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## Transit Equity: Trends in Commuting among the Employed Population in New York City, 1990-2019

Beiyi Hu

*Center for Latin American, Caribbean, and Latino Studies*

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# CLACLS

Center for Latin American, Caribbean, and Latino Studies

## Transit Equity: Trends in Commuting among the Employed Population in New York City, 1990-2019

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LATINO DATA PROJECT

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The Center for Latin American, Caribbean and Latino Studies is a research institute that works for the advancement of the study of Latin America, the Caribbean, and Latinos in the United States in the doctoral programs at the CUNY Graduate Center. One of its major priorities is to provide funding and research opportunities to Latino students at the Ph.D. level.

The Center established and helps administer an interdisciplinary specialization in Latin American, Caribbean and Latino Studies in the Masters of Arts in Liberal Studies program.

The Latino Data Project was developed with the goal of making information available on the dynamically growing Latino population of the United States and especially New York City through the analysis of extant data available from a variety of sources such as the U.S. Census Bureau, the National Institute for Health, the Bureau of Labor Statistics, and state and local-level data sources.

All Latino Data Project reports are available at <http://clacls.gc.cuny.edu>

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## Executive Summary

This report examines key trends in commuting among the employed population in New York City between 1990 and 2019.<sup>1</sup> The report describes changing patterns in travel time to work and means of transportation and how these patterns vary by race/ethnicity, sex, poverty status, and educational attainment. The geographic level of the study is confined to the five boroughs of New York City: the Bronx, Brooklyn, Manhattan, Queens, and Staten Island.

Between 1990 and 2019, most of the employed population of New York City (around 75%) spent between 10 and 60 minutes commuting to work. During this period, workers in New York City also experienced a general increase in travel time to work: the proportion of workers who reported travel times of less than 10 minutes dropped from 16.4% in 1990 to 14.6% in 2019, while the proportion of workers who reported travel times of 60 minutes or more increased from 7.8% in 1990 to 10.9% in 2019.

Non-Hispanic blacks had the highest proportion of people taking 60 minutes or more and the lowest share of the population taking less than 10 minutes in their commutes compared to other race and ethnic groups.

Women had a slightly higher proportion of people who spent less than 10 minutes commuting than men between 1990 and 2019, though this difference became marginal by the end of the study period. Similarly, there was a higher proportion of people in poverty spending less than 10 minutes commuting than people not in poverty.

When looking at the average travel time to work, in 1990, non-Hispanic whites had the shortest average travel time at 32 minutes, followed by Asians (36 minutes) and Latinos (35 minutes), while non-Hispanic blacks had the longest average travel time at 40 minutes. The pattern persisted in 2019, though the disparities in average commuting time between non-Hispanic whites and non-Hispanic blacks increased from 8 minutes in 1990 to 12 minutes in 2019.

The average travel time to work also varied by educational attainment. Between 1990 and 2019, workers in New York City with a bachelor's degree or higher had the shortest average travel time (around 32 to 37 minutes) compared to workers with other educational levels.

Public transit was the most popular means of transportation among the New York City working population. From 1990 to 2019, almost half of the New York City working population relied on public transit to work, and the share gradually increased from 51.8% in 1990 to 55.6% in 2019. The second most popular means of

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<sup>1</sup> This study uses the American Community Survey PUMS (Public Use Microdata Series) for all years released by the Census Bureau and reorganized for public use by IPUMS USA, University of Minnesota, [www.ipums.org](http://www.ipums.org). See Steven Ruggles, Sarah Flood, Sophia Foster, Ronald Goeken, Jose Pacas, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 11.0 [dataset]. Minneapolis, MN: IPUMS, 2021. <https://doi.org/10.18128/D010.V11.0>. The term “Employed” refers to persons age 16+ who were employed during the reference period.

transportation was by a private vehicle (including auto, truck, van, Taxicab, and motorcycle), but the proportion of people using them dropped from 34.3% in 1990 to 27.5% in 2019. Around 11% of New York City’s working population chose to bike or walk to work, and the proportion remained relatively stable from 1990 (10.9%) to 2019 (11.6%). Working at home gradually gained popularity, with its share of the population rising from 2.5% in 1990 to 4.7% in 2019.<sup>2</sup>

During this period, non-Hispanic whites experienced the sharpest decrease in the proportion of people using a vehicle to commute (an 11.8 percentage point drop), followed by Latinos (a 4.3 percentage point drop). Non-Hispanic blacks and Latinos had higher proportions of people than Asians and non-Hispanic whites commuting by public transit, though non-Hispanic whites had the sharpest percentage- point increase of 5.5% from 1990 to 2019. Among the four major race/ethnic groups, non-Hispanic whites had the highest percentage of people working from home (going from 4% to 7%) and biking or walking to work (around 14%); non-Hispanic blacks had the lowest percentage of people working from home (increasing from 1% to 3%) and biking or walking to work (around 4%).

Poverty status had a significant impact on one’s vehicle usage in commuting. Workers in poverty had a lower proportion of people using a vehicle to get to work than those not in poverty. Meanwhile, they had a higher share of the population biking or walking to work or work at home than people not in poverty.

Similarly, female workers had a higher proportion of people commuting by public transit and a lower proportion of people using a vehicle than the male working population. From 1990 to 2010, female workers also had a slightly higher percentage of people biking or walking to work than male workers; by 2019, this difference became marginal.

Lastly, using a vehicle to work was more common among workers with a medium-to-high level of education (high school graduates, people with some college, and people with an Associate degree) than among those who did not graduate high school or people with a bachelor’s degree or higher. By contrast, people who did not graduate high school or those with a bachelor’s degree or higher had a higher share of people commuting by biking/walking and public transit. While people from all educational levels saw an increase in the share of people working at home between 1990 and 2019, people with the highest levels of education (BA or higher) had the highest share compared to people from other educational levels (4.3% in 1990, 4.4% in 2000 and 2010, and 6.1% in 2019).

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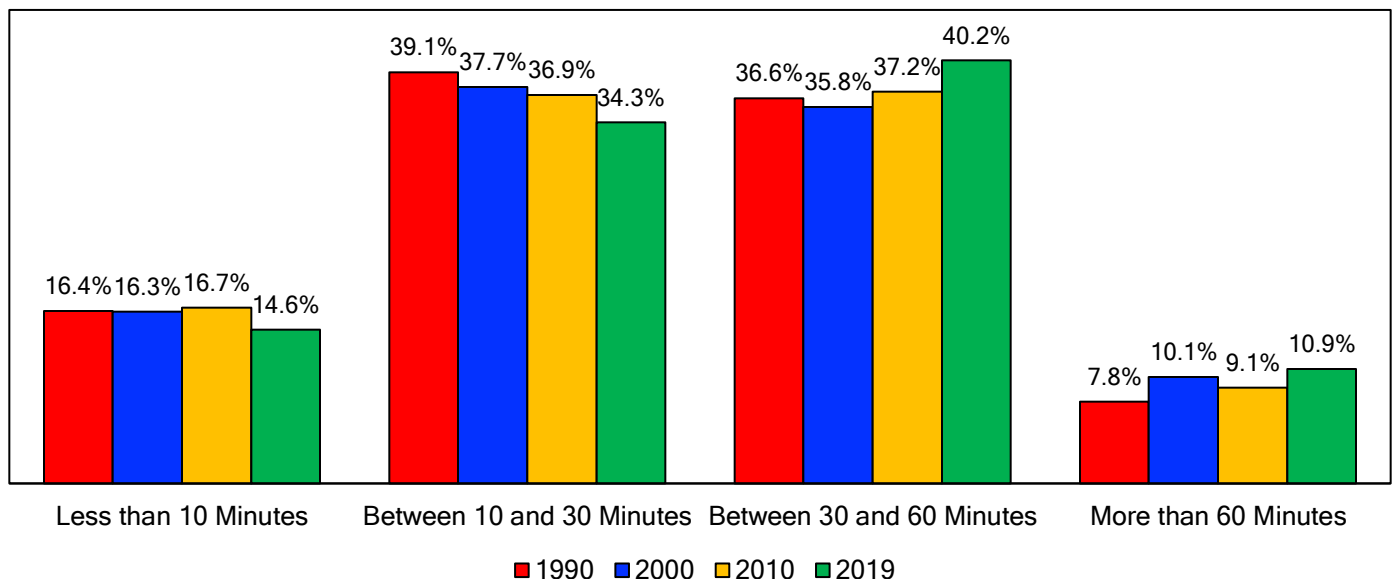
<sup>2</sup> At the time of writing this report, the data for 2020 was not released yet, which would impact these numbers after the COVID-19 pandemic.

## Travel Time to Work

Between 1990 and 2019, almost three-quarters of the employed population of New York City spent between 10 and 60 minutes commuting to work (going from about 76% to 74% during that period).<sup>3</sup> (See figure 1). During these three decades, workers in New York City also experienced a general increase in travel time to work. In 1990, 16.4% of the employed population of New York City reported travel times of less than 10 minutes; this group dropped to 14.6% in 2019. In contrast, the proportion of workers who reported travel times of 60 minutes or more increased from 7.8% in 1990 to 10.9% in 2019.

Longer commute times were also found among those who reported between 10 and 60 minutes of travel time. While in 1990, 39.1% of workers spent between 10 and 30 minutes commuting, the share declined to 34.3% in 2019. Conversely, the share of workers who spent between 30 and 60 minutes commuting rose from 36.6% in 1990 to 40.2% in 2019.

Figure 1  
Percentage of the Employed Population by Travel Time to Work. New York City, 1990-2019



## Travel Time to Work by Race/Ethnicity

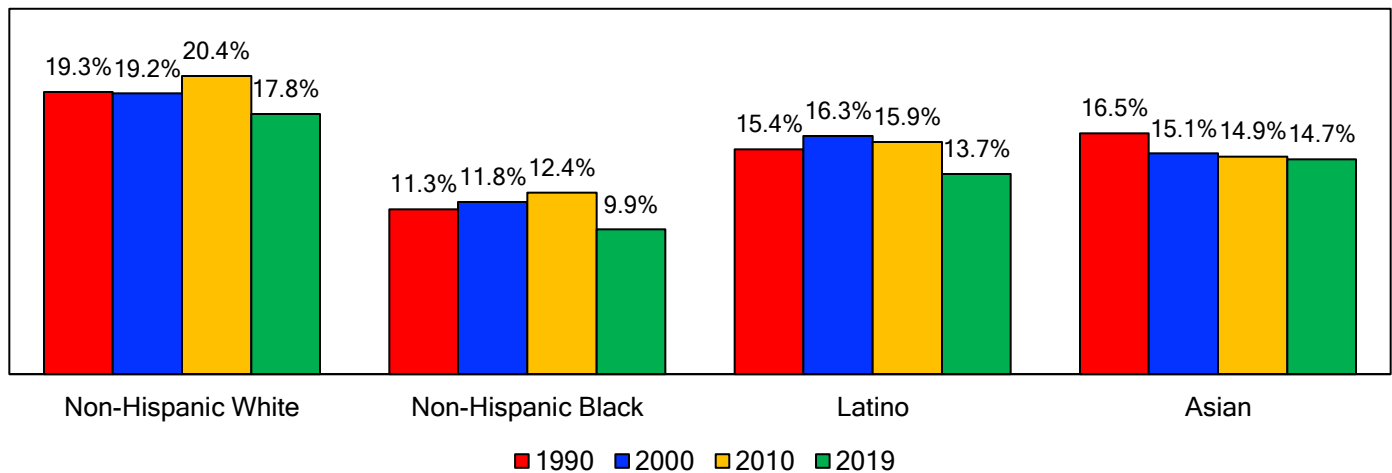
Travel times were similarly distributed among the four major race/ethnic groups. To begin with, the proportion of workers who spent less than 10 minutes commuting decreased among all four major race/ethnic groups between 1990 and 2019, with non-Hispanic whites dropping from 19.3% to 17.8%, non-Hispanic blacks from

<sup>3</sup> Because numbers were very similar in the two middle categories (between 10 and 30 minutes and between 30 and 60 minutes), this report combines them in the analysis.



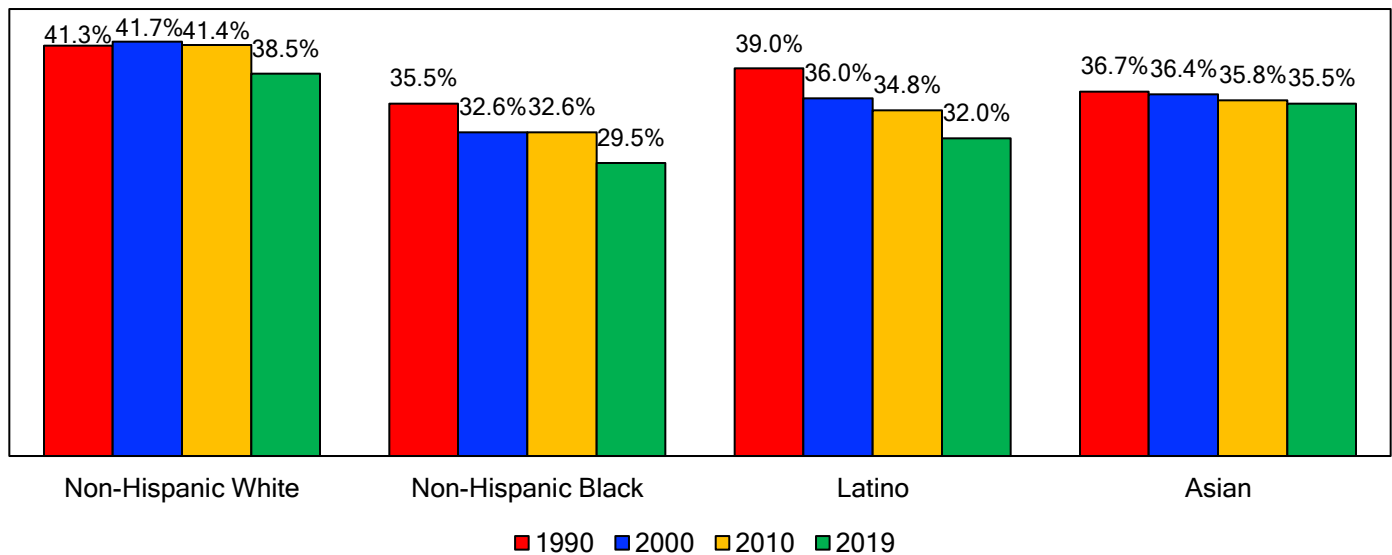
11.3% to 9.9%, Latinos from 15.4% to 13.7%, and Asians from 16.5% to 14.7%. (See figure 2). It should be noted that non-Hispanic blacks had the lowest share of people in this category throughout the study period.

Figure 2  
Percentage of the Employed Population Taking Less than 10 Minutes to Work  
by Race/Ethnicity. New York City, 1990-2019



The proportion of workers who spent between 10 and 30 minutes commuting declined among all four major race/ethnic groups between 1990 and 2019, with Latinos experiencing the sharpest drop, from 39.0% in 1990 to 32.0% in 2019—a 7 percentage point decrease. (See figure 3). Non-Hispanic blacks experienced the second sharpest drop, from 35.5% in 1990 to 29.5% in 2019—a 6 percentage point decrease. Non-Hispanic whites and Asians only experienced a minor dip in the proportion of workers who spent between 10 and 30 minutes commuting—a 2.8 percentage point decrease among non-Hispanic whites (from 41.3% to 38.5%) and a 1.2 percentage point decrease among Asians (from 36.7% to 35.5%).

Figure 3  
Percentage of Employed Population Taking between 10 and 30 Minutes to Work  
by Race/Ethnicity. New York City, 1990-2019



Though the proportion of workers taking between 30 and 60 minutes to work decreased slightly among the four major race/ethnic groups in 2000, their shares increased again between 2000 and 2019. (See figure 4). Latinos experienced the largest percentage-point increase of 5.4, from 38.5% in 2000 to 43.9% in 2019. Non-Hispanic Blacks experienced the second-largest percentage-point increase of 4.1—from 40.4% in 2000 to 44.5% in 2019—, followed by non-Hispanic whites, with the share of workers in this time frame increasing from 31.4% to 35.3% during the same period. Asians almost remained unchanged between 2000 and 2019. Compared with 1990 (39.2%), Asians even experienced a slight decline in the share of workers taking between 30 and 60 minutes to work in 2019 (38.6%).

Finally, among the four major race/ethnic groups, there was an overall increase in the proportion of workers taking more than 60 minutes to work between 1990 and 2019. (See figure 5). Non-Hispanic blacks had the highest share of workers who reported travel times of 60 minutes or more among all four major race/ethnic groups; the group also had the sharpest percentage-point increase of 5.6%, from 10.6% in 1990 to 16.2% in 2019. Latinos had the second-highest percentage-point increase of 3.7% (from 6.6% in 1990 to 10.3% in 2019), followed by Asians, whose workers experienced a 3.6 percentage point increase (from 7.6% in 1990 to 11.2% in 2019). Non-Hispanic whites only saw a modest increase of 1.3 percentage points (from 7.0% in 1990 to 8.3% in 2019).

Figures 2 through 5 indicate that while workers in New York City, in general, experienced an increase in travel time to work between 1990 and 2019, non-Hispanic blacks had the highest proportion of people taking 60 minutes or more commuting and the lowest share of the population taking less than 10 minutes commuting compared to other race/ethnic groups.

Figure 4  
Percentage of Employed Population Taking between 30 and 60 Minutes to Work by Race/Ethnicity. New York City, 1990-2019

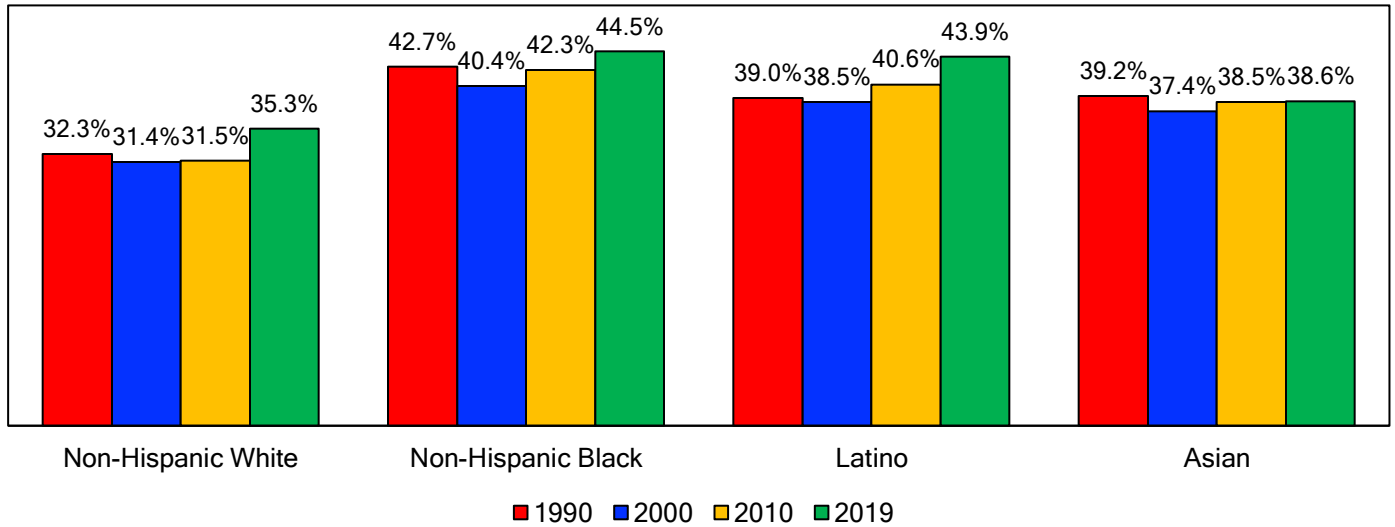
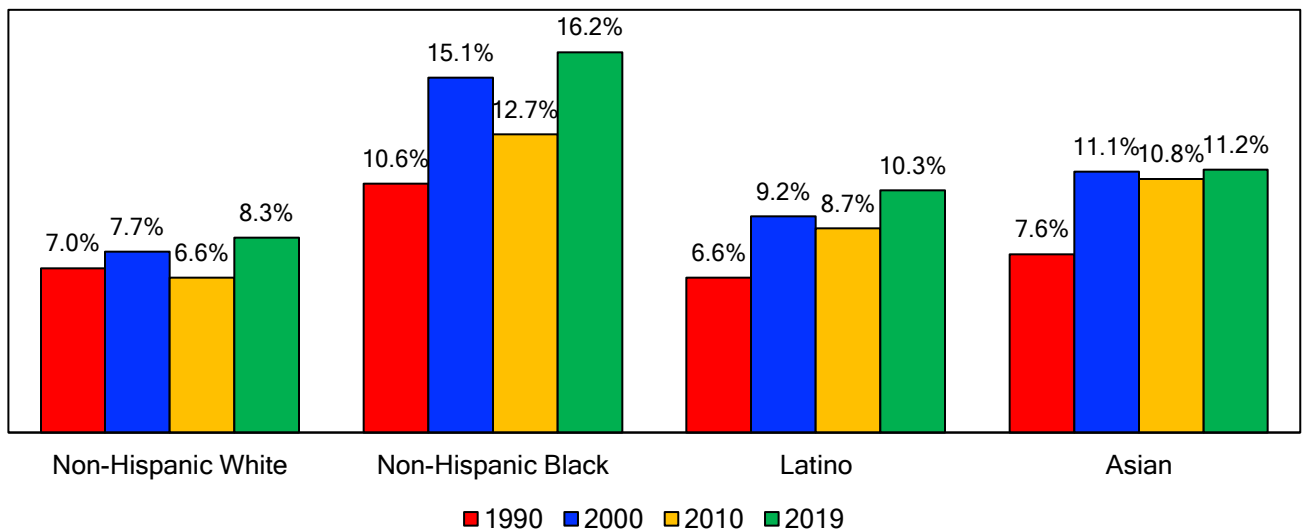


Figure 5  
Percentage of Employed Population Taking More than 60 Minutes to Work by Race/Ethnicity. New York City, 1990-2019

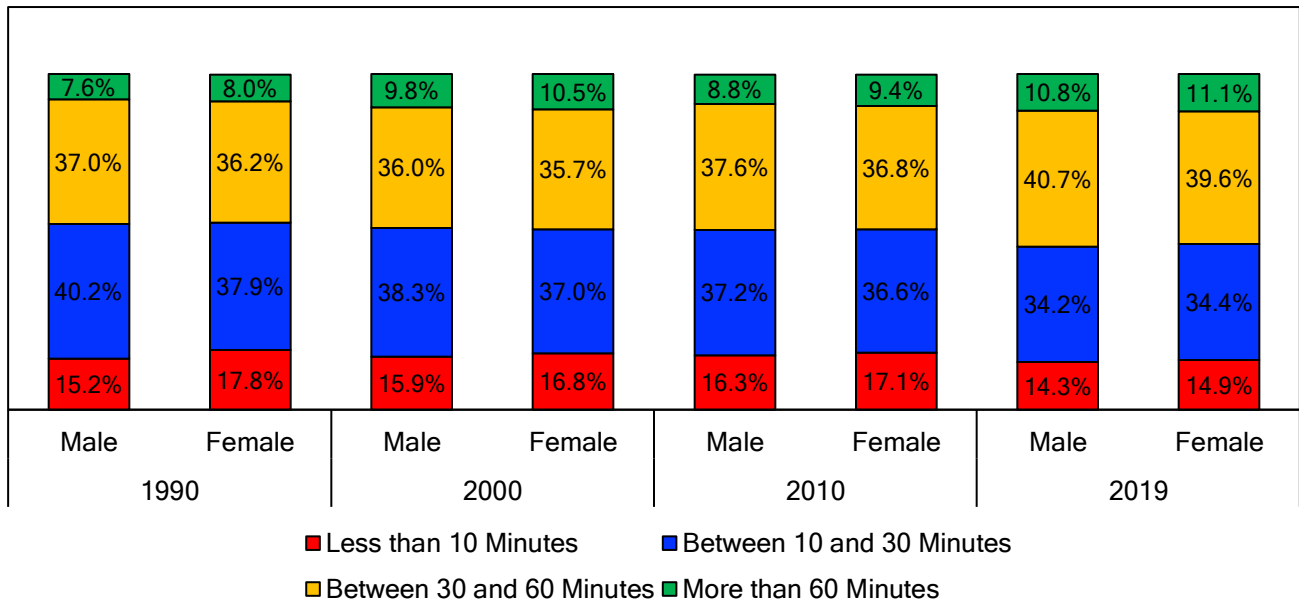


### Travel Time to Work by Sex

When breaking down travel time to work by sex, women and men had similar percentages in each commuting bracket between 1990 and 2019. (See figure 6). Both men and women experienced a drop in the proportion of workers who spent between 10 and 30 minutes commuting, following the general trend. Among men, the share dropped from 40.2% in 1990 to 34.2% in 2019, a 6-percentage point decrease. The share dropped from 37.9% to 34.4%, a 3.5-percentage point decrease, among women during the same period. The share of workers who spent between 30 and 60 minutes commuting increased from 37.0% to 40.7% among men and 36.2% to 39.6% among women during this period. Similarly, the proportion of workers who spent 60 minutes or more commuting increased from 7.6% to 10.8% among men and 8.0% to 11.1% among women.

Women had a slightly higher proportion of people than men who spent less than 10 minutes commuting. In 1990, 17.8% of women and 15.2% of men reported less than 10 minutes of travel time. In 2019, the share was 14.3% among men and 14.9% among women—a marginal difference.

Figure 6  
Percentage of Employed Population by Travel Time to Work and Sex.  
New York City, 1990-2019

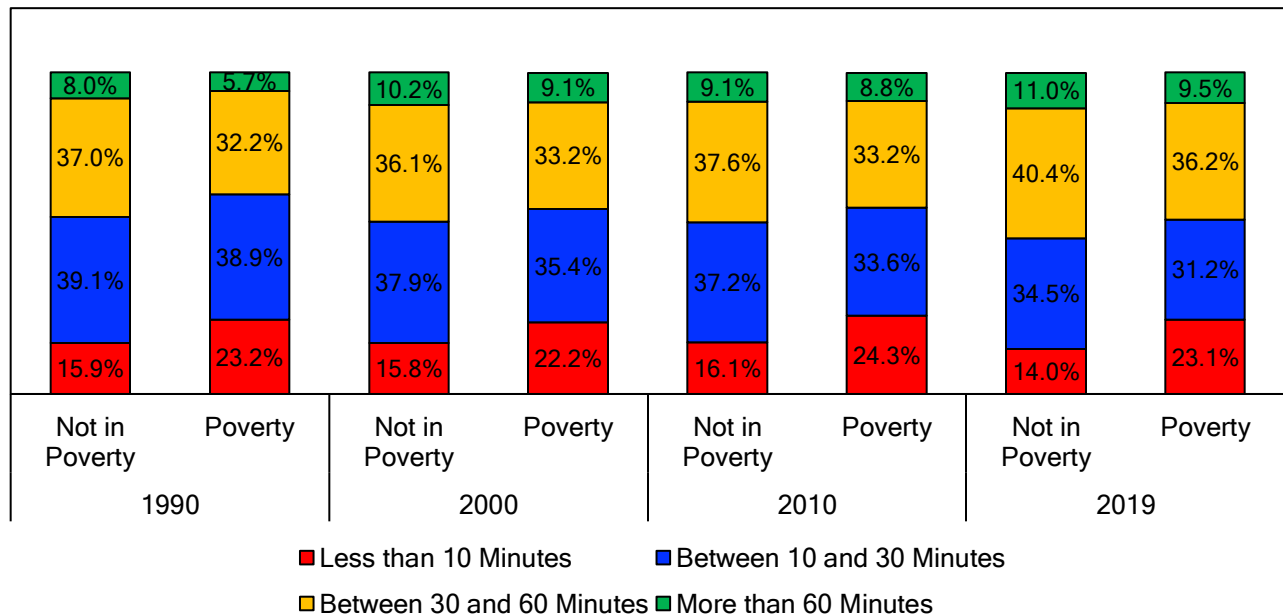


**Travel Time to Work by Poverty Status**

The proportion of New York City workers who reported travel times of less than 10 minutes was higher among people in poverty than people not in poverty in 1990, 2000, 2010, and 2019. (See figure 7). In 1990, while 15.9% of workers not in poverty spent less than 10 minutes commuting, the share among workers in poverty was 23.2%—a 7.3 percentage point difference. In 2019, the proportion was 14.0% among workers not in poverty and 23.1% among workers in poverty—a 9.1 percentage point difference.

Conversely, the percentage of workers who reported travel times of between 10 and 30 minutes, 30 and 60 minutes, and 60 minutes or more was lower among people in poverty than people not in poverty between 1990 and 2019. Figure 7 suggests that people in poverty may have a higher share of people choosing job opportunities close to home than people not in poverty.

**Figure 7**  
**Percentage of Employed Population by Travel Time to Work and Poverty Status. New York City, 1990-2019**

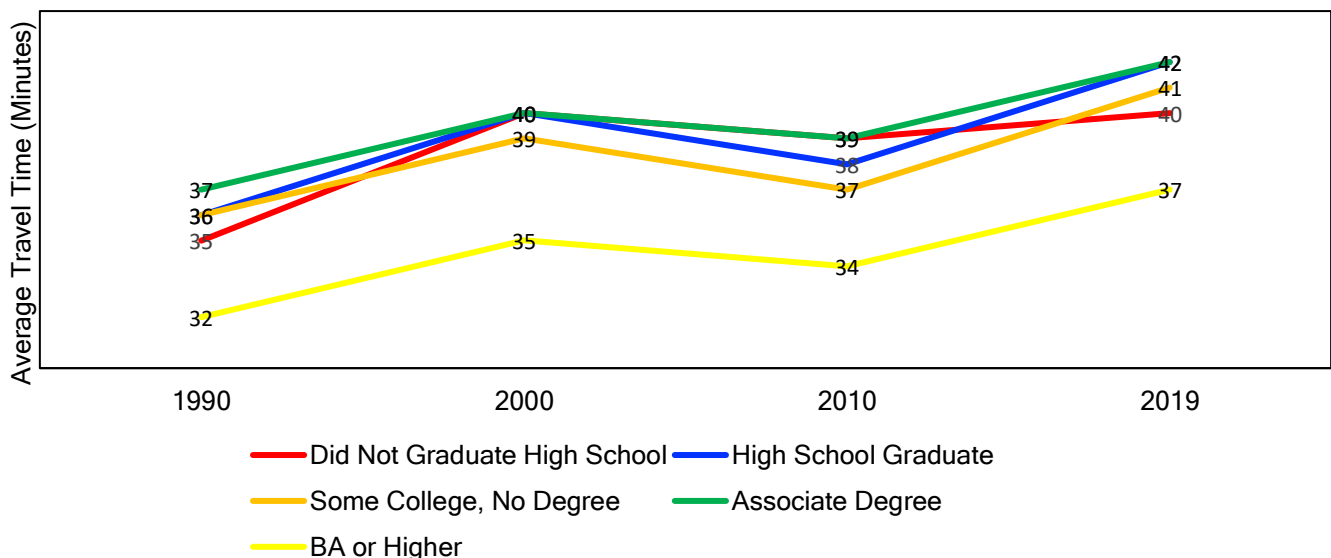


### Average Travel Time to Work by Educational Attainment

The average travel time to work varied significantly by educational attainment.<sup>4</sup> (See figure 8). In 1990, workers in New York City with a bachelor’s degree or higher had the shortest average travel time (32 minutes) compared to workers with other educational levels. In comparison, the average travel time among workers with an Associate Degree was 37 minutes, 36 minutes among workers with some college (no degree) or high school graduates, and 35 minutes among workers who did not graduate from high school.

By 2019, while the average travel time was still the shortest among workers with a bachelor’s degree or higher, this group’s average travel time increased to 37 minutes—a five-minute increase between 1990 and 2019. During the same period, the average travel time among workers with an Associate Degree and high school graduates increased to 42 minutes, 41 minutes among workers with some college (no degree), and 40 minutes among workers who did not graduate from high school.

Figure 8  
Average Travel Time to Work among Employed Population by Educational Attainment. New York City, 1990-2019



<sup>4</sup> The data on educational attainment are for the population 25 years of age and older.

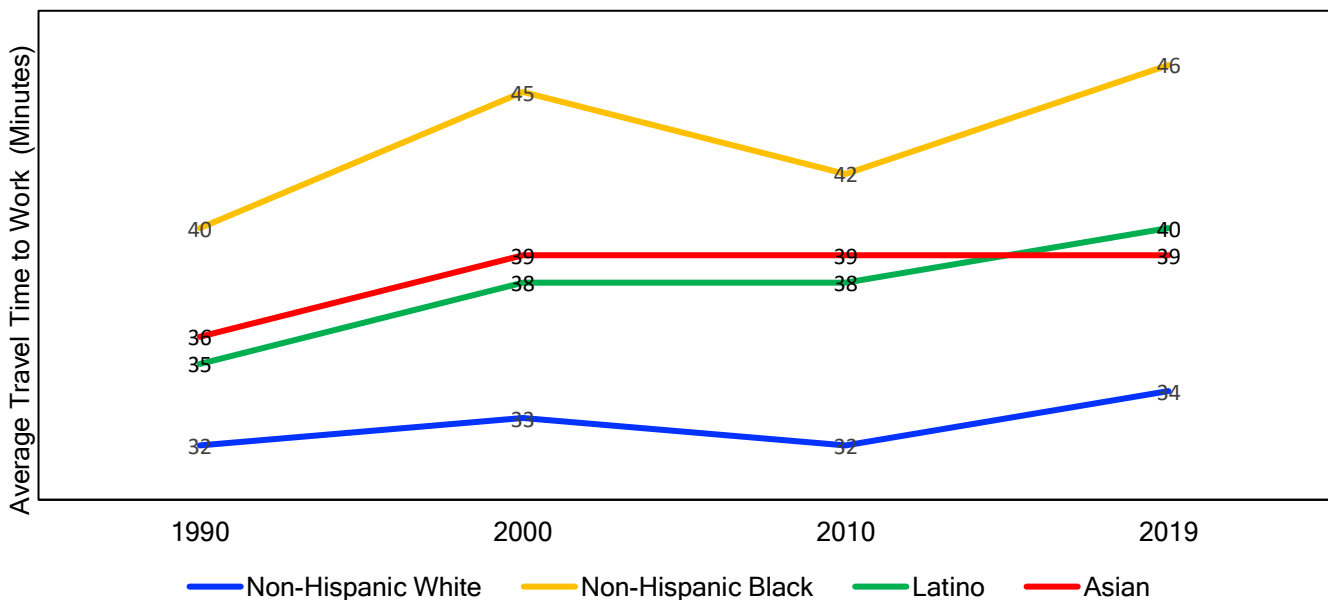
### Average Travel Time to Work by Race/Ethnicity

The average travel time broken down by race/ethnicity illustrates noticeable differences across the four groups in New York City. (See figure 9). In 1990, non-Hispanic whites had the shortest average travel time at 32 minutes, followed by Asians (36 minutes) and Latinos (35 minutes), while non-Hispanic blacks had the longest average travel time at 40 minutes.

In 2019, non-Hispanic blacks still had the longest average travel time at 46 minutes, followed by Latinos (40 minutes) and Asians (39 minutes), while non-Hispanic whites remained to have the shortest average travel time at 34 minutes.

It is worth noting that while the increase in average travel time was 6 minutes among non-Hispanic blacks and 5 minutes among Latinos between 1990 and 2019, the increase was much smaller among Asians (3 minutes) and non-Hispanic whites (2 minutes). As a result, the disparities in average commuting time between non-Hispanic whites and non-Hispanic blacks increased from 8 minutes in 1990 to 12 minutes in 2019.

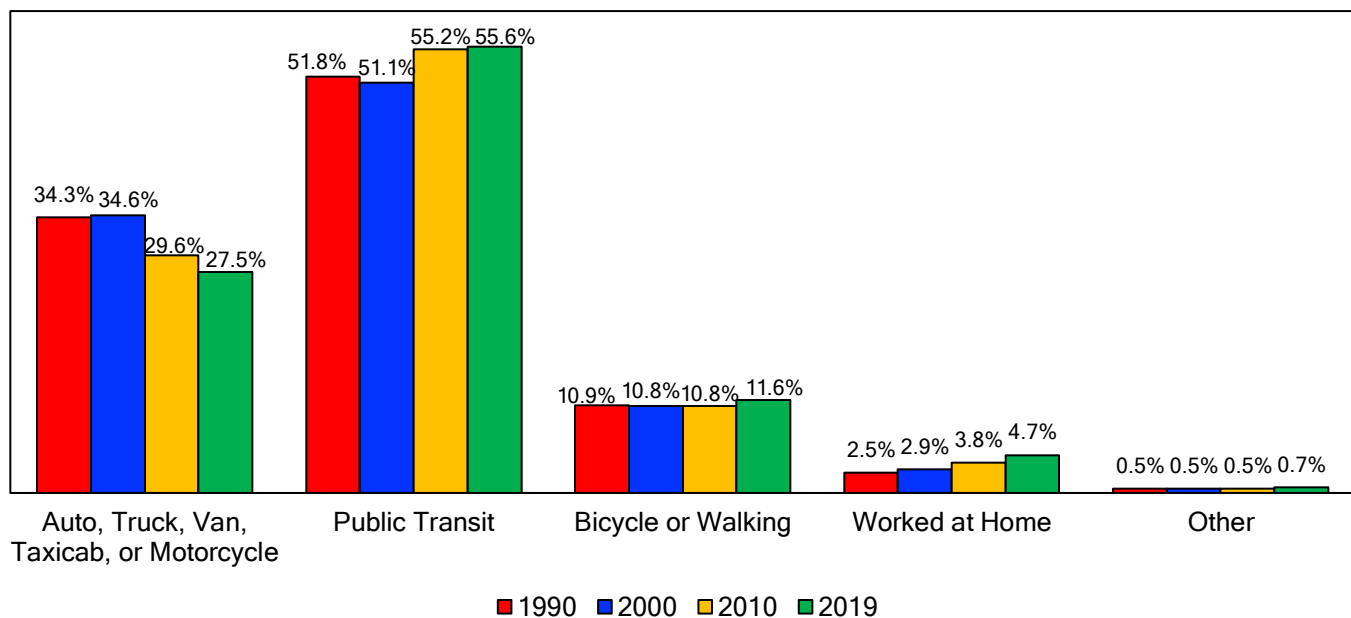
Figure 9  
Average Travel Time to Work among Employed Population by  
Race/Ethnicity. New York City, 1990-2019



## Means of Transportation

Public transit was the most common means of transportation among the New York City working population.<sup>5</sup> (See figure 10). From 1990 to 2019, about half of the New York City working population relied on public transit to work, and the share gradually increased from 51.8% to 55.6%. The second most common means of transportation was a small vehicle (including auto, truck, van, Taxicab, and motorcycle), but its usage dropped from 34.3% in 1990 to 27.5% in 2019. Around one in ten people of the New York City working population chose to bike or walk to work, and the proportion remained relatively stable between 1990 (10.9%) and 2019 (11.6%). Working at home gradually gained popularity, rising from 2.5% in 1990 to 4.7% in 2019. Finally, around 0.5% of the New York City working population chose other means of transportation to go to work, and the proportion remained relatively stable between 1990 (0.5%) and 2019 (0.7%).

Figure 10  
Percentage of Employed Population by Means of Transportation.  
New York City, 1990-2019



## Means of Transportation by Race/Ethnicity

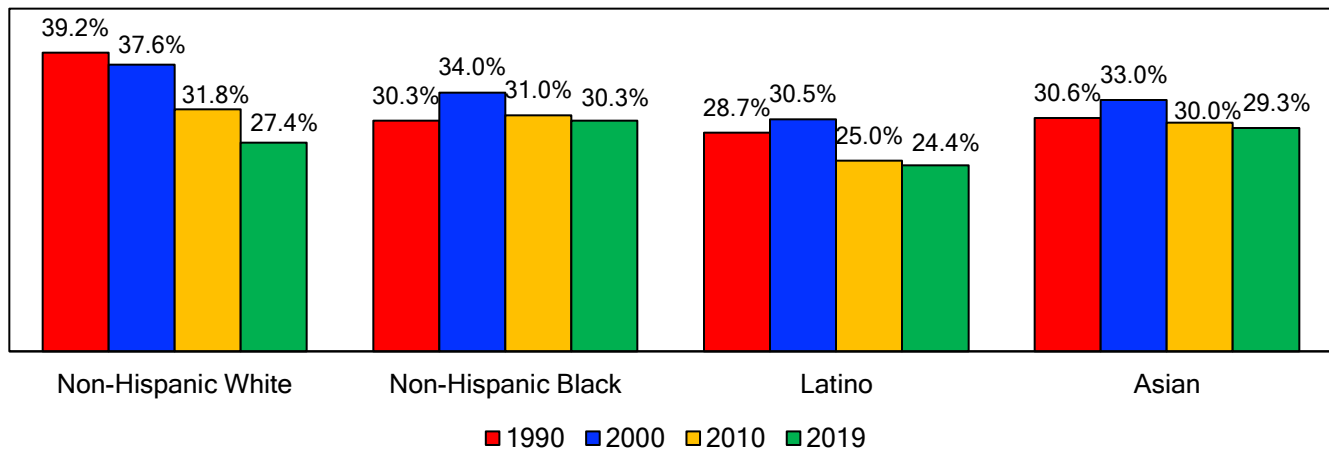
When breaking down the means of transportation by race/ethnicity, some nuanced differences emerged. Among the New York City working population who used a vehicle to work, non-Hispanic whites experienced the sharpest decrease, from 39.2% in 1990 to 27.4% in 2019—an 11.8 percentage point drop. (See figure 11). The second sharpest decrease was found among Latinos, dropping from 28.7% to 24.4% over this period—a reduction of 4.3 percentage points. Asians had a 1.3-percentage point drop from 1990 to 2019. Finally, non-

<sup>5</sup> Public transit includes bus, subway, light rail, streetcar, trolley, long-distance train or commuter train, and ferryboat.



Hispanic blacks remained relatively stable, with the share of people using a vehicle staying at around 30.3% between 1990 and 2019 (though its proportion momentarily rose to 34% in 2000).

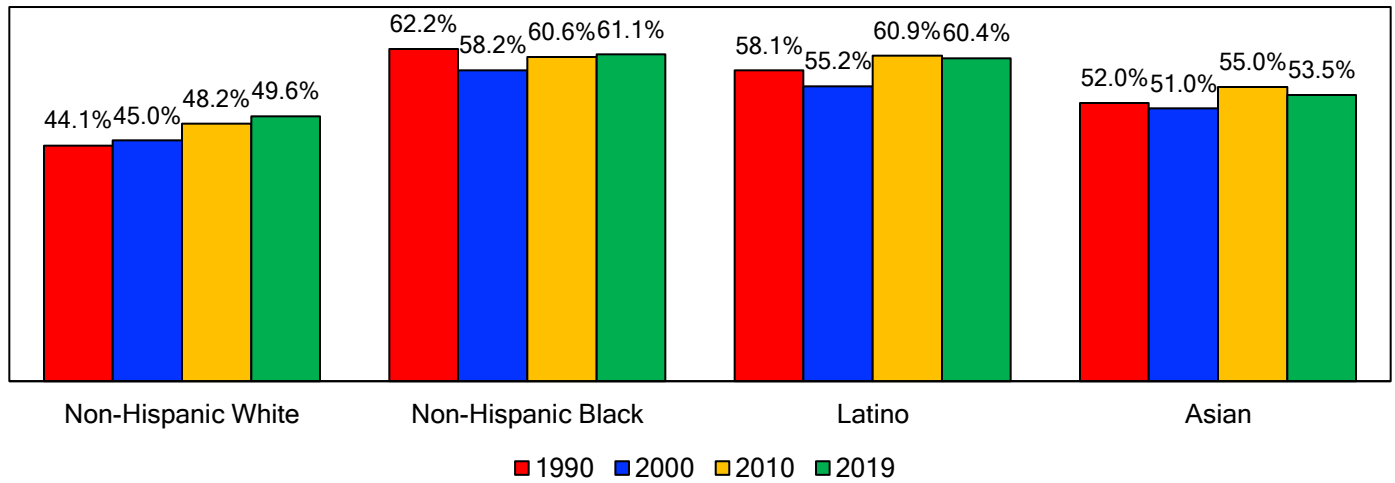
Figure 11  
Percentage of Employed Population Using Auto, Truck, Van, Taxicab, or  
Motorcycle to Work by Race/Ethnicity. New York City, 1990-2019



Between 1990 and 2019, almost all major race/ethnic groups experienced an increase in their share of the population using public transit. (See figure 12). The largest increase was found among non-Hispanic whites, whose use of public transit increased from 44.1% in 1990 to 49.6% in 2019—a 5.5-percentage point increase. The share of Latinos using public transit also increased slightly from 58.1% to 60.4%—a 2.3 percentage point increase. Among Asians, the percentage-point increase was 1.5% (from 52.0% in 1990 to 53.3% in 2019). In contrast, the share of non-Hispanic blacks decreased from 62.2% in 1990 to 61.1% in 2019.

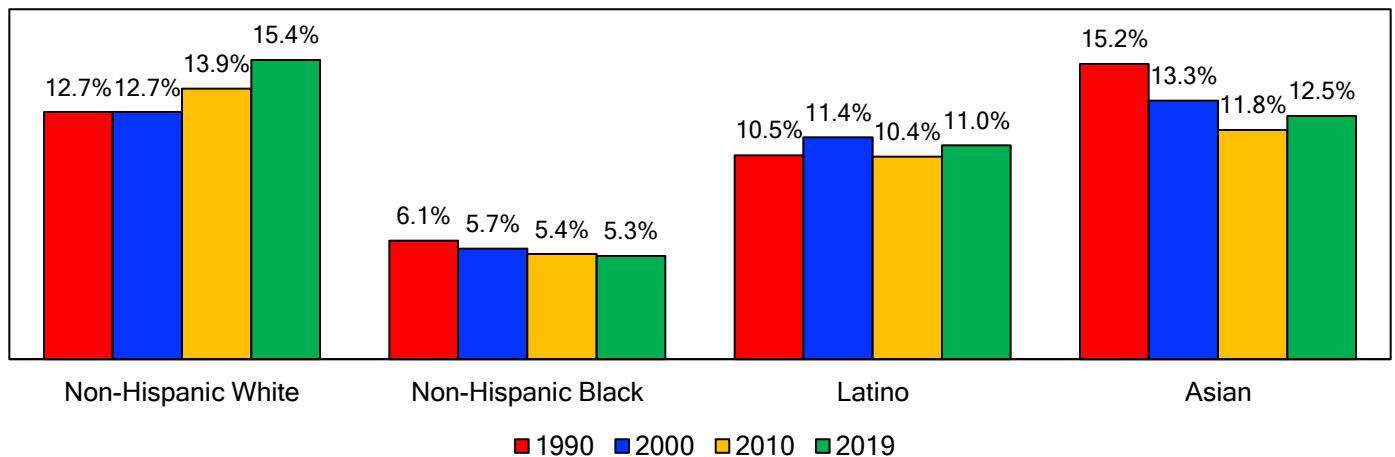
Figure 12 also suggests that non-Hispanic blacks and Latinos had higher proportions of people than Asians and non-Hispanic whites using public transit during this period. Around 58% to 62% of non-Hispanic black workers and around 55% to 61% of Latino workers in New York City used public transit to work, compared with around 44% to 50% of non-Hispanic whites and 51% to 55% of Asians.

Figure 12  
 Percentage of Employed Population Using Public Transit to Work by Race/Ethnicity. New York City, 1990-2019



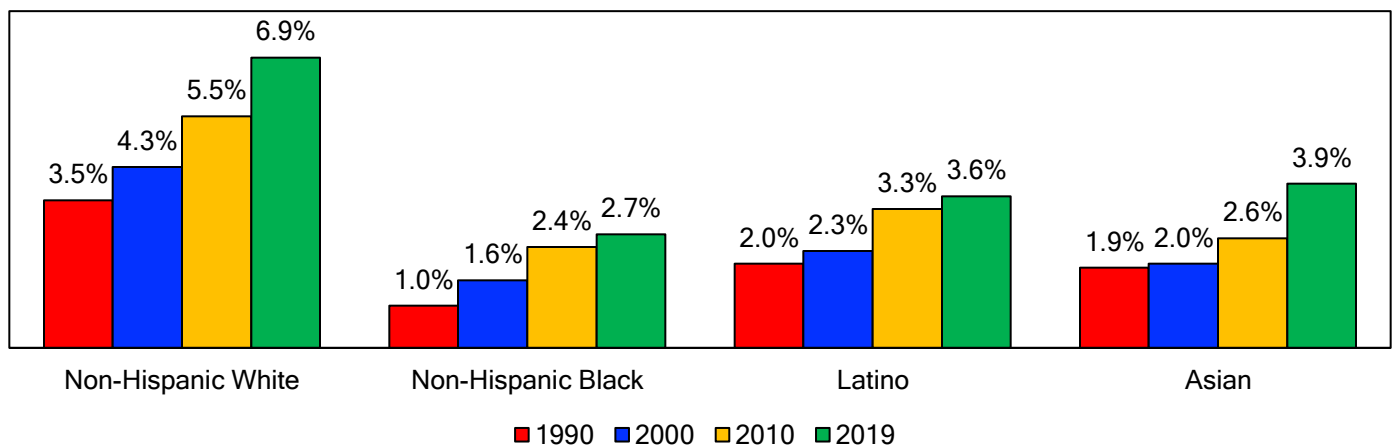
The New York City working population’s use of biking and walking varied by race/ethnicity. (See figure 13). The proportion of workers biking/walking to work rose from 12.7% in 1990 to 15.4% among non-Hispanic whites. Among Latinos, the share increased from 10.5% in 1990 to 11.0% in 2019. In contrast, the share of workers biking/walking to work dropped from 6.1% to 5.3% among non-Hispanic blacks and from 15.2% to 12.5% among Asians during this period. Non-Hispanic blacks had the lowest proportion of people to bike/walk to work compared to other race/ethnicity groups.

Figure 13  
 Percentage of Employed Population Biking or Walking to Work by Race/Ethnicity. New York City, 1990-2019



Finally, all major race/ethnic groups increased their share of the population working at home between 1990 and 2019. (See figure 14). Non-Hispanic whites had the highest proportion of people working at home compared to other race/ethnic groups. Furthermore, the group also had the sharpest percentage-point increase of 3.4% (from 3.5% in 1990 to 6.9% in 2019). Asians and Latinos were similar in their share of workers working at home (around 2% to 4%) and experienced a similar percentage-point increase during this period (around 1.6% to 1.7%). Only 1% of non-Hispanic blacks worked at home in 1990; in 2019, the share rose to 2.7%, but it was still lower than the other three major race/ethnic groups. It is worth noting that these were pre-pandemic rates; the COVID-19 pandemic may have tremendously increased the share of people working at home among certain or all race/ethnic groups.

Figure 14  
Percentage of Employed Population Worked at Home by Race/Ethnicity.  
New York City, 1990-2019



### Means of Transportation by Sex

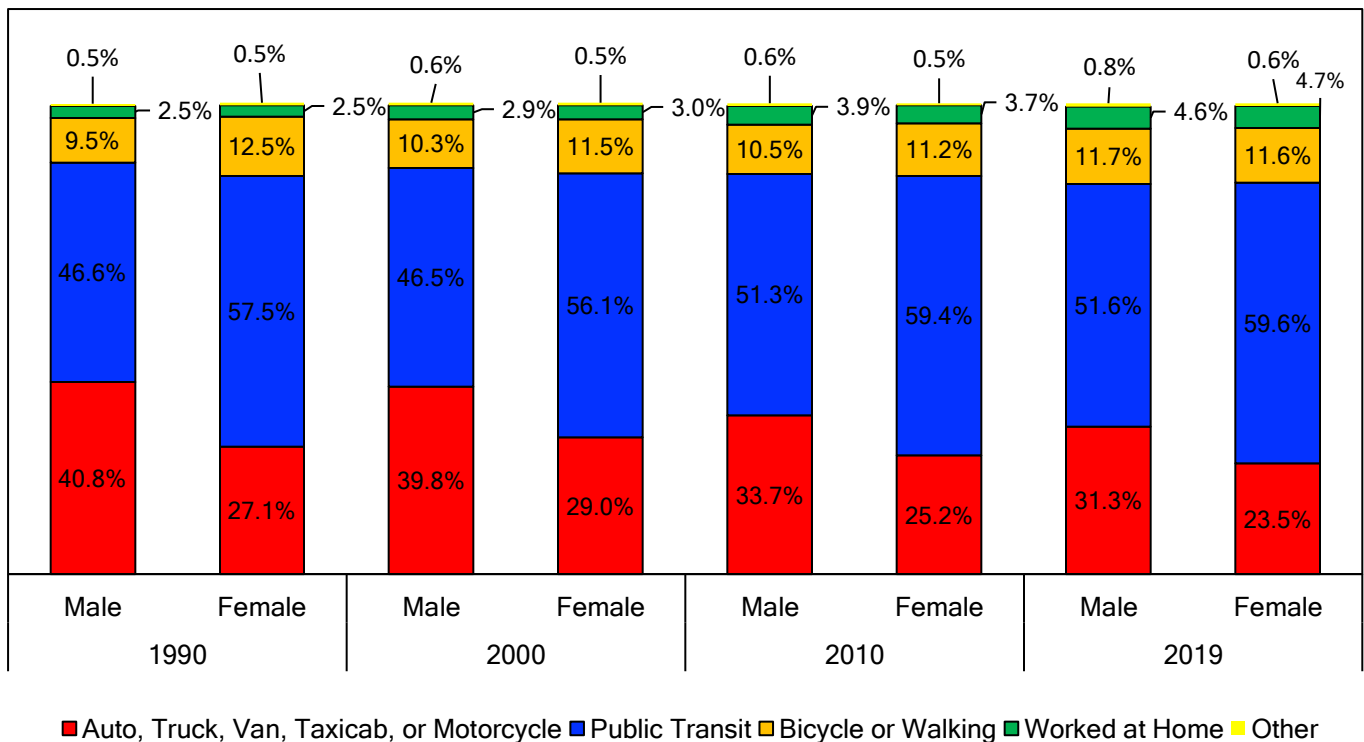
In New York City, female workers had a higher share of people commuting by public transit and a lower one who used a vehicle compared to the working male population. (See figure 15). In 1990, 40.8% of New York City male workers used a vehicle to work compared with 27.1% of female workers, a 13.7 percentage point difference. By 2019, the share of workers using a vehicle to work dropped to 31.3% among males and 23.5% among females. Still, there was a 7.8 percentage point difference between the two groups.

Conversely, in 1990, 57.5% of New York City's female working population commuted by public transit, while only 46.6% of male workers commuted by public transit—resulting in a 10.9 percentage point difference. By 2019, with the share of male workers increased to 51.6% and female workers increased to 59.6%, and the percentage-point difference declined to 8.

Between 1990 and 2010, female workers also had a slightly higher percentage of people biking/walking to work than male workers: the share was 9.5% among men and 12.5% among women in 1990, 10.3% among men and 11.5% among women in 2000, and 10.5% among men and 11.2% among women in 2010. By 2019, this difference became marginal (11.7% among men and 11.6% among women).

Finally, the share of workers who worked at home and the share of workers who used other means were similar among women and men between 1990 and 2019.

**Figure 15**  
 Percentage of Employed Population by Means of Transportation and Sex.  
 New York City, 1990-2019



**Means of Transportation by Poverty Status**

Public transit was the most popular means of transportation among people in poverty and not in poverty. (See figure 16). Between 1990 and 2019, around 51% to 56% of people not in poverty and 54% to 57% of people in poverty commuted by public transit.

Regarding the use of a vehicle to get to work, the share was lower among people in poverty than those not in poverty. In 1990, 22.5% of workers in poverty and 35.3% of those not in poverty commuted using a vehicle—a

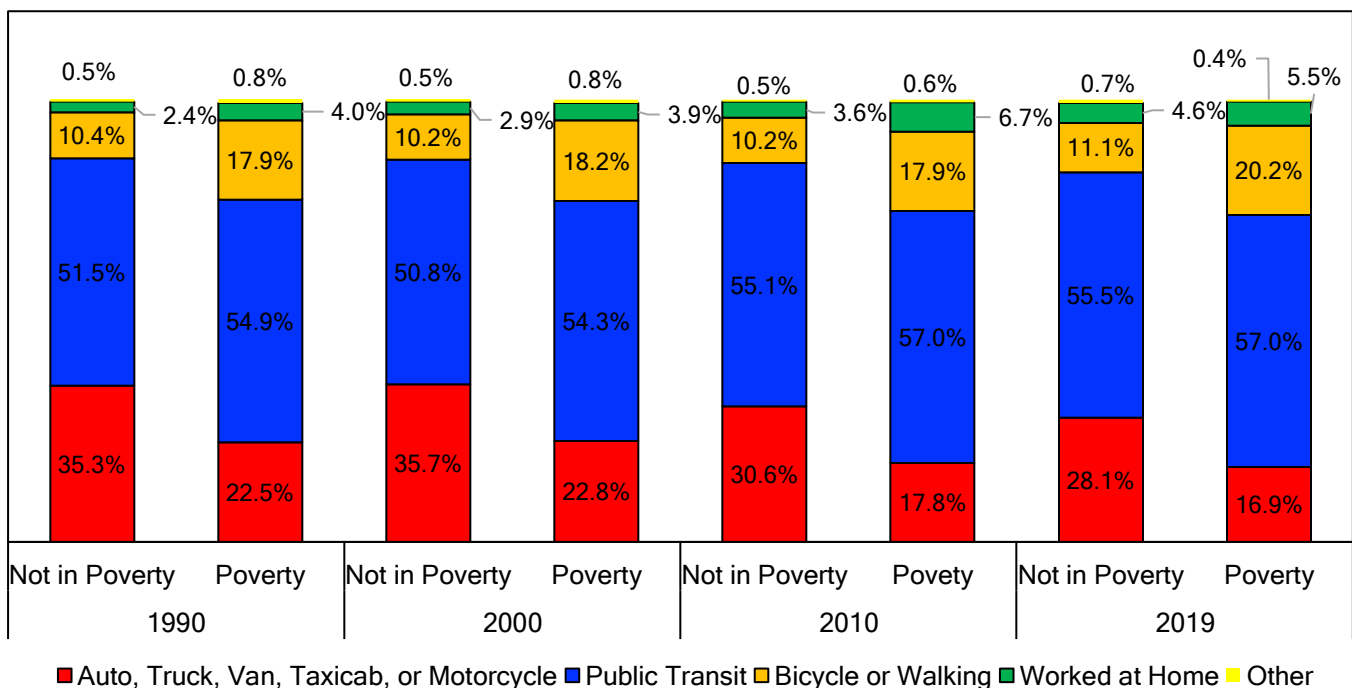
12.8 percentage point difference. By 2019, the share dropped to 16.9% among those in poverty and 28.1% among those not in poverty. Still, there was an 11.2 percentage point difference between the two groups.

People in poverty had a higher share of the population biking/walking to work than people not in poverty. In 1990, 17.9% of workers in poverty and 10.4% of those not in poverty biked/walked to work. By 2019, the proportion became 20.2% among workers in poverty and 11.1% among those not in poverty.

Work at home slowly increased its share between 1990 and 2019. The share rose from 4.0% to 5.5% among those in poverty and from 2.4% to 4.6% among those not in poverty. Workers in poverty had a slightly higher percentage of people who worked at home than workers not in poverty, probably to save on commute expenses or probably because they could not afford a vehicle.

Finally, among both people in poverty and people not in poverty, less than 1 percent of workers chose other means of transportation during this period.

Figure 16  
Percentage of Employed Population by Means of Transportation and Poverty Status. New York City, 1990-2019



## Means of Transportation by Educational Attainment

The New York City working population's choice of means of transportation also differed by educational attainment. (See table 1).

Between 1990 and 2019, using a vehicle to work was more common among workers with a moderate-to-high level of education (high school graduates, people with some college, and people with an Associate degree) than among people who did not graduate high school or people with a Bachelor's degree or higher. In 1990, 37.9% of high school graduates and people with some college (no degree), and 37.2% of people with an Associate degree used a vehicle to work. On the other hand, only 32.0% of people who did not graduate from high school and 33.9% of people with a Bachelor's degree or higher used a vehicle to work. By 2019, except among people with an Associate degree, workers in the other four educational categories all experienced a drop in their share of people using a vehicle. People with a Bachelor's degree or higher had the sharpest decrease from 33.9% to 24.6%—a 9.3 percentage point decrease.

In contrast, people who did not graduate from high school or people with a Bachelor's degree or more had a higher percentage of the population biking/walking to work. Between 1990 and 2019, around 11% to 14% of people who did not graduate from high school and people with a Bachelor's degree or higher biked/walked to work, while the other three groups fluctuated between 8% and 10%.

Those who did not graduate from high school had the highest percentage of people commuting by public transit compared to people from the other four educational levels (from 54.0% in 1990 to 56.2% in 2019). During the same period, people with a Bachelor's degree or higher gradually increased their share between 1990 (48.0%) and 2019 (55.9%). By 2019, this group had the second-highest share of the population using public transit to work.

People from all educational levels saw an increase in the share of people working at home between 1990 and 2019. Among them, people with a Bachelor's degree or higher had the highest share of the population working at home compared to people from other educational levels (4.3% in 1990, 4.4% in 2000 and 2010, and 6.1% in 2019). Conversely, people with an Associate degree and high school graduates had the lowest share of people who worked at home (around 2% to 3%).

Table 1  
Percentage of Employed Population by Means of Transportation and Educational Attainment  
New York City, 1990-2019

	Auto Vehicle	Public Transit	Bicycle/Walking	Worked at Home	Other
<b>1990</b>					
Did Not Graduate High School	32.0%	54.0%	11.2%	2.1%	0.6%
High School Graduate	37.9%	51.4%	8.8%	1.6%	0.4%
Some College No Degree	37.9%	50.7%	8.6%	2.3%	0.4%
Associate degree	37.2%	52.4%	8.4%	1.7%	0.2%
BA or Higher	33.9%	48.0%	13.2%	4.3%	0.5%
<b>2000</b>					
Did Not Graduate High School	32.6%	51.5%	12.6%	2.6%	0.8%
High School Graduate	39.9%	49.0%	8.6%	2.0%	0.5%
Some College No Degree	40.2%	48.1%	8.4%	2.9%	0.4%
Associate Degree	40.9%	49.0%	7.9%	1.9%	0.4%
BA or Higher	32.3%	50.7%	12.1%	4.4%	0.5%
<b>2010</b>					
Did Not Graduate High School	32.6%	51.5%	12.6%	2.6%	0.8%
High School Graduate	39.9%	49.0%	8.6%	2.0%	0.5%
Some College No Degree	40.2%	48.1%	8.4%	2.9%	0.4%
Associate Degree	40.9%	49.0%	7.9%	1.9%	0.4%
BA or Higher	32.3%	50.7%	12.1%	4.4%	0.5%
<b>2019</b>					
Did Not Graduate High School	25.2%	56.2%	14.4%	3.7%	0.5%
High School Graduate	31.5%	54.4%	9.9%	3.4%	0.7%
Some College No Degree	34.5%	52.5%	7.9%	4.4%	0.7%
Associate Degree	37.4%	50.8%	8.3%	2.9%	0.7%
BA or Higher	24.6%	55.9%	12.7%	6.1%	0.7%

## Concluding Remarks

This report examined changing patterns in travel time to work and means of transportation among the employed population in New York City between 1990 and 2019. Travel time to work and accessibility and affordability of different means of transportation are essential aspects of transit equity. They directly impact an individual's employment opportunities and physical and mental health.

This report highlights substantial disparities in commuting across race/ethnicity, sex, poverty status, and educational attainment. This could mean, for example, that women had higher proportions of people choosing job opportunities close to home than men, probably because they wanted to save on commute expenses, could not afford a vehicle, or had family responsibilities that prevented them from traveling far to work. As another example, non-Hispanic blacks had the longest average travel time to work compared to other race/ethnic groups, which may have increased their chances of giving up or losing a job opportunity.

The results also show that New York City's working population, especially women, people in poverty, non-Hispanic blacks and Latinos, and people who did not graduate high school, relied heavily on public transit. Transit agencies should develop strategies that prioritize the needs of and benefit these population groups, such as providing more affordable transit fares for low-income New Yorkers and adding express stops in disadvantaged neighborhoods.

Finally, as the COVID-19 pandemic has fundamentally changed people's lives, it is worth researching how has it impacted New Yorker City working population's commuting patterns. For example, have workers among all race/ethnic groups had the same flexibility to work from home since the pandemic? How has the pandemic impacted public transit ridership among individuals from different income neighborhoods? Has biking increased its popularity in all five boroughs of New York City, and if so, have the five boroughs had an equal level of bike infrastructure? Answering these questions will help policymakers make informed decisions about designing a more equitable transit system in New York City.