New York State Division of the Budget
September 22, 2021

Report on New York's Minimum Wage Increases Scheduled for 2022

Introduction

As provided under NYS Labor Law § 656, this report is intended to provide insights into the impact of recent minimum wage increases on the health of the New York State economy in each of the three regions defined under the law, i.e., New York City; combined counties of Nassau, Suffolk, and Westchester; and the remainder of the State. Given the importance of a job to the dignity and material well-being of families and individuals, this report focuses on the current labor market recovery in the context of the Covid-19 pandemic and the reopening of the economy.

This report recommends:

a) The minimum wage rise to $15 in Nassau, Suffolk, and Westchester counties in 2022, joining New York City and large fast-food firms statewide (see Table 1) and,

b) The Upstate minimum wage rise annually by the sum of the annual growth rates for the Consumer Price Index for all Urban Wage Earners and Clerical Workers and labor productivity, as defined by real output per hour of all persons in the nonfarm business sector, where annual growth is measured for the period ending in June of the prior calendar year. This rule implies a minimum wage of $13.20 for the Upstate area for the 2022 calendar year.

This report further examines the pace of the State labor market recovery and discusses these recommendations in more detail.

Table 1: Minimum Wage Schedule

		New York City			Long Island & Westchester		Upstate*	
Date of Increase	Calendar Year(s) in Effect	Minimum Wage (Large employers)	Minimum Wage (Small employers)	Fast Food Wage Board Schedule	Minimum Wage	Fast Food Wage Board Schedule	Minimum Wage	Fast Food Wage Board Schedule
July 24, 2009	2009 - 2013	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25	$7.25
December 31, 2013	2014	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00
December 31, 2014	2015	$8.75	$8.75	$8.75	$8.75	$8.75	$8.75	$8.75
December 31, 2015	2016	$9.00	$9.00	$10.50	$9.00	$9.75	$9.00	$9.75
December 31, 2016	2017	$11.00	$10.50	$12.00	$10.00	$10.75	$9.70	$10.75
December 31, 2017	2018	$13.00	$12.00	$13.50	$11.00	$11.75	$10.40	$11.75
December 31, 2018	2019	$15.00	$13.50	$15.00	$12.00	$12.75	$11.10	$12.75
December 31, 2019	2020	$15.00	$15.00	$15.00	$13.00	$13.75	$11.80	$13.75
December 31, 2020	2021	$15.00	$15.00	$15.00	$14.00	$14.50	$12.50	$14.50
December 31, 2021	2022	$15.00	$15.00	$15.00	$15.00	$15.00	$13.20	$15.00

*Growth to be rule-based for 2022 and beyond.

Pre-Pandemic Trends in the Low-Wage Employment Sector

The adverse impact that the Covid-19 pandemic has had on low-wage workers is the overwhelming message of virtually every source of New York employment data. However, the low-wage segment of the upstate labor market had begun to contract prior to the pandemic. The most accurate source for assessing the underlying trends in regional job growth is the Quarterly Census of Employment and Wages (QCEW).

Table 2a indicates that the three minimum-wage regions displayed very different trends prior to the pandemic. Private sector job growth accelerated in New York City in 2019, held steady in the Long Island-Westchester area, but decelerated Upstate. Decomposing the private sector into low-wage industries – including retail trade, healthcare and social assistance, and leisure and hospitality – and other private industries indicates similarly divergent trends across regions. Prior to the pandemic, the low-wage sector is estimated to have accounted for almost 60 percent of the State's minimum wage workforce. In both 2018 and 2019, the low-wage sector overall was a growth engine for both New York City and Long Island-Westchester, while for Upstate, the low-wage sector became a significant drag in 2019, shedding 0.4 percent of its jobs.

Table 2a: Recent Trends in New York State Private Sector Employment Growth
(Percent Change)

	Total Private			Low-Wage			Other Private		
	2018	2019	2020	2018	2019	2020	2018	2019	2020
Statewide	1.5	1.3	(11.2)	1.9	1.4	(14.8)	1.1	1.3	(8.5)
New York City	2.4	2.9	(12.7)	3.1	3.3	(17.5)	2.0	2.7	(9.3)
Long Island & West.	0.4	0.5	(11.3)	1.2	1.1	(13.0)	(0.2)	0.0	(9.8)
Upstate	0.8	0.3	(9.6)	0.8	(0.4)	(12.3)	0.8	0.9	(7.2)

Note: Low-wage industries include retail trade; healthcare and social assistance; and leisure and hospitality.
Source: NYS Department of Labor (Quarterly Census of Employment and Wages).

Table 2b: New York State Private Sector Employment Growth for Selected Low-Wage Industries
(Percent Change)

	Retail Trade			Healthcare and Social Assistance			Leisure and Hospitality		
	2018	2019	2020	2018	2019	2020	2018	2019	2020
Statewide	(0.7)	(1.8)	(12.4)	4.0	4.0	(4.9)	1.3	0.1	(33.9)
New York City	(0.2)	(0.5)	(17.5)	5.6	6.5	(3.8)	1.7	0.9	(41.0)
Long Island & West.	(1.0)	(1.5)	(12.6)	2.9	3.4	(6.2)	0.9	0.1	(26.2)
Upstate	(1.3)	(2.4)	(7.5)	2.1	1.0	(6.0)	1.2	(0.3)	(27.8)

Source: NYS Department of Labor (Quarterly Census of Employment and Wages).

Table 2b decomposes the low-wage sector further to illuminate which low-wage industries are the source of strength and weakness in the three regions. With the growth of e-commerce, which accelerated during the pandemic, the retail trade industry has been a source of weakness consistently across regions. In stark contrast, the healthcare and social assistance sector has been a growth engine in all three regions, but with a significant caveat. While growth in this sector appears to have accelerated in 2019 in New York City and elsewhere downstate, a substantial deceleration was experienced upstate.

The devastating impact of the Covid-19 pandemic on the State's leisure and hospitality sector is illustrated in high relief in Table 2b. However, Table 2b also establishes that this sector was losing considerable steam prior to the pandemic and had become a significant drag on the upstate labor market. The leisure and hospitality sector, which is estimated to have accounted for more than 20 percent of the State's minimum wage workforce prior to the pandemic, saw a significant deceleration in growth in 2019 in both New York City and Long Island-Westchester, while Upstate, this sector actually lost jobs. The data are consistent with anecdotal evidence bolstered by the low upstate unemployment rate that argues in favor of labor shortages.

The Covid-19 Impact and the Pace of Recovery in Low-Wage Employment

The shutdown of the economy required to control the spread of Covid-19 resulted in the unprecedented loss of 2.0 million jobs in New York over the two months of March and April 2020, a loss of 20.2 percent. Of the jobs lost, 1.9 million were in the private sector, a loss of 23.0 percent. The low-wage sector was the most severely impacted by the pandemic: 1 million, or 57.2 percent of the private sector losses, were in the three industries where minimum wage workers are most concentrated – retail trade, health care and social assistance, leisure and hospitality. These sectors represented only 42.5 percent of private employment at the February 2020 pre-Covid peak. In just two months, the low-wage sector experienced a combined loss of 31.0 percent of its jobs.

Current Employment Statistics data (CES), the timeliest labor market data source, indicate that as of July 2021, fully 15 months after the labor market trough in April 2020, New York has regained about 1.1 million private sector jobs, or 56.4 percent of private sector jobs lost. This compares to 77.6 percent for the nation through the same month. The data also indicate that the low-wage sector continues to disproportionately account for the remaining losses.

Table 3 summarizes the progress of the State's labor market recovery for both the private sector overall and the low-wage sector for the three minimum-wage areas, but with two caveats due to limited data availability. The Rest of Downstate area includes Orange and Putnam counties, and the definition of the low-wage sector is broadened to include private education.[1]

Table 3 indicates that the upstate economy is recovering at a faster pace than both the New York City and Rest of Downstate regions, having recovered 68.7 percent of its private sector job losses as of July 2021. New York City lags well behind, having recovered only 46.3 percent of its lost private sector jobs. Low-wage employment was clearly disproportionately affected by the pandemic in all three regions, but even more so Upstate, where low-wage job losses represent 62.4 percent of all private sector jobs lost, the highest of the three regions. Table 3 also shows that the low-wage sector is recovering more quickly than the private sector overall in both New York City and the Rest of Downstate, while the opposite is true Upstate where the low-wage recovery is lagging. Indeed, the Upstate low-wage sector shed 24,900 jobs over the months of May and June, but after gaining only 7,800 in

[1] CES data are less granular at the sub-state level. For example, data for Westchester county are only available in combination with Orange and Putnam counties. However, based on the highly accurate but less timely Quarterly Census of Employment and Wages (QCEW) data for 2020, Westchester represents 72 percent of the combined total. Additionally, data for the healthcare and social assistance sector are only available in combination with private education for sub-state areas. But based on QCEW data for 2020, healthcare and social assistance represents fully 82 percent of the combined total. As a result, we conclude that the resulting distortions are not large.

July, the July level of low-wage employment remains 17,100 below April. Table 3 indicates that of the remaining private sector losses Upstate, fully 74.7 percent are in the low-wage sector as defined here.

Table 3: The Pace of the Recovery in Private Sector and Low-wage Employment by Region Through July 2021 (Job Losses in Thousands)

	Total Private				Low-wage				
	Job Losses Through April 2020	Jobs Recovered as of July 2021	% Jobs Recovered	As Share of Private Jobs at Feb. 2020 Peak	Job Losses Through April 2020	As Share of Private Losses	Jobs Recovered as of July 2021	% Jobs Recovered	As Share of Remaining Private Losses
New York City	(946.1)	438.4	46.3%	46.1%	(570.6)	60.3%	315.6	55.3%	50.2%
Rest of Downstate	(470.8)	299.2	63.6%	49.8%	(269.2)	57.2%	179.9	66.8%	52.1%
Upstate	(500.8)	343.8	68.7%	51.5%	(312.5)	62.4%	195.4	62.5%	74.7%

Notes: The Remainder of Downstate includes Long Island, Westchester, Rockland, and Orange counties. Low-wage industries include retail trade; healthcare and social assistance; leisure and hospitality; and private education.
Source: Current Employment Statistics via Moody's Analytics.

The Impact of Covid-19 on the Minimum Wage Workforce

Prior to the pandemic, the size of the 2021 minimum wage workforce was estimated at 1.4 million, but there is evidence suggesting that this number has fallen dramatically. Current Population Survey (CPS) data is the only survey that reports hourly wages. However, due to the small sample size, we average over two years of monthly datasets to obtain reliable estimates. To infer the impact of the pandemic on minimum wage employment, two 24-month samples are constructed, one ending February 2020, the State's most recent employment peak, and another ending in July 2021. The employment declines between the two samples are assumed to capture the impact of the pandemic. The results are presented in Table 4 for both overall and minimum wage employment by selected worker characteristics and industry. The size of the 2021 minimum wage workforce is now estimated to have fallen to about 1 million, a decline of 425,500 from the pre-pandemic estimate, or 29.6 percent. In contrast, the general workforce is estimated to have fallen only 7.1 percent.

Table 4 indicates that, consistent with other data sources, employment counts are down in every industrial category except for those in the utilities and information industries. In all but two industries, minimum wage employment is down by much more than employment overall. Table 4 also indicates some subtle shifts in the profile of minimum wage workers. For example, women represent about half of the decline in the overall workforce, but 60 percent of the decline in the minimum wage workforce. Non-whites represent 39 percent of the workers leaving the overall workforce, but 44 percent of the estimated drop in the minimum wage workforce. Nevertheless, female, non-white, part-time, and young workers are still expected to be overrepresented within the minimum wage workforce relative to the workforce overall.

Table 4: Selected Low-Income Worker Characteristics Estimated for 2021 and Change from Pre-pandemic Level

	Total Employed			Minimum Wage Workers			
	Level	% Share	% Change from Pre-pandemic Level	Level	% Share	% Change from Pre-pandemic Level	As Share of Total Employed
Total	8,549,145	100.0%	-7.1%	1,012,368	100.0%	-29.6%	11.8%
Gender							
Male	4,457,284	52.1%	-7.0%	456,301	45.1%	-27.3%	10.2%
Female	4,091,861	47.9%	-7.3%	556,067	54.9%	-31.4%	13.6%
Race							
White Only	6,196,258	72.5%	-6.1%	646,682	63.9%	-27.0%	10.4%
Black Only	1,356,037	15.9%	-8.0%	251,158	24.8%	-30.2%	18.5%
All other races	996,850	11.7%	-11.9%	114,527	11.3%	-40.6%	11.5%
Full-Time/Part-Time Status							
Usually Full-Time, Total	7,096,322	83.0%	-7.5%	588,741	58.2%	-29.3%	8.3%
Usually Part-Time, Total	1,452,823	17.0%	-5.4%	423,627	41.8%	-30.0%	29.2%
Age							
16-24	864,629	10.1%	-8.6%	287,129	28.4%	-35.4%	33.2%
25-34	2,081,255	24.3%	-7.9%	241,676	23.9%	-30.3%	11.6%
35 and above	5,603,261	65.5%	-6.6%	483,563	47.8%	-25.3%	8.6%
Industry							
Mining, Agriculture, Forestry	49,650	0.6%	-30.6%	7,111	0.7%	-33.2%	14.3%
Construction	560,940	6.6%	-5.8%	39,236	3.9%	-3.3%	7.0%
Manufacturing	457,944	5.4%	-8.1%	46,703	4.6%	-16.7%	10.2%
Wholesale Trade	151,357	1.8%	-3.7%	9,513	0.9%	-28.0%	6.3%
Retail Trade	826,020	9.7%	-6.4%	184,878	18.3%	-33.4%	22.4%
Transportation & Warehousing	419,419	4.9%	-16.5%	42,164	4.2%	-39.4%	10.1%
Utilities	64,727	0.8%	2.2%	4,509	0.4%	26.3%	7.0%
Information	233,736	2.7%	1.2%	17,291	1.7%	12.5%	7.4%
Fire	771,852	9.0%	-0.5%	32,368	3.2%	-36.1%	4.2%
Professional & Business Svs.	1,113,035	13.0%	-6.5%	78,309	7.7%	-33.2%	7.0%
Educational Services	966,329	11.3%	-4.8%	71,363	7.0%	-29.5%	7.4%
Health Care	1,156,608	13.5%	-3.4%	164,476	16.2%	-10.7%	14.2%
Social Services	272,006	3.2%	-13.7%	43,737	4.3%	-35.8%	16.1%
Leisure and Hospitality	670,651	7.8%	-20.6%	181,570	17.9%	-40.2%	27.1%
Other Services	397,674	4.7%	-5.8%	56,971	5.6%	-38.1%	14.3%
Public Administration	437,197	5.1%	-1.2%	32,168	3.2%	-6.7%	7.4%

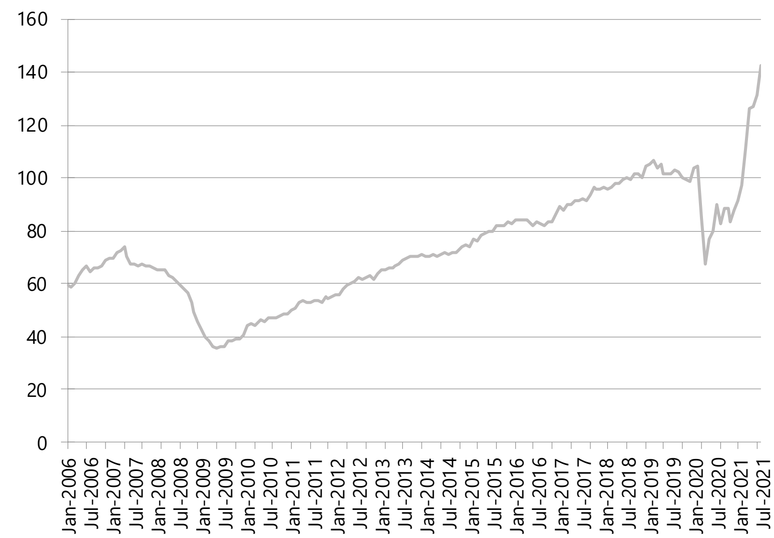
Note: Estimates for 2021 are based on Current Population Survey (CPS) data for August 2019-July 2021; the pre-pandemic estimates used for comparison purposes are based on CPS data for March 2018-February 2020.
Source: Census Bureau; DOB staff calculations.

The Return of Labor Shortages

At the national level, about 63.7 percent of the adult population are fully vaccinated as of this writing (September 3, 2021), yet only 77.6 percent of the private sector jobs lost during the deadliest months of the pandemic had been recovered through July 2021. In New York, the conundrum is even more stark: 71.8 percent of the adult population is fully vaccinated but only 56.4 percent of the private sector jobs lost had returned. The implied job gap suggests the presence of a labor shortage in New York State that is even more severe than that of the nation.

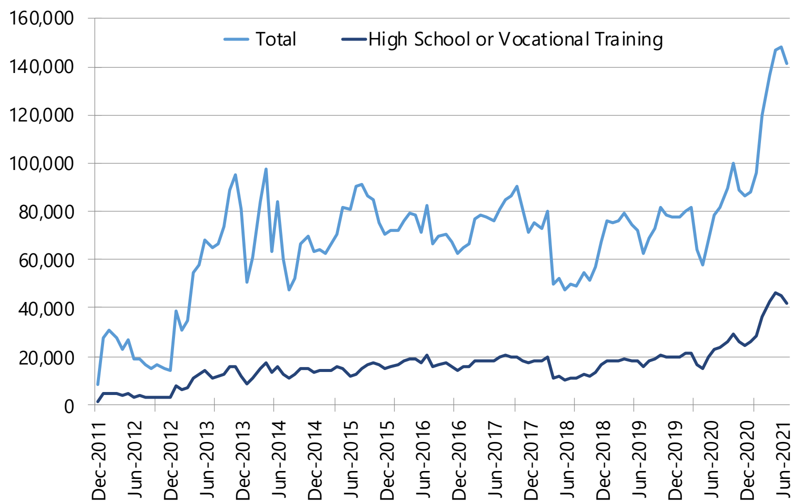
The unprecedented abundance of job openings provides perhaps the strongest evidence of the severity of the State's labor shortage. Figure 1 indicates that based on the Conference Board Help Wanted Online (HWOL) Index, statewide job postings are currently at record highs. Figure 2 isolates the Upstate area and indicates that recent levels of job postings have been well above their pre-pandemic peaks. Indeed, total job postings for July 2021, the most recent month available, exceeded the March 2020 pre-pandemic peak by 72.4 percent. The shortage of low-skill/low-wage labor appears to be even more severe. July postings specifying a high school education or vocational training exceed their March 2020 pre-pandemic peak by 95.4 percent. Moreover, postings specifying either a high school education or vocational training represent 29.9 percent of total postings for July 2021, just below its May 2021 historic high of 31.6 percent.

Figure 1: Statewide Job Postings Index at Record Levels



Source: The Conference Board®-Burning Glass® Help Wanted OnLine® Index via NYS Department of Labor.

Figure 2: Upstate Job Postings: Total and Those Specifying High School Education or Vocational Training



Source: The Conference Board®-Burning Glass® Help Wanted OnLine® Data Series via NYS Department of Labor.

Recent increases in reservation wages provide additional evidence of a tightly constrained labor supply. Results from the labor market module of the Survey of Consumer Expectations (SCE), compiled by the Federal Reserve Bank of New York, suggests that the pandemic has caused some workers to reassess the value of their labor.[2] The survey elicits each respondent's reservation wage by asking what is the lowest wage that would be sufficient to induce them to accept a job in their chosen line of work. The responses are then averaged after eliminating suspected errors and outliers. Survey results indicate that the nationwide reservation wage attained a historical peak of $71,400 for March 2021, a 15.7 percent increase from March 2020. This compares to a 1.0 percent drop for the prior year. The increases were largest for workers with less than a college degree (26.0 percent vs. 5.8 percent for workers with a college degree or more) and workers earning $60,000 or less (26.4 percent vs. 2.9 percent).

Based on July 2021 survey results, the most recent available, the economywide reservation fell slightly to $69,000. This result is consistent with increased vaccination rates making a return to the workforce more comfortable for workers in occupations where remote work is not feasible, and perhaps the anticipation of the expiration of enhanced unemployment insurance benefits in early September. But a comparison over the two-year period from July 2019 indicates particularly strong growth among less educated and young workers.

Abundant job openings and rising reservation wages support the hypothesis that labor demand is currently outstripping supply, particularly for the workers most impacted by the Covid-19 pandemic – low-wage front-line workers and women caring for children. Such circumstances would certainly point toward the need for higher pay to induce those workers to re-enter the labor force if the factors keeping them out of the workforce were expected to endure.

Reduced rates of immigration are another factor constraining labor supply. International immigration had been falling both nationally and in New York since spiking in 2016, perhaps in anticipation of a more hostile environment to come, and no doubt took a nosedive during the pandemic as a result of the myriad travel bans put in place to stop the spread of Covid-19. The decline in the number of foreign workers could be of particular concern for New York given their importance to the leisure and hospitality sector.[3]

Finally, fear related to the virus itself may be playing a role in exacerbating the shortage of labor among risk-averse workers. The rapid spread of the particularly virulent Delta variant is likely keeping workers from applying for the myriad openings within the hospitality industry where the risk to workers is particularly high.

The Economic Outlook

The increase in the Upstate minimum wage will occur in the context of a recovery that will be profoundly affected by the Covid-19 pandemic for years to come. Real U.S. GDP is expected to have surpassed its pre-pandemic peak during the second quarter of 2021, but not without the help of an unprecedented infusion of government spending into the economy. That spending continues to support the millions of workers who remain unemployed.

[2] https://www.newyorkfed.org/microeconomics/sce#/

[3] Capital Economics cites the decline in the teen unemployment rate to 9.6 percent in May 2021, the lowest since the 1950s as evidence that young workers may be picking up some of the slack created by the decline in immigration but BLS does not make the teen unemployment rate available by State. *US Economics Focus*, "Labor shortages will last well into 2022," June 29, 2021.

Real GDP is estimated to increase 6.5 percent for 2021, followed by projected growth of 4.6 percent for 2022. The Budget Division's near-term outlook for quarterly real GDP growth appears in Figure 3.

Figure 3: Outlook for US GDP Growth

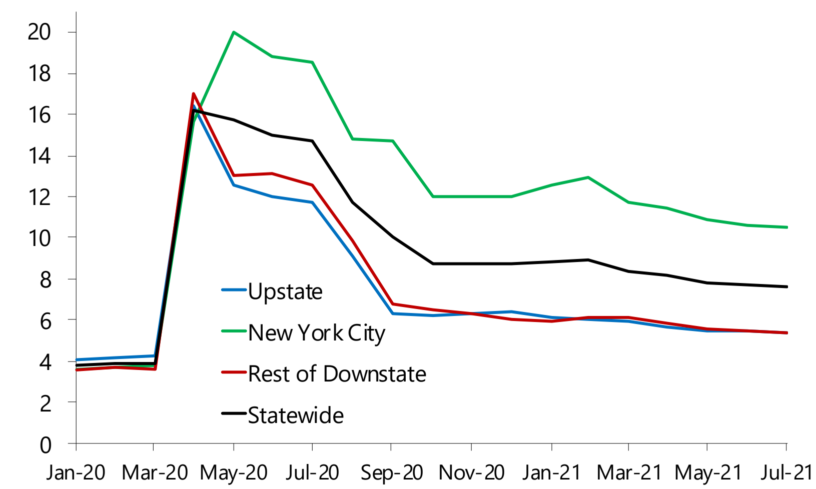
Note: Shaded areas represent U.S. recessions; DOB estimates that NBER will determine that the early 2020 recession is subsumed by the first two quarters of 2020.
Source: Moody's Analytics; DOB staff estimates.

But the nation's labor market recovery is far from complete. With only 76.2 percent of the 22.4 million jobs that were lost in March and April restored as of August 2021, national employment is not expected to recover its most recent 2020Q1 peak until the second half of 2022. Moreover, the national unemployment rate is not expected to reach its pre-pandemic low of 3.5 percent at any point over the forecast horizon. As of August 2021, the national labor force was still almost 2.9 million below its February 2020 level.

The impact of the Covid-19 pandemic on the New York State labor market has been devastating. State employment fell 10.0 percent in 2020 and is not expected to reach its pre-pandemic peak until the second half of 2024. That State wages fell only 0.7 percent in calendar year 2020 is testament to how profoundly the low-income workforce was affected by the pandemic. Wages are estimated to grow 3.9 percent for 2021 and 5.3 percent for 2022.

The State's unemployment rate rose from a historic low of 3.7 percent in December 2019 to 16.2 percent in April 2020, likely its highest since the 1930s, although reporting is spotty for that period. However, as illustrated in Figure 4, the regional disparities in both the impact of downturn and the pace of the recovery are notable. In New York City, the hardest hit area in the nation, the unemployment rate rose from 3.6 percent in January 2020 to a peak of 20.0 percent in May 2020. The unemployment rates in the rest of Downstate and Upstate peaked one month earlier in April at lower rates of 17.0 percent and 16.4 percent, respectively.

Figure 4: New York State Regional Unemployment Rates
(Percent)



Note: Rest of Downstate includes Nassau, Suffolk, and Westchester counties.
Source: Moody's Analytics.

As seen in Figure 4, unemployment rates appear to have fallen rapidly between July and October 2020, with the statewide rate falling from 14.7 percent in July to 8.7 percent in October. Since then, unemployment rates have remained comparatively steady, with New York City remaining elevated at 10.5 percent, and the Long Island/Westchester and Upstate areas both at 5.4 percent as of July 2021. The New York City labor market is likely to remain depressed until domestic and international travel move closer to pre-pandemic levels. But all three regions are likely to continue to see elevated unemployment rates until the primary factors constraining labor supply are resolved.

Recommendations:

Nassau, Suffolk, and Westchester Counties

This report recommends that the minimum wage rise to $15 in Nassau, Suffolk, and Westchester counties in 2022, joining New York City and large fast-food firms statewide. Nassau, Suffolk, and Westchester counties are part of the New York-Newark-Jersey City, NY-NJ-PA metropolitan statistical area (MSA), implying that all of the included areas have comparable costs-of-living, as well as other economic characteristics.[4] Data from the Regional Purchasing Parities (RPPs), published by the Bureau of Economic Analysis and the Supplemental Poverty Measure (SPM), published by the Census Bureau, indicate a high standard of living for the entire downstate MSA, exceeding the national average by over 20 percent based on both statistics. Moreover, the 2019 1-Year American Community Survey data indicate that among workers age 25 and above working at least 35 hours per week and at least 40 weeks per year, the Nassau, Suffolk, and Westchester area has the highest median annual wage of the three regions.[5]

[4] This MSA also includes 12 counties in New Jersey and one county in Pennsylvania.
[5] The medians for this subset of the workforce for 2019 are $57,578 for New York City; $70,710 for the Nassau, Suffolk, and Westchester area; $50,507 for Upstate; and $56,568 statewide.

The Path to $15 for Upstate

New York is not the first state to index the minimum wage to some measure of cost-of-living growth.[6] On January 1, 2021, Washington state made the first annual cost-of-living adjustment to its minimum wage based on the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). Beginning July 1, 2023, Oregon will annually adjust its regionally trifurcated minimum wages based on the increase, if any, in the Consumer Price Index for All Urban Consumers (CPI-U). Beginning January 1, 2024, Connecticut will begin indexing its minimum wage to the Employment Cost Index for wages and salaries for all civilian workers (ECIWC). Similarly, Minnesota indexes its minimum wage to the implicit price deflator for personal consumption expenditures published by BEA.

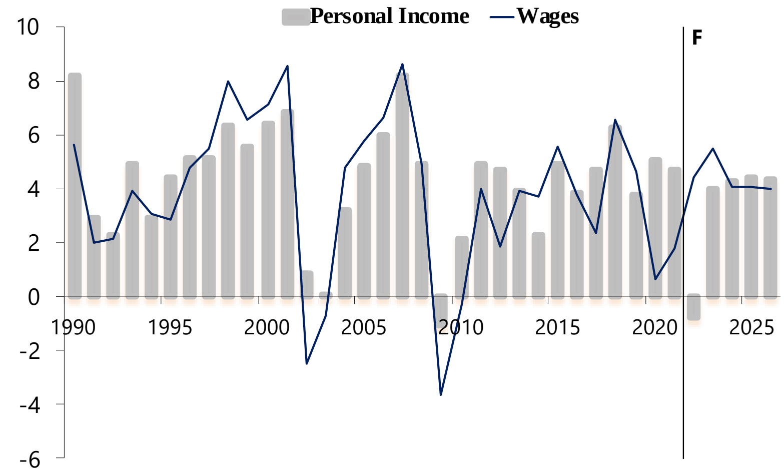
Indexing the minimum wage to inflation permits low-wage workers to continue to be able to afford the same basket of goods and services. Baker (2020) argues that in addition to rising with the cost of living, the minimum wage should rise with labor productivity growth, as he claims it roughly did between 1938, the year it was introduced, and 1968.[7] If workers become more productive with time, raising the wage in line with productivity growth allows them to augment that basket. While traditionally the minimum wage-heavy occupations have not been among those that have posted high rates of productivity growth, it could be argued that the pandemic has illuminated the inadequacy of standard measures of productivity growth within the service industries.

Labor productivity, defined as real output per hour in the nonfarm business sector, grew 82 percent between 1947, the first year of the current series, and 1968. Consumer prices as measured by the CPI-W grew 56 percent over the same period. Between 1947 and 1968, the Federal minimum wage, which initially "was applicable generally to employees engaged in interstate commerce or in the production of goods for interstate commerce," grew from $0.40 to $1.60, an increase of 300 percent, and more than double the combined growth of consumer prices and labor productivity. But between 1968 and 2020, that combined growth totaled 780 percent, while the minimum wage has only risen 353 percent.

Here we propose that the upstate minimum wage rise with the combined rates of growth in the CPI-W and labor productivity growth. Although the impact of the pandemic can be seen in virtually every economic indicator, we have discounted indicators such as State personal income and wage growth since these measures are likely to exhibit particularly large distortions for several years to come, distortions that should not be passed through to the minimum wage. These distortions are easily visible in Figure 5, which presents the DOB outlook for both variables for each annual period ending in the second quarter of every year through 2026. Indexing the minimum wage growth would imply growth of only 1.8 percent for CY 2022, while indexing to personal income would imply a decline of 0.8 percent for CY 2023 as the fiscal support bolstering transfer income falls off.

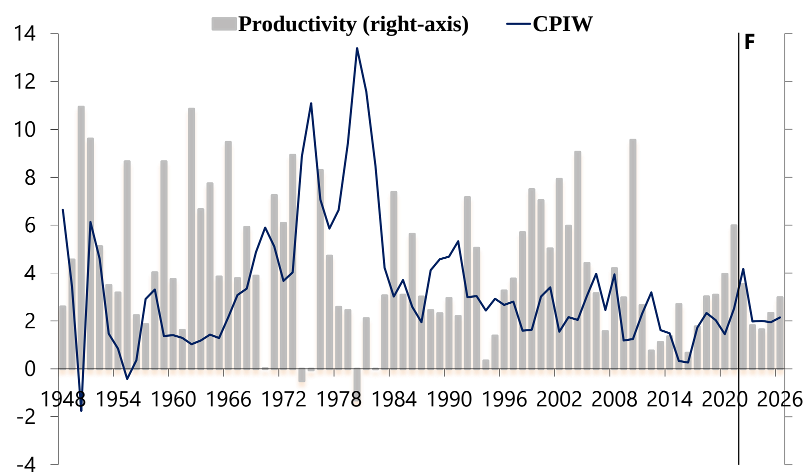
[6] A compilation of state-specific minimum wages can be found at https://www.dol.gov/agencies/whd/mw-consolidated.
[7] Dean Baker (2020), "This is What Minimum Wage Would Be If It Kept Pace with Productivity," Center for Economic Policy and Research, January 21. https://cepr.net/this-is-what-minimum-wage-would-be-if-it-kept-pace-with-productivity/

Figure 5: Outlook for NYS Wages and Personal Income Growth
(Percent change)



Note: Data represent annual growth for the 12-month period ending in June of the designated year.
Source: Moody's Analytics; DOB staff estimates.

Figure 6: US Inflation and Labor Productivity Growth
(Percent change)



Note: Data represent annual growth for the 12-month period ending in June of the designated year.
Source: Moody's Analytics; DOB staff estimates.

We therefore recommend that the Upstate minimum wage rise by the sum of both consumer price inflation, as measured by growth in the CPI-W, and labor productivity growth, for the period ending in June of the prior year.

Figure 6 presents the historical growth rates for both consumer price inflation and labor productivity growth. Following the most persistent bout of inflation of the postwar period in the 1970s, inflation has been well contained, helping to keep the most important driver of runaway inflation – inflation expectations – well anchored since that time. Indeed, between 2010 and 2019, the first and last full years of the expansion that immediately followed the Great Recession, inflation averaged approximately 1.8 percent, two tenths below the Federal Reserve's 2.0 percent target rate. Labor productivity growth averaged 1.2 percent over the same period. For the 12-month period ending in June 2021, the CPI-W and labor productivity grew 2.6 percent and 3.0 percent, respectively, resulting in a minimum wage of $13.20 for the 2022 calendar year for the Upstate area (see Table 1 on page 1).