing due to a resurgence in Covid-19 cases, these forecasts as subject to further revision.

Exhibit 5. Seattle MSA and Washington State Forecast GDP



Sources: U.S. Bureau of Economic Analysis, 2020; Federal Reserve Bank of Atlanta, 2020; The Wall Street Journal, 2020; International Monetary Fund, 2020; Community Attributes Inc., 2020.

Exhibit 6. Seattle Metro GDP By Segment



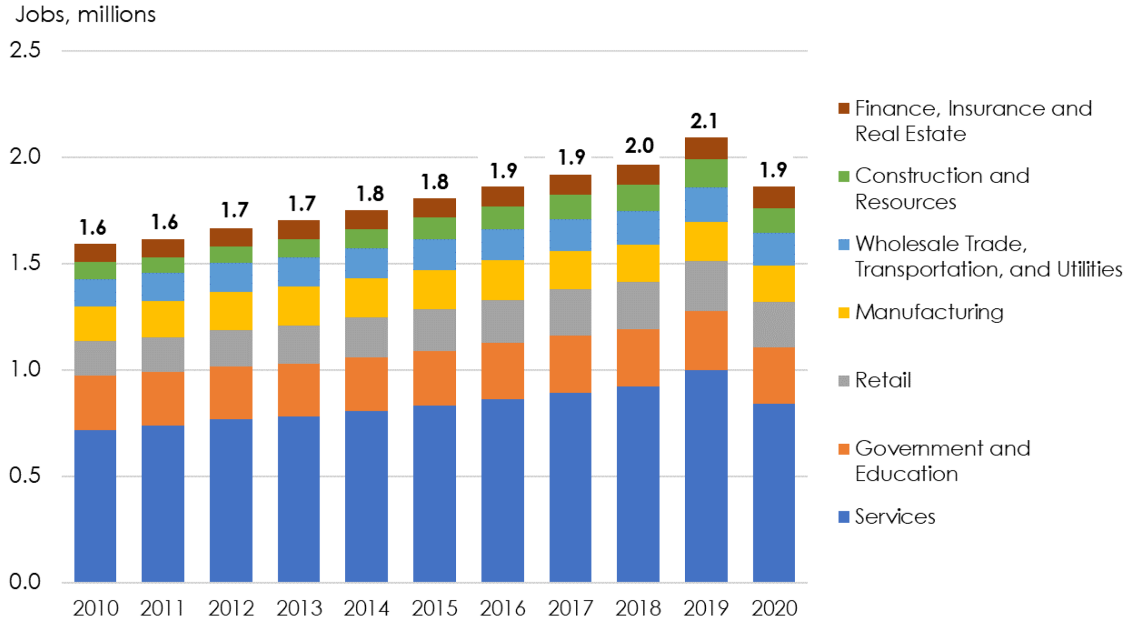
Sources: U.S. Bureau of Economic Analysis, 2020; St. Louis FRED, 2020; Community Attribute Inc., 2020.

The Seattle Metro Area has been at the center of Washington state's recovery since the Great Recession. GDP rose by 4.6% annually between 2010 and 2019 with the fastest growth in the Services and Retail sectors (**Exhibit 6**).

Jobs have declined as of May by 200,000 in the region, returning to 2015 employment levels, at least temporarily. The loss is a steep drop after regional employment grew by 3.1% annually from 2010 to 2019, adding 500,000 jobs. This growth has been particularly strong in the construction and resources sector (5.7%) and in retail (4.3%). **Exhibit 7** illustrates the area's industry makeup by number of employees.

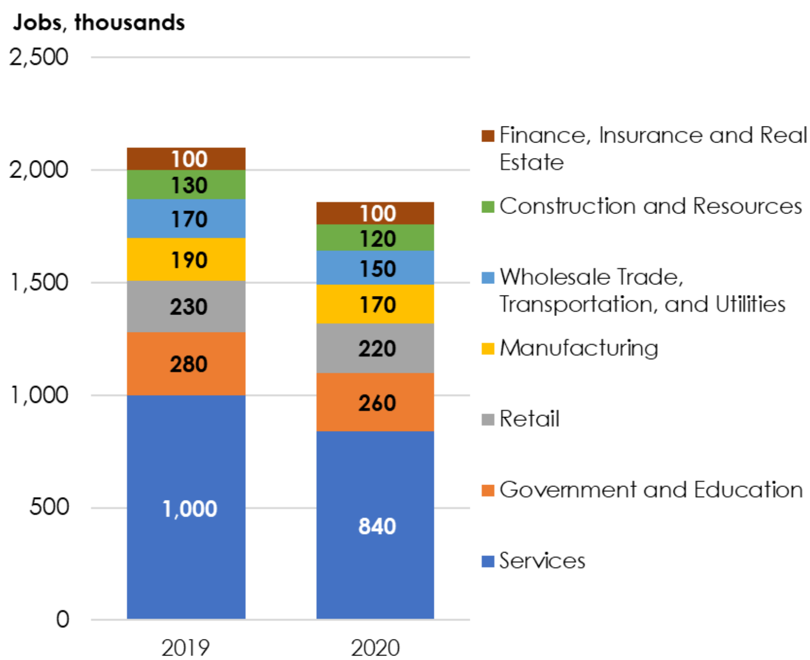
As shown in **Exhibit 8.** Employment by Industry, Seattle MSA, 2019 and May 2020 losses of employment as of May were across nearly all sectors, with only jobs in Finance, Insurance, and Real Estate remaining constant with annual averages from 2020.

Exhibit 7. Employment by Industry, Seattle MSA, 2010-2020



Sources: Puget Sound Regional Council, 2018; Washington State Employment Security Department, 2020.

Exhibit 8. Employment by Industry, Seattle MSA, 2019 and May 2020



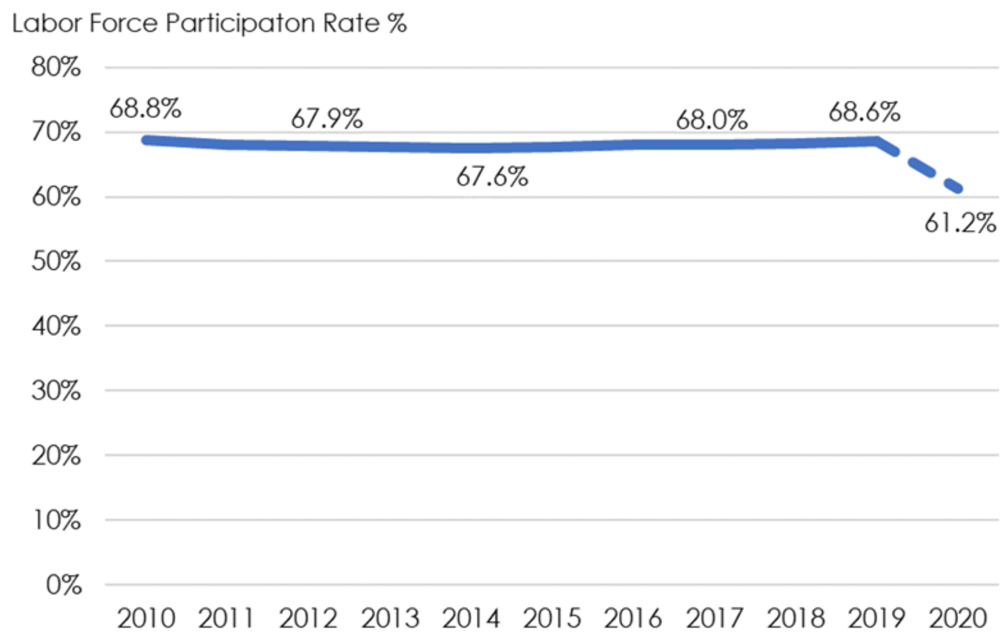
Sources: Washington State Employment Security Department, 2020.

Labor Force and Wages

Regional Labor Force

In 2019, the civilian labor force in the Seattle Metro Area exceeded 2.1 million people, representing a labor force participation rate of 68.6%. The regional labor force has grown by more than 280,000, or 15%, since 2010. Labor force participation in the Seattle Metro Area is higher than in the United States as a whole, but changes in the participation rate have followed national trends. In 2019, the labor force participation rate had nearly returned to its level in 2010 (**Exhibit 9**).

Exhibit 9. Labor Force Participation Rate, Seattle MSA, 2010-2020



Sources: Washington State Employment Security Department, 2020; U.S. Census Bureau, 2020; Olivier Coibion et al., 2020.

The economic impacts of the virus will push down the labor force participation rate, as unemployed workers get discouraged and opt out of the workforce altogether. Nationwide, the U.S. labor force participation rate has fallen by an estimated 7.4% as of early April.[3] Older workers are particularly at risk to the economic effects of Covid-19 because they are less able to work remotely and tend to be unemployed for longer. Many will retire early if they are able to.

The Seattle area has a large percentage of workers that can work from home, which will keep the labor force participation rate up higher than would be

[3] Olivier Coibion et al., *Labor Markets During the Covid-19 Crisis: A Preliminary View*, CESifo Working Paper No. 8238 (April 2020).

otherwise. According to a survey by Redfin, 44% of people who shifted to remote work in Seattle expect to continue working from home after the government-imposed shutdown ends. This share of workers is higher than in any other city surveyed, including 31% in New York and 28% nationally.[4]

Unemployment

Between early March and July 11, there have been 801,800 cumulative initial unemployment claims made among workers in King, Pierce, and Snohomish counties. The peak weekly initial claims came during the week ending April 4, when 90,700 initial claims were submitted within the three-county region (**Exhibit 10**). The largest number of cumulative claims have come in the arts, entertainment, and recreation industry, representing 14% of all claims in the region between March and July 11, followed by educational services (13%) and construction (12%).[5]

Approximately 56% of cumulative initial unemployment claimants in the three-county region of King, Pierce, and Snohomish have less than a college degree, and more than one third are above the age of 44, based on Washington State Employment Security Department data between March 1 and July 11.

The Covid-19 crisis has had an uneven effect on employment in different industries. Workers in consumer-facing industries such as retail, accommodation and food service, and arts, entertainment and recreation were hit early and severely by this crisis. These three industries account for a combined 153,600 new claims since between March 1 and July 11 (weeks 9 to 27), representing 19% of total new UI claims in the region over this period. A dramatic drop in consumer demand for restaurants and hotel rooms followed by government closure of non-essential businesses led to mass furloughs and layoffs.

Workers in the healthcare and social assistance industry, due to a decline in non-urgent care, has seen more than 27,000 new claims since March 1, while manufacturing workers have filed 26,300 new claims (**Exhibit 11**).

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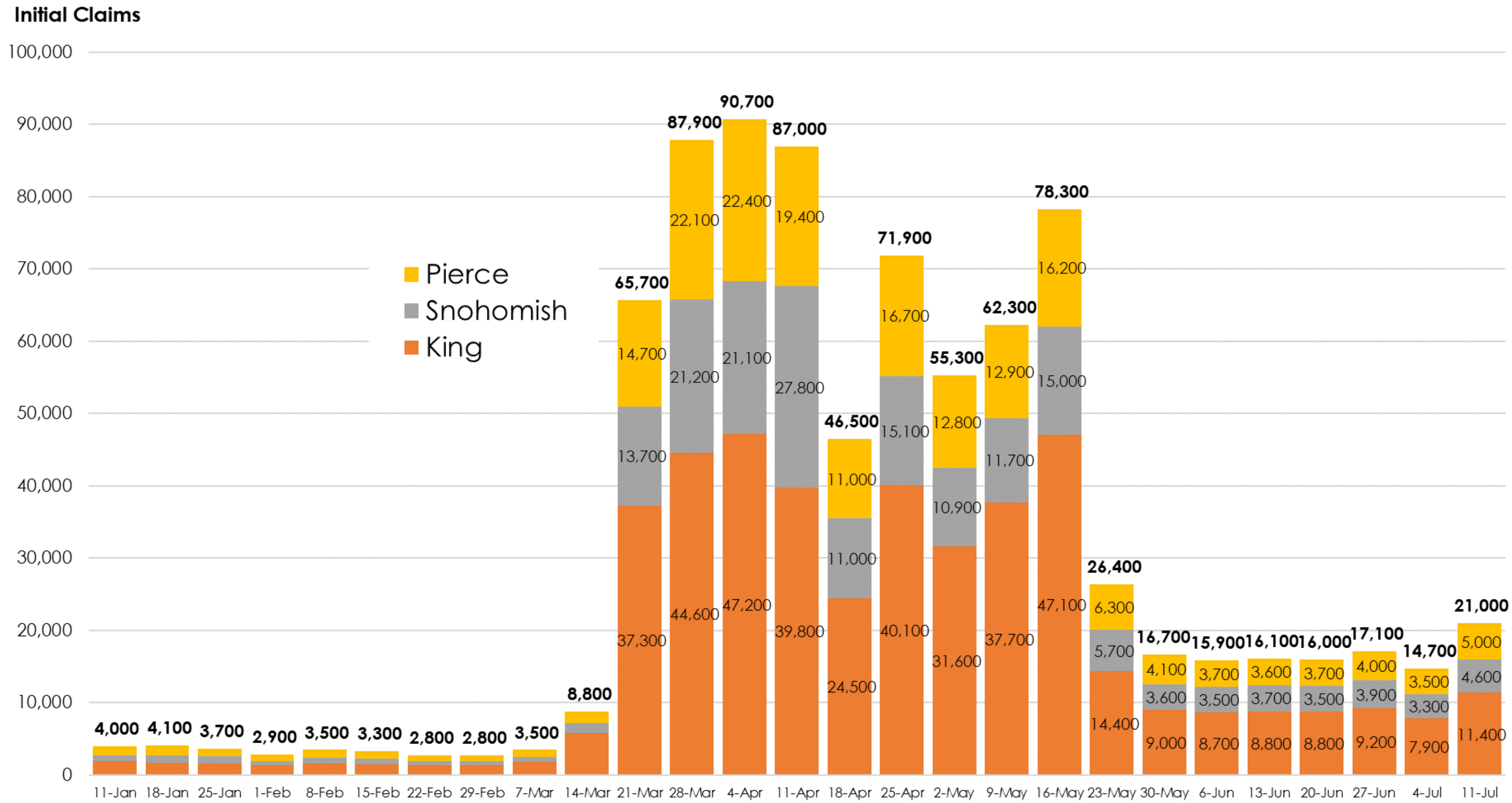
[4] Tim Ellis, "Post-Pandemic Migration from Expensive Cities Likely As 1 in 4 Newly Remote Employees Expect Work-From-Home to Continue," *Redfin* (updated May 18, 2020), https://www.redfin.com/blog/wfh-leaving-new-york-san-francisco/.

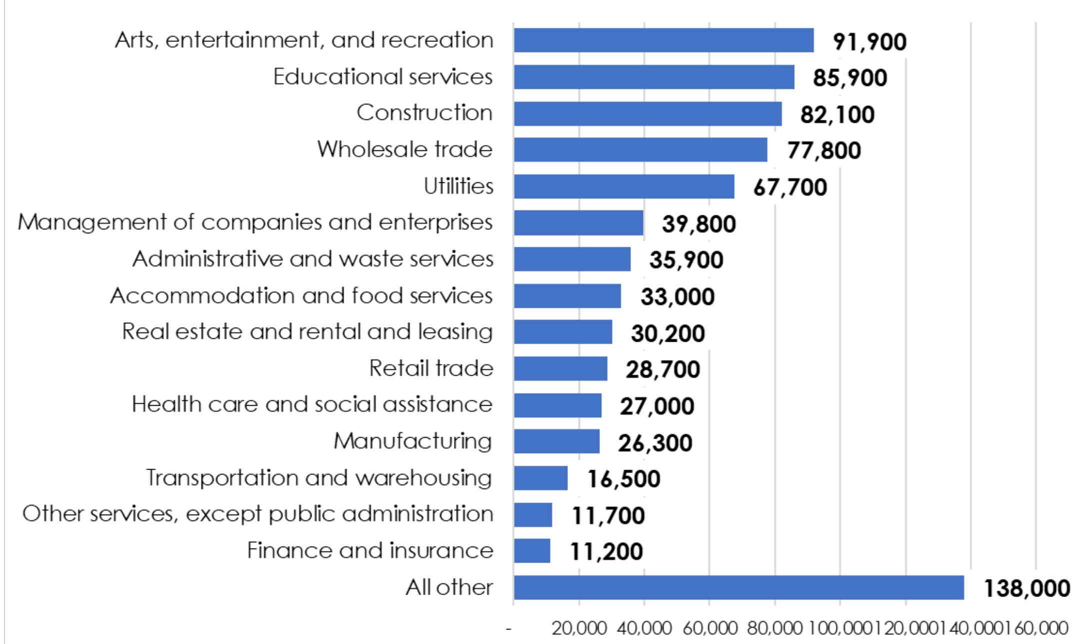
[5] There have been reported cases of fraudulent unemployment insurance claims, though the extent of these claims, and necessary correction of past data for 2020, has not yet been released. Nonetheless, the overall magnitude and trend in claims is historic in nature.

Exhibit 10. Initial Unemployment Insurance Claims, Weekly, 2020, Seattle Metro Area



Source: Washington State Employment Security Department, 2020.

Exhibit 11. Cumulative Initial Unemployment Insurance Claims, 2020, by Industry, King, Pierce, and Snohomish Counties (March 8 to July 11)



Source: Washington State Employment Security Department, 2020.

The largest segment of workers filing for unemployment between March 1 and July 11 are multiple manager classifications, which make up 18.0% of all initial claims. Another 8.0% of those filing for unemployment are workers engaged in office and administrative support, followed by construction and extraction workers at 7.9%. **Exhibit 12** lists initial unemployment claims by specific occupations. Managerial positions dominate the list, as well as occupations which are generally consumer-facing, such as waitstaff, retail salespersons and hairdressers.

Exhibit 12. Initial Unemployment Insurance Claims by Occupation, 2020, Cumulative (March 1 to July 11)

Occupation	Initial Claims	Share
Sales Managers	28,400	3.5%
General and Operations Managers	23,100	2.9%
Waiters and Waitresses	21,800	2.7%
Retail Salespersons	20,900	2.6%
Carpenters	12,500	1.6%
Hairdressers, Hairstylists, and Cosmetologists	12,200	1.5%
Production Workers, All Other	11,600	1.4%
Managers, All Other	11,400	1.4%
Marketing Managers	11,400	1.4%
Taxi Drivers and Chauffeurs	10,900	1.4%
Cashiers	10,400	1.3%
Customer Service Representatives	10,400	1.3%
Bartenders	10,100	1.3%
Electricians	9,900	1.2%
Administrative Services Managers	9,700	1.2%
Construction Laborers	9,000	1.1%
Stock Clerks and Order Fillers	8,700	1.1%
Counter Attendants, Cafeteria, Food Concession, and Coffee Sh	8,700	1.1%
Construction Managers	8,500	1.1%
Childcare Workers	7,900	1.0%
Cooks, Restaurant	7,500	0.9%
Maids and Housekeeping Cleaners	7,400	0.9%
Receptionists and Information Clerks	7,200	0.9%
All Other Occupations	*524,100*	*65.2%*
Total	**803,700**	

Source: Washington State Employment Security Department, 2020.
Note: total is slightly less than overall report total due to incomplete data.

Exhibit 13 lists estimated lost wages by industry in the Seattle Metro Area. Manufacturing and construction lead the way, partly due to delayed projects and factory closures under social distancing guidelines. Consumer-facing industries have also been hit hard. In total, retail, accommodation and food services, and arts, entertainment and recreation have experienced a $1.7 billion loss to wages. (Some income has been offset by unemployment insurance and federal stimulus checks.)

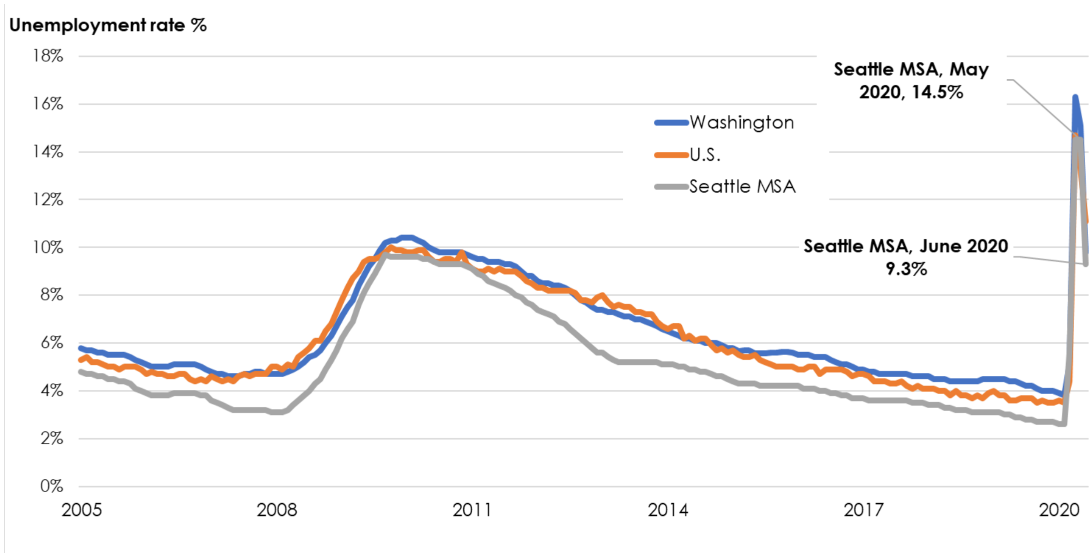
Exhibit 13. Estimated Lost Wages, King, Pierce, and Snohomish Counties, millions $, 2020 Q2

Industry	Lost Wages, Q2	Share of Total
Manufacturing	$1,534.5	18.9%
Construction	$1,181.7	14.5%
Health care and social assistance	$1,003.5	12.4%
Retail Trade	$931.5	11.5%
Professional and technical services	$625.9	7.7%
Accommodation and food services	$553.4	6.8%
Information	$453.1	5.6%
Wholesale trade	$440.6	5.4%
Administrative and waste services	$398.5	4.9%
Other services, except public administration	$273.2	3.4%
Educational services	$240.0	3.0%
Finance and insurance	$168.0	2.1%
Arts, entertainment, and recreation	$166.9	2.1%
Real estate and rental and leasing	$103.3	1.3%
Management of companies and enterprises	$31.9	0.4%
Utilities	$9.2	0.1%
Agriculture, forestry, fishing and hunting	$8.7	0.1%
	$8,123.9	100.0%

Source: Washington State Employment Security Department, 2020; U.S. Bureau of Labor Statistics, 2020; Community Attributes Inc., 2020.

As of June 2020, the unemployment rate for the Seattle MSA was 9.3%, down from an unprecedented 14.5%, a level much higher than any period since the Great Depression of the 1930s. Even during the depths of the Global Financial Crisis, the Seattle MSA's unemployment rate peaked just shy of 10% (**Exhibit 14**).

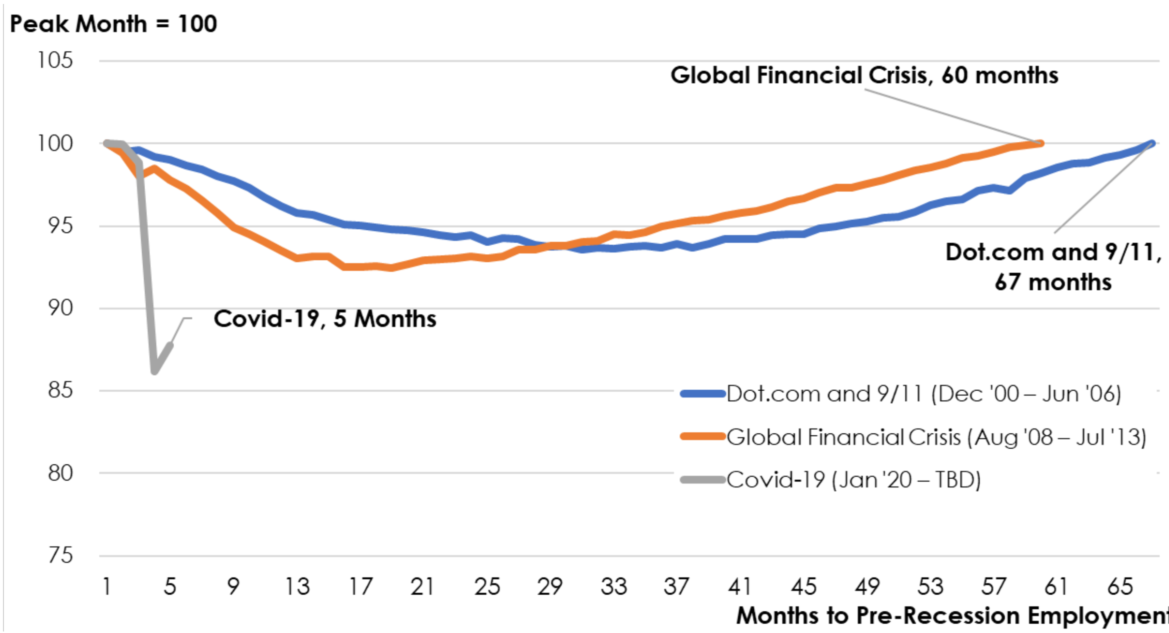
Exhibit 14. Unemployment Rate, Monthly, 2005-2020



Sources: Washington State Employment Security Department, 2020; U.S. Employment and Training Administration, 2020; Community Attributes Inc., 2020.

The rise in unemployment during the pandemic has been far more rapid than in the last several recessions. **Exhibit 15** compares the employment level in the Seattle Metro Area by months since its most recent peak. Starting in December 2000, the economic effects of the Dot.com bust and, later, 9/11 caused the region to remain below its prior peak employment level for 67 months. After August 2008, it took 60 months for employment to reach its pre-recession employment level.

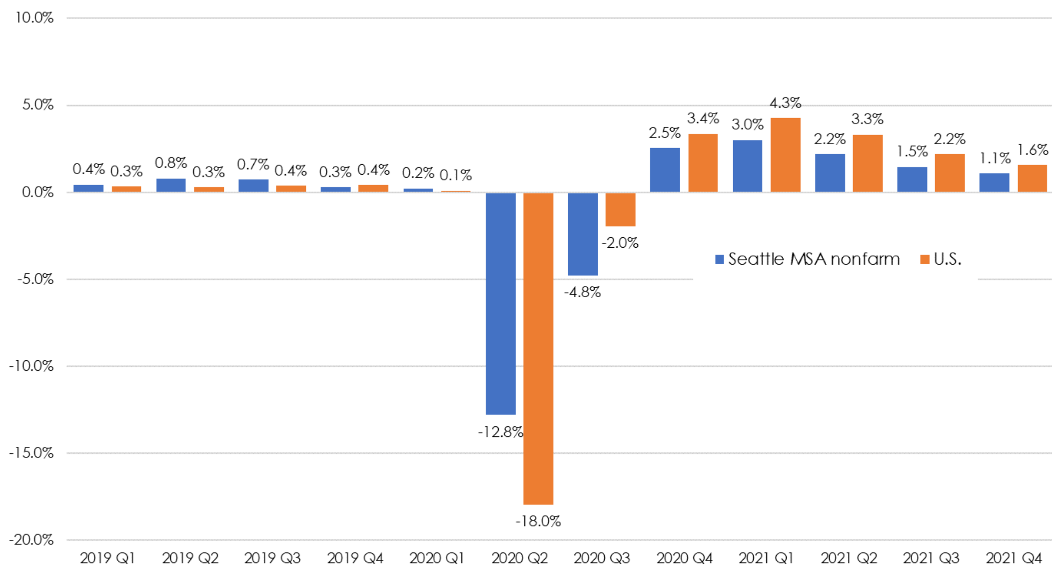
Exhibit 15. Employment Recovery Following Recession, Seattle MSA



Source: Washington State Employment Security Department, 2020.

Employment in the Seattle Metro Area is expected to return to its pre-Covid-19 level by 2022 (**Exhibit 16**). Nationwide employment will take longer to resurface. U.S. employment is not expected to reach pre-virus employment levels until the second quarter of 2023.

Exhibit 16. Seattle MSA Quarterly Employment, Historic and Forecast (quarterly change)

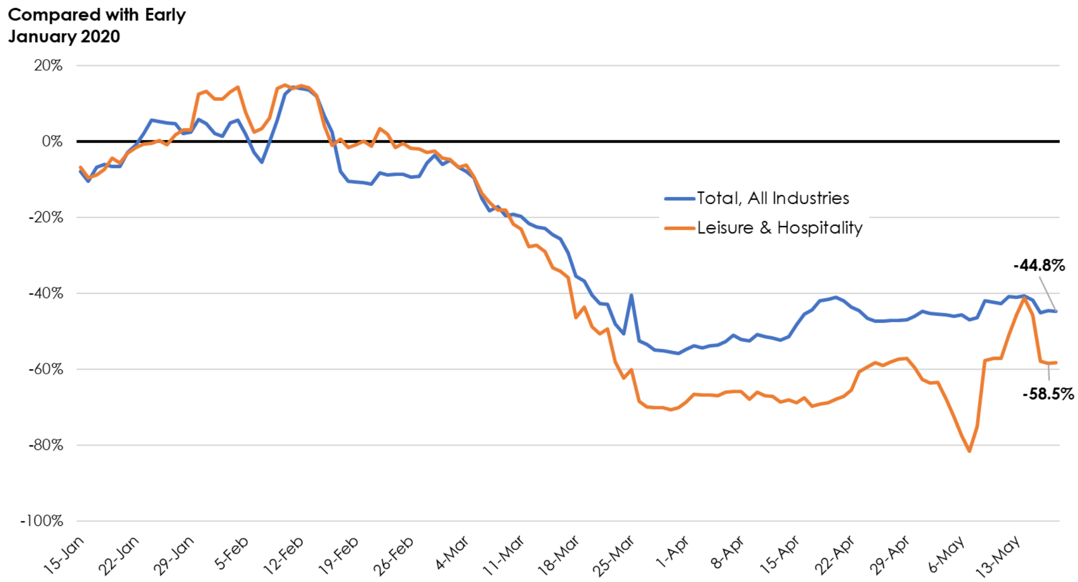


Sources: U.S. Bureau of Labor Statistics, 2020; Washington State Economic and Revenue Forecast Council, 2020 (for U.S. forecast); Community Attributes Inc., 2020 (Seattle MSA forecast).
Note: Non-farm employment; Seattle MSA includes King, Pierce, and Snohomish Counties.

Business Revenues

The economic costs of the virus and social distancing affected all sectors of the regional economy. The most directly impacted are those businesses that provide consumer-facing services, such as restaurants and hotels. Small businesses have less resources and cash reserves to weather sudden declines in sales and economic uncertainty. According to estimates produced by Opportunity Insights, a Harvard University-based non-profit data platform, small business revenues in the Seattle Metro Area have remained at levels well-below just prior to onset of the pandemic. As of mid-May, small business revenues had fallen 44.8% among all small businesses, and they were down nearly 60% among those in leisure and hospitality (**Exhibit 17**).

Exhibit 17. Change in Small Business Revenues, Seattle MSA, Daily, 2020

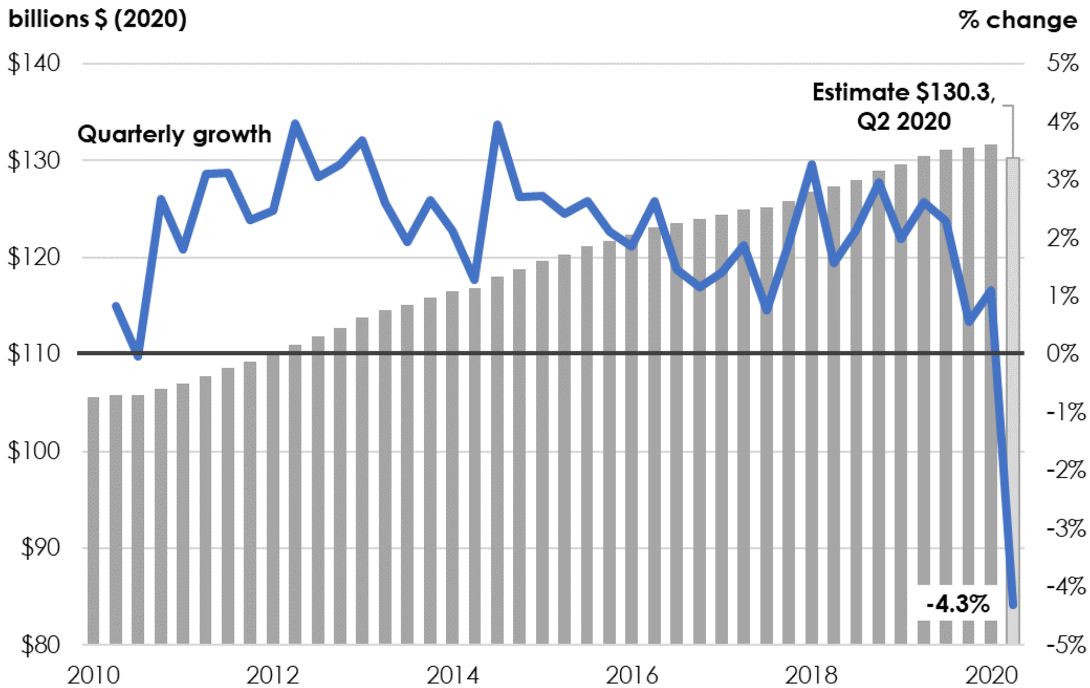


Source: Opportunity Insights, 2020.[6]

In the first quarter of 2020, however, revenues only grew by an estimated 1.1%. Gross business revenues in the Seattle Metro Area have grown steadily over the last ten years. Between 2010 and 2019, business revenues grew by an average of 2.3% per quarter. This decline is a direct result of reduced consumer and business spending. Gross business revenues in the Seattle Metro Area are expected to decrease by 4.3% in the second quarter. This will bring gross revenues to a total of $130.3 billion across all industries (**Exhibit 18**).

[6] Opportunity Insights receives data on purchase at small business from Womply, a company which collects deidentified credit card transaction. "Small businesses" have annual revenue that is less than Small Business Administration thresholds and within twice the interquartile range of Womply's data. Net business revenue is the sum of all credits (generally purchases) and debits (generally returns). These are seasonally adjusted seven-day moving averages. Location is the county/state of the business at which the transaction occurred.

Exhibit 18. Gross Business Revenues and Percent Change, Seattle MSA, Quarterly, 2010-2020



Sources: Washington State Employment Security Department, 2020; Washington State Department of Revenue, 2020; Washington State Economic and Revenue Forecast Council, 2020; Community Attributes, 2020.
Note: Projected using preliminary estimates of real disposable personal income growth for Washington state,

Gross business incomes have declined by approximately $13.4 billion through the first six months of 2020 compared with the same period in 2019 (**Exhibit 19,** for King, Pierce, and Snohomish counties; estimated by declines reported in employment by industry). Losses by city are report by county in **Appendix B**.

Exhibit 19. Estimated Gross Business Revenue Losses, Seattle MSA, June 2020 Year-to-Date

County	Estimated GBI Losses June 2020 YTD, billions $
King	-$9.0
Pierce	-$2.3
Snohomish	-$2.0
Total	**-$13.4**

Sources: Washington State Employment Security Department, 2020; Washington State Department of Revenue, 2020; Puget Sound Regional Council, 2018; Community Attributes, 2020.

Consumer Spending and Taxable Retail Sales

Consumer spending, or consumption, is the purchasing of goods and services by individuals or families. It is the largest contributor to US GDP. In the United States, consumer spending comprises three categories:

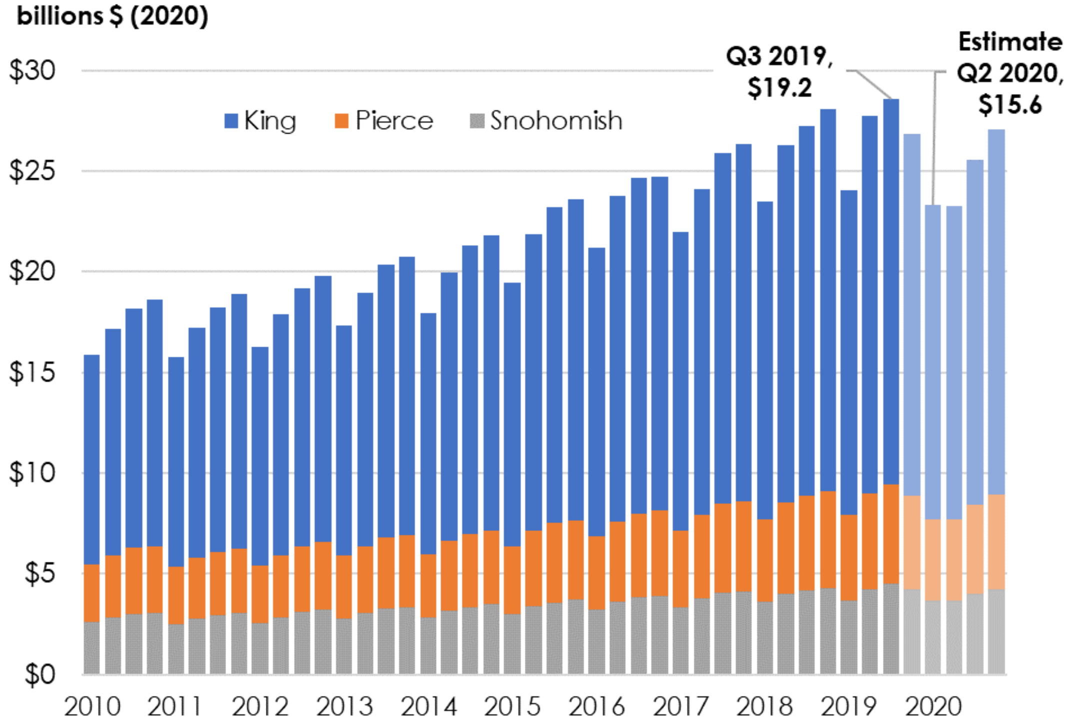
- Durable goods that are purchased by consumers and are used over a prolonged period, like motor vehicles.
- Nondurable goods that can be stored or inventoried with an average life of less than three years, like food or clothing.
- Services that are consumed at the place and time of their purchase, like housing or healthcare.

As of June 3, consumer spending in the Seattle Metro Area is down an estimated 26.1% compared to early January 2020. The largest decrease in spending has been on entertainment and recreation, transportation, and restaurants and hotels. These expenditures averaged a 60.5% drop. Over the same period spending on general merchandise and healthcare fell 48.2% and 17.4% respectively, while grocery spending increased by 2.2%. Consumer spending in the Seattle Metro Area has fallen more than in the nation at large, which experienced a 12.6% drop, but less than in Boston, San Francisco, or Los Angeles.[7]

Taxable retail sales measure the amount of money spent within an area on residential and nonresidential purchases. Between 2010 and 2019, taxable retail sales in the Seattle Metro Area grew by an average rate of 2.0% per quarter. Taxable retail sales are generally low in the first quarter and increase throughout the year. In the fourth quarter of 2018, taxable retail sales in King, Snohomish, and Pierce Counties totaled $28.1 billion. In the second quarter of 2019, this figure fell to $24.1 billion. By the third quarter of 2019, taxable retail sales had risen to an unprecedented $28.6 billion (**Exhibit 20**).

[7] Opportunity Insights, Economic Tracker (June 9, 2020), https://tracker.opportunityinsights.org/

Exhibit 20. Taxable Retail Sales, Seattle MSA, Quarterly, 2010-2019



Source: Washington State Department of Revenue, 2020.

As consumer and business spending halted, purchases lag and cut into business revenues. Between January and April 2020, estimated taxable retail sales in the Seattle Metro Area were $31.6 billion. This amount is nearly $900 million, or 2.7%, below its level in 2019. Purchases in the leisure and hospitality industry have dropped 15.2% over the same period, and purchases in the retail industry have fallen 1.8%. These two consumer-facing industries are responsible for 98.3% of the decline in total taxable retail sales between April 2019 year-to-date and April 2020 year-to-date. (**Exhibit 21**)

Exhibit 21. Estimated Taxable Retail Sales, Seattle MSA, billions $ (2020), April 2019 YTD and April 2020 YTD

Industry	April 2019 YTD	April 2020 YTD	Change
Retail	$13.0	$12.8	-$0.2
Leisure & Hospitality	$4.1	$3.4	-$0.6
All Consumer-Facing	*$17.1*	*$16.2*	*-$0.8*
Other Industries	$15.4	$15.4	$0.0
Total	**$32.5**	**$31.6**	**-$0.9**

Source: Washington State Department of Revenue, 2020; Washington State Employment Security Department, 2020; Community Attributes, 2020.

Impacts by Industry

The pandemic has affected all industries in the Seattle Metro Area. A few niche industries experiencing temporary increase in demand, but economic activity has slowed for most businesses. Like the U.S. economy, the regional economy depends on consumer spending. Quarantines, office closures, and a sudden change in spending patterns have resulted in significant losses to businesses. Those most heavily affected are in consumer-facing industries, which include retail and services-based businesses engaged in leisure and hospitality.[8]

Retail and Personal Services

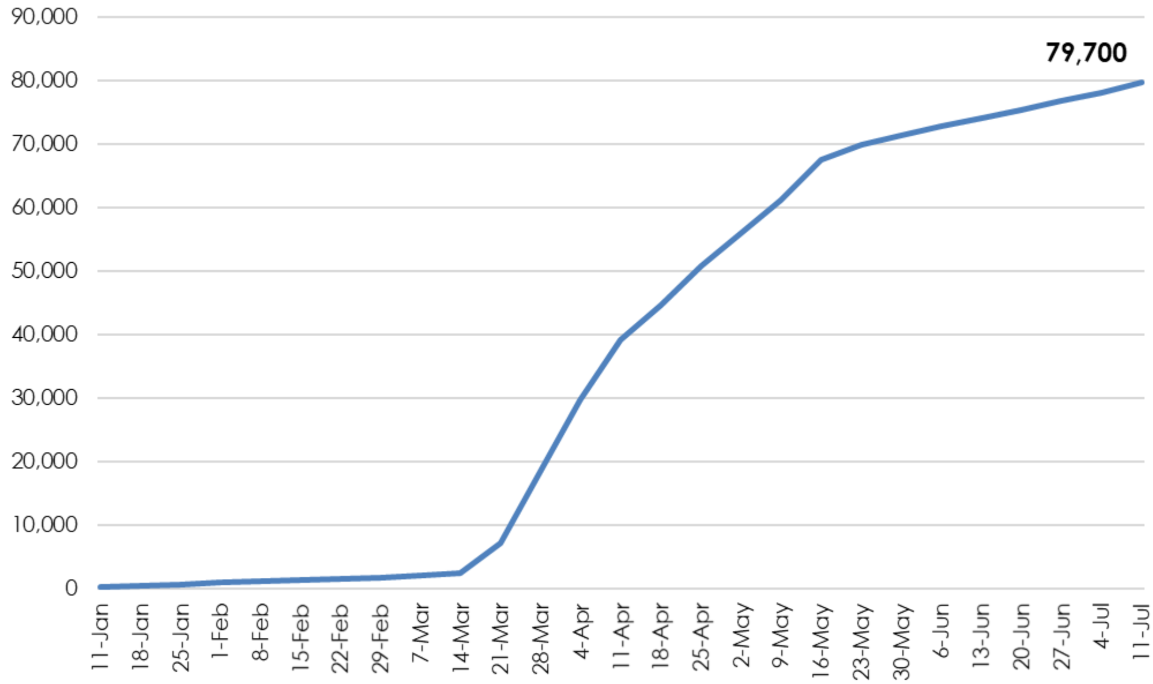
The pandemic comes after a decade of change to the retail industry, marked by technology advances in online shopping, same-day delivery and consumer delivery. Under the statewide shutdown order, "essential" retail outlets such as grocery stores and pharmacies could remain open with limited capacity and certain safety precautions. Non-essential stores had to close. This situation left many retailers with no revenue, and some firms were forced to furlough their employees. Since the beginning of the year, there have been more than 75,400 new claims in the region from retail sector workers, though near all these claims were filed beginning in March (**Exhibit 22**).

In the early stages of the shutdown order, certain retail businesses deemed essential experienced a surge in demand for cleaning supplies, medicine, and non-perishable foods. Consumers started buying more groceries and other goods online. Seattle-based Amazon reported hiring more than 100,000 warehouse and delivery workers to help meet increased demand in March and April (nationwide).

On May 8, Governor Inslee announced that retail outlets could begin offering curbside pickup services. By then, the pandemic had already taken a heavy toll on non-essential retail businesses. Nordstrom, which is headquartered in Seattle, issued a press release that same day stating it would permanently shut 16 of its department stores nationwide.

[8] The leisure and hospitality industry includes restaurants, lodging and businesses related to arts, entertainment, and recreation.

Exhibit 22. Retail Sector Initial Unemployment Insurance Claims, Cumulative, Seattle Region



Sources: Washington State Employment Security Department, 2020; Washington State Department of Revenue, 2020; Community Attributes Inc., 2020.

Other Services

More than 440,000 workers across the Seattle Metro Area, or 21% of the region's total employment, were employed in consumer-facing industries in 2019. These industries are at particular risk to economic upheaval. **Appendix A** lists cities with over 25% employment in these sectors, led by the City of Ruston in Pierce County at 53%. Ruston relies on visitors to its waterfront shops, restaurants, and entertainment venues. The City of Covington leads King County with 49% consumer-facing industry employment, and the City of Lynwood tops Snohomish County at 42%.[9]

Local level employment, however, depends on the degree to which suburban cities are more residential in nature or are employment centers. Much retail is supported by day-time population, which includes workers by place of work. The places have work have for now shifted away from office centers and into workers' homes. So cities such as Covington and Kent may in fact have an increase in demand for local services, with more commuters working out of their homes, rather than commuting into major employment centers.

[9] Consumer-facing industries include retail.

Public health measures have directly restricted the activities of labor-intensive services-based businesses. On March 16, 2020, Governor Inslee directed all restaurants and bars to cease operations. Some establishments took steps to retain their workforce with modified business plans, such as by converting to a drive-thru operation and providing delivery service. However, many businesses were forced to close and will not reopen.

Tourism and Visitors

The coronavirus outbreak has disrupted a decade-long upward trend in tourism to the Seattle Metro Area. Between 2010 and 2019, the sector had experienced consistent annual growth. In February 2020, Visit Seattle reported that more than 41 million people had visited King County in 2019 and it cited a record number of future meeting and convention bookings. At that time, the organization reported that nearly 800,000 total room nights had been booked for these events through 2028.[10]

Social distancing, travel bans, and business closures have since caused people to cancel their vacations and work-related trips. While hotels may remain open as essential businesses, the economic situation has forced many to temporarily close. Hotels in King County recorded a 26% occupancy rate for the week ending on May 23, leading to an 87% year-over-year decline in revenues. This lags the U.S. hotel market, which had an occupancy rate of 35% during the same week.[11]

As of May 29, 32 citywide conventions previously booked at the Washington State Convention Center have canceled or postponed due to virus-related restrictions. Most cancelled conventions were scheduled for 2020, with an estimated total attendance of more than 127,000 people. Fifteen of these events were planned for the second quarter of 2020, and more will cancel as social distancing measures extend into the third or fourth quarter. These canceled events have directly contributed to the decline in hotel occupancy, as total attendees were expected to spend more than 215,000 room nights in the area.[12] According to the Washington State Convention Center, events at the center in 2018 supported direct $438.4 million in spending by outside visitors, supporting nearly 4,700 direct jobs.[13]

The Port of Seattle announced in March the suspension of the 2020 cruise season. In May, Holland America, Carnival, and Princess Cruises cancelled

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[10] Visit Seattle, "Seattle Celebrates Tenth Year of Record-Breaking Tourism Season With More Than 41 Million Visitors in 2019," https://visitseattle.org/press/press-releases/seattle-celebrates-tenth-year-of-record-breaking-tourism-season/.
[11] Visit Seattle, *COVID-19 Travel Industry Impact Briefing* (May 29, 2020).
[12] Ibid.
[13] Washington State Convention Center Public Facilities District, *2018 Annual Report*.

their remaining Alaska cruises from the Port of Seattle. The cruise industry supports an estimated $4.2 million in total economic impact in Washington per vessel call at the Port of Seattle. Cruise Lines International Association Alaska estimated 199 vessel calls for the 2020 season, all cancelled due to the coronavirus outbreak. The estimated total losses in economic impact due to the pause in the cruise season are more than $800 million.

The Mariners, Seahawks, Sounders, Storm, and others contribute millions in consumer spending to the economy each year. In 2019, there were nearly 1.8 million attendees to Mariners games, or approximately 22,000 per game. These visitors spend income not only at the stadium, but at nearby restaurants and retail outlets. Professional sports nationwide are exploring new formats to open in 2020, but full capacity crowds will not be allowed until Phase 4, expected no sooner than mid-2021.

Major concerts and entertainment events draw millions of people each year to Seattle. According to a report by the City of Seattle, each job directly associated with music events supports one additional job across the local economy.[14]

Aerospace & Air Travel

Covid-19 significantly impacted both passenger travel and cargo. The International Air Transport Association (IATA) forecasts that Revenue Passenger Km (RPK) this year will be 55% lower than in 2019. While recovery is expected to begin in the second half of 2020, initially from domestic markets and then through a gradual reopening of international markets, RPKs will remain below the 2019 levels. RPKs are estimated to increase by roughly 55% in 2021. With world trade projected to fall by 13% in 2020, cargo and mail ton-kilometers (CTK) are estimated to decline by roughly 17% this year.

IATA predicts airlines in all regions will experience a total net loss of $84.3 billion in 2020 and losses will continue in 2021, although to a lesser extent. On May 5, Alaska Air Group reported its first quarterly loss in more than a decade. Alaska has grounded 80% of its fleet, cut advance payments to Boeing and put more than 5,000 of its 23,000 employees on voluntary unpaid leave.[15] Although the future remains unclear, Alaska expects to adjust its

[14] William Beyers, Christopher Fowler, and Derek Andreoli, "The Economic Impact of Music in Seattle and King County." Report for the Mayor's Office of Film + Music. November, 2008.
[15] Alaska Air Group, *Quarterly Earnings*, https://investor.alaskaair.com/financial-information/quarterly-results.

size to meet reduced demand. As of June 4, 2020, the airline predicts operating with 3,000 fewer workers in 2021 than in 2019.[16]

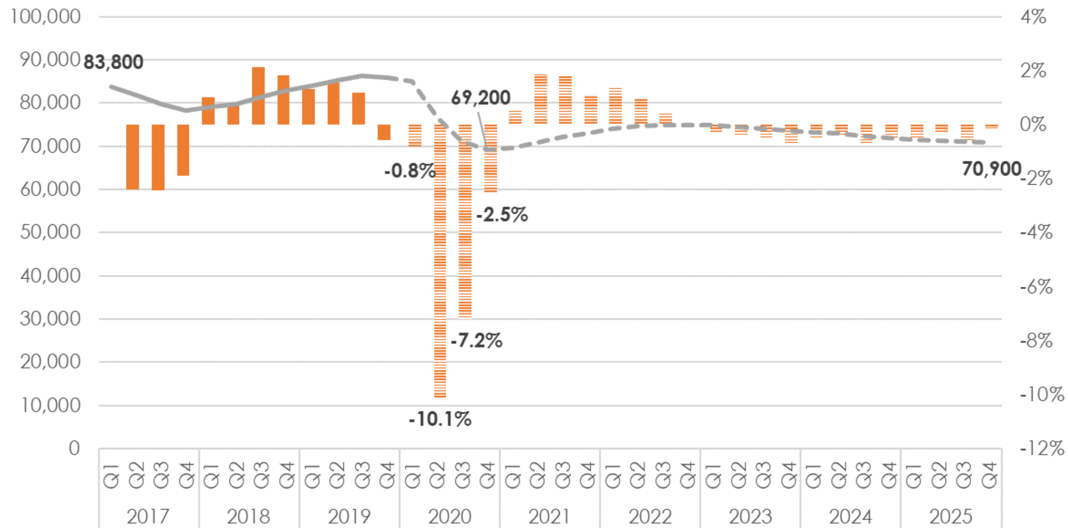
Given the challenging industry outlook, airlines will face pressures to reduce operating costs and there will be reduced investment appetite for new aircraft, with an impact on aerospace manufacturing. Boeing reported a first quarter loss of $641 million and a 26% drop in revenues. The company has announced plans to cut 10,000 jobs in 2020 at its commercial jet business, mainly in the Seattle area.

Boeing is slowing production of jets built in Everett and Renton. According to company officials, production of the 737-MAX in Renton will resume at lower than pre-pandemic levels and will gradually increase to 31 planes per month during 2021. The 777 and 777X production will also decrease from five a month to three a month in 2021. Production of the 787 which was happening at a rate of 14 per month, with half being produced in Everett, will fall to 10 per month in 2020 and 7 per month by 2022.

The Washington State Economic and Revenue Forecast Council produces aerospace employment forecasts for Washington state (**Exhibit 23** and **Exhibit 24).** The projections show a decline in regional aerospace employment of roughly 12% in 2020. While there are some signs of recovery in 2021, the number of regional aerospace jobs is projected to remain below the pre-pandemic levels in the next five years.

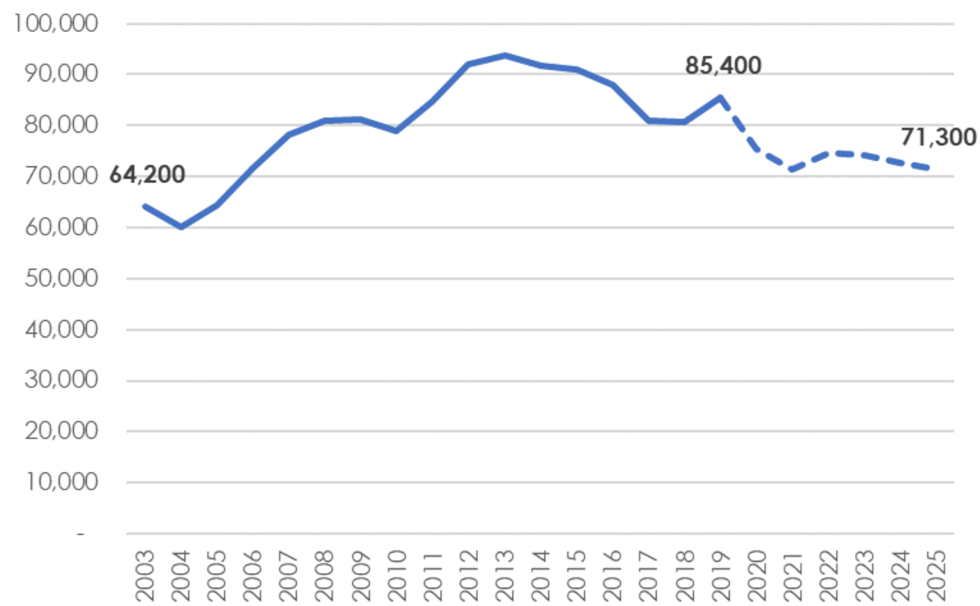
[16] Alaska Air Group President Ben Minicucci *quoted by* Andrew McIntosh, "Alaska Airlines tells workers it may need to operate with 3,000 fewer people in 2021," *Puget Sound Business Journal* (June 4, 2020).

Exhibit 23. Regional Aerospace Employment and Quarter-over-Quarter Change, 2017-2025



Sources: U.S. Bureau of Labor Statistics, 2020; Washington State Economic and Revenue Forecast Council, 2020; Community Attributes Inc., 2020.
Note: Aerospace industry forecast is for the Puget Sound region (King, Pierce, Snohomish, and Kitsap).

Exhibit 24. Puget Sound Region Aerospace Employment, 2003-2025



Sources: Washington State Economic and Revenue Forecast Council, May 27, 2020.

Other Manufacturing

The manufacturing sector was among the first to feel the effects of the coronavirus outbreak when trade and supply lines with China were disrupted. Once the virus began spreading rapidly in the United States, some factories shut down to protect workers. Others have grappled with social distancing guidelines, which pose challenges to normal operations. In the Seattle Metro Area, total employment in non-aerospace manufacturing fell by 6.4% between January and May. Nearly 37,000 people working in the sector have filed for unemployment since March 1.

Seafood processing companies have had to navigate these problems for months. Washington state exports $150 million a year in seafood to China, and many regional seafood companies also send fish to China for processing. In January and February, the virus disrupted both production at Chinese facilities and demand by Chinese consumers for seafood. This created a shock to the industry, with seafood processors having to manage an oversupply of fish. Trident Seafoods has started using a no-contact drive-thru fish truck to sell seafood products directly to consumers in Seattle and Bellingham.[17]

Issues were compounded by the virus spreading on board fishing vessels. In May and June, 110 crewmembers on three ships operated by Seattle-based American Seafoods tested positive for Covid-19. These boats are factory trawlers, in which workers normally process seafood in close quarters with little space for social distancing. As a result, seafood companies have faced difficulties to adapt to the pandemic. American Seafoods has implemented mandatory testing and a 14-day quarantine for all new crewmembers.[18]

Food and beverage processing companies have also been heavily affected by the pandemic. According to the Washington State Beer Commission, 50% of breweries in the state are in danger of going out of business if containment policies extend into the summer. Local breweries and wineries which rely on tasting rooms and meal service for sales are particularly vulnerable. In April, Cloudburst Brewing in Seattle reportedly dumped over 630 gallons of beer that had been originally produced for canceled events and closed bars.[19]

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[17] Ben Fisher, "Trident expands food truck operations in Seattle," *SeafoodSource* (June 16, 2020), https://www.seafoodsource.com/news/foodservice-retail/trident-expands-food-truck-operations-in-seattle.

[18] American Seafoods, *Some Crew Test Positive for COVID-19 on Northern Jaeger and American Triumph*, Press Release (June 5, 2020), https://www.americanseafoods.com/media/1694/release-65-some-crew-test-positive-for-covid-19-on-northern-jaeger-and-american-triumph.pdf.

[19] Gabe Guarente, "Beer Commission Says Half of Washington's Microbreweries May Close By Summer, If Restrictions Continue," *Eater Seattle* (April 30, 2020), https://seattle.eater.com/2020/4/30/21242938/half-small-breweries-washington-may-close-by-summer.

Some manufacturers have met the call by Governor Inslee to re-tool and make personal protective equipment. Seattle-based GM Nameplate began designing face shields for healthcare workers at Swedish Medical Center. Within a week, the company had manufactured and donated 500 face shields to the hospital. By April, it was producing shields in its facilities in the Seattle area, North Carolina, and China.[20]

Transportation

Washington state has experienced a significant decline in travel across all modes of transportation since Covid-19 related restrictions went into effect at the beginning of March. The Washington State Department of Transportation (WSDOT) has been monitoring these system-wide transportation changes and on June 5, 2020 the data showed that:

- Highway traffic was down by 18% on average compared to 2019 baseline.[21] Traffic has seen the sharpest decline after the *Stay Home-Stay Healthy* Executive Order went into effect on March 25th (63% on average) and has been increasing steadily since then.
- Ferry ridership was down 49% on average compared to 2019 baseline.[22] Like the other metrics, ferry ridership saw the greatest decline (87%) after the Stay Home order at the end of March and has been rebounding since.
- Transit ridership was down 58% on average compared to 2019 baseline.[23] In April and May, transit levels on weekdays were anywhere between 70% and 75% lower on average than during the same months in 2019.
- Compared to 2019 baseline, passenger rail was down 94% on average. Passenger rail has experienced the greatest decline amongst all modes of transportation and has been down by more than 90% for the whole period between end of March and June.
- Use of toll facilities was down by 49% on average compared to 2019 baseline.[24] This is up from 80% at the end of March.

Currently, state revenues and bonds make up 85% of Washington's transportation budget. The decline in travel due to the Covid-19 pandemic has financial repercussions on the state's revenue sources from fuel tax, tolls, and ferry fares. Fuel tax, tolls and ferry revenues represent roughly 45% of transportation funds. According to April estimates from the Secretary of

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[20] Brad Root, "Face shields for personal protection," *GM Nameplate* (April 9, 2020), https://gmnameplate.com/company/blog/face-shields-personal-protection.
[21] Average decline based on data from 32 locations statewide.
[22] Average decline based on data from all currently operating WSF routes.
[23] Average decline based on data from the ten largest transit agencies.
[24] Average decline based on data from all five tolled highways and bridges.

Transportation, Washington can expect a $100 million a month loss in revenue or roughly 38% of average monthly state revenue collections.[25]

The Secretary of Transportation provided a summary of activities programed with state revenue for the remainder of the fiscal biennium (June 2021), which can be impacted by the revenue loss:

- 1,050 capital construction projects, including highway improvements, ferry, rail, and other local program projects.
- 650 preservation projects, including the preservation of roadways, bridges, and other facilities.
- Maintenance work, which includes activities like snow and ice removal, pavement patching and bridge deck repair.

The state is taking some action to reduce expenses, such as maintaining ferries winter schedule through June 20, and reducing Amtrak Cascades service from four daily round trips between Seattle and Portland, Oregon, to one. The department also is deferring both permanent and non-permanent new hires. However, these measures will likely not be sufficient and additional reductions will be required, leading to disruptions to the operation and maintenance of the transportation system, delays of projects as well as job losses both in the state DOT workforce and within contractors in the private sector.

The pandemic also risks undoing years of transit growth. The low levels of transit ridership observed in the past couple of months may continue as the economy begins to reopen and some employers choose to extend their work-from-home policies. Even when more people return to work or start to travel more, they may not want to ride on a crowded bus or train due to the health concerns.

Furthermore, as fares are not being collected and tax revenues have plummeted, transit projects may suffer delays or cancellations, with potential negative impacts on traffic congestion in the region. Sound Transit has estimated that they will run out of tax money to build more train and bus lines by 2028, unless some projects are delayed or cancelled. In 2020 and 2021, Sound Transit forecasts a $743 million revenue loss under a moderate recession scenario and $1 billion under a severe recession scenario. It also projects a loss between $7.8 and $12 billion through 2041[26]. This accounts for the $166 million the agency received through the federal CARES Act.

[25] https://policy.transportation.org/wp-content/uploads/sites/59/2020/04/WA-April-17.pdf

[26] https://www.soundtransit.org/st_sharepoint/download/sites/PRDA/ActiveDocuments/200603%20Board%20Realignment%20Workshop%20FINAL.pdf

King County Metro projects a revenue shortfall between $240 and $265 million in 2020[27]. Funding from the CARES Act can cover most of that, but the prospects for recovery are uncertain. Almost half of Metro's operating budget for the 2021-2022 biennium comes from sales taxes. The revenue forecast from the King County budget office is for a reduction in sales tax revenue estimate for Metro transit of $397 million between 2020 and 2022. The inability to cover losses in the long run could mean substantial service reductions, delays to RapidRide lines and other amendments to service.

Air travel has also been impacted by the pandemic. Year-to-date on June 9, 2020, TSA screened passenger volumes were down 55% and aircraft operations were down 30%. The Port of Seattle anticipates a 61% decrease in passenger volume in 2020 for Sea-Tac International Airport compared to 2019. In April, the Airport estimated that the decline in passenger volumes and cancellations of flights will result in a $251 million revenue loss by the end of 2020.[28] This is a 37% drop in revenues caused mostly by losses in rents and fees paid by retail and dining tenants, parking and rental car operators and ground transportation companies. The $192 million authorized by the CARES Act will only partly cover the anticipated revenue loss.

Energy

Efforts to reduce the spread of COVID-19 have resulted in changing trends in energy consumption. According to the U.S. Energy Information Administration (EIA) electricity demand nationally in June through August is expected to be 5% less than energy consumption in June through August in 2019. Much of this decrease in demand is expected to be due to a decline in sales among the commercial and industrial sectors. Conversely, residential consumption is expected to increase due to coronavirus containment policies and social distancing which increase at home hours. Anticipated weather during the summer months also influences demand projections. The summer of 2020 is anticipated to have fewer cooling days, or days requiring the use of air conditioning, compared to 2019 which influences projections of residential and commercial demand as well.[29]

In the Pacific Contiguous region, which includes Washington, Oregon, California, Alaska, and Hawaii, EIA projects residential energy consumption to reach 30.8 billion kilowatt-hours in the second quarter of 2020, a 4% increase over 2019 and 39.5 billion kilowatt-hours in the third quarter a 2%

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[27] https://seattletransitblog.com/2020/05/19/metro-faces-steep-challenges-in-2021/
[28] https://www.seattletimes.com/seattle-news/health/coronavirus-daily-news-updates-april-23-what-to-know-today-about-covid-19-in-the-seattle-area-washington-state-and-the-nation/
[29] U.S. Energy Information Administration, *EIA expects 2020 summer U.S. electricity demand to be lowest since 2009* (June 10, 2020), https://www.eia.gov/todayinenergy/detail.php?id=44055.

increase over 2019. This represents the first increase in residential energy consumption in the second quarter of the year since 2017.

Commercial consumption is projected at 35.1 billion kilowatt-hours in the second quarter of 2020, the lowest in any quarter since 2011, and 39.8 billion kilowatt-hours in the third quarter of 2020. These projections represent 8% and 9% declines respectively over the same periods in 2019. Industrial consumption is also projected to decrease compared to 2019 rates. The EIA projects quarter two consumption at 19.8 billion kilowatt-hours and quarter three consumption at 22.7 billion kilowatt hours, declines of 3% each over the same period in 2019.

According to EIA short-term projections for the Pacific Contiguous region, demand in the first quarter of 2021 is projected to see continued decreases on commercial and industrial consumption. Demand in quarters two through four of 2021 is projected to stay relatively stable compared to 2020, however, both commercial and industrial quarterly consumption are projected to decrease compared to 2019 quarterly consumption levels.

Construction

Coronavirus containment policies have halted many ongoing and planned construction projects nationwide. In May, ground breakings at residential construction sites were down by 23.2% year-over-year nationwide and by 1.9% in the West.[30] The construction industry is typically more volatile than the overall economy, as the level of economic activity directly influences demand for new commercial or industrial space.

Washington state's stay-at-home order took effect on March 26, allowing only construction related to essential activities to continue. On April 24, Governor Inslee announced that some construction work could restart under new safety guidelines to prevent the spread of the virus.[31] These included providing personal protection equipment and requiring construction site workers to maintain at least six feet apart at all times. Only current projects that met the criteria could resume.

Since June 5, all construction has been authorized to resume in the Seattle Metro Area, including new projects and those in which social distancing may not be maintained. However, many projects have been delayed or abandoned.

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[30] U.S. Census Bureau, *Monthly New Residential Construction, May 2020* (June 17, 2020), https://www.census.gov/construction/nrc/pdf/newresconst.pdf.
[31] Gov. Jay Inslee's Construction Working Group, *Phase 1 Construction Restart COVID-19 Job Site Requirements* (April 23, 2020), https://www.governor.wa.gov/news-media/inslee-announces-plan-allow-construction-projects-previously-underway-be-completed.

As of June 18, there are 99 delayed projects in Washington state, of which 49 are in the Seattle Metro Area with a combined value of nearly $410 million.[32]

Healthcare

The healthcare sector has confronted a series of challenges since Covid-19 began spreading in the region. Early concerns about the healthcare system's capacity, particularly in terms of hospital beds and ventilators, motivated the collective effort to "flatten the curve." Budget shortfalls followed as hospitals increased spending on Covid-19 treatment and personal protective equipment for staff. UW Medicine anticipates a $500 million shortfall this year because of adaptations related to the pandemic.[33]

Declining patient demand has contributed hospital budget deficits. Since March, public health officials in Washington have advised avoiding hospitals for reasons other than necessary and elective surgeries, mammograms and colonoscopies.[34] Nationwide, outpatient visits dropped by 60% in early April.[35] In the Seattle region, emergency department volumes at CHI Franciscan's eight hospitals dropped 42% in April year-over-year. EvergreenHealth Medical Center in Kirkland also had 60% fewer emergency room visits and 73% fewer procedures.[36] Even after fears and capacity shortages related to Covid-19 subside, patient demand may remain low due to strained household finances.[37]

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[32] ConstructConncet, *Delayed Projects Report* (June 18, 2020), https://ref.constructconnect.com/delayed_projects/Delay-Report-State-Washington-byConstructConnect.pdf.

[33] Evan Bush, "UW Medicine furloughs 4,000 more workers, citing coronavirus budget hit," *The Seattle Times*, (May 25, 2020), https://www.seattletimes.com/seattle-news/health/uw-medicine-furloughs-4000-more-workers-citing-coronavirus-budget-hit/.

[34] Evan Bush, "'Where are the patients?' People are avoiding doctors, hospitals because of coronavirus worries," *The Seattle Times*, (May 25, 2020) https://www.seattletimes.com/seattle-news/health/patients-are-delaying-care-at-what-price/.

[35] Ateev Mehrotra, Michael Chernew, David Linetsky, Hilary Hatch, and David Cutler, *The Impact of the COVID-19 Pandemic on Outpatient Visits: A Rebound Emerges*, (May 19, 2020) https://www.commonwealthfund.org/publications/2020/apr/impact-covid-19-outpatient-visits.

[36] Evan Bush, "Washington hospitals, community health centers face a new crisis: red ink," *The Seattle Times*, (May 4, 2020) https://www.seattletimes.com/seattle-news/health/washington-hospitals-community-health-centers-face-a-new-crisis-red-ink/.

[37] Reed Abelson, "Why people are still avoiding the doctor (it's not the virus)," *Puget Sound Business Journal*, (June 17, 2020) https://www.bizjournals.com/seattle/news/2020/06/17/why-people-are-still-avoiding-the-doctor.html.

As Covid-19 costs rise and patient revenues fall, hospitals are forced to cut costs, including by furloughing employees. In May, UW Medicine furloughed 1,500 non-union workers, shortly followed by 4,000 union workers, totaling 15% of its workforce.[38] Furloughs have meant lower capacity for non-emergency procedures like optometry services, Harborview's patient-resource center, outpatient therapy and psychiatric services. Other cost reductions include hiring freezes and medical-supply expense reductions which may impact patient care.[39]

Like many industries and workplaces, the healthcare sector is trending towards wider and more permanent remote work. Virtual visits have increased exponentially during the pandemic.[40] In-person hospital and doctor's office visits present dangers to vulnerable populations such as the elderly. Unfortunately, these groups are in greater need of healthcare than the general population. Telemedicine can reduce the need for in-person care, lowering the risk for patients and healthcare providers alike.

Technology

The Covid-19 pandemic has had disparate effects on various areas of the tech sector. Technology dependent companies such as Airbnb, Uber and Lyft have been hit hard by the drop in travel. Others, such as Zoom and Amazon, have seen surges in demand for web-based services. In mid-March, Amazon began hiring thousands of new warehouse workers nationwide to meet the rising demand for home delivery. Of the 175,000 new temporary workers, Amazon plans to hire 70% full-time.[41]

The pandemic has hurt lesser established companies seeking venture capital. Nationwide, venture capital investment in April 2020 was down 43% compared to April 2019. However, in Washington state, April investment and completed deals were higher than in January and February 2020. Health and

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[38] Evan Bush, "UW Medicine furloughs 4,000 more workers, citing coronavirus budget hit," *The Seattle Times*, (May 25, 2020) https://www.seattletimes.com/seattle-news/health/uw-medicine-furloughs-4000-more-workers-citing-coronavirus-budget-hit/.

[39] Evan Bush, "As furloughs start for 5,500 UW Medicine workers, patients and staff worry about care," *The Seattle Times*, (June 4, 2020) https://www.seattletimes.com/seattle-news/health/as-furloughs-for-5500-uw-medicine-workers-begin-patients-staff-worry-over-care/.

[40] Erin Brodwin, "Surge in patients overwhelms telehealth services amid coronavirus pandemic," *STAT*, (March 17, 2020) https://www.statnews.com/2020/03/17/telehealth-services-overwhelmed-amid-coronavirus-pandemic/.

[41] Monica Nickelsburg, "Amazon will offer permanent jobs to 70% of workers hired in response to the pandemic," *GeekWire*, (May 28, 2020) https://www.geekwire.com/2020/amazon-will-offer-permanent-jobs-70-workers-hired-response-pandemic/.

life sciences companies in the region are raising the most money recently. 98point6 (telemedicine), Avalyn (respiratory disease therapies) and Blaze Bioscience (brain tumor identification) raised a combined $101 million in April, accounting for more than half of the state's total $190.6 million in VC funding that month.[42]

Workers in the tech industry have largely been able to work from home. Amazon and Microsoft acted quickly to send workers home in the early days of the pandemic and have extended remote work guidelines well into 2020. Other tech companies, like Twitter, have announced that employees may work from home indefinitely.

These changes may lead to higher concentrations of tech workers in Seattle. Hired, the job search marketplace, conducted a survey of tech workers in major hubs across the country. Survey data shows strong support for remote work among tech employees, with only 7% of respondents saying they wish to return to the office every day. More than half of workers prefer between 1 and 3 days per week in the office. If full-time remote work was allowed, 53% of respondents said they were likely or very likely to move to a city with a lower cost of living. Despite rising cost of living in Seattle, the city remains significantly cheaper than San Francisco and New York. Seattle is the third cheapest city with a technology cluster after Austin and Denver, and Seattle was the second most popular destination for tech workers after New York.[43]

Financial and Professional Services

The financial services sector is preparing for significant changes amid social distancing and widespread economic upheaval. Banks and financial institutions were deemed essential businesses during Washington state's stay-at-home order, but many firms closed retail branches due to reduced demand for in-person services. Others reduced their business hours. Seattle-based HomeStreet Bank shifted to an appointment-only model in April, and its staff have also been willing to meet customers at their cars.[44]

As the economy reopens, many consumers will continue to favor mobile banking and fintech products. This provides an opportunity for banks to

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[42] John Cook, "U.S. venture capital activity nosedives in April, but Washington state's numbers aren't too bad, yet," *GeekWire*, (May 6, 2020) https://www.geekwire.com/2020/u-s-venture-capital-activity-nosedives-april-washington-states-numbers-werent-bad/.
[43] Hired, *2020 State of Salaries Report*, (June 16, 2020), https://hired.com/blog/highlights/2020-state-of-salaries-report/
[44] Paul Roberts, "Banks temporarily close dozens of Seattle-area branches as coronavirus disrupts in-person interactions," *The Seattle Times* (April 27, 2020), https://www.seattletimes.com/business/local-business/banks-temporarily-close-dozens-of-seattle-area-branches-as-coronavirus-disrupts-in-person-interactions/.

expand their digital offerings and ramp up their online payment capabilities. The financial services sector is more flexible now than during the 2008 financial crisis, largely due to having healthier balance sheets. Higher capital and liquidity levels have put the industry in a better position to withstand the economic effects of the Covid-19 pandemic. That said, the crisis has caused an increase in homeowners not being able to make mortgage payments. Mortgage delinquency rates in the Seattle area rose 11% month-over-month between February and March, although the area continues to have one of the lowest rates in the country.[45]

Banks have had an integral role in the fiscal response to the coronavirus pandemic. Through the Paycheck Protection Program (PPP), small businesses can apply for special low-interest loans from participating depository institutions and credit unions. The Small Business Administration will fully forgive these loans if the borrower uses at least 60% to fund payroll and employee benefits. As of June 13, 73.4% of small businesses in the Seattle Metro Area had applied for a PPP loan and 69.9% had received one. This results in an estimated approval rate of 95.2%, up from 92.1% during the week ending on May 23.[46]

Regional Global Trade Impacts

The Covid-19 pandemic has dealt economic blows which acutely affect trade and supply chains in Washington state. The first impacts were felt after the virus disrupted manufacturing in China, dramatically reducing the volume of goods produced and shipped to the United States and other markets. This supply shock caused a significant increase in cancellations of scheduled cargo vessel arrivals at Washington state ports. The Northwest Seaport Alliance (NWSA) reports that there were 39 canceled sailings in the first four months of 2020, and shipping lines have announced 18 more through early July.[47]

On March 23, 2020, Governor Inslee included several supply chain sector occupations on the list of "Essential Critical Infrastructure Workers," including those in warehouses, logistics, and maritime transportation.[48] Nevertheless, there has been a clear slowdown in trade activity. In April, total containerized volume was down 17.5% year-over-year through NWSA ports, and there was a 20.5% year-over-year drop in international cargo

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[45] Black Knight, *Mortgage Monitor* (March 2020), https://cdn.blackknightinc.com/wp-content/uploads/2020/05/BKI_MM_Mar2020_Report.pdf.
[46] U.S. Census Bureau, *Small Business Pulse Survey* (updated June 18, 2020), https://portal.census.gov/pulse/data.
[47] American Shipper, *Ports of Tacoma and Seattle see 23.5% volume drop*, https://www.freightwaves.com/news/ports-of-tacoma-and-seattle-see-235-volume-drop
[48] Washington State Coronavirus Response. https://coronavirus.wa.gov/what-you-need-know/whats-open-and-closed/essential-business

volume specifically.[49] Canceled sailings have also created further delays due to inconsistent scheduling.

The IMF has revised GDP forecasts down for all of Washington state's leading export markets, comprising a 6.6% decrease across the state's ten largest trade partners. These broad economic effects could have long-term impacts on trade passing through Washington state.

Aircraft and Air Cargo

One of the most deeply impacted sectors worldwide has been the airline industry. Air travel is down 85% year-over-year as of June 7, forcing several airlines across the globe to restructure or shut down permanently. Surviving airline companies have taken drastic measures to reduce cash burn, including making historic capacity cuts and selling off assets. U.S. passenger airlines have grounded 47% of their active fleets, leaving 2,882 passenger aircraft sitting idle.[50] Civilian aircraft and parts constituted $25.4 billion or 42.2% of Washington state's exports in 2019.[51]

The pandemic has also affected air cargo as air freight not flown on dedicated cargo planes is often carried in the hold of passenger airplanes. These commodities generally have a high value-to-weight ratio or are perishable, such as electronics or produce. Fresh cherries, for example, made up $350 million of exports from Washington state in 2019.

Passenger air travel through Sea-Tac International Airport plummeted 56% in March and 94% in April compared to the same period in 2019. This translates to fewer planes and belly freight capacity, higher transportation costs and narrower margins for exporters (**Exhibit 25**). In addition, air cargo volumes dropped by 10% in April.

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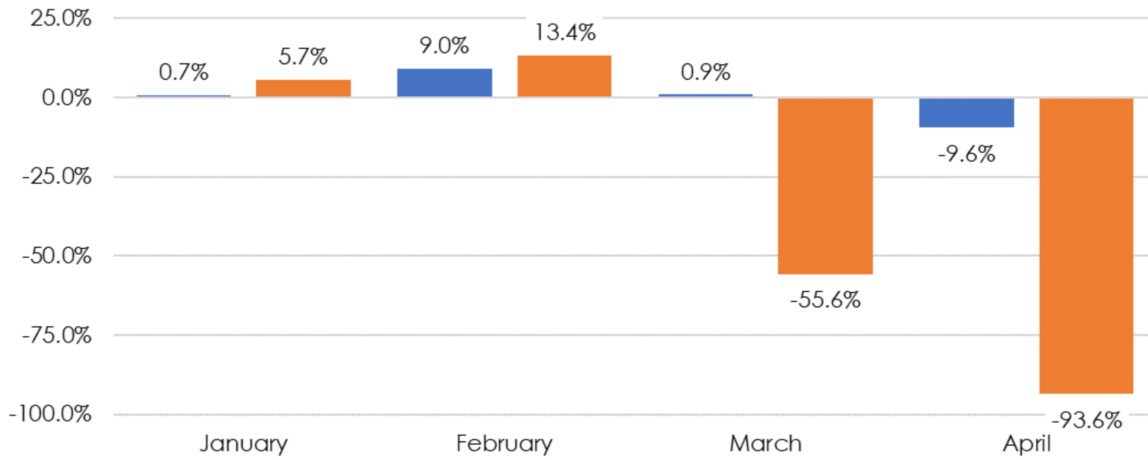
[49] American Shipper, *Ports of Tacoma and Seattle see 23.5% volume drop*, https://www.freightwaves.com/news/ports-of-tacoma-and-seattle-see-235-volume-drop

[50] Airlines for America, Impact of Covid-19: Data Updates, https://www.airlines.org/dataset/impact-of-Covid19-data-updates/#

[51] Census Bureau, *State Exports from Washington*, https://www.census.gov/foreign-trade/statistics/state/data/wa.html

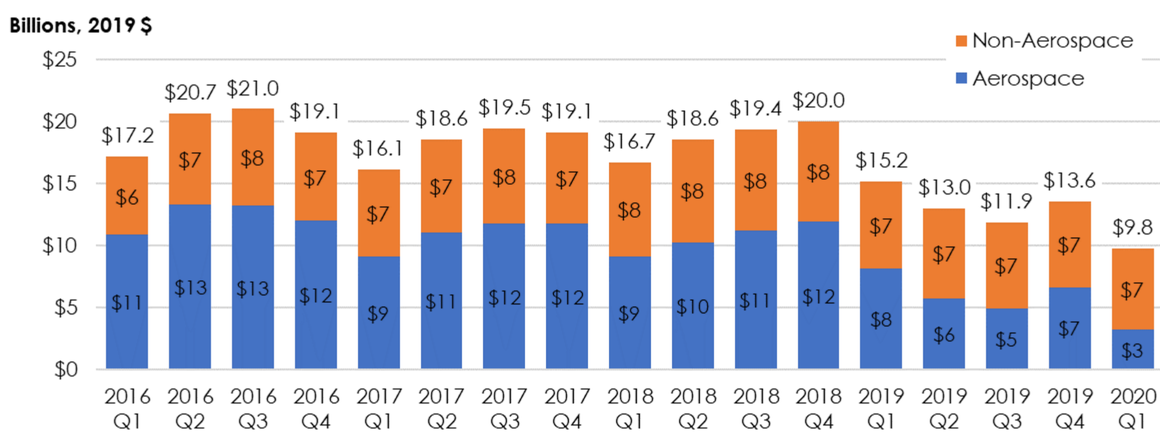
Exhibit 25. Air Cargo and Passenger Volume Change, 2019-2020



Sources: Port of Seattle, 2020.

The value of statewide exports in Q1 2020 was its lowest since 2005. However, this follows a year of falling exports values and more than a year of global trade disputes between the U.S. and its largest trade partners (**Exhibit 26**). However, 55% of Washington state export value was driven by aerospace exports on average from 2016 to 2020. Most of the export value decline after 2018 was in aerospace products.

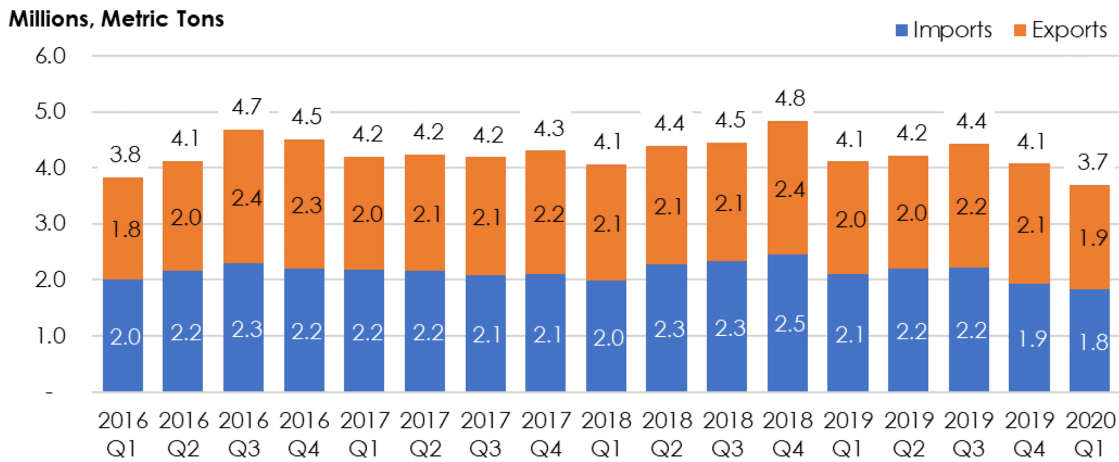
Exhibit 26. Washington State Exports to the World, by Quarter, 2016 Q1-2020 Q1



Sources: U.S. Census Bureau, 2020; St. Louis Fred, 2020; Community Attributes Inc., 2020.

Examining trade by weight over the same period also shows a decline, but is significantly smaller than the drop in trade value (**Exhibit 27**).

Exhibit 27. Washington Ports Imports and Exports Containerized Cargo, 2016 Q1 to Q1 2020 (Metric Tons)



Sources: U.S. Census Bureau, 2020; Community Attributes Inc., 2020.

Equity Considerations

As Covid-19 has disrupted business activity and people's livelihoods, it is important to note that many Americans are not well-prepared to deal with unexpected expenses. In 2019, only 63% of U.S. adults reported that they were able to cover a hypothetical expense of $400 using cash, savings, or a credit card paid off at the next statement. The other 37% would have to resort to some sort of borrowing to meet the expense, and 12% said they would be unable to come up with $400 by any means.[52]

This lack of savings means that Americans have a thin financial barrier against the economic effects of the pandemic. In addition, job losses in March and April 2020 were most severe among workers with lower incomes. According to the Federal Reserve, 39% of people working in February with a household income below $40,000 reported a job loss in March.[53]

Even while employed, these households are more susceptible to food scarcity, housing insecurity and delayed medical care. During the week ending on May 26, 9.1% of adults in the Seattle Metro Area reported sometimes or often not having enough to eat, as compared to 9.9% of U.S. adults and 7.7% of adults in Washington state (**Exhibit 28**).

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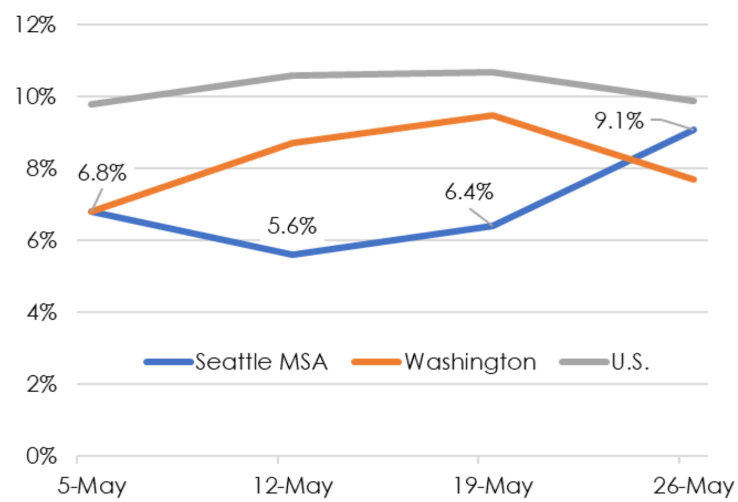
[52] Federal Reserve Board of Governors, *Report on the Economic Well-Being of U.S. Households in 2019, Featuring Supplemental Data from April 2020*, https://www.federalreserve.gov/publications/files/2019-report-economic-well-being-us-households-202005.pdf

[53] Ibid., page 53.

Exhibit 28. Percent of Adults Reporting Food Scarcity, Weekly, May 2020



Source: U.S. Census Bureau Household Pulse Survey, 2020.

The virus has had uneven impacts across races, ethnicities, and education levels. In the Seattle Metro Area, more than 41% of individuals filing for unemployment between March 8 and June 20 were non-white or Hispanic. Approximately 31% of new filers held no more than a high school education or less, while this demographic makes up 26% of the region as a whole.[54]

Fiscal Policy and Impacts

Federal Relief and Stimulus

Through the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) and other fiscal programs, the U.S. government has provided Washington state and the Seattle region with billions of dollars in financial relief and economic stimulus. Recipients of these funds include state and local governments, small businesses, and individual taxpayers.

The CARES Act was signed into law on March 27, 2020, as the largest-ever stimulus package in U.S. history. With over $2 trillion in direct payments and loans, the passed legislation was over twice the size of the $831 billion American Recovery and Reinvestment Act of 2009 which was passed in response to the Great Recession. A substantial portion of the CARES Act is the Paycheck Protection Program (PPP), which was designed to provide small businesses with a direct incentive to keep their employees on their payroll. As of May 23, more than $500 billion in PPP loans have been extended

[54] U.S. Census Bureau, 2018 American Community Survey 1-year estimates.

nationwide. Small businesses in Washington state have received $12 billion, or 2.3%, of that total amount.[55]

The CARES Act has also provided qualifying taxpayers with direct payments of $2,400 to married couples filing jointly, $1,200 to individuals and $500 for each qualifying dependent. As of May 22, the Internal Revenue Service estimates that Americans have received $258 billion through these payments, of which $5.9 billion have gone to individuals in Washington state.[56]

Local governments in areas whose population exceeds 500,000 are also eligible for payments from the CARES Act's Coronavirus Relief Fund for public health emergency expenditures and other expenses. According to the Treasury Department, governments in Washington state have been given more than $2.9 billion for these purposes as of May 11. The state government has received $2.2 billion of this total, Pierce County has received $158 million, Snohomish County has received $143 million, and the City of Seattle has received $132 million.[57]

Other CARES Act funds have been allocated to transportation agencies and airports in the Seattle region. The Puget Sound Regional Council estimates that transit agencies in the Seattle-Tacoma-Everett Urbanized Area will receive more than $538 million in relief, including $234 million for King County Metro and $166 million for Sound Transit.[58] The Federal Aviation Administration has also provided airports in King, Snohomish and Pierce Counties with $211 million in CARES Act funding. More than 91% of this regional financial assistance has been allocated to Sea-Tac International Airport and another 8.5% has been given to King County International Airport-Boeing Field.[59]

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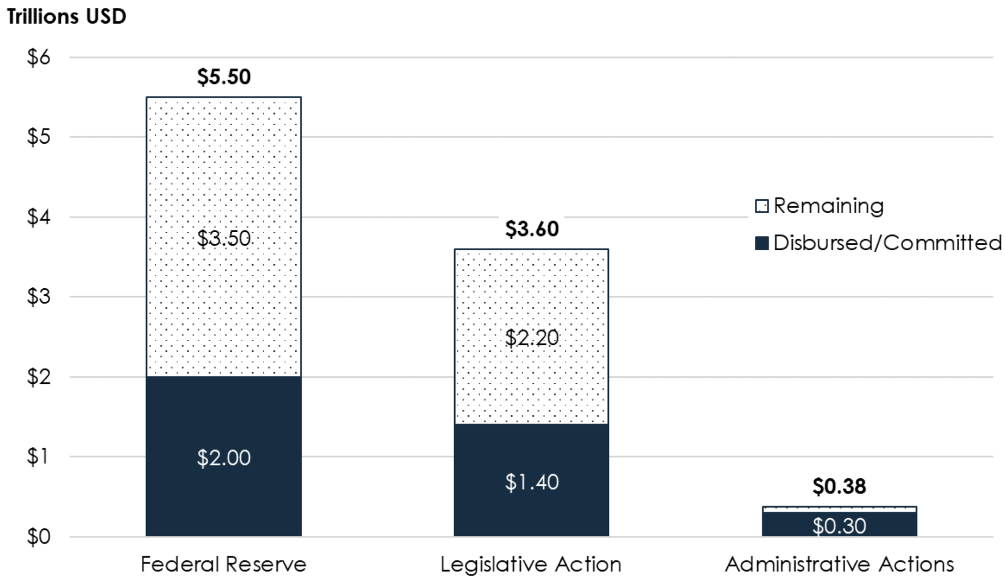
[55] U.S. Small Business Administration, *Paycheck Protection Program (PPP) Report*, https://home.treasury.gov/system/files/136/SBA-Paycheck-Protection-Program-Loan-Report-Round2.pdf.
[56] Internal Revenue Service, "Treasury, IRS release latest state-by-state Economic Impact Payment figures," https://www.irs.gov/newsroom/treasury-irs-release-latest-state-by-state-economic-impact-payment-figures-for-may-22-2020.
[57] U.S. Department of the Treasury, *Payments to States and Eligible Units of Local Government*, https://home.treasury.gov/policy-issues/cares/state-and-local-governments.
[58] Puget Sound Regional Council, "$538 million in CARES Act funding approved," https://www.psrc.org/whats-happening/blog/538-million-cares-act-funding-approved.
[59] Federal Aviation Administration, *Map of CARES Funding*, https://www.faa.gov/airports/cares_act/map/.

Exhibit 29. Federal Fiscal and Monetary Stimulus in Response to Covid-19



Sources: Federal Reserve Bank of St. Louis, 2020; Committee for a Responsible Federal Budget, "Covid Response: How Much Money Has Been Made Available So Far?" May 12, 2020; Community Attributes Inc., 2020.

Local Fiscal Impacts

Declines in business activity due to efforts to contain the coronavirus will have consequences for state and local tax revenues. Sales taxes and business and occupation (B&O) taxes are important sources of revenue for state and local governments. In 2019, total state business and occupation taxes totaled an estimated more than $4.6 billion. Declines in business activity in 2020 are estimated to result in a decline of $88 million in revenues compared to 2019. Estimated B&O tax revenues are not expected to reach 2019 levels until 2022. Between 2014 and 2019, statewide B&O taxes grew at a compound annual growth rate of 4%, in 2020 B&O taxes are expected to decline by nearly 2%, between 2020 and 2025 B&O taxes are expected to grow at a compound annual growth rate of 2.5%.[60]

Statewide sales taxes revenues are estimated to decline as well. State sales tax revenues totaled more than $11.6 billion in 2019. Estimated state sales tax revenues in 2020 are estimated at $10.8 billion, an estimated decline of $860 million compared to 2019 revenues, or annual decline of 7.4%. State sales taxes are estimated to reach 2019 levels by 2023. Between 2014 and 2019 statewide sales taxes grew at a compound annual growth rate of 5.8%,

[60] Statewide business and occupation and sales taxes are estimated using gross business income, business and occupation tax, taxable retail sales, and sales tax data from the Washington State Department of Revenue, as well as forecasts from the Washington State Economic and Revenue Forecast Council.

between 2020 and 2025 statewide sales taxes are forecasted to grow at a compound annual growth rate of 2.4%.

Combined state and local sales taxes in the Seattle MSA, based on an 8.6% combined sales tax rate, are estimated at more than $9 billion in 2019, and are likely higher given differences in local sales tax rates. Combined state and local sales tax rates within the Seattle MSA vary by jurisdiction, between 7.8% in portions of unincorporated Snohomish County to 10.5% in Mukilteo. Between 2014 and 2019 state and local sales taxes in the Seattle MSA grew at an estimated compound annual growth rate of 6%, while state and local sales taxes are forecasted to grow at a compound annual growth rate of 2.6% between 2020 and 2025. Estimated state and local sales tax revenues in the Seattle MSA are projected to decline by more than $680 million between 2019 and 2020, or a decline of 7.4%. State and local sales tax collections in the Seattle MSA are projected to reach 2019 levels in 2023.

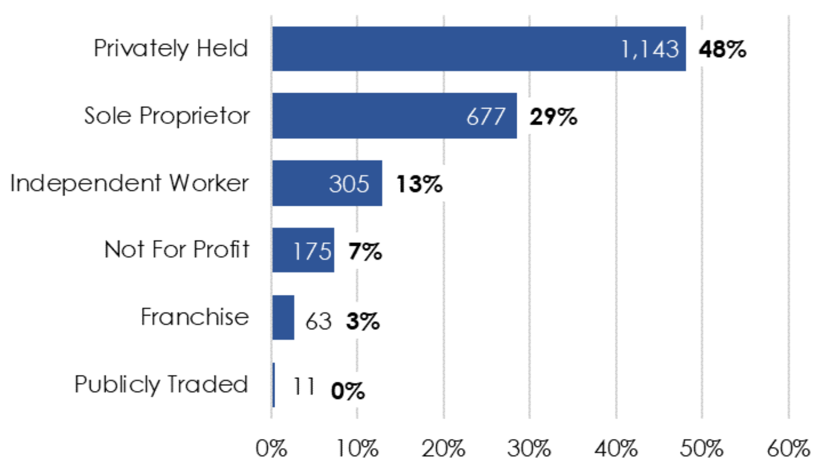
Lodging taxes in the Seattle MSA include Hotel/Motel taxes, transient rental taxes, tourism promotion area taxes, and the King County convention center tax. These sources of local tax revenues are generated through lodging stays and support economic development efforts throughout the region. In King County hotel revenues experienced an 86.9% decline in year-over-year revenues. In 2019, special hotel/motel tax, tourism promotion area tax, and King County convention center taxes totaled more than $135 million in Seattle MSA jurisdictions. May year-to-date distributions have totaled nearly $30.6 million a decline of 27% compared to year-to-date in May 2019. Year-to-date collections in King County have declined 28% over 2019, 22% in Snohomish County and 19% in Pierce County. Continued declines in visitation, including losses in tourism and event cancellation will increase lodging tax revenue losses through 2020.

COVID-19 BUSINESS IMPACTS SURVEY

All businesses and industries are heavily affected by the Covid-19 pandemic. Although the economic impacts are disproportionate across industries, locations, demographics, and occupations, all businesses have been affected. Lower wage earners are the cohort hit substantially harder than others. Recent UI claims data for Washington state show occupation unemployment claims are dominated by workers whose annual wages are far below statewide wage levels. Those lower wage earners are less likely to have personal savings at a scale to withstand prolonged loss of income.

The second survey round was conducted in May and collected 3,240 responses in King, Pierce, and Snohomish counties. About one-third of respondents were self-employed or independent contractors and two-thirds had employees (**Exhibit 30**).

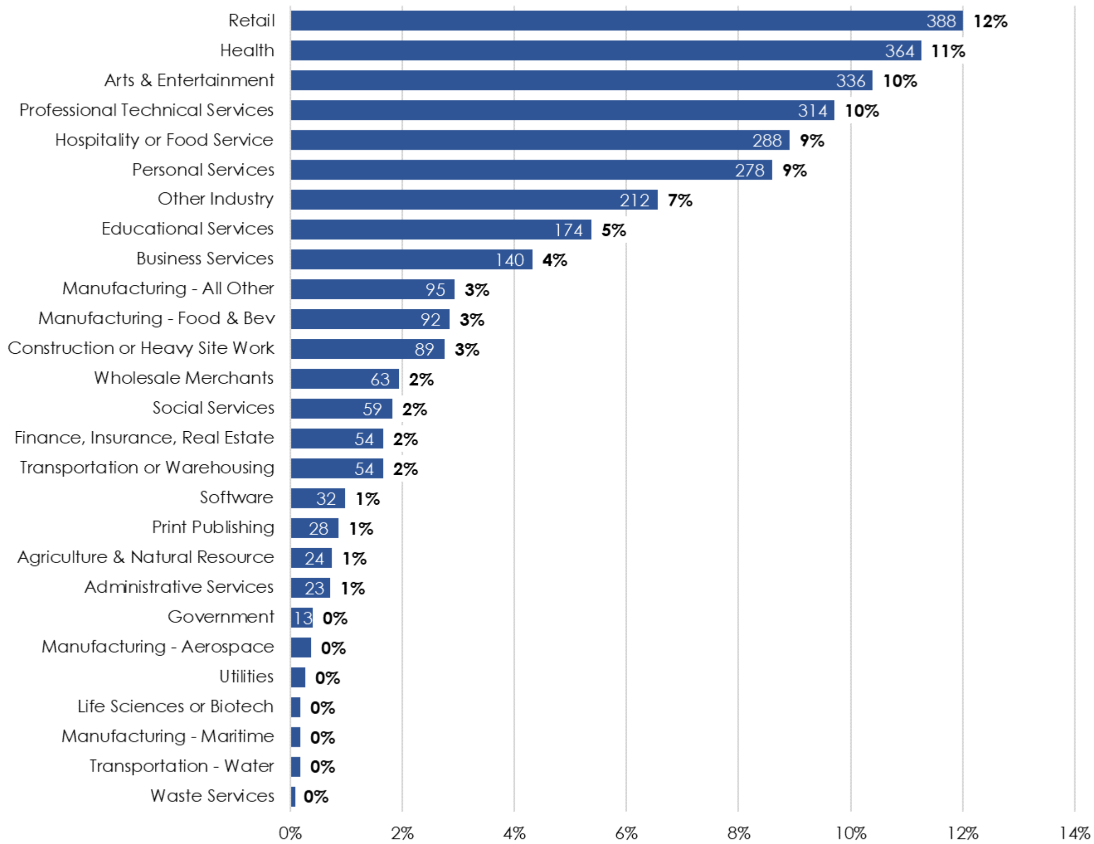
Exhibit 30. Business or Organization Type



Source: Community Attributes Inc., 2020.

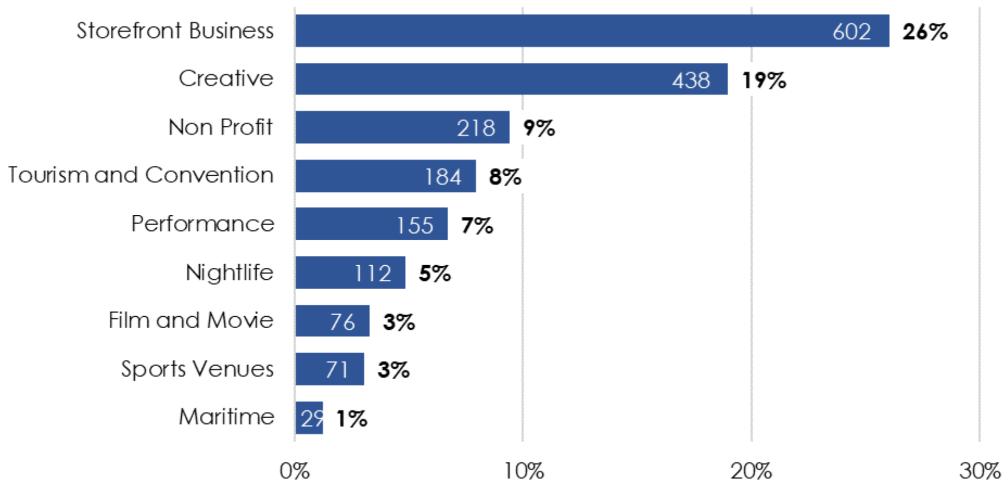
The survey captured responses from all industries, but the majority were in services and retail businesses (**Exhibit 31**).

Exhibit 31. Respondents by Industry



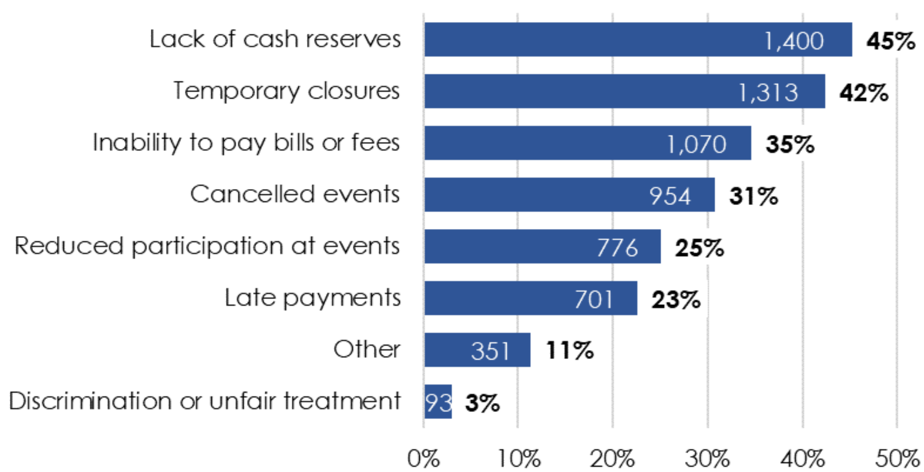
Respondents included many in the arts and cultural fields, an area particularly beset by shutdowns (**Exhibit 32**).

Exhibit 32. Business Categories



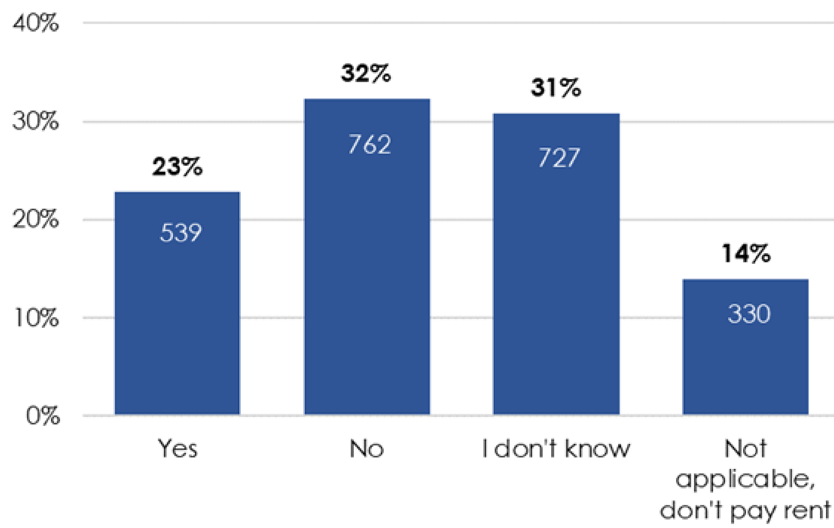
Businesses currently face several challenges. Lack of cash reserves to weather the economic slowdown is the most common concern (**Exhibit 33**).

Exhibit 33. Business Concerns



One-third of respondents cannot pay rent without assistance, and another third are uncertain (**Exhibit 34**).

Exhibit 34. Can you make rent or property payments?



84% have applied for financial assistance and 52% have received it in some form (**Exhibit 35**).

Exhibit 35. Have you received financial assistance?

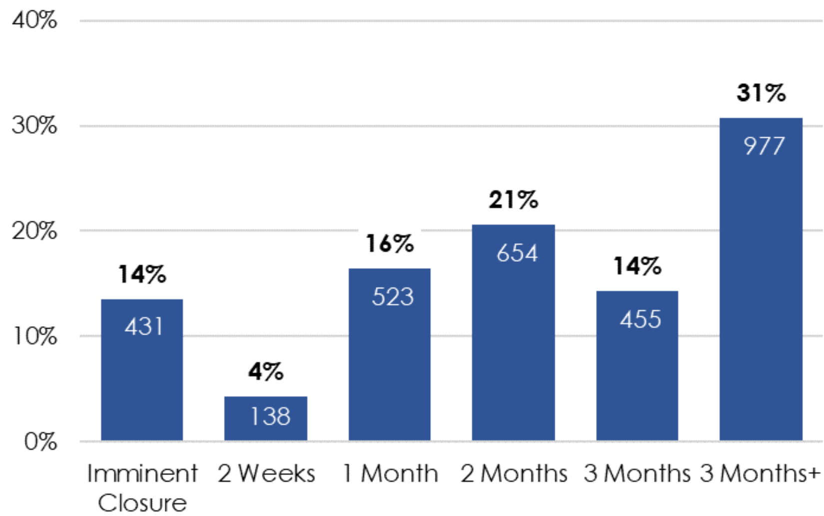
	Responses	Share
Yes	1,675	52%
No	1,524	48%
Total	**3,199**	**100%**

Exhibit 36. Types of Financial Assistance

Type of Assistance	Responses	Average Received	Share
PPP	1,814	$103,900	68%
EIDL	1,620	$13,200	61%
Seattle Stabilization Fund	1,044	$10,000	39%
Other assistance	610		23%
Did not apply for assistance	521		16%

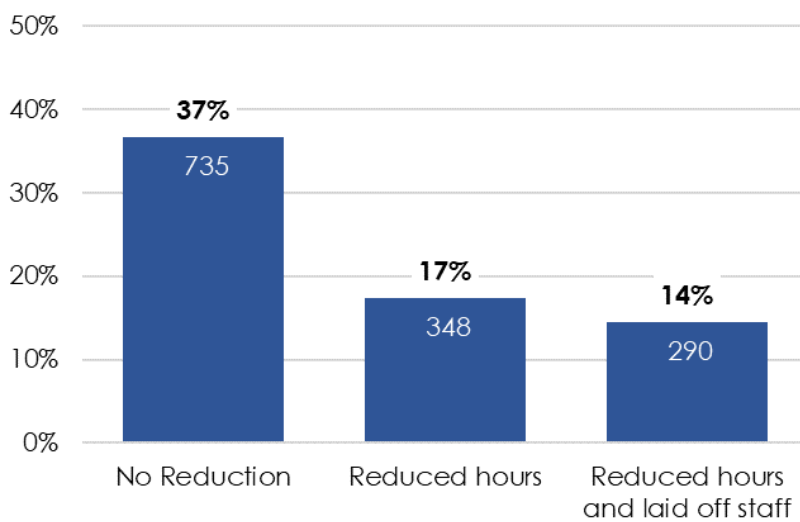
Just 31% of respondents think they can stay in business for more than three months under the current conditions. 18% expect to close within two weeks, and the remainder between one and three months (**Exhibit 37**).

Exhibit 37. Business Closure Timeline



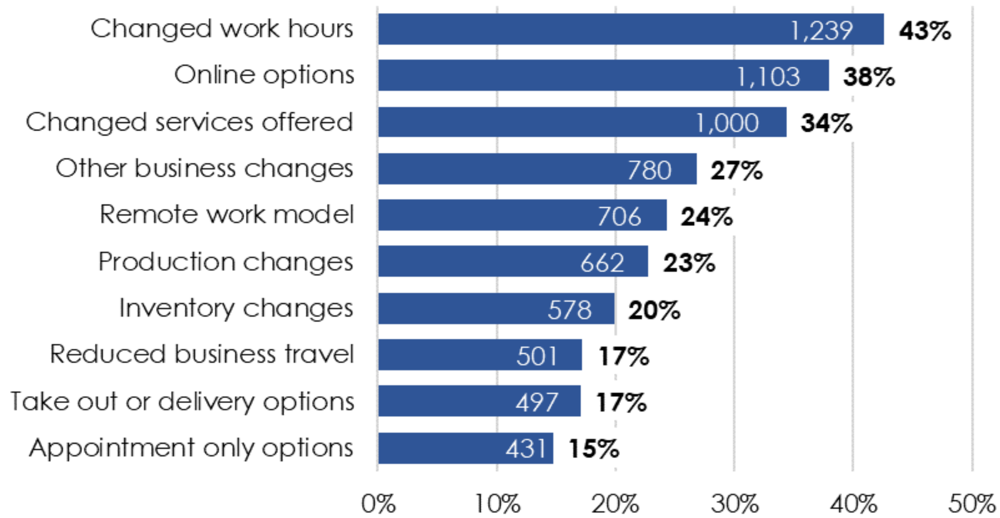
Businesses are adapting to new economic conditions by changing their business models and scaling back business to meet consumer demand and government guidelines. Of businesses with employees, two-thirds report staffing reductions in the form of layoffs, fewer hours, or both (**Exhibit 38**).

Exhibit 38. Staff Reductions



Changing working hours and services, and offering online options are the most common business adaptations (**Exhibit 39**).

Exhibit 39. Business Model Changes



Challenges to Recovery

Economic recovery from the Covid-19 crisis will confront multiple challenges. These include the damages incurred to the economy from a period of prolonged closure, such as the permanent shuttering of businesses, reduced fiscal resources availed to local governments for programmatic responses, strains on our public health system, and the slow recovery of global supply chains. However, there are also potentially more lasting changes in the economy that will create serious obstacles for economic recovery, at least over a few or several years. These changes represent more substantive transformations in our economy and modes of consumption, which will in turn shape future economic and (re)employment opportunities.

The impact of the virus on these longer-term, lasting effects can be thought of as obtaining through at least two vectors of economic transformation. The virus may act as an **accelerant** to changes already underway, rapidly forcing these changes to occur within a far more truncated period of time. Such a driver of change can be thought of as a "force multiplier."

The second vector of change is through the forced, **stepwise adoption** of new consumption and business practices. These were changes that were not widely predicted in advance of the virus but are now quickly being embraced and implemented at a wide scale.

These transformations will alter demand for various goods and services, and potentially dislocate a large share of the Seattle regional workforce on a more sustained or even permanent basis.

The Virus as an Economic Change *Accelerant*

The virus has driven rapid, accelerated change in how we consume, interact, and work. We call these "accelerant" changes because of the antecedent developments underway pre-pandemic, only to rapidly accelerated and adopted during the pandemic. These include:

- **Online consumption**. E-commerce was already a rapidly growing industry and mode of consumption, particularly via mobile apps. Households, due to social distancing, more time spent at home, and reluctance to shop as frequently in crowded spaces, has leaned more heavily on these online and mobile platforms, a trend that will likely continue post-pandemic.
- **In-home entertainment**. More and more households were preferring Netflix, Amazon Prime, Hulu, and other online streaming services as a more convenient and affordable form of entertainment and leisure over cinemas. There may be a more permanent decline in movie theater business even after the pandemic subsides.
- **Remote work**. WebEx, Teams, Zoom, Slack, and various other online video conference and meeting platforms have emerged in recent years, introducing flexibility in workplace environments and remote work.
- **Restructuring global supply chains**. Unabating tensions between the U.S. and China, punctuated by the still on-going trade war, and various other international trade disputes have fueled calls on U.S. businesses to, whenever possible, diversify their supply chains away from China, either through reshoring or near-shoring. China's early mishandling of the virus and prevarications, efforts to cast doubts on the origin of the virus, and soliciting of foreign government statements and official positions (e.g., on the status of Taiwan) in exchange for masks and other PPE donations in Europe and elsewhere has only added to these tensions.

Transformations

In some industries, the virus has brought change at a scale and nature previously unanticipated. Examples include:

- **Business travel reduction**. Many businesses may now be reevaluating the need for business travel. This is a costly expense that businesses are increasingly discovering can at least be partially replaced with virtual meetings. Business travel is an important, and even critical, source of revenues for many airlines, including Seattle-based Alaska Airlines. Losses in revenues will damage these airlines and likely force up ticket prices to make up the difference.

- **Adjusted household savings**. At the micro level, a household increasing its savings rate is a prudent behavioral change. However, a large shift in savings among households across the region will reduce demand for various goods and services, creating a negative cycle. If this adjustment process occurs nationwide, it may prolong the recession and force additional federal government stimulus to break the logjam.
- **Altered household consumption**. Many individuals and households may be recalibrating the value they get from outside leisure, recreation, and entertainment. In some cases, this could mean lowering their demand for restaurants and bars, such as changing how frequently they patronize these businesses from once a week to once a month. Given the very thin margins many of these establishments operate under, it may only take a modest downward shift in demand among households across the region to drive a large segment of the restaurant and bar industry out of business.

Appendix A. Employment in Consumer-Facing Industries

Exhibit 40. Cities by Employment in Consumer-Facing Industries, King County, 2018

City	Estimated Jobs, 2018	% of Total Employment
Covington	2,600	49%
North Bend	1,400	42%
Maple Valley	1,600	36%
Burien	3,800	31%
Tukwila	14,100	30%
Federal Way	9,100	30%
Shoreline	4,600	27%
Enumclaw	1,400	26%
Duvall	300	25%
Subtotal	*38,900*	*31%*
Other Cities	257,900	21%
All Consumer-Facing Industries	**296,800**	**22%**

Sources: Puget Sound Regional Council, 2018.

Exhibit 41. Cities by Employment in Consumer-Facing Industries, Pierce County, 2018

City	Estimated Jobs, 2018	% of Total Employment
Ruston	200	53%
Bonney Lake	2,500	48%
Milton	800	42%
Auburn	400	39%
South Prairie	40	37%
Gig Harbor	3,700	34%
Puyallup	8,800	32%
University Place	1,900	30%
Lakewood	7,000	26%
Subtotal	*25,300*	*32%*
Other Cities	43,300	19%
All Consumer-Facing Industries	**68,600**	**22%**

Sources: Puget Sound Regional Council, 2018.

Exhibit 42. Cities by Employment in Consumer-Facing Industries, Snohomish County, 2018

City	Estimated Jobs, 2018	% of Total Employment
Lynnwood	11,200	42%
Snohomish	2,200	38%
Mill Creek	2,200	35%
Marysville	5,200	34%
Edmonds	4,300	32%
Lake Stevens	1,600	30%
Stanwood	1,000	27%
Monroe	2,500	25%
Subtotal	*30,200*	*35%*
Other Cities	31,100	16%
All Consumer-Facing Industries	**61,300**	**22%**

Sources: Puget Sound Regional Council, 2018.

Appendix B. Gross Business Revenue Losses

Exhibit 43. Cities by Estimated Gross Business Revenue Losses, King County, June 2020 YTD

City	Estimated GBI Losses June 2020 YTD, millions $
Seattle	-$3,544
Kent	-$1,187
Bellevue	-$718
Tukwila	-$581
Redmond	-$440
Uninc. King	-$350
Renton	-$339
Kirkland	-$242
Woodinville	-$214
Federal Way	-$127
Issaquah	-$119
Sea Tac	-$105
Bothell	-$62
Shoreline	-$59
Subtotal	*-$8,085*
Other Cities	-$908
Total	**-$8,993**

Sources: Washington State Employment Security Department, 2020; Washington State Department of Revenue, 2020; Puget Sound Regional Council, 2018; Community Attributes, 2020.

Exhibit 44. Cities by Estimated Gross Business Revenue Losses, Pierce County, June 2020 YTD

City	Estimated GBI Losses June 2020 YTD, millions $
Tacoma	-$743
Uninc. Pierce	-$571
Sumner	-$324
Lakewood	-$198
Fife	-$196
Puyallup	-$156
Gig Harbor	-$69
Auburn	-$3
Subtotal	*-$2,261*
Other Cities	-$87
Total	**-$2,348**

Sources: Washington State Employment Security Department, 2020; Washington State Department of Revenue, 2020; Puget Sound Regional Council, 2018; Community Attributes, 2020.

Exhibit 45. Cities by Estimated Gross Business Revenue Losses, Snohomish County, June 2020 YTD

City	Estimated GBI Losses June 2020 YTD, millions $
Uninc. Snohomish	-$768
Everett	-$274
Mukilteo	-$177
Lynnwood	-$154
Arlington	-$128
Marysville	-$121
Bothell	-$113
Edmonds	-$53
Subtotal	*-$1,788*
Other Cities	-$220
Total	**-$2,008**

Sources: Washington State Employment Security Department, 2020; Washington State Department of Revenue, 2020; Puget Sound Regional Council, 2018; Community Attributes, 2020.

Appendix C: COVID-19 Business Impacts Survey

Cities are presented in order of total survey respondents.

"All Other Cities" includes cities with less than 10 responses

- Algona
- Covington
- Edgewood
- Fife
- Gig Harbor
- Lake Stevens
- Lakewood
- Maple Valley
- Marysville
- Mercer Island
- Mill Creek
- Milton, Monroe
- Mountlake Terrace
- Mukilteo, Newcastle
- Normandy Park
- North Bend
- Sammamish
- Snohomish
- Sumner
- Unincorporated Pierce County
- University Place

Exhibit 46. Business Impacts

City	Lack of cash reserves		Temporary closures		Inability to pay bills or fees		Cancelled events		Total
Seattle	832	67%	762	62%	669	54%	551	45%	1,236
Kirkland	63	57%	56	51%	37	34%	46	42%	110
Kent	59	55%	49	45%	46	43%	34	31%	108
Tacoma	65	66%	58	59%	38	38%	52	53%	99
Redmond	30	48%	34	55%	15	24%	24	39%	62
Issaquah	32	52%	38	61%	21	34%	31	50%	62
Bellevue	26	58%	21	47%	20	44%	11	24%	45
Renton	28	65%	24	56%	18	42%	16	37%	43
Unincorporated King County	27	46%	33	56%	21	36%	22	37%	59
Shoreline	24	71%	25	74%	18	53%	16	47%	34
Burien	16	52%	19	61%	15	48%	15	48%	31
Auburn	21	62%	20	59%	14	41%	17	50%	34
Federal Way	16	64%	15	60%	18	72%	7	28%	25
Bothell	12	60%	11	55%	9	45%	10	50%	20
SeaTac	12	57%	8	38%	9	43%	5	24%	21
Tukwila	10	59%	11	65%	5	29%	7	41%	17
Everett	9	53%	11	65%	9	53%	8	47%	17
Kenmore	9	56%	7	44%	8	50%	7	44%	16
Lynnwood	8	53%	9	60%	7	47%	8	53%	15
Unincorporated Snohomish County	9	50%	12	67%	7	39%	7	39%	18
Edmonds	8	62%	9	69%	5	38%	8	62%	13
Woodinville	4	36%	7	64%	6	55%	4	36%	11
Arlington	7	78%	7	78%	5	56%	5	56%	9
Des Moines	3	50%	3	50%	3	50%	4	67%	6
All Other Cities	56	64%	51	58%	38	43%	32	36%	88
Total	**1,386**		**1,300**		**1,061**		**947**		**2,199**

acts

Business Impacts (continued)

City	Reduced participation at events		Late payments		Discrimination or unfair treatment		Other		Total
Seattle	446	36%	403	33%	64	5%	172	14%	1,236
Kirkland	32	29%	28	25%	2	2%	20	18%	110
Kent	29	27%	44	41%	2	2%	15	14%	108
Tacoma	42	42%	21	21%	1	1%	18	18%	99
Redmond	20	32%	15	24%	1	2%	12	19%	62
Issaquah	30	48%	15	24%	4	6%	11	18%	62
Bellevue	9	20%	15	33%	2	4%	8	18%	45
Renton	17	40%	12	28%	4	9%	6	14%	43
Unincorporated King County	14	24%	17	29%	3	5%	9	15%	59
Shoreline	17	50%	10	29%	1	3%	10	29%	34
Burien	8	26%	15	48%	1	3%	9	29%	31
Auburn	15	44%	13	38%	-	0%	8	24%	34
Federal Way	8	32%	8	32%	1	4%	4	16%	25
Bothell	8	40%	6	30%	1	5%	4	20%	20
SeaTac	3	14%	11	52%	-	0%	3	14%	21
Tukwila	9	53%	6	35%	-	0%	4	24%	17
Everett	7	41%	5	29%	1	6%	6	35%	17
Kenmore	5	31%	5	31%	-	0%	3	19%	16
Lynnwood	4	27%	6	40%	-	0%	3	20%	15
Unincorporated Snohomish County	3	17%	5	28%	1	6%	4	22%	18
Edmonds	4	31%	5	38%	-	0%	4	31%	13
Woodinville	3	27%	3	27%	1	9%	-	0%	11
Arlington	3	33%	2	22%	-	0%	2	22%	9
Des Moines	3	50%	3	50%	-	0%	-	0%	6
All Other Cities	31	35%	23	26%	2	2%	15	17%	88
Total	**770**		**696**		**92**		**350**		**2,199**

Exhibit 47. Covid-19 Related Developments

City	Decline in business		Reduced access due to remote working		Fewer visitors to the region		Workers working reduced hours		Cancelled domestic business trips		Workers working remotely		Other		Total
Seattle	768	73%	576	55%	503	48%	354	34%	284	27%	302	29%	254	24%	1,053
Kirkland	66	69%	53	55%	26	27%	22	23%	26	27%	22	23%	26	27%	96
Kent	68	71%	49	51%	39	41%	39	41%	31	32%	35	36%	17	18%	96
Tacoma	73	72%	53	52%	50	50%	33	33%	35	35%	19	19%	17	17%	101
Redmond	40	66%	29	48%	21	34%	18	30%	18	30%	15	25%	12	20%	61
Issaquah	50	78%	35	55%	35	55%	23	36%	21	33%	21	33%	10	16%	64
Bellevue	25	63%	23	58%	17	43%	17	43%	10	25%	12	30%	6	15%	40
Renton	25	66%	23	61%	16	42%	15	39%	6	16%	12	32%	9	24%	38
Unincorporated King County	39	71%	26	47%	14	25%	18	33%	18	33%	14	25%	12	22%	55
Shoreline	24	80%	22	73%	13	43%	14	47%	8	27%	6	20%	10	33%	30
Burien	19	73%	14	54%	8	31%	8	31%	9	35%	6	23%	7	27%	26
Auburn	19	61%	18	58%	13	42%	16	52%	11	35%	11	35%	3	10%	31
Federal Way	13	57%	10	43%	7	30%	6	26%	5	22%	3	13%	4	17%	23
Bothell	16	76%	10	48%	6	29%	12	57%	6	29%	8	38%	2	10%	21
SeaTac	14	67%	8	38%	9	43%	10	48%	7	33%	4	19%	6	29%	21
Tukwila	10	71%	5	36%	7	50%	3	21%	3	21%	4	29%	2	14%	14
Everett	14	82%	8	47%	7	41%	5	29%	3	18%	4	24%	3	18%	17
Kenmore	8	62%	7	54%	5	38%	5	38%	8	62%	4	31%	4	31%	13
Lynnwood	13	76%	7	41%	4	24%	4	24%	7	41%	4	24%	3	18%	17
Unincorporated Snohomish County	14	88%	12	75%	6	38%	6	38%	9	56%	7	44%	4	25%	16
Edmonds	10	77%	6	46%	3	23%	4	31%	3	23%	4	31%	5	38%	13
Woodinville	8	89%	6	67%	5	56%	2	22%	-	0%	2	22%	1	11%	9
Arlington	7	88%	3	38%	5	63%	3	38%	2	25%	1	13%	4	50%	8
Des Moines	2	40%	4	80%	2	40%	3	60%	1	20%	1	20%	2	40%	5
All Other Cities	52	70%	35	47%	26	35%	23	31%	16	22%	22	30%	20	27%	74
Total	**1,397**		**1,042**		**847**		**663**		**547**		**543**		**443**		**1,942**

Covid-19 Related Developments (continued)

City	Unable to get supplies		Drop in customers		Cancelled international business trips		Sick worker absenteeism		Cancelled or delivery of exports (domestic)		Cancelled delivery of exports (international)		Total
Seattle	214	20%	222	21%	99	9%	79	8%	60	6%	19	2%	1,053
Kirkland	15	16%	18	19%	6	6%	6	6%	5	5%	2	2%	96
Kent	20	21%	16	17%	8	8%	14	15%	7	7%	5	5%	96
Tacoma	19	19%	9	9%	12	12%	8	8%	9	9%	4	4%	101
Redmond	12	20%	12	20%	7	11%	4	7%	4	7%	4	7%	61
Issaquah	10	16%	6	9%	7	11%	4	6%	4	6%	2	3%	64
Bellevue	6	15%	4	10%	6	15%	3	8%	1	3%	-	0%	40
Renton	11	29%	2	5%	1	3%	4	11%	-	0%	1	3%	38
Unincorporated King County	12	22%	11	20%	5	9%	5	9%	5	9%	-	0%	55
Shoreline	10	33%	4	13%	2	7%	3	10%	3	10%	-	0%	30
Burien	6	23%	2	8%	1	4%	2	8%	5	19%	-	0%	26
Auburn	14	45%	4	13%	1	3%	3	10%	3	10%	-	0%	31
Federal Way	6	26%	7	30%	1	4%	3	13%	4	17%	1	4%	23
Bothell	6	29%	2	10%	3	14%	2	10%	-	0%	-	0%	21
SeaTac	7	33%	3	14%	4	19%	3	14%	3	14%	2	10%	21
Tukwila	3	21%	3	21%	-	0%	-	0%	2	14%	-	0%	14
Everett	4	24%	4	24%	-	0%	1	6%	2	12%	4	24%	17
Kenmore	4	31%	2	15%	2	15%	-	0%	-	0%	-	0%	13
Lynnwood	8	47%	8	47%	-	0%	2	12%	2	12%	-	0%	17
Unincorporated Snohomish County	5	31%	5	31%	1	6%	2	13%	-	0%	-	0%	16
Edmonds	3	23%	2	15%	-	0%	1	8%	1	8%	-	0%	13
Woodinville	5	56%	1	11%	-	0%	1	11%	1	11%	-	0%	9
Arlington	2	25%	-	0%	-	0%	-	0%	-	0%	-	0%	8
Des Moines	-	0%	3	60%	1	20%	1	20%	-	0%	-	0%	5
All Other Cities	23	31%	12	16%	2	3%	3	4%	6	8%	-	0%	74
Total	**425**		**362**		**169**		**154**		**127**		**44**		**1,942**

Exhibit 48. Business Model Changes

City	Changed work hours		Online options		Changed services offered		Remote work model		Other business changes		Total
Seattle	760	43%	710	40%	593	34%	408	27%	485	27%	1,764
Kirkland	45	34%	50	38%	39	30%	21	31%	41	31%	132
Kent	47	40%	33	28%	31	26%	43	20%	23	20%	117
Tacoma	49	45%	38	35%	42	39%	26	27%	29	27%	109
Redmond	33	42%	32	41%	34	44%	21	27%	21	27%	78
Issaquah	38	52%	27	37%	23	32%	21	21%	15	21%	73
Bellevue	33	44%	38	51%	34	45%	20	27%	20	27%	75
Renton	23	41%	16	29%	18	32%	14	13%	7	13%	56
Unincorporated King County	22	45%	14	29%	16	33%	14	31%	15	31%	49
Shoreline	19	44%	12	28%	14	33%	4	26%	11	26%	43
Burien	13	33%	14	35%	13	33%	6	28%	11	28%	40
Auburn	19	44%	11	26%	10	23%	12	28%	12	28%	43
Federal Way	18	53%	13	38%	16	47%	7	35%	12	35%	34
Bothell	13	52%	14	56%	9	36%	10	12%	3	12%	25
SeaTac	5	25%	4	20%	4	20%	7	35%	7	35%	20
Tukwila	8	38%	5	24%	9	43%	10	19%	4	19%	21
Everett	9	47%	6	32%	8	42%	4	26%	5	26%	19
Kenmore	5	29%	6	35%	8	47%	5	29%	5	29%	17
Lynnwood	9	47%	5	26%	5	26%	4	16%	3	16%	19
Unincorporated Snohomish County	6	43%	3	21%	6	43%	7	29%	4	29%	14
Edmonds	5	42%	7	58%	8	67%	6	42%	5	42%	12
Woodinville	3	33%	3	33%	3	33%	4	11%	1	11%	9
Arlington	5	45%	4	36%	2	18%	1	36%	4	36%	11
Des Moines	6	67%	4	44%	1	11%	1	11%	1	11%	9
All Other Cities	37	39%	27	28%	42	44%	26	27%	32	33%	96
Total	**1,230**		**1,096**		**988**		**702**		**776**		**2,885**

Busines Model Changes (continued)

City	Production changes		Inventory changes		Reduced business travel		Take out or delivery options		Appointment only options		Total
Seattle	389	22%	374	21%	286	16%	316	18%	253	14%	1,764
Kirkland	22	17%	15	11%	16	12%	8	6%	12	9%	132
Kent	39	33%	22	19%	31	26%	21	18%	24	21%	117
Tacoma	24	22%	24	22%	25	23%	17	16%	13	12%	109
Redmond	17	22%	14	18%	15	19%	8	10%	8	10%	78
Issaquah	9	12%	19	26%	19	26%	16	22%	5	7%	73
Bellevue	19	25%	12	16%	10	13%	14	19%	8	11%	75
Renton	8	14%	9	16%	5	9%	10	18%	6	11%	56
Unincorporated King County	13	27%	9	18%	11	22%	8	16%	8	16%	49
Shoreline	8	19%	6	14%	5	12%	5	12%	10	23%	43
Burien	10	25%	6	15%	4	10%	4	10%	9	23%	40
Auburn	10	23%	8	19%	9	21%	9	21%	7	16%	43
Federal Way	18	53%	5	15%	6	18%	9	26%	5	15%	34
Bothell	8	32%	5	20%	5	20%	6	24%	2	8%	25
SeaTac	5	25%	3	15%	5	25%	2	10%	4	20%	20
Tukwila	7	33%	5	24%	9	43%	3	14%	5	24%	21
Everett	8	42%	3	16%	3	16%	2	11%	4	21%	19
Kenmore	5	29%	2	12%	4	24%	2	12%	3	18%	17
Lynnwood	5	26%	6	32%	1	5%	5	26%	7	37%	19
Unincorporated Snohomish County	-	0%	2	14%	5	36%	2	14%	3	21%	14
Edmonds	2	17%	5	42%	5	42%	3	25%	1	8%	12
Woodinville	3	33%	3	33%	3	33%	3	33%	2	22%	9
Arlington	2	18%	4	36%	2	18%	3	27%	5	45%	11
Des Moines	3	33%	-	0%	1	11%	5	56%	2	22%	9
All Other Cities	20	21%	16	17%	13	14%	13	14%	20	21%	96
Total	**654**		**577**		**498**		**494**		**426**		**2,885**

Exhibit 49. Reopening Needs

City	Public health confidence		Access to funds		Government guidelines		Access to PPE		Requirement clarity		Visitor, worker safety		Total
Seattle	964	52%	974	52%	729	39%	582	31%	596	32%	313	17%	1,865
Kirkland	71	52%	51	38%	57	42%	40	29%	47	35%	15	11%	136
Kent	57	47%	53	44%	52	43%	35	29%	33	27%	14	12%	121
Tacoma	59	52%	40	35%	46	41%	33	29%	26	23%	14	12%	113
Redmond	47	61%	25	32%	36	47%	24	31%	25	32%	12	16%	77
Issaquah	51	69%	18	24%	34	46%	26	35%	31	42%	14	19%	74
Bellevue	41	54%	39	51%	21	28%	24	32%	25	33%	7	9%	76
Renton	22	37%	24	41%	21	36%	21	36%	13	22%	5	8%	59
Unincorporated King County	23	40%	23	40%	18	31%	21	36%	18	31%	6	10%	58
Shoreline	23	49%	23	49%	20	43%	15	32%	12	26%	5	11%	47
Burien	20	44%	20	44%	11	24%	18	40%	16	36%	6	13%	45
Auburn	21	48%	16	36%	10	23%	16	36%	17	39%	3	7%	44
Federal Way	11	30%	28	76%	10	27%	13	35%	10	27%	4	11%	37
Bothell	9	36%	10	40%	6	24%	8	32%	9	36%	5	20%	25
SeaTac	12	52%	14	61%	8	35%	9	39%	3	13%	5	22%	23
Tukwila	9	43%	9	43%	8	38%	7	33%	2	10%	2	10%	21
Everett	7	37%	10	53%	5	26%	4	21%	9	47%	1	5%	19
Kenmore	6	32%	7	37%	6	32%	3	16%	6	32%	2	11%	19
Lynnwood	8	40%	12	60%	6	30%	8	40%	8	40%	5	25%	20
Unincorporated Snohomish County	12	71%	6	35%	5	29%	3	18%	2	12%	2	12%	17
Edmonds	3	20%	8	53%	4	27%	7	47%	7	47%	2	13%	15
Woodinville	5	50%	6	60%	3	30%	3	30%	-	0%	-	0%	10
Arlington	3	27%	7	64%	2	18%	5	45%	3	27%	1	9%	11
Des Moines	5	56%	3	33%	1	11%	3	33%	1	11%	1	11%	9
All Other Cities	51	47%	45	42%	31	29%	33	31%		0%	11	10%	108
Total	**1,540**		**1,471**		**1,150**		**961**		**919**		**455**		**3,049**

Reopening Needs (continued)

City	Lift travel restriction		Suppliers or supply chain		Healthy workers		Access to customers or suppliers		Other reopening needs		Total
Seattle	205	11%	137	7%	123	7%	72	4%	104	6%	1,865
Kirkland	13	10%	4	3%	8	6%	7	5%	8	6%	136
Kent	20	17%	15	12%	8	7%	10	8%	6	5%	121
Tacoma	20	18%	24	21%	8	7%	16	14%	5	4%	113
Redmond	8	10%	2	3%	8	10%	9	12%	2	3%	77
Issaquah	7	9%	3	4%	3	4%	7	9%	3	4%	74
Bellevue	9	12%	3	4%	8	11%	6	8%	7	9%	76
Renton	7	12%	6	10%	3	5%	5	8%	4	7%	59
Unincorporated King County	10	17%	6	10%	3	5%	6	10%	5	9%	58
Shoreline	3	6%	2	4%	4	9%	1	2%	2	4%	47
Burien	3	7%	1	2%	8	18%	3	7%	3	7%	45
Auburn	7	16%	4	9%	1	2%	4	9%	3	7%	44
Federal Way	3	8%	3	8%	6	16%	1	3%	-	0%	37
Bothell	7	28%	5	20%	1	4%	-	0%	3	12%	25
SeaTac	4	17%	2	9%	-	0%	1	4%	-	0%	23
Tukwila	1	5%	7	33%	1	5%	3	14%	1	5%	21
Everett	2	11%	3	16%	1	5%	2	11%	-	0%	19
Kenmore	2	11%	5	26%	2	11%	1	5%	-	0%	19
Lynnwood	3	15%	3	15%	2	10%	1	5%	-	0%	20
Unincorporated Snohomish County	4	24%	1	6%	-	0%	1	6%	2	12%	17
Edmonds	4	27%	2	13%	1	7%	2	13%	-	0%	15
Woodinville	3	30%	1	10%	-	0%	2	20%	-	0%	10
Arlington	3	27%	2	18%	-	0%	1	9%	-	0%	11
Des Moines	2	22%	2	22%	-	0%	-	0%	1	11%	9
All Other Cities	15	14%	10	9%	8	7%	8	7%			108
Total	**365**		**253**		**207**		**169**		**159**		**3,049**

Exhibit 50. How Worried Are You About Your Business?

City	No worry		Some impact, will survive		Worried		Very worried		Will likley go out of business		Total
Seattle	6	0%	169	13%	497	39%	516	40%	96	7%	1,284
Kirkland	6	5%	43	35%	38	31%	32	26%	3	2%	122
Kent	6	5%	31	27%	36	31%	39	34%	3	3%	115
Tacoma	2	2%	30	28%	36	34%	29	27%	10	9%	107
Redmond	5	7%	19	27%	24	34%	20	29%	2	3%	70
Issaquah	2	3%	21	31%	25	37%	13	19%	6	9%	67
Bellevue	2	4%	10	21%	18	38%	17	35%	1	2%	48
Renton	-	0%	16	38%	16	38%	10	24%	-	0%	42
Unincorporated King County	3	5%	8	13%	28	46%	20	33%	2	3%	61
Shoreline	-	0%	14	37%	14	37%	9	24%	1	3%	38
Burien	-	0%	8	25%	15	47%	9	28%	-	0%	32
Auburn	-	0%	12	35%	10	29%	9	26%	3	9%	34
Federal Way	-	0%	3	11%	4	15%	11	41%	9	33%	27
Bothell	-	0%	6	26%	10	43%	4	17%	3	13%	23
SeaTac	-	0%	3	14%	12	57%	3	14%	3	14%	21
Tukwila	-	0%	3	17%	8	44%	5	28%	2	11%	18
Everett	-	0%	4	22%	10	56%	3	17%	1	6%	18
Kenmore	-	0%	4	27%	8	53%	2	13%	1	7%	15
Lynnwood	1	5%	1	5%	10	53%	4	21%	3	16%	19
Unincorporated Snohomish County	-	0%	4	22%	9	50%	3	17%	2	11%	18
Edmonds	-	0%	2	14%	6	43%	6	43%	-	0%	14
Woodinville	-	0%	1	10%	3	30%	6	60%	-	0%	10
Arlington	-	0%	2	22%	2	22%	5	56%	-	0%	9
Des Moines	-	0%	1	17%	1	17%	4	67%	-	0%	6
All Other Cities	3	3%	22	24%	42	46%	25	27%	4	4%	96
Total	**36**		**437**		**882**		**804**		**155**		**2,314**

Exhibit 51. How Long Can You Stay in Business?

City	Imminent closure		2 weeks		1 month		2 months		3 months		3+ months		Total
Seattle	295	15%	83	4%	334	18%	431	23%	284	15%	480	25%	1,907
Kirkland	13	9%	3	2%	24	16%	23	15%	19	13%	67	45%	149
Kent	7	5%	6	4%	16	12%	26	19%	18	13%	62	46%	135
Tacoma	13	11%	8	7%	15	12%	21	17%	20	16%	46	37%	123
Redmond	7	9%	4	5%	7	9%	9	11%	13	16%	40	50%	80
Issaquah	5	6%	1	1%	6	8%	15	19%	11	14%	40	51%	78
Bellevue	15	19%	5	6%	15	19%	12	16%	9	12%	21	27%	77
Renton	4	7%	3	5%	14	23%	12	20%	5	8%	23	38%	61
Unincorporated King County	2	3%	4	7%	13	22%	16	27%	7	12%	18	30%	60
Shoreline	10	20%	3	6%	8	16%	7	14%	7	14%	14	29%	49
Burien	4	9%	3	7%	7	16%	7	16%	10	22%	14	31%	45
Auburn	3	7%	3	7%	4	9%	8	18%	5	11%	21	48%	44
Federal Way	9	25%	4	11%	12	33%	4	11%	1	3%	6	17%	36
Bothell	2	7%	1	4%	1	4%	5	19%	3	11%	15	56%	27
SeaTac	3	13%	1	4%	4	17%	4	17%	6	25%	6	25%	24
Tukwila	4	18%	-	0%	4	18%	4	18%	2	9%	8	36%	22
Everett	3	15%	-	0%	5	25%	4	20%	2	10%	6	30%	20
Kenmore	2	11%	1	6%	1	6%	6	33%	2	11%	6	33%	18
Lynnwood	1	5%	1	5%	5	26%	3	16%	2	11%	7	37%	19
Unincorporated Snohomish County	3	18%	-	0%	-	0%	2	12%	5	29%	7	41%	17
Edmonds	2	13%	-	0%	4	25%	2	13%	1	6%	7	44%	16
Woodinville	4	31%	1	8%	2	15%	3	23%	-	0%	3	23%	13
Arlington	-	0%	1	9%	1	9%	2	18%	2	18%	5	45%	11
Des Moines	2	20%	1	10%	-	0%	4	40%	-	0%	3	30%	10
All Other Cities	17	18%	1	1%	18	20%	17	18%	15	16%	45	49%	98
Total	**430**		**138**		**520**		**647**				**970**		**3,139**

Exhibit 52. Staff Reduction by City

City	No Reduction		Reduced hours		Laid off staff		Reduced hours and laid off staff		Total
Seattle	447	36%	211	17%	413	33%	171	14%	1,242
Kirkland	65	55%	15	13%	29	24%	10	8%	119
Kent	45	40%	20	18%	34	30%	13	12%	112
Tacoma	55	52%	14	13%	26	25%	11	10%	106
Redmond	32	46%	12	17%	15	22%	10	14%	69
Issaquah	32	48%	10	15%	13	20%	11	17%	66
Bellevue	16	33%	11	23%	16	33%	5	10%	48
Renton	16	37%	12	28%	10	23%	5	12%	43
Unincorporated King County	26	46%	9	16%	20	35%	2	4%	57
Shoreline	14	38%	7	19%	10	27%	6	16%	37
Burien	11	38%	5	17%	10	34%	3	10%	29
Auburn	13	37%	4	11%	11	31%	7	20%	35
Federal Way	10	45%	3	14%	5	23%	4	18%	22
Bothell	9	38%	6	25%	6	25%	3	13%	24
SeaTac	2	11%	3	16%	7	37%	7	37%	19
Tukwila	11	61%	3	17%	3	17%	1	6%	18
Everett	9	50%	2	11%	3	17%	4	22%	18
Kenmore	8	53%	3	20%	3	20%	1	7%	15
Lynnwood	5	31%	1	6%	7	44%	3	19%	16
Unincorporated Snohomish County	7	41%	3	18%	4	24%	3	18%	17
Edmonds	5	36%	3	21%	5	36%	1	7%	14
Woodinville	2	20%	1	10%	6	60%	1	10%	10
Arlington	4	50%	-	0%	3	38%	1	13%	8
Des Moines	-	0%	1	17%	4	67%	1	17%	6
All Other Cities	38	41%	16	17%	25	27%	13	14%	92
Total	**882**		**375**		**688**		**297**		**2,242**

Exhibit 53. Anticipated Staff Reduction by City

City	No Reduction		Reduced hours		Laid off staff		Reduced hours and laid off staff		Total
Seattle	799	66%	188	16%	120	10%	98	8%	1,205
Kirkland	92	81%	6	5%	8	7%	7	6%	113
Kent	75	69%	16	15%	7	6%	11	10%	109
Tacoma	81	79%	13	13%	3	3%	5	5%	102
Redmond	48	73%	9	14%	5	8%	4	6%	66
Issaquah	45	71%	7	11%	3	5%	8	13%	63
Bellevue	28	60%	6	13%	6	13%	7	15%	47
Renton	27	64%	7	17%	3	7%	5	12%	42
Unincorporated King County	44	77%	8	14%	2	4%	3	5%	57
Shoreline	18	53%	8	24%	3	9%	5	15%	34
Burien	21	75%	3	11%	2	7%	2	7%	28
Auburn	26	76%	2	6%	3	9%	3	9%	34
Federal Way	14	67%	5	24%	1	5%	1	5%	21
Bothell	15	63%	5	21%	1	4%	3	13%	24
SeaTac	10	53%	3	16%	1	5%	5	26%	19
Tukwila	13	72%	2	11%	-	0%	3	17%	18
Everett	8	47%	5	29%	2	12%	2	12%	17
Kenmore	9	60%	3	20%	-	0%	3	20%	15
Lynnwood	8	50%	4	25%	3	19%	1	6%	16
Unincorporated Snohomish County	13	76%	1	6%	2	12%	1	6%	17
Edmonds	9	69%	2	15%	2	15%	-	0%	13
Woodinville	6	60%	2	20%	1	10%	1	10%	10
Arlington	5	71%	1	14%	1	14%	-	0%	7
Des Moines	4	67%	1	17%	1	17%	-	0%	6
All Other Cities	59	64%	13	14%	5	5%	8	9%	85
Total	**1,477**		**320**		**185**		**186**		**2,168**

Exhibit 54. Past Month Loss of Income

City	0%		1-25%		26-50%		51-75%		76-100%		Total
Seattle	43	3%	83	7%	218	18%	192	15%	708	57%	1,244
Kirkland	13	11%	11	9%	34	29%	10	9%	49	42%	117
Kent	13	12%	14	13%	32	29%	14	13%	38	34%	111
Tacoma	13	12%	9	9%	23	22%	12	11%	48	46%	105
Redmond	8	13%	11	17%	9	14%	8	13%	27	43%	63
Issaquah	5	8%	11	17%	12	18%	10	15%	27	42%	65
Bellevue	3	6%	5	10%	10	21%	4	8%	26	54%	48
Renton	3	7%	6	14%	8	19%	6	14%	20	47%	43
Unincorporated King County	3	5%	5	8%	10	17%	6	10%	36	60%	60
Shoreline	-	0%	2	5%	7	19%	4	11%	24	65%	37
Burien	-	0%	6	20%	3	10%	2	7%	19	63%	30
Auburn	5	16%	6	19%	4	13%	3	10%	13	42%	31
Federal Way	1	4%	-	0%	6	25%	6	25%	11	46%	24
Bothell	2	8%	4	17%	7	29%	1	4%	10	42%	24
SeaTac	-	0%	2	10%	8	38%	1	5%	10	48%	21
Tukwila	-	0%	3	17%	1	6%	4	22%	10	56%	18
Everett	-	0%	2	11%	1	5%	2	11%	14	74%	19
Kenmore	3	19%	2	13%	1	6%	3	19%	7	44%	16
Lynnwood	1	6%	3	17%	1	6%	3	17%	10	56%	18
Unincorporated Snohomish County	-	0%	2	12%	3	18%	4	24%	8	47%	17
Edmonds	1	7%	1	7%	4	29%	1	7%	7	50%	14
Woodinville	1	10%	-	0%	1	10%	1	10%	7	70%	10
Arlington	-	0%	-	0%	2	25%	1	13%	5	63%	8
Des Moines	-	0%	-	0%	-	0%	1	17%	5	83%	6
All Other Cities	6	7%	12	13%	16	17%	8	9%	52	57%	86
Total	**124**		**200**		**421**		**307**		**1,191**		**2,235**

Exhibit 55. Next Month Anticipated Loss of Income

City	0%		1-25%		26-50%		51-75%		76-100%		Total
Seattle	38	3%	77	6%	192	15%	186	15%	754	60%	1,247
Kirkland	11	9%	16	14%	22	19%	16	14%	52	44%	117
Kent	11	10%	15	14%	32	29%	13	12%	40	36%	111
Tacoma	8	8%	8	8%	28	27%	12	12%	47	46%	103
Redmond	7	11%	8	13%	11	18%	9	15%	27	44%	62
Issaquah	3	5%	11	17%	13	21%	13	21%	23	37%	63
Bellevue	2	4%	7	15%	10	21%	5	11%	23	49%	47
Renton	2	5%	5	12%	7	17%	6	14%	22	52%	42
Unincorporated King County	3	5%	5	9%	10	17%	6	10%	34	59%	58
Shoreline	-	0%	2	6%	10	28%	4	11%	20	56%	36
Burien	1	3%	5	16%	3	10%	-	0%	22	71%	31
Auburn	2	6%	8	24%	7	21%	4	12%	12	36%	33
Federal Way	1	4%	1	4%	6	24%	4	16%	13	52%	25
Bothell	1	4%	6	25%	5	21%	1	4%	11	46%	24
SeaTac	-	0%	2	11%	5	26%	4	21%	8	42%	19
Tukwila	-	0%	3	17%	3	17%	3	17%	9	50%	18
Everett	-	0%	2	12%	2	12%	3	18%	10	59%	17
Kenmore	1	6%	1	6%	4	25%	3	19%	7	44%	16
Lynnwood	1	6%	3	17%	3	17%	3	17%	8	44%	18
Unincorporated Snohomish County	-	0%	-	0%	6	35%	2	12%	9	53%	17
Edmonds	1	8%	1	8%	2	15%	2	15%	7	54%	13
Woodinville	-	0%	1	10%	1	10%	1	10%	7	70%	10
Arlington	-	0%	-	0%	1	13%	-	0%	7	88%	8
Des Moines	-	0%	-	0%	-	0%	1	17%	5	83%	6
All Other Cities	6	7%	12	13%	16	17%	8	9%	52	57%	86
Total	**99**		**199**		**399**		**309**		**1,229**		**2,227**

Exhibit 56. Have You Applied for Financial Assistance?

City	Applied		Did not apply		Received		Did not receive		Total
Seattle	1,701	44%	218	6%	1,000	26%	912	24%	3,831
Kirkland	104	35%	45	15%	74	25%	75	25%	298
Kent	111	41%	24	9%	86	32%	49	18%	270
Tacoma	94	37%	32	13%	62	25%	63	25%	251
Redmond	47	28%	35	21%	32	19%	51	31%	165
Issaquah	60	38%	19	12%	47	30%	32	20%	158
Bellevue	62	39%	17	11%	52	33%	27	17%	158
Renton	53	43%	8	7%	40	33%	21	17%	122
Unincorporated King County	51	42%	10	8%	26	21%	34	28%	121
Shoreline	41	42%	8	8%	24	24%	25	26%	98
Burien	32	36%	13	14%	16	18%	29	32%	90
Auburn	36	40%	9	10%	29	32%	16	18%	90
Federal Way	31	42%	6	8%	22	30%	15	20%	74
Bothell	20	37%	7	13%	17	31%	10	19%	54
SeaTac	17	35%	7	15%	9	19%	15	31%	48
Tukwila	20	45%	2	5%	12	27%	10	23%	44
Everett	14	37%	5	13%	10	26%	9	24%	38
Kenmore	13	35%	5	14%	9	24%	10	27%	37
Lynnwood	18	45%	2	5%	12	30%	8	20%	40
Unincorporated Snohomish County	14	39%	4	11%	8	22%	10	28%	36
Edmonds	14	41%	3	9%	10	29%	7	21%	34
Woodinville	9	45%	1	5%	7	35%	3	15%	20
Arlington	10	42%	2	8%	4	17%	8	33%	24
Des Moines	7	35%	3	15%	5	25%	5	25%	20
All Other Cities	86	93%	30	33%	47	51%	69	75%	232
Total	**2,665**		**515**		**1,660**		**1,513**		**6,353**

Exhibit 57. Types of Assistance Applied For

City	PPP		EIDL		Seattle Stabilization Fund		Other Assitance		Total
Seattle	1,112	32%	1,036	30%	908	26%	408	12%	3,464
Kirkland	79	46%	54	32%	9	5%	28	16%	170
Kent	94	53%	61	34%	12	7%	11	6%	178
Tacoma	53	38%	53	38%	3	2%	31	22%	140
Redmond	41	54%	26	34%	4	5%	5	7%	76
Issaquah	49	52%	26	28%	6	6%	13	14%	94
Bellevue	55	46%	40	34%	13	11%	11	9%	119
Renton	42	49%	33	38%	8	9%	3	3%	86
Unincorporated King County	28	33%	30	35%	11	13%	16	19%	85
Shoreline	27	37%	25	34%	9	12%	12	16%	73
Burien	21	34%	25	41%	8	13%	7	11%	61
Auburn	28	47%	20	34%	6	10%	5	8%	59
Federal Way	17	40%	19	44%	3	7%	4	9%	43
Bothell	15	38%	14	35%	7	18%	4	10%	40
SeaTac	10	42%	9	38%	4	17%	1	4%	24
Tukwila	16	44%	14	39%	4	11%	2	6%	36
Everett	9	38%	8	33%	3	13%	4	17%	24
Kenmore	8	42%	8	42%	2	11%	1	5%	19
Lynnwood	14	47%	11	37%	3	10%	2	7%	30
Unincorporated Snohomish County	7	33%	10	48%	1	5%	3	14%	21
Edmonds	11	44%	11	44%	1	4%	2	8%	25
Woodinville	5	33%	8	53%	1	7%	1	7%	15
Arlington	5	23%	10	45%	1	5%	6	27%	22
Des Moines	5	42%	2	17%	2	17%	3	25%	12
All Other Cities	48	52%	55	60%	12	13%	24	26%	139
Total	**1,799**		**1,608**		**1,041**		**607**		**5,055**

Exhibit 58. Will You Be Able to Make Rent Payments?

City	Yes		Not sure		No		Not applicable, don't pay rent		Total
Seattle	253	19%	443	34%	471	36%	133	10%	1,300
Kirkland	39	32%	25	20%	28	23%	30	25%	122
Kent	36	31%	36	31%	30	26%	15	13%	117
Tacoma	32	29%	31	28%	22	20%	24	22%	109
Redmond	24	35%	16	23%	20	29%	9	13%	69
Issaquah	24	36%	19	29%	11	17%	12	18%	66
Bellevue	13	25%	12	24%	20	39%	6	12%	51
Renton	15	33%	10	22%	13	29%	7	16%	45
Unincorporated King County	16	27%	13	22%	16	27%	14	24%	59
Shoreline	6	16%	9	24%	12	32%	11	29%	38
Burien	7	21%	4	12%	13	39%	9	27%	33
Auburn	12	34%	12	34%	10	29%	1	3%	35
Federal Way	3	11%	5	19%	16	59%	3	11%	27
Bothell	8	33%	8	33%	4	17%	4	17%	24
SeaTac	8	38%	4	19%	7	33%	2	10%	21
Tukwila	5	28%	7	39%	4	22%	2	11%	18
Everett	-	0%	6	33%	7	39%	5	28%	18
Kenmore	-	0%	9	56%	2	13%	5	31%	16
Lynnwood	2	11%	6	33%	8	44%	2	11%	18
Unincorporated Snohomish County	7	39%	2	11%	3	17%	6	33%	18
Edmonds	3	21%	7	50%	2	14%	2	14%	14
Woodinville	1	9%	4	36%	5	45%	1	9%	11
Arlington	1	11%	1	11%	4	44%	3	33%	9
Des Moines	3	50%	-	0%	3	50%	-	0%	6
All Other Cities	19	21%	30	33%	28	30%	21	23%	98
Total	**537**		**719**		**759**		**327**		**2,342**

Exhibit 59. Have You Received Landlord Support?

City	Little or no support		Deffered rent		Reduced rent		Other landlord support		Total
Seattle	729	43%	544	42%	205	16%	224	17%	1,702
Kirkland	46	42%	36	30%	8	7%	19	16%	109
Kent	51	50%	21	18%	9	8%	21	18%	102
Tacoma	31	33%	26	24%	10	9%	26	24%	93
Redmond	35	51%	23	33%	3	4%	8	12%	69
Issaquah	23	37%	20	30%	4	6%	16	24%	63
Bellevue	31	46%	24	47%	6	12%	6	12%	67
Renton	26	50%	9	20%	4	9%	13	29%	52
Unincorporated King County	20	45%	11	19%	5	8%	8	14%	44
Shoreline	16	46%	8	21%	8	21%	3	8%	35
Burien	16	44%	9	27%	7	21%	4	12%	36
Auburn	13	34%	13	37%	4	11%	8	23%	38
Federal Way	11	32%	11	41%	5	19%	7	26%	34
Bothell	8	36%	12	50%	-	0%	2	8%	22
SeaTac	10	59%	4	19%	1	5%	2	10%	17
Tukwila	8	44%	4	22%	-	0%	6	33%	18
Everett	8	53%	2	11%	-	0%	5	28%	15
Kenmore	6	38%	5	31%	1	6%	4	25%	16
Lynnwood	7	41%	6	33%	1	6%	3	17%	17
Unincorporated Snohomish County	5	56%	1	6%	-	0%	3	17%	9
Edmonds	4	33%	5	36%	1	7%	2	14%	12
Woodinville	6	50%	4	36%	1	9%	1	9%	12
Arlington	4	36%	1	11%	-	0%	6	67%	11
Des Moines	4	40%	2	33%	3	50%	1	17%	10
All Other Cities	39	42%	20	22%	5	5%	19	21%	83
Total	**1,157**		**821**		**291**		**417**		**2,686**

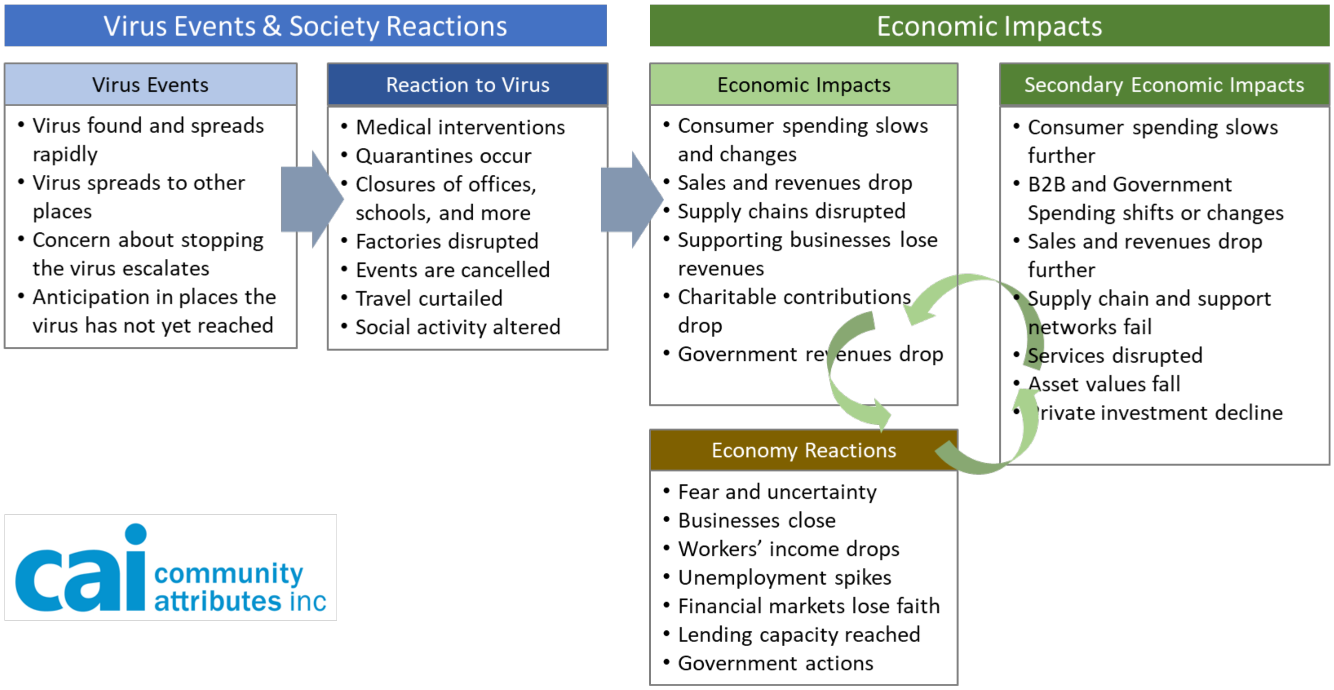
Appendix D. Overview of COVID-19 Impacts

The virus comes on the heels of a bruising U.S.-China trade war and trade disputes between the U.S. and various key trading partners, and a flattening in the growth of global trade entering into 2020. The federal response to the economic contraction has included the largest federal stimulus program enacted in U.S. history. The Federal Reserve reduced interest rates to nearly zero, purchased government and nongovernment securities, and dramatically expanded its lending programs and facilities. The Fed has also launched new programs to expand liquidity and backstop businesses from economic and financial collapse.

Prior to the current crisis, the Seattle regional economy was among the leading metro economies in the United States, driven by a dynamic and fast-growing tech sector, a strong manufacturing base anchored by aerospace, medical devices, advanced manufacturing, and food and beverage processing, and professional and technical services sector. As economically strong as the Seattle Metro Area has been, Covid-19 has laid bare important issues such as economic inequality, housing affordability and mobility.

The impacts of COVID-19 are multifaceted and will reach into nearly every corner of Washington's economy. **Exhibit 60** illustrates varied transmission linkages between the virus and local economic costs.

Exhibit 60. Societal Reactions and Economic Impacts of COVID-19



Decline in consumer and business spending. The Washington economy, like the U.S. economy, sustains itself largely with consumer spending. Quarantines, office closures and a severe change in spending patterns result in immediate losses to small businesses, and consumer-based business. The most vulnerable workers are hit immediately with loss of employment or loss of income, including independent and temporary workers and contractors, sometimes referred to as the gig economy. This net reduction in turn impairs many small businesses, particularly labor-intensive services-based businesses such as restaurants and visitor-dependent businesses.

Event cancellations. Many organizations and companies depend on a few major events each year. Conferences, concerts, spectator sports, fund-raiser events and more are the cornerstone of many businesses, whether as the support industries or as the direct provider and beneficiary.

Tourism and visitations lowered. Visitors to the region alter travel plans, including vacations in Seattle, cruises, and more. The halt in hotel room purchases and visitor spending hits goods and services providers locally, including additional damages to restaurants and retailers (the latter of which have been challenged by on-line sales in recent years as well).

Loss of wages and benefits to employees and contractors. As business revenues falter, employees and contract staff suffer immediate damages. Layoffs, employment termination, wage reduction, and cease of benefits will be immediate for business owners to reduce risk and liabilities. The wage decline will have immediate effect on housing, health care, basic needs, and consumer spending.

Disruptions to supply chains and global trade. Factory closures overseas restrict access to key intermediate components and reduced demand in foreign markets for Washington state products and services. Our major industrial employers in aerospace, maritime, trade and logistics and more depend on the global supply chain to maintain productivity.

Reduced activity in global logistics systems. An escalated number of blank sailings and less cargo flowing through Washington ports means less work for various businesses and independent contractors throughout the global logistics system, such as longshoremen, owner-operator truckers, many of whom operate under thin margins, warehousing, and intermodal operations.

Impacts on business productivity. Flight cancellations and remote work may adversely affect labor productivity, especially among services and tech firms that depend on face-to-face interaction for project work and to close deals. Technology in 2020 fortunately mitigates these losses tremendously through enhanced communication options (video conferences, file sharing and much more). Seattle's cloud-based technology systems lead technology infrastructure reliability.

Real estate, capital investments and asset value declines. Rent defaults will cancel some property investments under consideration (commercial and residential). Lenders will be asked to restructure and postpone debt service. Asset value will decline.

Uncertainty and broader risk of a U.S. economic downtown and recession. The virus may likely be the event that pushes the U.S. and world into a recession, catalyzing sustained economic contraction which had been a concern off and on in 2019 leading into the virus impacts.

Government revenues and fiscal impacts. Washington state's dependency on retail spending and business revenues will see immediate impacts in March and throughout the second quarter of 2020. Many businesses will be slow to return to full operations and return to normal state and local tax payments through the third quarter. State and local revenues will decline in 2020, as government spending increases to serve immediate needs. Difficult budget choices will playout in Q3 and Q4.