



The Transportation and Warehousing Sector in New York City

Highlights

- As of April 2022, the transportation and warehousing sector in the City has regained 82 percent of pandemic job losses, while the nation fully recovered its losses by October 2020.
- The New York metropolitan area ranks first among the top 10 metropolitan areas in the nation for number of transportation, warehousing and utilities sector jobs (394,600), but makes up a smaller share of private sector employment (4.7 percent).
- Despite the COVID-19 pandemic, air transportation is the largest subsector, employing 26,550 workers in 2021 (which is down 5,400 from 2019).
- Transit and ground passenger transportation lost the most employment from 2019 to 2021, declining by 34 percent to 22,472 jobs.
- More than one-half of sector workers are Black or African American and/or Hispanic or Latino male workers without a college degree, and most workers earn less than \$60,000.
- E-commerce taxable sales grew 78 percent between State tax period 2019 and 2021, and local delivery service taxable sales grew 149 percent, fueling the need for transportation services.
- Warehouses and storage industrial real estate sales grew 115 percent to \$4.1 billion between 2019 and 2021, whereas overall commercial properties declined 19 percent.

From moving people into and around New York City to delivering food and storing goods, the transportation and warehousing sector is an important component of the City's economy. Prior to the COVID-19 pandemic, growing visitor numbers and increased demand for the transportation of goods with the rise of e-commerce supported employment growth. During the pandemic, visitor numbers fell dramatically, stunting the demand for passenger transportation. At the same time, demand for goods skyrocketed due to shifts in consumer and business buying behaviors amid the implementation of social distancing measures. Total goods transported throughout the City are expected to reach 313 million tons valued at nearly \$639 billion in 2022.¹

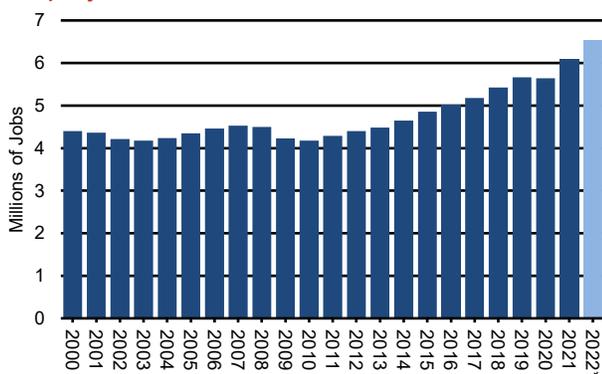
While certain subsectors were affected more negatively than others, the overall transportation and warehousing sector has regained 82 percent of its pandemic job losses compared to 73 percent for the total private sector. The sector's strength represents a brighter side for the larger trade, transportation and utilities supersector, whose employment recovery has been stalled by the hard-hit retail trade sector. However, the recovery of pandemic job losses in the City's transportation and warehousing sector lags behind the nation's, which recovered before the end of 2020.

The City expects the transportation and warehousing sector to regain the remainder of its pandemic job losses by 2022, barring the emergence of new economic disruptions that could further impact the global supply chain system and the sector. Continued growth in the sector would suggest a broad-based and vigorous economic recovery in New York City.

National and Rest of State Employment

In the United States, the transportation and warehousing sector shed 555,000 jobs in the months of March and April 2020 (not seasonally adjusted). Sector employment in the nation declined from a high of 6 million jobs in December 2019 to fewer than 5.2 million by the end of April 2020. However, nationally, the sector fully recovered its COVID-19 pandemic job losses by October 2020, leading to an annual average of 5.6 million jobs in 2020, just shy of the peak in 2019 (see Figure 1).²

FIGURE 1
Transportation and Warehousing Employment in the Nation, 2000 to 2022



Notes: Annual average employment levels in 2022 reflect data through April 2022. Figures are not seasonally adjusted.
Sources: U.S. Bureau of Labor Statistics, Current Employment Statistics; OSC analysis

*Year-to-date

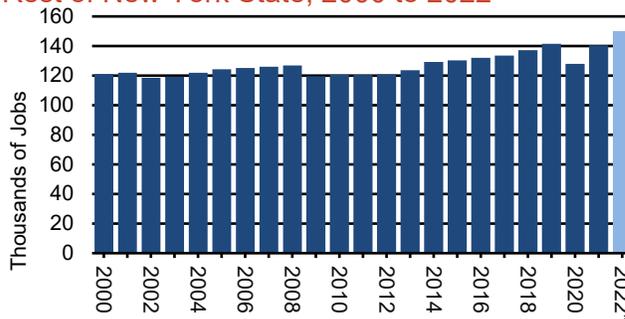
The recovery of job losses in the sector during the pandemic was very different than in the Great Recession, when the sector lost fewer jobs but took over four years to regain the jobs lost. In the nation, the sector continued to grow in 2021 and is on pace to add over 450,000 jobs on an annual average basis in 2022, barring new economic disruptions. This gain would be slightly fewer than in 2021.

New York State has not yet seen a full recovery, but the continuing lag is related to the outsized role of New York City in the State economy. In the rest of the State, the transportation and warehousing sector lost over 35,000 jobs in the

months of March and April 2020, declining from nearly 140,000 jobs prior to the onset of the pandemic to fewer than 105,000 jobs. In comparison, during the Great Recession, on average, the sector lost 7,200 jobs in 2009.

While the sector in the rest of the State did begin to regain jobs in May 2020, the annual average was 13,600 jobs fewer in 2020 than in 2019, the largest decline in the last 20 years (see Figure 2). The sector regained its pandemic job losses by September 2021 and is on pace to add over 9,300 jobs on an annual average basis in 2022.

FIGURE 2
Transportation and Warehousing Employment in Rest of New York State, 2000 to 2022



Notes: The Rest of New York State equals New York State minus New York City employment. Annual average employment levels in 2022 reflect monthly data through April 2022. Figures are not seasonally adjusted.
Sources: U.S. Bureau of Labor Statistics, Current Employment Statistics; OSC analysis

*Year-to-date

The trend in the City was very different, as the transportation and warehousing sector has not fully recovered its pandemic job losses even as of April 2022. The City's experience during the pandemic suggests fundamental differences in the City's transportation and warehousing sector even prior to the pandemic. Those differences, discussed below, have important implications for the return of employment and the overall structure of the sector as the pandemic recedes.

New York City Employment

Not only does sector employment in New York City stand out within the State but also among other large job markets. At the metropolitan area

level, where data for utilities cannot be separated from data for transportation and warehousing for many areas, the New York metropolitan area ranks first among the top 10 areas in the nation for sector jobs (see Figure 3). Its sector makes up a smaller share of private sector employment than in other metropolitan areas.

FIGURE 3
Transportation, Warehousing and Utilities Sector in Top 10 Metropolitan Areas by Number of Jobs, April 2022

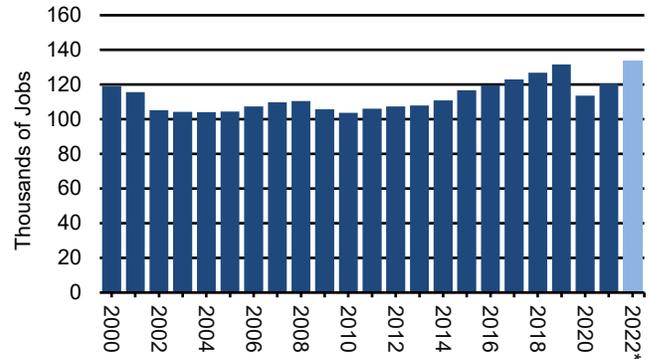
Metro Area	Sector Employment (1,000s)	Sector's Share of Total Private Sector
New York	394.6	4.7%
Chicago	273.1	6.6%
Dallas	258.6	7.2%
Los Angeles	254.9	4.7%
Riverside	212.5	15.3%
Atlanta	177.0	6.8%
Houston	170.4	6.2%
Miami	148.8	6.0%
Philadelphia	133.2	5.1%
Phoenix	115.5	5.7%

Note: At the metropolitan area level, utilities cannot be disentangled from transportation and warehousing employment for many areas.
Sources: U.S. Bureau of Labor Statistics, Current Employment Statistics; OSC analysis

The City's transportation, warehousing and utilities sector comprises over 35 percent of sector employment in the New York metropolitan area. Within the sector, the pandemic barely affected the utilities component. However, the pandemic did have a delayed and prolonged negative impact on the transportation and warehousing sector.

Job losses in the sector began in April 2020 (rather than March 2020) and persisted through July 2020. In total, the City lost nearly 40,000 jobs over those months, leading to an annual average of 113,625 jobs in 2020 (see Figure 4). The sector recovered some employment in 2021, and as of April 2022, has recovered 82 percent of the jobs lost between April and July 2020.

FIGURE 4
Transportation and Warehousing Employment in New York City, 2000 to 2022



Note: Annual average employment levels in 2022 reflect data through April 2022. Figures are not seasonally adjusted.
Source: NYS Department of Labor, Current Employment Statistics; OSC analysis
*Year-to-date

In comparison, the City's overall private sector has recovered just 73 percent of its pandemic job losses.

Among the five boroughs that make up the City, Queens made up nearly half of transportation and warehousing employment in 2021 (see Figure 5). Queens' outsized share reflects its status as home to two major airports, La Guardia and John F. Kennedy (JFK).

Subsector Employment

The transportation and warehousing sector is composed of several subsectors. Even prior to the pandemic, employment in the City's transportation and warehousing sector was different than the nation's, due to the unique needs of the City's economy. (For further discussion, see the "Pandemic Impact on Travel" and "Freight Transportation" sections of this report.)

In 2019, in the nation, truck transportation, and warehousing and storage, together made up over half of transportation and warehousing employment, as the sector's main role is the movement of goods through population centers. In contrast, in the City, transit and ground passenger transportation and air transportation,

FIGURE 5

City Transportation and Warehousing Employment by Borough, 2019 to 2021

	2019	2020	2019-2020 Percentage Change	2021	2020-2021 Percentage Change	Borough Share of Sector Employment in 2021
Queens	73,281	57,490	-22%	58,311	1%	49.4%
Brooklyn	20,141	16,808	-17%	18,429	10%	15.6%
Manhattan	19,545	18,049	-8%	17,538	-3%	14.9%
Staten Island	9,000	11,710	30%	14,881	27%	12.6%
Bronx	8,834	7,686	-13%	8,911	16%	7.5%
New York City	130,801	111,743	-15%	118,070	6%	100.0%

Sources: NYS Department of Labor, Quarterly Census of Employment and Wages; OSC analysis

made up the majority of sector employment. Couriers and messengers, who are often responsible for “final mile” delivery, made up significant portions at the national and local levels (both at 15 percent). The overall difference in pre-pandemic demand for transportation services between the nation and the City has had important implications for their respective recoveries.

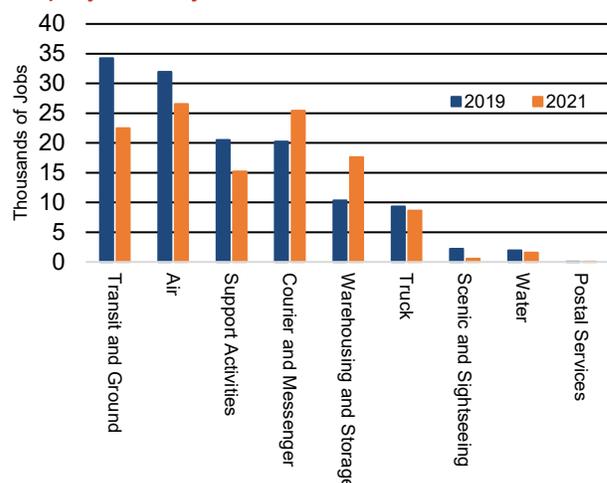
By 2021, in the City, the subsector employment shares changed. Air transportation employed the most people among the subsectors at 26,550 (a decline of almost 5,400 from 2019; see Figure 6). Transit and ground passenger transportation (not including Metropolitan Transportation Authority employment, which falls under the public sector) lost the greatest number of jobs over the period, declining by about 11,800 jobs and driving the overall employment loss in the sector.

On a percentage basis, scenic and sightseeing transportation fared the worst, losing over 75 percent to reach only 539 jobs in 2021. This subsector is heavily reliant on tourists (see the Office of the State Comptroller’s [report on the tourism industry](#)).³ NYC & Company, the City’s official tourism agency, does not expect the number of visitors to recover fully until 2024,

leading to slower recovery for sightseeing employment than other subsectors.⁴

Employment that is more closely tied to the storing and delivery of goods experienced a significant uptick between 2019 and 2021. For example, warehousing and storage employment rose by 70.7 percent to reach 17,600 jobs compared to only 35 percent in the nation. Courier and messenger employment increased by over 5,100 jobs. However, employment growth

FIGURE 6
City Transportation and Warehousing Employment by Subsector, 2021



Sources: NYS Department of Labor, Quarterly Census of Employment and Wages; OSC analysis

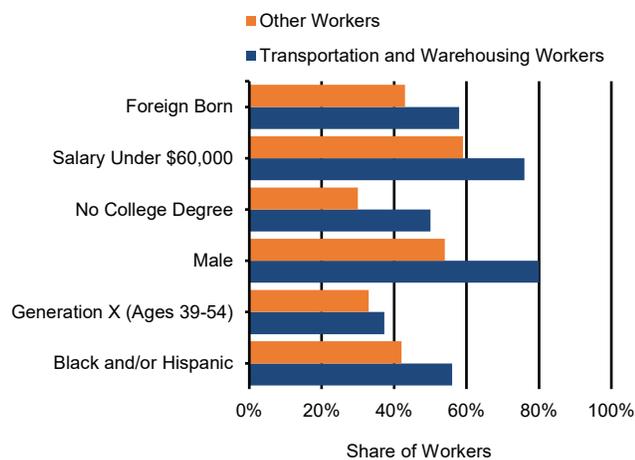
in these subsectors combined did not make up for employment loss in transit and ground passenger transportation.

Workforce Characteristics

According to the U.S. Census Bureau, 170,570 New York City residents worked in the transportation and warehousing sector in 2019.⁵ The majority of workers in the City’s transportation and warehousing sector earn less than \$60,000 (see Figure 7). More than one-half of sector workers are Black or African American and/or Hispanic or Latino male workers without a college degree. The sector also had the highest share of foreign-born workers (58 percent) out of all the major sectors in the City.

Among these workers, in the City, taxi drivers made up more than a quarter of employment (29 percent) in 2019 (compared to only 7 percent in the nation). New York City also had higher shares of bus drivers, flight attendants, and shuttle drivers and chauffeurs than the nation. Two of the groups where the City did not have larger shares than the nation are drivers/sales workers and truck drivers (11 percent compared to 27 percent) and laborers and freight, stock, and material movers (4 percent compared to 8 percent).

FIGURE 7
Select City Transportation and Warehousing Worker Characteristics, 2019



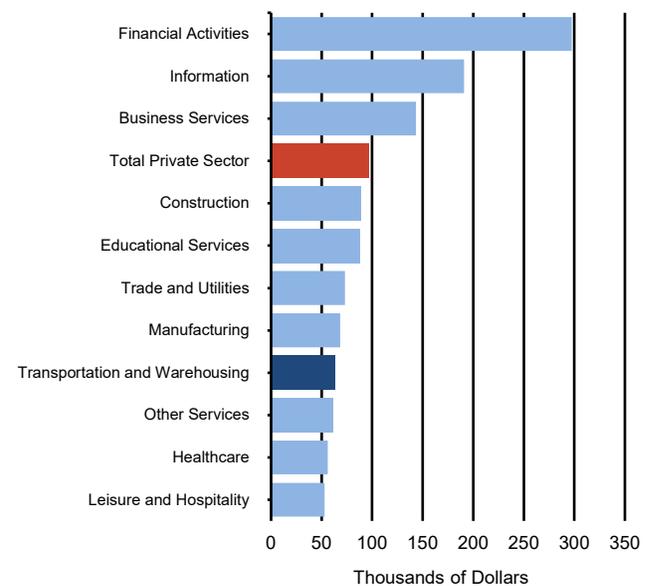
Sources: U.S. Census Bureau, American Community Survey; OSC analysis

In addition to these demographic and occupational characteristics, union membership is a prominent trait in the transportation and warehousing sector. In 2021, about 37 percent of transportation and warehousing workers were members of a labor union (compared to 21 percent of all public and private workers; both shares were similar to prior years).⁶ In April 2022, Amazon warehouse workers in the City made history when they voted to unionize in Staten Island. In the nation, 20 percent of transportation and warehousing sector workers were members of a union.

Average Salaries

The annual average salary in the transportation and warehousing sector in the City was \$63,900 in 2021, 5.3 percent higher than in 2020. In 2021, the sector had the fourth lowest average salary of all major sectors in the City. The average salary in the private sector overall is more than one-and-a-half times higher than in the transportation and warehousing sector (see Figure 8).

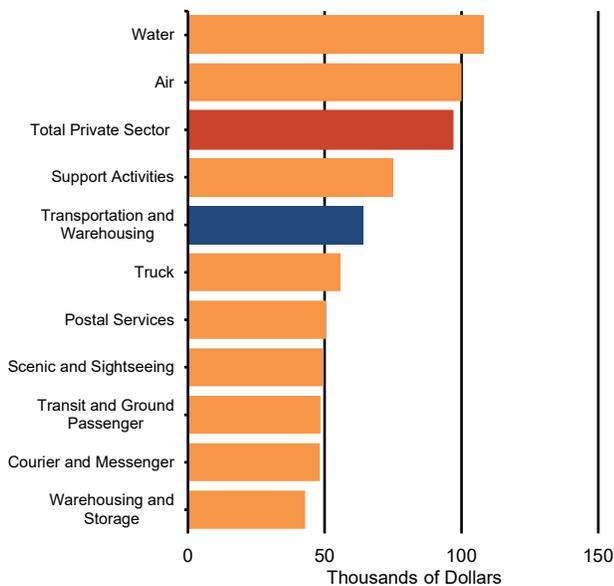
FIGURE 8
Annual Average Salaries by Sector in New York City, 2021



Note: Salaries for the total private sector exclude the high-paying securities subsector of the financial activities sector.
Sources: NYS Department of Labor, Quarterly Census of Employment and Wages; OSC analysis

While the transportation and warehousing sector as a whole ranks towards the bottom of all major sectors in salary, a few subsectors paid relatively high salaries in 2021. Among these subsectors, water transportation had the highest annual average salary at about \$108,120, beating the average salary for the total private sector (excluding the high-paying securities subsector of the financial activities sector; see Figure 9).

FIGURE 9
City Transportation and Warehousing Salaries by Subsector, 2021



Notes: Salaries reflect annual averages. Salaries for the total private sector exclude the high-paying securities subsector of the financial activities sector. Sources: NYS Department of Labor, Quarterly Census of Employment and Wages; OSC analysis

In 2021, the postal services subsector saw the largest drop in average salaries, declining 4.6 percent from 2019, while support activities (e.g., cargo handling, vehicle towing, etc.) saw the largest increase of 37.7 percent. The increase was because support activities employment declined by 26 percent from 2019 and total wages grew 2 percent for the same period causing average salaries to rise.

In 2021, the annual average salary in the transportation and warehousing sector was highest in Queens (\$73,474). All boroughs saw growth in average salaries, with Manhattan

growing the most at 12 percent from 2020 to 2021.

Firms

In 2021, there were an average of 4,914 transportation and warehousing firms in the City. Most firms (88 percent) employed fewer than 20 people and were responsible for more than one-tenth of the jobs in the sector (see Figure 10). Large firms (those with 500 or more employees) accounted for most of the jobs in the sector and were located primarily in Queens and Brooklyn.

FIGURE 10
Transportation and Warehousing Firms by Size in New York City, 2021

Size	Number of Firms	Share of Firms	Share of Employees
1 to 19	4,330	88%	12%
20 to 99	433	9%	15%
100 to 499	118	2%	22%
500 or more	34	<1%	51%
Total	4,914	100%	100%

Note: Totals may not add due to rounding.

Sources: NYS Department of Labor, Quarterly Census of Employment and Wages; OSC analysis

Over the course of the pandemic, transportation and warehousing firm trends changed. In 2020, the total number of firms increased by 1 percent compared to 2019. This growth was led by very small firms (those employing fewer than five employees), which grew 8.2 percent over that period. During this time, taxi and limousine services added the greatest number of very small firms (60), followed by general freight trucking (45).

The trend in overall firm growth in 2020 was seen across other sectors citywide, as businesses were forced to downsize and lay off employees during the pandemic, leading to many unemployed workers starting their own businesses.⁷ In fact, total business applications in the City increased by 12 percent in 2020, the largest year-over-year growth since 2010.⁸

In 2021, the total number of firms decreased by 3 percent compared to 2019. This decline was led by large firms, which declined 20 percent over that period. Additionally, the previous growth in very small firms was flat.

Pandemic Impact on Travel

Prior to the pandemic, demand for passenger transportation fueled employment in the two largest subsectors in the transportation and warehousing sector in New York City, air, and transit and ground passenger transportation, unlike in the nation. As of 2021, these subsectors remain large components of employment but have been slow to recover their pandemic job losses. As the most populous city in the United States, New York City relies heavily on robust transportation infrastructure for its residents, tourists and visiting business professionals alike. As noted earlier, the City's two airports represent major contributors to City visits, and, in combination with Newark International less than 20 miles from Midtown, make the area the busiest airspace in the country by flight arrivals.

The pandemic resulted in a severe curtailment in mobility, drastically reducing employment in subsectors that transport passengers. At its onset, the pandemic decimated flights worldwide, before they slowly started to rise once more. Enplanements, a count of boarded planes, dropped more than 73 percent in 2020 at JFK and La Guardia airports on a combined basis. (For additional detail on the initial impact of the pandemic on passenger transportation, see OSC's [report on the tourism industry](#).)⁹

In 2019, JFK served 62.6 million passengers, 34.3 million of which were international visitors. Both figures set records. In contrast, the airport served only 30.7 million passengers in 2021. Revenue passenger figures exceeded 4 million in March 2022, nearly 58 percent of which were domestic. International passengers made up more than half of all passengers in the years preceding the pandemic.¹⁰ Carriers with declines

in passengers generally reflect travel trends in Russia and East Asia.¹¹ The Governor recently announced a \$9.5 billion project to build a 2.4 million square foot state-of-the-art international terminal that would create more than 10,000 jobs.¹²

JetBlue Airways maintains headquarters in New York City and is the largest carrier by number of passengers at JFK. The airline recently announced a plan to hire 5,000 employees in the City.¹³ The announcement, made with the Mayor, includes a workforce development component expected to enhance the City's talent pipeline for aviation-related employment.

Transit and ground passenger transportation was also dramatically impacted by the pandemic. For-hire trips, including taxi rides, dropped by 84 percent in April 2020. According to the Taxi and Limousine Commission (TLC), only about a quarter of drivers were able to drive during this period, garnering only half the typical wages.

To leverage under-capacity among taxi drivers and to help alleviate food insecurity caused by the pandemic, the City initiated the GetFood NYC program. The program used TLC-licensed drivers to deliver food to homes in need and provided \$24 million in wages to drivers in the sector through June 30, 2020.¹⁴ The City also used a portion of federal relief aid to create a \$65 million medallion relief fund to support taxi drivers who had accumulated significant debt and were not able to pay off their taxi medallion.¹⁵ Recently, Uber reached an agreement to list New York City taxis as a ride-hail option.

The Emergence of E-commerce

To put the economic picture of the transportation and warehousing sector in context during the pandemic, it is important to look at the rise in non-store retail (including local delivery services) or e-commerce amid the decline of brick-and-mortar retail. Traditional retail had been facing challenges in the years prior to the pandemic,

with an expansion in online shopping due to a change in consumer preferences that forced some chain stores into bankruptcy.¹⁶

The growth in demand for e-commerce is supported by mobility data. According to the U.S. Department of Transportation, before the pandemic, an average of 25 percent of the New York State population stayed at home, the highest share in the nation.¹⁷ During the pandemic that average grew to 30 percent, which was the highest in the nation (with the high points in April, November, and December 2020 as spikes in COVID-19 cases further impacted mobility). As more people in the City stayed home amid the pandemic, consumption habits changed, as evidenced by retail taxable sales.

Data on retail taxable sales in the City are lagged, with the latest available sector-level data being through February 2022.¹⁸ Taxable sales in the local messenger and local delivery services component of the couriers and messengers subsector (e.g., grocery delivery, alcoholic beverage delivery, and restaurant meals delivery) more than doubled, growing 148.8 percent in the tax year period March 2021 to February 2022 compared to the same period beginning in 2019. (The tax year reported to the State for taxable sales starts in March of a given year.) These delivery services grew rapidly during the pandemic as people stayed home and ordered groceries, beverages, and food online; the preferred method of transportation was delivery over customer carry-out due to social distancing mandates. As a result, retail taxable sales in the City spiked for non-store retailers while store-based sales declined more than 40 percent at the onset of the pandemic (see Figure 11).

When the pandemic hit, many store categories in retail suffered, such as clothing stores and jewelry, luggage, and leather goods stores, which each experienced a decline of larger than 40 percent from March 1, 2020 to February 28, 2021, when compared to the previous year. The

FIGURE 11
Retail Taxable Sales in New York City,
Year-Over-Year Growth



Sources: New York State Department of Taxation and Finance; OSC analysis

one category that grew and increased in share was the non-store category of e-commerce. From March 1, 2020 through February 28, 2021, e-commerce taxable sales grew 55.2 percent compared to the same period the year before. One year later, e-commerce taxable sales were up 78 percent compared to the same period beginning in 2019. The category's total share of retail taxable sales grew to 21 percent in 2020-2021 from 12 percent in 2019-2020.

As the economy continues to improve amid the pandemic environment, it is likely that e-commerce will continue to contribute to a significant share of retail sales as some of the consumer spending shifts witnessed at the onset of the pandemic become permanent. According to the New York Federal Reserve Survey of Consumer Expectations, median household spending was at an all-time high in April 2022, growing 8 percent year over year, the strongest growth since the data began in 2014.

Global Supply Chain

The early days of the pandemic sent ripples throughout the global supply chain system, with many being disrupted or halted as the economy shut down. A number of factors have contributed to the emergence of the supply chain crisis during

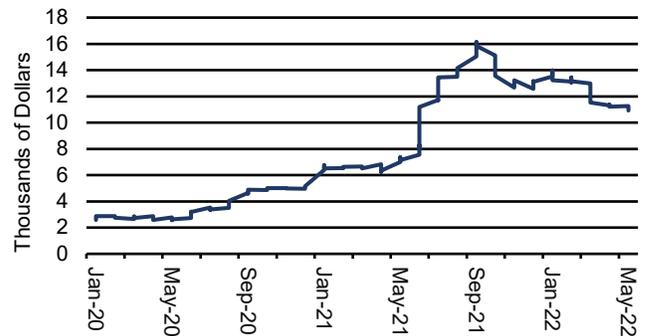
the pandemic, from raw material shortages to worker layoffs to inadequate infrastructure and port congestion. These factors have greatly influenced the trajectory for much of the transportation and warehousing sector.

During the early days of the pandemic, there was a widespread shift from consumption of services (e.g., restaurants, bars, hotels) to goods (e.g., essential items such as food and household products).¹⁹ As the nation started to recover a couple months into the pandemic, boosted by federal relief measures, the demand for goods skyrocketed, further fueling the demand for e-commerce. Additionally, a shortage of dock workers and truckers caused by COVID-19 infections and quarantines, and a higher-than-usual volume of cargo ships in limited space, created a problematic situation for ports, delaying the offloading of shipping containers.²⁰ All of these things stressed a supply chain system that had shown vulnerabilities even before the pandemic.²¹

The high demand also led to price increases across the supply chain system. Freight rates between Asia and North America rose significantly amid the pandemic. In the week ending January 2, 2020, prior to the pandemic, a 40-foot container cost around \$2,580 to ship from Shanghai, China, to New York City (see Figure 12). In the week ending May 19, 2022, the cost increased by 334 percent to \$10,930 per container, after having peaked at \$16,140 per container in September 2021.

Rates to ship freight to the City remain elevated and continue to affect businesses across the City and the State. According to the Empire State Manufacturing Survey (which measures the current and expected business conditions of manufacturers in New York State), businesses continued to experience supply chain issues in early 2022 but remained optimistic about future economic conditions (which covers the next six

FIGURE 12
Freight Rates from Shanghai to New York City,
January 2020 to May 2022



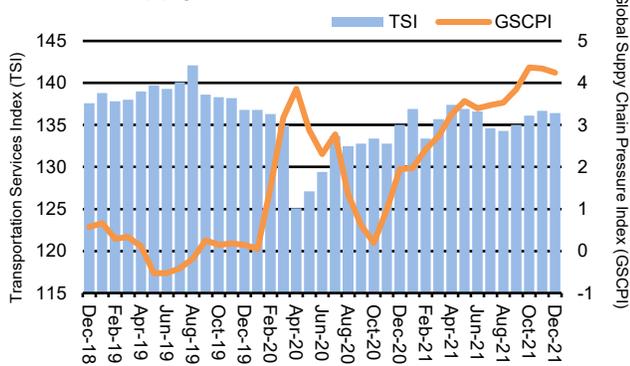
Note: Rates are for 40-foot containers.
Sources: The World Container Index Drewry Reports; OSC analysis

months) through March 2022. However, in May 2022, optimism about the six-month outlook waned as businesses cited longer delivery times and higher prices.²² Annual price increases, measured by the Consumer Price Index, are currently at their highest level in decades. In the New York metropolitan area, prices rose by 6.3 percent in May 2022 compared to one year ago.²³

Early estimates indicate that the supply chain crisis could last until 2023, although current geopolitical tensions as well as the Chinese government's response to managing the pandemic could lengthen this timeline. One way to gain a better understanding of the crisis is to compare supply chain disruptions with freight transportation utilization (see Figure 13).²⁴

In 2021, prices rose with supply chains still disrupted, causing raw material shortages and port congestion. While freight volume was up from its 2020 low in 2021, it remained below levels seen in the summer months of 2019. Freight volume should continue to climb along with consumer spending, barring further supply chain disruptions, and aid in the further recovery of the transportation and warehousing sector in New York City.

FIGURE 13
U.S. Transportation Services Index Versus
Global Supply Chain Pressure Index



Sources: NY Federal Reserve, Global Supply Chain Pressure Index; U.S. Department of Transportation, Freight Transportation Services Index

Freight Transportation

Amid the pandemic, freight transportation saw a boom in volume as consumption behavior further shifted to e-commerce. Freight transportation is used to move a variety of items from pharmaceuticals to raw materials. The urgency of need and the perishability of an item determine its mode of transportation. For example, pharmaceuticals are usually required for immediate use and may require refrigeration, so they are transported overnight, usually by air. Raw materials such as unrefined minerals are not usually a priority, and can travel by a slower mode of transportation, such as rail, without much consideration for their potential exposure to outside elements.

Transportation is critical for moving freight in and out of the New York City metropolitan region. Most of the freight comes in the form of packages (as opposed to machinery and motorized vehicles, for example). In fact, around 2.4 million packages are delivered in the City each day, a jump of 500,000 more packages than before the pandemic. Of the 2.4 million packages, around 80 percent are delivered to residential buildings, up from 40 percent pre-pandemic.²⁵

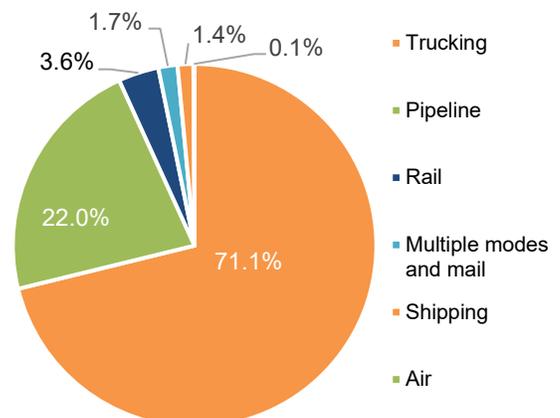
Before the pandemic in 2019, roughly 295 million tons of total freight passed through the City each

year.²⁶ Of that amount, 229 million tons (78 percent) traveled by these four common modes of transportation: truck, rail, water, and air. By 2020, the shares of trucking (the most popular mode) and pipeline rose while the shares of all other modes declined slightly (see Figure 14). By 2045, roughly 53 percent more freight is expected to move through the City’s transportation network.

Trucking Freight

Most of the trucking that passes through the City enters through one of several bridges that connect the City to the surrounding region, including New Jersey. Among those bridges, the George Washington Bridge sees the most truck traffic on a yearly basis. According to the American Transportation Research Institute, before the pandemic in 2019, and still in 2021, the number one traffic congestion area for trucks in the nation was Fort Lee, New Jersey, which is where the George Washington Bridge crossing is located.²⁷ From that bridge, trucks use several routes and interstate highways throughout the City and the outer region to transport goods. The top five industrial zone destinations for trucks in the City are: JFK Airport, Queens; Hunts Point,

FIGURE 14
Total Freight Volume Transported to
New York City by Transport Mode,
2020



Note: Excludes unknown modes of transportation.
 Sources: U.S. Department of Transportation, Freight Analysis Framework; OSC analysis

Bronx; North Brooklyn; Maspeth, Queens; and Southwest Brooklyn.²⁸

In 2019, the annual tonnage that was trucked through the City was around 202 million tons. By 2020, overall trucking freight volume rose to 213 million tons. Among the freight that passes through the City by truck, non-metal products (e.g., ceramics, cement and glass) and gravel made up the largest share, at 27 percent in 2020. Food made up over 11 percent of total commodities moved in the City by weight.²⁹

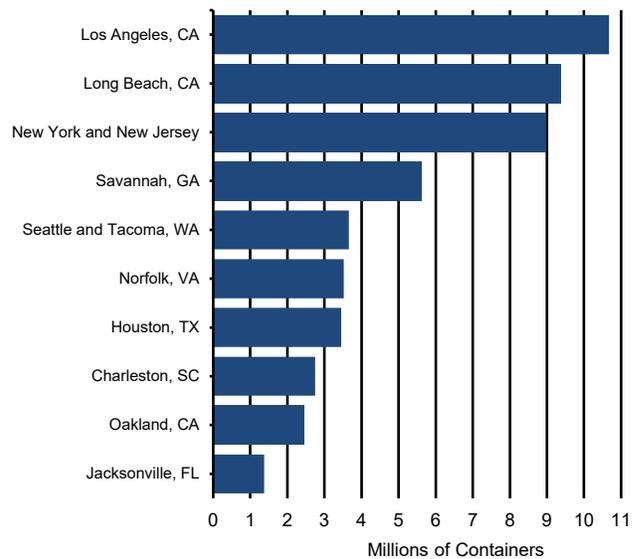
An average of around 19 billion pounds of food are distributed throughout the City annually.³⁰ The Hunts Point Food Distribution Center is the largest point-of-sale food market in the country and represents 13 percent of all food coming into the City (see OSC’s report on the [Hunts Point Food Distribution Center](#)).³¹ The Enacted Budget for State Fiscal Year (SFY) 2022-23 has included a \$550 million investment in the neighborhood, which includes the reconstruction of the Bruckner Sheridan Interchange, which connects the other boroughs to the Hunts Point Food Distribution Center.³² The City has also announced its own investment of \$140 million in the redevelopment and revitalization of the Hunts Point Food Distribution Center and surrounding area.³³

Shipping Freight

In 2019, shipping handled about 11.2 million tons of freight throughout the City. By 2020, this volume declined to 4.2 million tons. Goods from shipping arrive in the port of New York and New Jersey. According to the Port Authority of New York and New Jersey, the port of New York and New Jersey is the largest port on the East Coast and the third largest in the country behind Los Angeles and Long Beach, California, as measured by the number of large shipping containers (see Figure 15).³⁴

In 2020, in terms of total tonnage, the port of New York and New Jersey ranked fourth in the country behind Corpus Christi, Texas; South Louisiana;

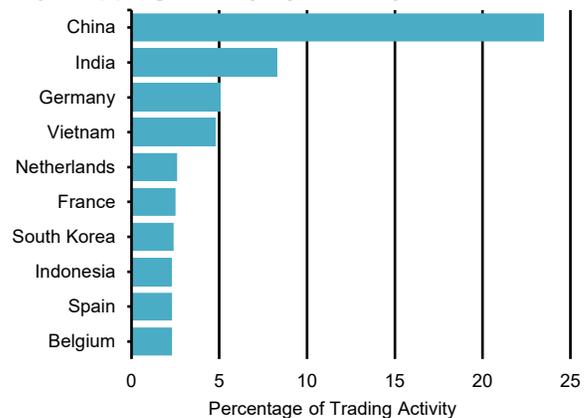
FIGURE 15
Top 10 U.S. Ports by Container Traffic, 2021



Note: Containers are defined as 20-foot equivalent units.
Sources: U.S. Department of Transportation; OSC analysis

and Houston, Texas. By volume, the largest share of shipping activity in the port is associated with China, followed by India (see Figure 16).

FIGURE 16
Share of Port Authority of New York and New Jersey Shipping Activity by Country, 2019



Note: Shipping activity refers to both import and export trading activity as measured by volume in thousands of metric tons.
Sources: Port Authority of New York and New Jersey; OSC analysis

Rail Freight

In 2019, rail handled roughly 16.2 million tons of freight throughout the City. Non-metal mineral products (e.g., ceramics, cement, and glass) and wood products made up a majority (64 percent) of

rail freight going through the City. By 2020, rail handled only 10.8 million tons of freight. Most of the rail freight that serves the City is processed through northern New Jersey terminals.

There have been proposals and studies over the years to expand and utilize rail freight more in the City.³⁵ In February 2022, State and federal officials announced the resumption of an environmental impact study to assess options for the Cross Harbor Rail Freight Tunnel. The intention was to leverage rail service to manage an increasing volume of freight into the City while reducing truck traffic.³⁶ In addition, the City recognizes the need for a sustainable freight network that reduces traffic congestion and alleviates air pollution. The City’s Delivering Green initiative includes goals to shift freight from trucking to rail.³⁷

Air Freight

Although freight transported by air makes up only 0.1 percent of total freight volume, it transports time-sensitive freight into the City and is the most costly means of transporting freight. All air freight that arrives in the City comes through the two airports located in Queens (La Guardia and JFK). JFK is the busiest cargo freight airport in the New York-New Jersey region and has the most storage to accommodate its freight arrivals. In 2019, the total freight that passed through both airports was 1.3 million tons. JFK was responsible for processing 99.5 percent of the total air freight to the City.

In 2021, JFK alone saw 1.5 million tons of freight, a 32.3 percent increase from 2020 and well above its pre-pandemic level of 1.3 million tons. Despite this increase, in 2021, JFK was ranked ninth in the nation in terms of freight moved among airports nationwide compared to sixth before the pandemic.³⁸

In 2021, Federal Express carried the most freight (92.3 thousand tons) among the top carriers flying into JFK.³⁹

Warehousing

While freight transportation is necessary to move goods, the question then becomes where to store all these goods once they arrive or while they are in transit to their destination. The need for storage is where warehousing and the commercial real estate market provide a critical service. According to Jones Lang LaSalle (JLL), the outer boroughs of the City offered over 107 million square feet of commercial space that was primarily used for warehousing and distribution in 2021. (For a further breakout, see Figure 17).⁴⁰

FIGURE 17
 NYC Outer Borough Warehouse and Distribution Real Estate Inventory, 2021

Borough	Square Feet (in millions)
Queens	45.5
Brooklyn	37.6
Bronx	18.7
Staten Island	5.3
Total	107.1

Note: Data does not include Manhattan.

Source: Jones Lang LaSalle, Industrial Market Insight: NYC Outer Boroughs Q4 2021

Market values of warehouse and storage facilities grew by 15.8 percent between FY 2022 and FY 2023, beating other major Class IV (commercial and industrial) property types (i.e., office, retail and hotel). The taxable value (the portion of the market value on which property tax is levied) of warehouse and storage facilities (including warehouses, condo warehouses, self-storage and condo non-business storage, all of which have served to store goods during the pandemic) grew by 8.5 percent in the final assessment roll for FY 2023 from FY 2021, bucking the citywide taxable value trend (1.5 percent).⁴¹ These property types are expected to contribute about \$554 million in property taxes in FY 2022.

JLL reports that growing demand for industrial space, including storage, has pushed asking rents up 15.6 percent year over year as of the fourth quarter of 2021. A low number of vacancies and a slow pace of new construction are contributing to constrained supply. Active

buyers are looking for 17 million square feet in total industrial space, but only 3.4 million square feet of storage space is currently under construction, leading developers to seek large amounts of land to develop additional space in the City.

Construction on an additional 8.7 million square feet of warehouses is about to begin or is underway, which includes a 1.2 million square foot UPS facility in Red Hook, Brooklyn.⁴² According to the ACRIS transaction sales data provided by the New York City Department of Finance, real estate sales of warehouses and industrial storage space grew 115 percent to \$4.1 billion when comparing 2019 and 2021, whereas overall commercial properties declined 19 percent.

Several large corporations have built or leased warehouses in the City to accommodate the growing demand in e-commerce and shipping of goods and services. According to the New York Times, Amazon has at least 12 warehouses in the City, the most by far among its competitors.⁴³ Many packages arrive in New York City through New Jersey, which has seen an uptick of warehouse purchases and development as well.

Outlook

While transportation and warehousing sector jobs grew robustly over the last decade, the pandemic has presented new opportunities for the sector to thrive as well as new challenges to manage. With the strong demand for e-commerce, the freight coming into the City and the nation is only expected to grow further, fueling continued growth in certain components of the transportation and warehousing sector. In the nation, the sector's pandemic job losses were regained in 2020 itself, and in the City, they have almost returned (whereas total private sector employment is still down about 30 percent). The loss of visitors impacted significant components of the City's transportation and warehousing sector, but the sector should continue to see

growth as the recovery in travel and commuter activity continues.

Courier and messenger, and warehousing and storage, have led employment growth and now well exceed pre-pandemic employment levels. However, the recovery within the sector has not been broad-based, as air, and transit and ground passenger, transportation employment have lagged. The full return of tourists and commuters to the City, which may remain depressed over the next two years, is critical for the revival of these passenger transportation jobs in particular.

New York State and New York City have put in place programs to boost tourism and tourism-dependent businesses, which should help boost the transportation and warehousing sector's fortunes in 2022 and 2023. E-commerce has continued to absorb a large market share, a trend that is likely to continue to impact the sector's employment and demand for real estate space in the future.

Subsectors, including trucking and warehousing, still face challenges in recruiting, which may result in higher wages as well as efforts to automate components of the sector. There may be a chance to leverage the existing skills of knowledgeable individuals within the space and provide new opportunities in high-demand subsectors. A number of firms have increased training programs and the City has made efforts to provide transferable skills to workers covering a broad variety of occupations.

As goods continue to be moved throughout the City at a volume not seen before, and visitor figures return to levels reached before the pandemic, the City and State seem to have recognized the need for a sustainable freight and passenger network that improves the quality of life across its boroughs. With the help of State and federal partners, the City must strive to realize these goals and move the transportation and warehousing sector forward.

ENDNOTES

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