Western New York ECONOMIC NEWS
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The Corona Virus Pandemic has ended the 42 quarter national economic expansion that began in 2009:Q3. Advanced estimates of GDP growth for 2020:Q1 show the economy contracting by 4.8%. The contraction is likely to be much worse during the second quarter of 2020. In the coming months, the national unemployment rate will approach levels unseen since the Great Depression of the 1930's. How long this economic downturn will last depends on how quickly the economy can be re-opened and how quickly consumers return to their typical spending behavior. Even though the Buffalo MSA has changed its industrial base, once again it is leading the state and the nation into recession and seems to be falling deeper in terms of the unemployment rate.

The National Economic Outlook

Advanced estimates of real GDP show the economy contracting by 4.8% during 2020:Q1. This decline is likely to be mild compared to what will come during the second quarter of 2020. Personal consumption expenditures declined by 7.6% during the quarter while gross private domestic investment declined by 5.6% We have repeatedly stated the national economic expansion which began in 2009:Q3 was getting long in the tooth, having continued for 42 quarters, far surpassing the 15 quarter average duration of post-WWII expansions. Real GDP growth rates since 2007:Q1 appear in Figure 1. The unforeseeable exogenous shock about which we have previously written that would end the expansion has arrived and the economic fallout will be severe. Much of the service sector that employs millions of workers and provides profits to small business has been idled due to government imposed shutdowns. It remains to be seen how long the interruption of normal economic activity will last, but the longer it lasts the more dramatic will be the economic damage.

Since the US economy is largely driven by consumer expenditures, which comprise approximately 70% of GDP, the behavior of consumers in the aftermath of the Covid-19 crisis will determine how quickly and to what extent the economy will recover. Once federal, state and local governments give the all clear sign, will consumers attend sporting and entertainment events, go on vacations and out to restaurants in the same numbers that they did prior to the pandemic, or will they avoid doing so? Consumer behavior will largely determine whether the economic recovery will be U or V shaped.

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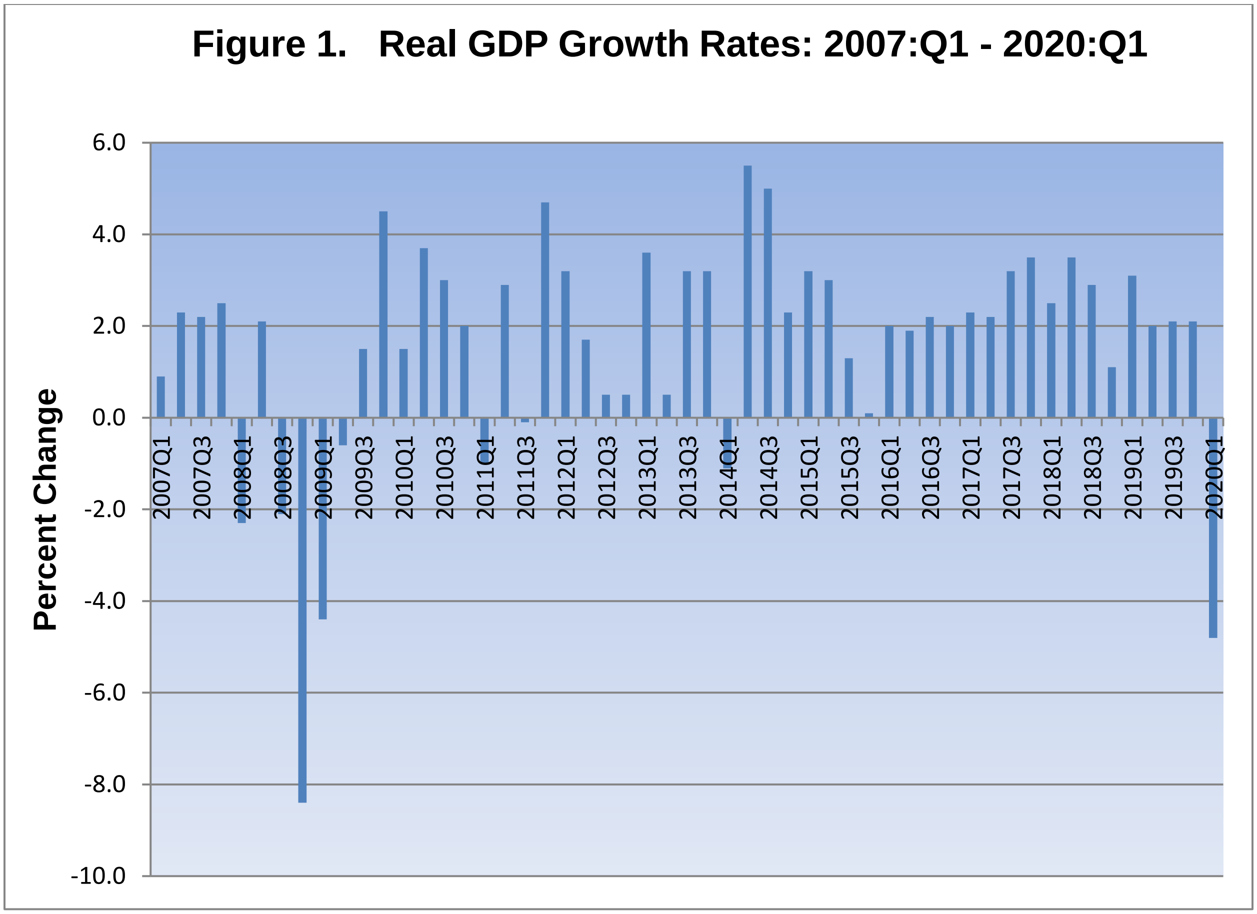


At this point in the cycle, an analysis of labor market data yields the best information as to how severe the economic downturn will be. In March and April 2020, U.S. payroll employment data shows a loss of 870,000 and 20.5 million jobs, respectively. The April figure is an unprecedented single month loss in terms of magnitude. The monthly payroll data over the period 2016-2020 is shown in Figure 2. In Figure 3, the payroll data over the period 2007-2011, which embodies the most severe recession we have experienced since the Great Depression of the 1930's, is shown. The contrast between Figure 2 where there is a virtual overnight turnaround in the employment figures compared to Figure 3, where the job losses during the 2008-2009 recession were more gradual, is remarkable.

The national unemployment rate increased to 14.7%, in April, up from 4.4% in March. This unemployment rate will increase again in May 2020, since the household survey that determined the April rate occurred in the middle of April. In April, more than 23 million people were unemployed out of a labor force of approximately 156.5 million. We expect the May unemployment rate to be in the range of 25% given the unprecedented level of business shutdowns that have occurred over the past two months. Over the 7 weeks ending May 2, 2020, almost 33.5 million workers filed claims for unemployment insurance benefits. Weekly unemployment insurance claims since January 2018 are

Figure 2. Monthly Change in U.S. Payroll Employment: 2016-2020

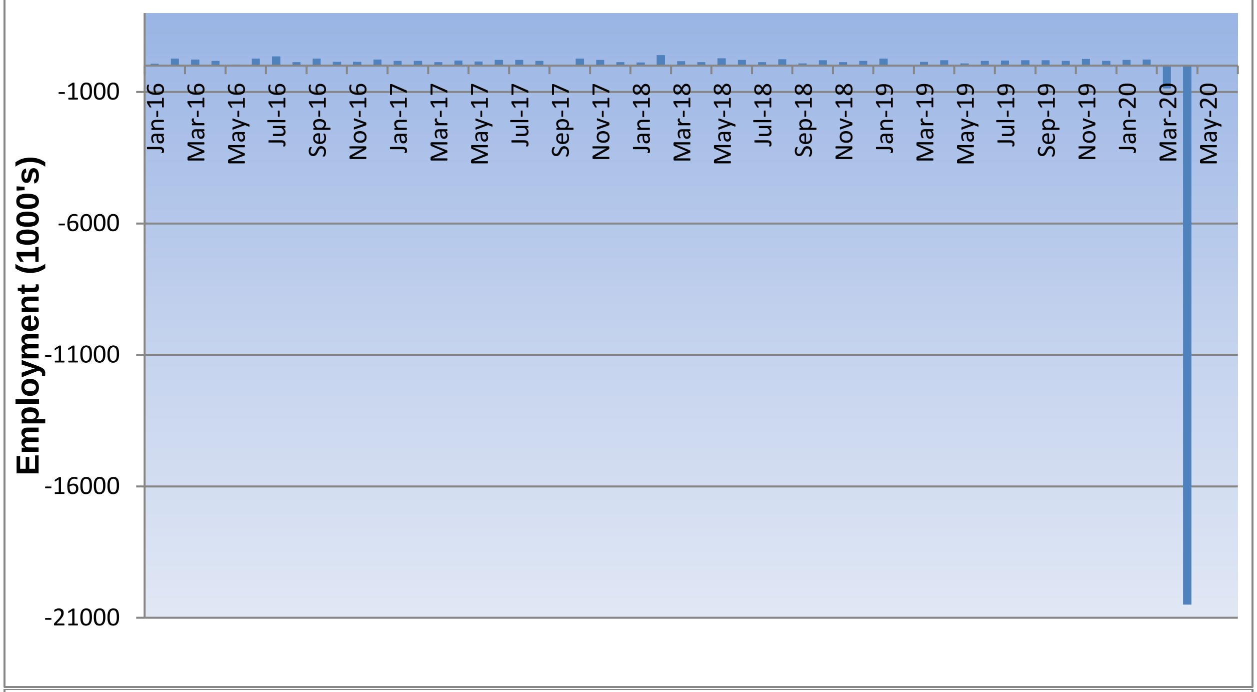
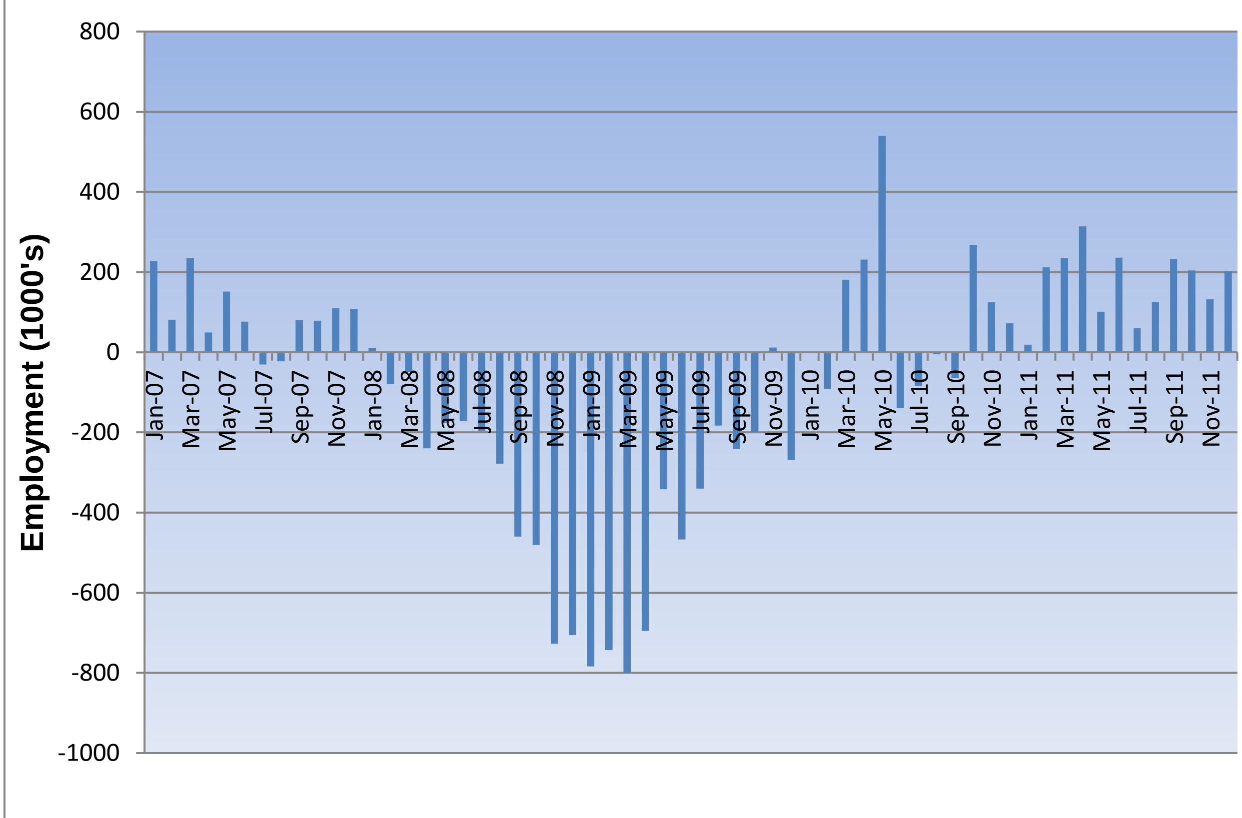
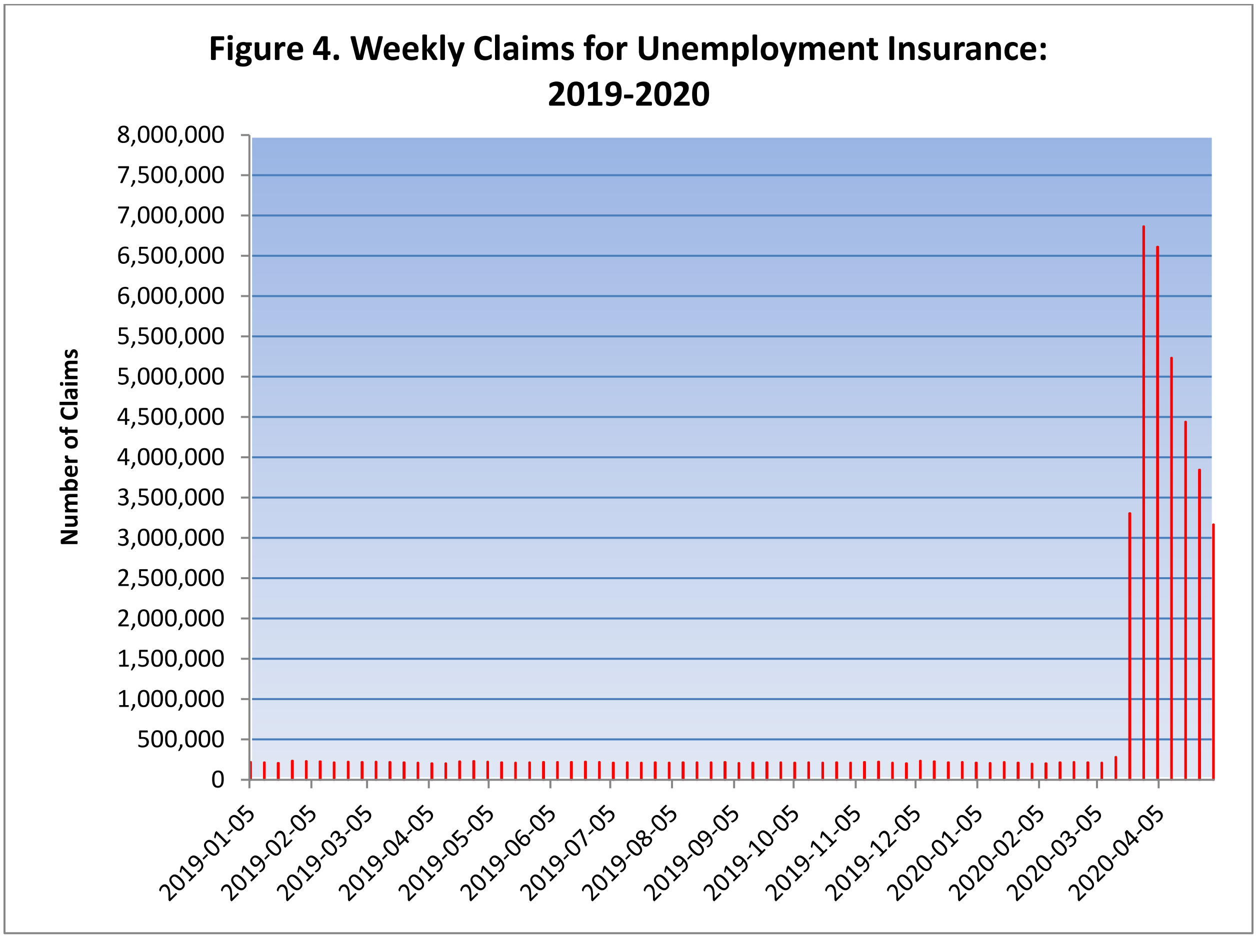


Figure 3. Monthly Change in U.S. Payroll Employment: 2007-2011



exhibited in Figure 4. Similar to the employment data, what is remarkable about the weekly claims data is the dramatic order of magnitude increase in claims. Weekly unemployment claims averaged 218,273 over the period January 4 - March 14, 2020. In the seven weeks since March 14, the weekly figures balooned to 3.307, 6.867, 6.615, 5.237, 4.442, 3.846 and 3.169 million.



During the 2008-2009 recession, unemployment insurance claims gradually increased from an average weekly level of 327,000 during the second half of 2007 to a peak of 665,000 in March 2009. The buildup in unemployment during the last recession was gradual, and was sustained for 15 months, dramatically different from what we have so far observed in 2020. These data suggest that there will be a significant decline in GDP during the second quarter of 2020 on the order of at least 20%. The magnitude and duration of the economic decline is dependent upon how long the quarantine will last and how quickly consumers resume their old expenditure practices.

The Fiscal and Monetary Policy Response

The Federal Reserve has responded agressively to the economic downturn in two unscheduled March FOMC meetings, reducing the federal funds target first, by 50 basis points on March 3, and then by another 100 basis points on March 15 to the range of 0 to .25%. Additionally, the Fed has added approximately $3 trillion in assets to their balance sheet, which presently stands at $6.9 trillion. The Fed has been providing liquidity to financial markets by increasing their holdings of U.S Treasury securities, Agency Mortgage Backed Securities, Agency Commercial Mortgage Backed Securities and Corporate Secutities, including those with less than an investment grade, and shows no inclination to stop its purchases.

The yield on the 10-year U.S Treasury note has fallen by 100 basis points since early March and presently stands at .67%. Equity markets plunged in value since their highs in mid-February. The S&P 500 index declined by 34% from February 19 to March 23 but has recently rebounded by 30% off its low. On May 7, the index stood at approximately 2900, 14% below its February 19 value.

Crude oil markets have also experienced extreme volatility and a rare super-contango occurred April 20 in the futures market. A glut of crude supply and a lack of storage space caused the NYMEX WTI per barrel futures price to settle at a negative price (-$37.63), so holders of the contract were willing to pay to have the crude taken off their hands.

The fiscal policy response to the crisis has also been extremely accomodative. Congress passed the $2.2 trillion CARES Act that is making direct cash payments to Americans, boosts unemployment insurance benefits and provides aid to struggling businesses and states. This legislation is what economists refer to as a *helicopter drop* of dollars meant to inject cash directly into the U.S. economy. Up to this point, the federal government has spent almost $3 trillion to aid the economy and additional government expenditures are being considered.

With a federal deficit of $1.2 trillion prior to the outbreak of the present crisis, the additional government expenditures will result in an expansion of the national debt by approximately 13% this year. In the short term, these expenditures are helpful, but in the long run there is potential difficulty with an acceleration of inflation, especially if the Federal Reserve continues to monetize the debt.

Additionally, the liquidity the Fed provided the credit markets did not fix any of the underlying problems. Corporate debt as well as state and local debt is and will continue to be a long term problem. The Fed put a tourniquet on the bleeding appendage, but the ruptured blood vessels need to be repaired. Debtors, whether public or private are always placed in jeopardy when recessions lead to deflations.

The Economic Outlook for the Buffalo Region

Much has changed since we ended our last newsletter with this sentence: *"Thus, though lower in earnings per worker than the rest of the nation and the (other) upstate MSAs, on average, the growth of wages in the region is no longer falling behind."* While our past observations establish a basis to understand where we were, they provide little more than a framework to guide our understanding of where the region might be headed.

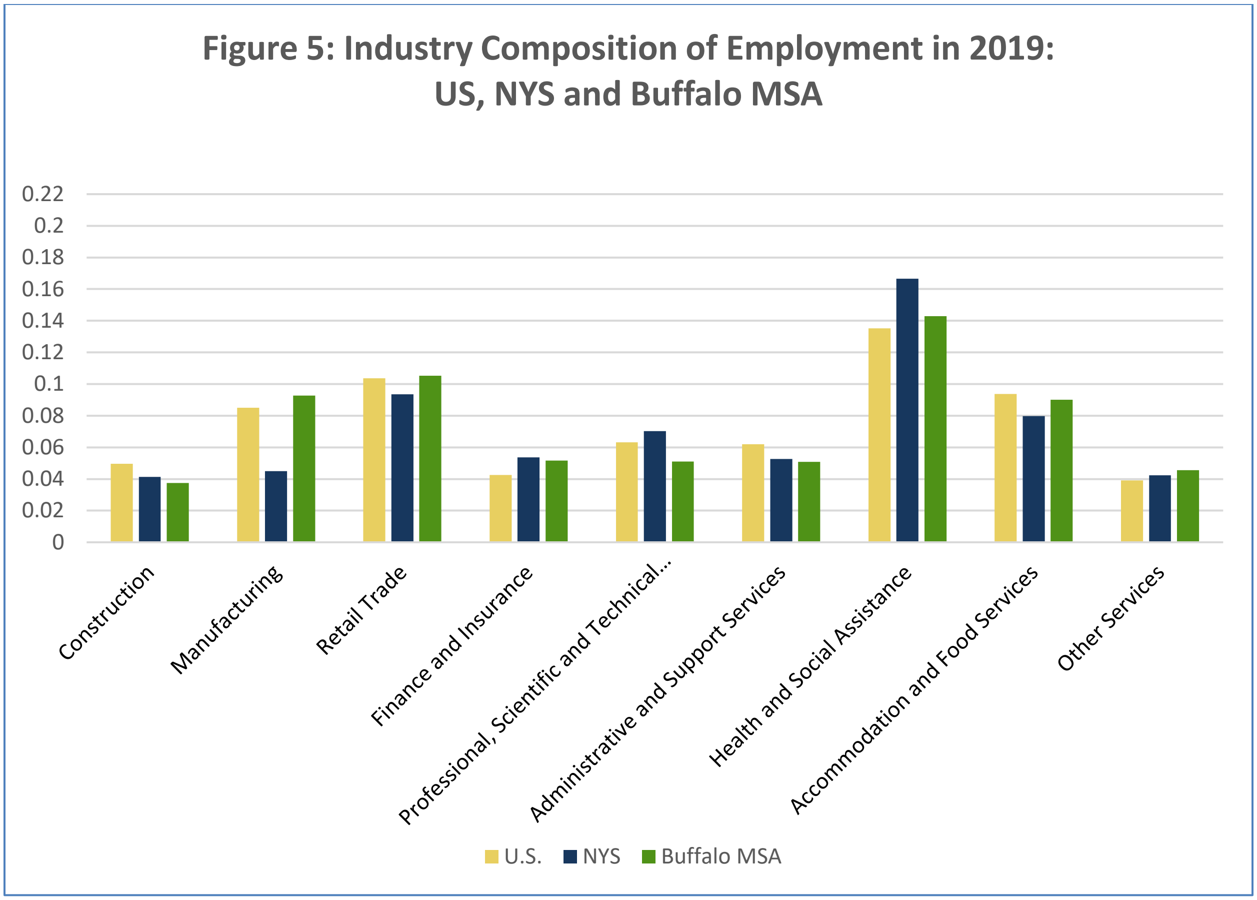


Figure 5 represents the composition of employment in the Buffalo MSA compared to New York State and the U.S. economy. While manufacturing's proportion of total employment is slightly above the national average, this sector is nearly twice the average rate in New York State. The only sectors where both the Buffalo MSA and New York State were higher than the national average were Finance & Insurance and Health & Social Assistance. The region had a substantially lower rate of Professional, Scientific and Technical employment than occurs in the rest of the state or nation**.**

The composition of the local economy in terms of industrial as well as occupational base has had a substantial impact on the loss of employment, income and tax base during the ongoing economic disruption, and will undoubtedly affect the timing of and degree of recovery as shutdown orders are removed locally, statewide and nationally.

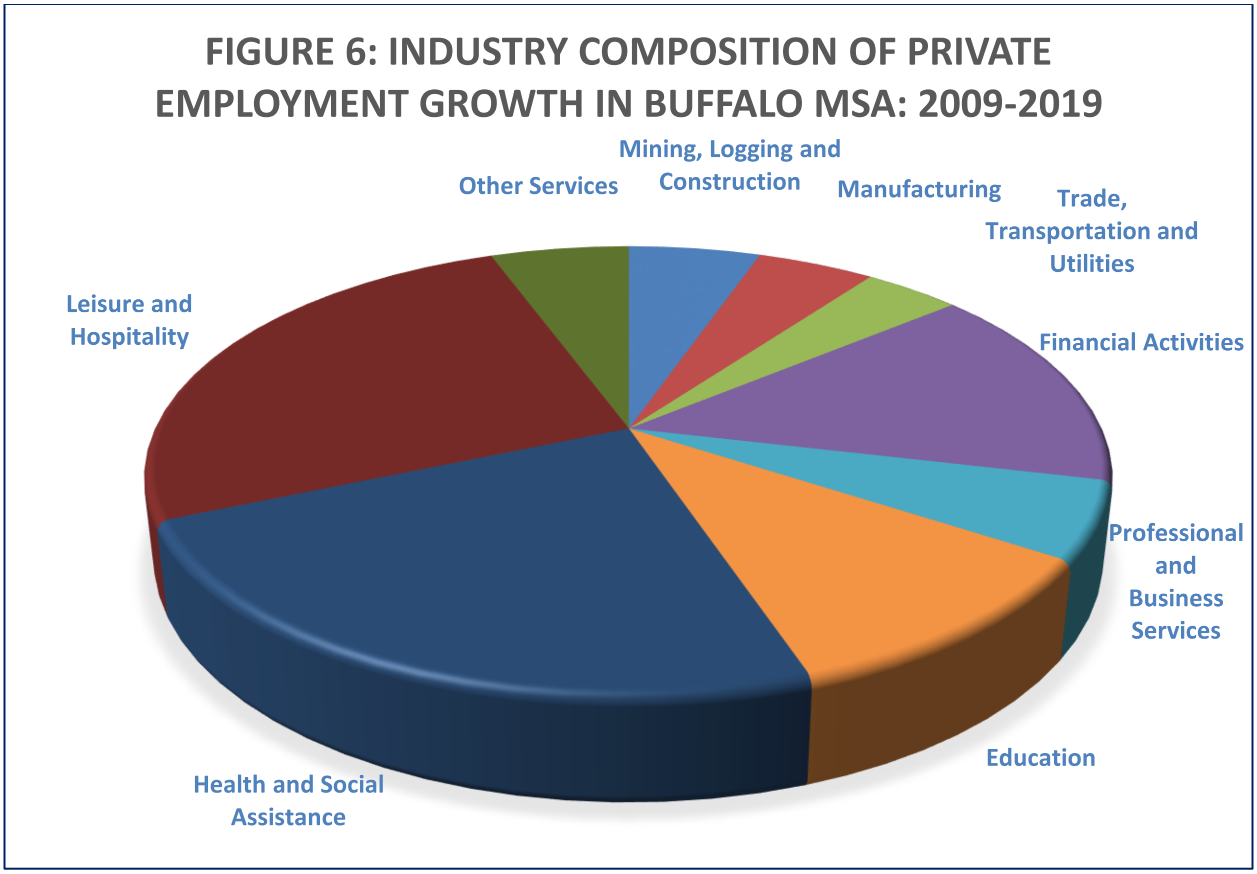


Figure 6 shows how the Buffalo economy got to the position it was in at the end of 2019, when we observed that local average wages per worker were no longer falling behind the rest of the nation. As summarized in Table 1 below, the four fastest growing industrial sectors were Leisure & Hospitality, Health Care & Social Assistance, Financial Activities and Education. Of these only in the Financial Activities sector were wages substantially above the approximately $51,000 median earnings of the region. The remainder of the fastest growing sectors were below the median, though Health & Social Assistance average annual wages per worker were close to the median.

The growth in the Social Assistance industrial sub-sector has limited wage growth in that industry. The average annual wages per worker in this sub-sector are similar to those for employees in Leisure & Hospitality.

Table 1.
Average Annual Wages of Fastest Growing
Industrial Sectors in the Buffalo MSA: 2009-2019

Industry	Average Annual Wage	Share of Total Growth
Leisure and Hospitality	$25,000	25.9%
Health Care and Social Assistance	$47,000	23.7%
Financial Activities	$67,000	14.8%
Education	$36,000	10.6%
Other Services	$29,000	5.6%
Professional and Business Services	$60,000	5.6%
Mining, Logging and Construction	$62,000	5.3%
Manufacturing	$67,000	4.7%
Trade, Transportation, and Utilities	$39,000	3.9%

Table 2 below shows that even though the Buffalo MSA has changed its industrial base it is leading the state into recession and seems to be falling deeper in terms of the unemployment rate. Since 1969 the Buffalo metropolitan area has led the nation, fallen deeper, recovered later and less fully than the rest of the nation. The industrial composition and distributions of occupations within these industries may provide insight into way the region seems to have been hit substantially harder than the other Upstate MSAs and the rest of New York State.

Table 2.
Initial Jobless Claims as Share of February Labor Force
(Through May 9)

Region	Rate
Buffalo MSA	24.0%
Rochester MSA	17.6%
Syracuse MSA	20.1%
New York State	20.1%
United States	22.2%

Figure 7 identifies the industrial sectors with the highest ratios of initial jobless claims to total employment in New York State. Initial claims in New York State for workers in Accommodation & Food Services were 45.7% of 2019 employment in that sector. That sector was in the fastest growing part of the local economy and in 2019 its proportion of total employment was higher than in New York State.

Similar characteristics existed for Manufacturing and Retail Trade employment. While not as heavily concentrated as in the rest of New York State, employment concentrations in Administrative & Support Services were above the national average. These industrial sectors were amongst the hardest hit by the current economic disruption.

The lone bright spot in the composition of local economic activity is the Financial Services sector, which is an area of concentration for the region, had lower than normal initial claims ratios and had average wages above the regional mean.

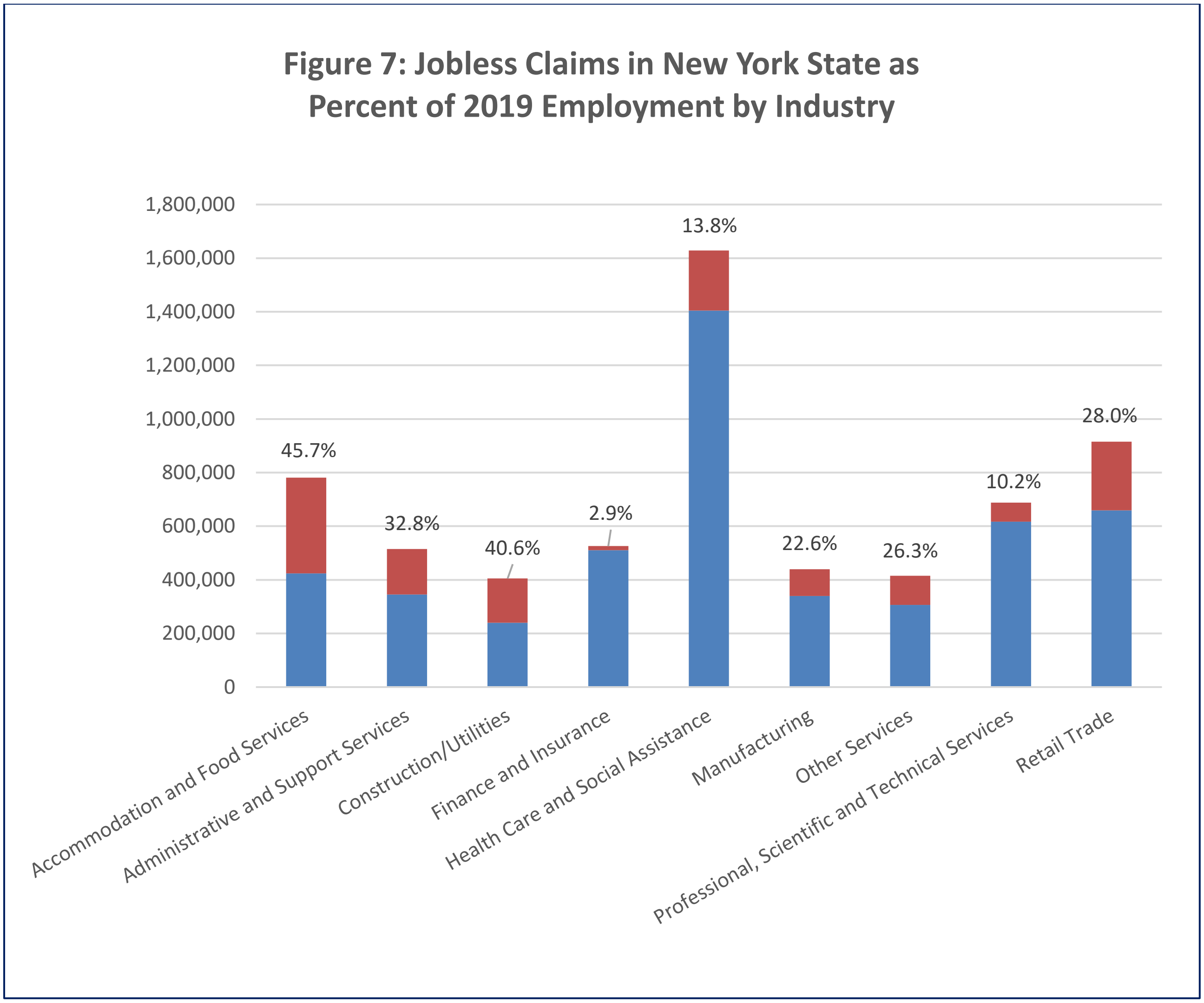


Table 3 shows NYS initial unemployment claims by occupation as a share of total claims. Given the industrial breakdown shown in Figure 7, it is not surprising that Food Preparation and Serving, Office and Administrative Support and Sales and Related Occupations account for the largest shares of the claims. Life, Physical and Social Science, Legal, Computer and Mathematical, and Community and Social Service occupations each accounted for less than 0.5% of the total claims filed in New York State. This could result from the ability to do work at home or because this work was necessary even in an environment when most of the state was in lockdown due to the pandemic.

Table 3. Jobless Claims in New York State by Occupation

Occupation	Share of NYS Jobless Claims
Life, Physical, and Social Science	0.23%
Legal	0.39%
Computer and Mathematical	0.40%
Community and Social Service	0.49%
Architecture and Engineering	0.63%
Protective Services	0.87%
Business and Financial Operations	1.26%
Education, Training and Library	2.10%
Healthcare Practitioners and Technical	2.16%
Building and Grounds Cleaning and Maintenance	2.29%
Healthcare Support	2.30%
Arts, Design, Entertainment, Sports and Media	2.36%
Installation, Maintenance and Repair	2.48%
Production	3.54%
Transportation and Material Moving	4.29%
Personal Care and Service	4.45%
Construction and Extraction	5.09%
Management	7.26%
Sales and Related	7.38%
Office and Administrative Support	8.79%
Food Preparation and Serving	9.21%

Individuals with higher levels of education tend to fare better during economic downturns, and Table 3 provides evidence that this recession is no different in that way. Even more telling is Table 4, which displays the April US unemployment rate by educational attainment. The differential between the unemployment rates of those who didn't graduate from high school and those with bachelor's or graduate degrees is 12.8 percentage points, showing the dramatically different experience for those with lower levels of educational attainment and therefore, lower incomes. If past relationships hold, the difference between bachelor's degree holders and those with advanced degrees is similar.

Table 4. April US Unemployment Rate by Educational Attainment

Education Level	Unemployment Rate
Less than High School Degree	21.2%
High School Graduate	17.3%
Some College/Associate's Degree	15%
Bachelor's Degree or Higher	8.4%

Table 5 below shows why there is nearly universal pain for state and local governments across the nation. 93% of all tax revenue in New York State is either directly or indirectly based on income. Therefore, as the recession continues and intensifies tax revenues will continue to decline. While local governments are more heavily dependent on property tax revenues, state aid is more than 50% of the value of total taxes collected.

On May 13, New York State Comptroller Thomas DiNapoli explained that New York State's financial plan reflects a bleak economic outlook and without aid from Washington, hospitals, schools, and local governments could face billions in budget cuts.

So, New York State's problems will soon be Erie County's problems.

Table 5. Tax Revenue U.S. and New York State

United States Total			New York	
	State government taxes as % of total taxes	**Local government taxes as % of total taxes**	**State government taxes as % of total taxes**	**Local government taxes as % of total taxes**
Property Tax	**2%**	**72%**	**0%**	**58%**
Individual income	**37%**	**5%**	**56%**	**12%**
Corporate income	**5%**	**1%**	**5%**	**7%**
Sales & Gross Receipts	**48%**	**17%**	**32%**	**19%**
Total aid as % of Taxes	**70%**	**85%**	**76%**	**66%**
State Aid as % of Taxes	**n. a.**	**75%**	**n. a.**	**58%**

NATIONAL, STATE & LOCAL BUSINESS INDICATORS

NATIONAL INDICATORS	2019:I	2019:III	2019:IV	2020:I	% change 2019:I - 2020:I
Real GDP (billions of chained 2012$) (1)(a)	18,927.3	19,121.1	19,222.0	18,987.9	0.3
US Personal Income (billions of $) (1)(a)	18,355.4	18,676.9	18,821.0	18,916.2	3.1

	Mar-19	Jan-20	Feb-20	Mar-20	% change Mar-19 - Mar-20
Annual CPI Inflation Rate (%) (2)	1.86	2.49	2.33	1.54	
Exchange Rate Canadian cents/US $ (3)(b)	133.50	132.36	133.73	140.64	5.35
10 Year Treasury Note Yield (%)(3)(b)	2.41	1.51	1.16	0.68	-1.73
3 Month Treasury Bill Yield (%)(3)(b)	2.40	1.55	1.30	0.13	-2.27
S&P 500 Stock Index (3)(b)	2,834.40	3,225.52	2,954.22	2,584.59	-8.81
Dow-Jones Industrial Average (3)(b)	25,928.68	28,256.03	25,409.36	21,917.16	-15.47
LABOR MARKET TRENDS (2)					
Nonag Civilian Employment					
US (1000's)(a)	148,254	152,212	152,487	151,786	2.38
Change from previous month	147	214	275	(701)	
NY State (1000's)(a)	9,781.3	9,840.4	9,847.3	9,805.6	0.25
WNY (1000's)(a)	567.4	564.8	565.5	565.1	-0.41
Unemployment Rate (%)					
US (a)	3.8	3.6	3.5	4.4	0.6
NY State (a)	4.0	3.8	3.7	4.5	0.5
WNY	4.5	5.1	4.9	5.2	0.7
Ave. Weekly Hours in Mfg. US (a)	41.7	41.3	41.7	41.4	-0.72
Ave. Weekly. Earnings in Mfg. US ($)(a)	915.73	925.95	939.50	934.81	2.08
US Private Employment (1000's)(a)	127,754	129,498	129,740	129,027	1.00
WNY EMPLOYMENT BY SECTOR (1000's)(2)					
Mining, Logging & Construction	18.7	19.2	18.9	20.3	8.56
Manufacturing	52.6	50.9	51.7	52.1	-0.95
Trade, Transportation & Utilities	98.2	99.1	98.1	97.9	-0.31
Durable Goods	32.7	31.3	31.8	32.0	-2.14
Finance Activities	36.4	35.6	35.7	35.8	-1.65
Government	90.9	90.2	91.6	91.7	0.88

(1) US Dept. of Commerce — (a) Seasonally Adjusted
(2) US Dept. of Labor — (b) End of month data
(3) Wall Street Journal