

Changes in Employment and Commuting Patterns among Workers in New York City and the New York Metropolitan Area, 2000-2007



New York City Department of City Planning
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Using the 2000 US Census and the 2007 American Community Survey (ACS), this Census Brief examines changes in employment and commuting patterns in New York City and the New York City Metropolitan Area from 2000 to 2007. These two years, representing the peaks of the two most recent economic cycles, permit us to analyze how the long term growth trend in employment has affected the relative numbers and shares of commuters, by automobile and via public transportation. Administrative data, including vehicular entry data from New York Metropolitan Transportation Council annual Hub-Bound At-A-Glance fact sheets, as well as ridership data from PATH, New York City Transit, commuter rail, commuter bus, ferry, tram and, bicycle are then compared to the Census and ACS changes in commute patterns, to determine whether overall transportation usage patterns reflect the trends among commuters.

'New York City' refers to the five boroughs: the Bronx, Brooklyn, Manhattan, Queens, and Staten Island.

The 'New York City Metropolitan Area' refers to the five boroughs of New York City and 26 neighboring counties: Nassau and Suffolk counties in New York (the "Long Island Railroad region"); Fairfield, New Haven, and Litchfield counties in Connecticut, and Westchester, Putnam, and Dutchess counties in New York (the "Metro-North Region"); and Rockland, and Orange, Ulster, Sullivan counties in New York, and Bergen, Passaic, Hudson, Essex, Union, Morris, Somerset, Middlesex, Mercer, Monmouth, Ocean, Hunterdon, Warren and Sussex counties in New Jersey (the "NJ Transit region").

Because the ACS is based on a statistical sample, small changes recorded in the survey may not reflect real changes in the underlying populations. When this paper refers to a change as "significant", that change exceeds statistical thresholds indicating that it is likely to reflect actual trends.

Summary Findings

Between 2000 and 2007, concurrently with large employment increases, there was a pronounced shift in the New York Metropolitan Area from auto commuting to public transportation. While this shift was most pronounced in the New York City, it existed in the suburbs as well. In New York City, increases in commuting by public transportation are significant in the four largest boroughs. Auto commuting increased significantly only in the Bronx, and in Manhattan, the number of auto commuters decreased over the seven-year period.

New York City Employment Change, 2000-2007

Between 2000 and 2007, New York City employment increased by nearly 500,000 persons, to 4.2 million (Table 1). Over 90 percent of this employment increase was comprised of city residents.

In the five boroughs, the largest employment increase, 212,000, was in Manhattan, which had 2.28 million workers in 2007. Significant employment increases were also recorded in the Bronx, Brooklyn and Queens, of 80,000, 103,000 and 98,000 workers, respectively. Manhattan had an increase of 173,000 city resident workers as well as a significant influx of 42,000 additional

workers from the NJ Transit region. Increases in the Bronx, Brooklyn and Queens were dominated by city residents.

Commuting to New York City from Metropolitan Area (Including New York City)

There was a significant increase of 413,000, to 2.383 million, in the number of workers commuting by public transportation among all Metropolitan Area residents working in New York City (Table 1). This increase is dominated by Manhattan, with 228,000 additional public transportation commuters, but there were significant increases in the number of public transportation commuters in the Bronx, Brooklyn and Queens as well.

The number of auto commuters in the region to New York City's five boroughs did not change significantly. However, there was a significant decrease of 57,000 auto commuters to Manhattan, and a significant increase of 19,000 auto commuters to the Bronx.

The percentage of commuters to New York City using cars to get to work decreased as a result. Among those residing anywhere in the metropolitan area, the percentage of workers commuting via car decreased from 33 to 29 percent. Those residing in the metropolitan region and using public transportation to get to their jobs anywhere in NYC increased from 53 percent to 57 percent (Figure 2).

The share of workers commuting from anywhere in the region to Manhattan via public transportation increased from 70 to 74 percent between 2000 and 2007. Among regional residents, just over 17 percent of commuters to Manhattan drove in 2000, while in 2007 the share was close to 13 percent (Figure 3).

Intra-City Commuting

The increase in commuters using public transit to New York City jobs was dominated by New York City residents, who accounted for 369,000, or about 90 percent, of the increment (Table 1). New York City residents also accounted for 48,000 fewer workers commuting by auto to Manhattan, or 84 percent of the overall decrease.

Among workers residing in any of New York's five boroughs and working in any of New York's five boroughs, the share of public-transportation commuters increased from 54 percent to 57 percent between 2000 and 2007 (Figure 4). Those residing in any of the five boroughs and commuting via car to any of the five boroughs decreased from 30 to 25 percent of all New York City resident workers. Among NYC residents working in Manhattan, the percent of public-transportation commuters increased from 71 to 74 percent. While nearly 13 percent of City residents who worked in Manhattan drove to work in 2000, fewer than 9 percent drove in 2007 (Figure 5).

Significant changes in commute mode were observed among New York City residents who commute to the Bronx, Brooklyn and Queens. Between 2000 and 2007, nearly 12,000, or about 13 percent, more City resident workers drove to their places of employment in the Bronx. However, during this same period, about 49,000 more city resident commuters, an increase of over 57 percent, used public transportation to get to work in the Bronx. Significant employment increases were made in the Bronx during this seven-year period, and, while both auto and transit

commuters increased significantly, the rate of growth among public transit users outpaced that of people who drove to work (Table 1).

The Bronx was the only borough outside of Manhattan to experience a significant increase in New York City resident automobile commuters between 2000 and 2007, but the Bronx, Brooklyn and Queens each experienced significant growth in employment and significant increases in the share of public transit commuters. The number of city residents commuting via public transportation to a place of employment in Brooklyn increased by 73,000, or 32 percent. In Queens, the number increased by 64,000, or 44 percent (Table 1).

**Table 1 (continued on next page):
New York City Total Workers 16 Years and Over at Work During the Week Prior to Enumeration
Total Workers Residing in NY-NJ-CT Metropolitan Region
Total Workers Residing in New York City**

Residence Workplace	2000						2007					
	Total		Drive or carpool		Public transportation		Total		Drive or carpool		Public transportation	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Residence in New York Region	3,710,690	100.00%	1,238,388	33.37%	1,969,612	53.08%	4,206,492	100.00%	1,206,884	28.69%	2,382,559	56.64%
Bronx	279,260	100.00%	145,169	51.98%	89,041	31.88%	359,729	100.00%	164,296	45.67%	139,657	38.82%
Brooklyn	661,719	100.00%	299,747	45.30%	251,940	38.07%	765,073	100.00%	295,208	38.59%	322,102	42.10%
Manhattan	2,067,610	100.00%	359,588	17.39%	1,448,170	70.04%	2,279,855	100.00%	302,467	13.27%	1,676,316	73.53%
Queens	581,834	100.00%	346,090	59.48%	158,312	27.21%	679,402	100.00%	356,057	52.41%	222,606	32.76%
Staten Island	120,267	100.00%	87,794	73.00%	22,149	18.42%	122,433	100.00%	88,856	72.58%	21,878	17.87%
Residence in New York City	2,924,373	100.00%	861,247	29.45%	1,566,627	53.57%	3,383,127	100.00%	840,312	24.84%	1,935,552	57.21%
Bronx	220,330	100.00%	91,078	41.34%	84,840	38.51%	291,384	100.00%	102,937	35.33%	133,471	45.81%
Brooklyn	591,749	100.00%	249,452	42.16%	232,694	39.32%	705,321	100.00%	251,909	35.72%	306,180	43.41%
Manhattan	1,535,937	100.00%	196,790	12.81%	1,083,527	70.55%	1,708,696	100.00%	148,763	8.71%	1,265,562	74.07%
Queens	470,067	100.00%	248,217	52.80%	145,206	30.89%	568,620	100.00%	260,670	45.84%	208,965	36.75%
Staten Island	106,290	100.00%	75,710	71.23%	20,360	19.16%	109,106	100.00%	76,033	69.69%	21,374	19.59%

NY-NJ-CT Metropolitan Region:

Metro North Railroad Area: New York State Counties - Dutchess, Putnam and Westchester; Connecticut Counties - Fairfield, Litchfield and New Haven

Long Island Railroad Area: New York State Counties - Nassau and Suffolk

New Jersey Transit Area: New Jersey Counties - Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Warren and Union; New York State Counties - Orange, Rockland, Sullivan and Ulster

Note: Combined percent commuters who Drove/Carpooled and used Public Transportation < 100%. Other workers include those using other means of transportation to commute, or who worked at home.

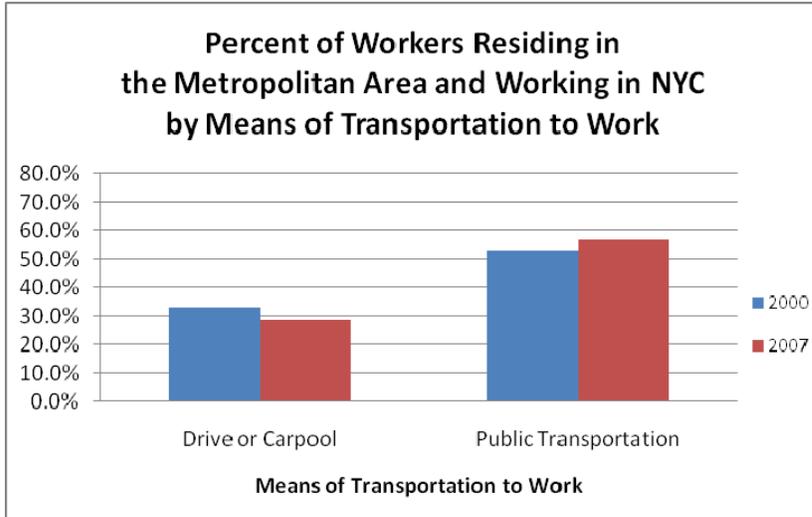
Table 1 (continued): New York City Total Workers 16 Years and Over at Work During the Week Prior to Enumeration

Residence Workplace	Change, 2000-2007					
	Total		Drive or carpool		Public transportation	
	Number	Percent	Number	Percent	Number	Percent
Residence in New York Region	495,802	13.4*	-31,504	-2.5	412,947	21.0*
Bronx	80,469	28.8*	19,127	13.2*	50,616	56.8*
Brooklyn	103,354	15.6*	-4,539	-1.5	70,162	27.8*
Manhattan	212,245	10.3*	-57,121	-15.9*	228,146	15.8*
Queens	97,568	16.8*	9,967	2.9	64,294	40.6*
Staten Island	2,166	1.8	1,062	1.2	-271	-1.2
Residence in New York City	458,754	15.7*	-20,935	-2.4*	368,925	23.5*
Bronx	71,054	32.2*	11,859	13.0*	48,631	57.3*
Brooklyn	113,572	19.2*	2,457	1.0	73,486	31.6*
Manhattan	172,759	11.2*	-48,027	-24.4*	182,035	16.8*
Queens	98,553	21.0*	12,453	5.0	63,759	43.9*
Staten Island	2,816	2.6	323	0.4	1,014	5.0

**Statistically significant change*

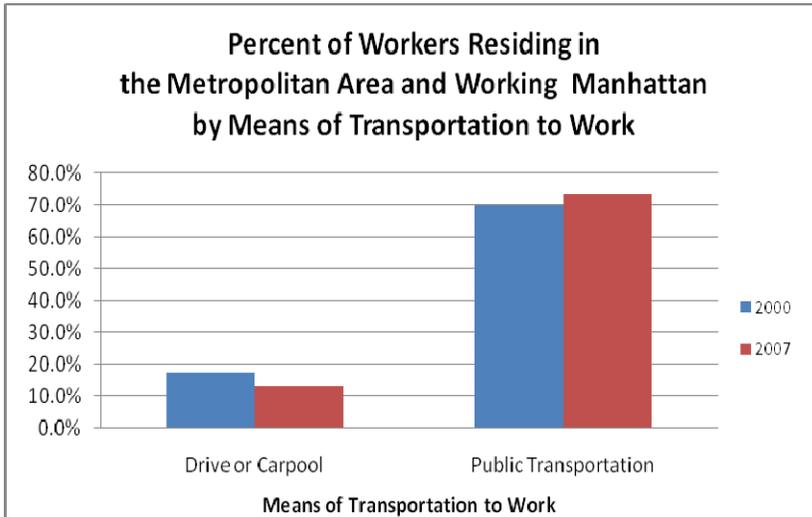
Source: 2000 Census and 2007 American Community Survey (ACS)

Figure 2: Percent of Workers Commuting by Car and Public Transportation



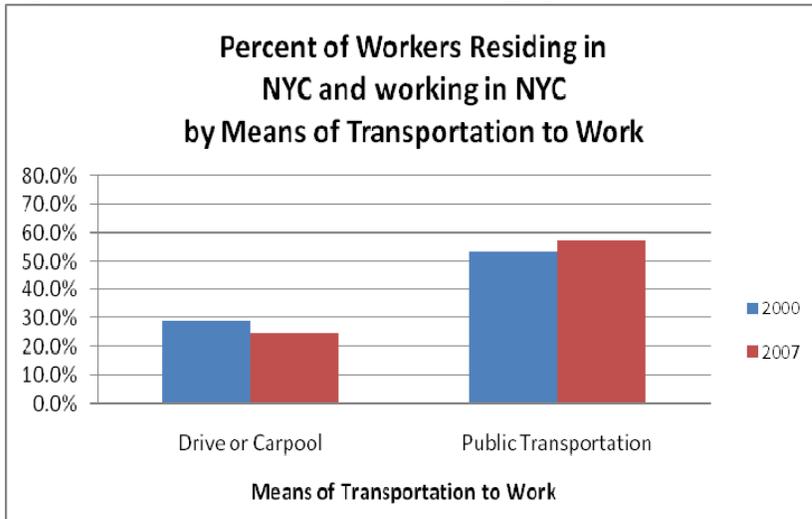
Source: U.S. Census Bureau, 2007 American Community Survey 1% PUMS File and 2000 5% PUMS Files

Figure 3: Percent of Workers Commuting by Car and Public Transportation



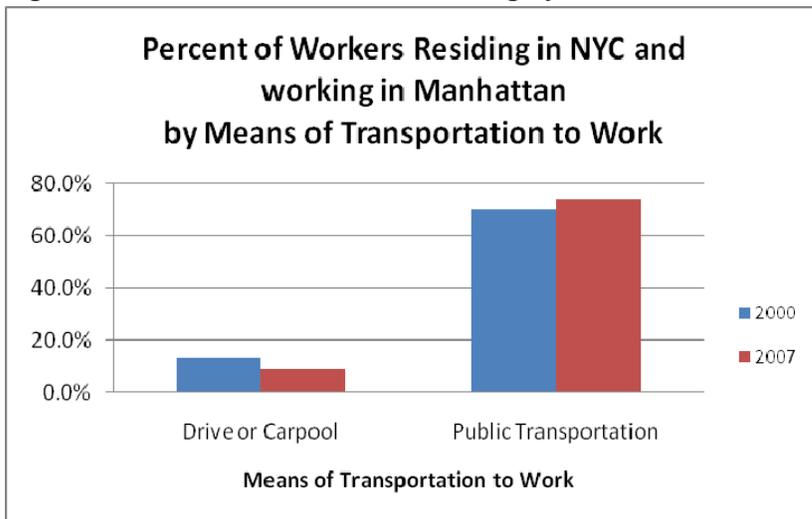
Source: U.S. Census Bureau, 2007 American Community Survey 1% PUMS File and 2000 5% PUMS Files

Figure 4: Percent of Workers Commuting by Car and Public Transportation



Source: U.S. Census Bureau, 2007 American Community Survey 1% PUMS File and 2000 5% PUMS Files

Figure 5: Percent of Workers Commuting by Car and Public Transportation



Source: U.S. Census Bureau, 2007 American Community Survey 1% PUMS File and 2000 5% PUMS Files

Rest-of-Metropolitan-Area Employment Change, 2000-2007

Between 2000 and 2007, employment in the rest of the New York City metropolitan area increased by about 306,000, to 5.9 million. A significant increase of 81,000 was recorded in the Metro-North region, and of 194,000 in the NJ Transit region (Table 6). Employment change in each suburban region was dominated by that region's residents. New York City residents accounted for 39,000 of this employment increase, with a large share of 22,000 in the Metro-North region.

Rest-of-Metropolitan-Area Commuting

In the suburbs, there were significant increases in both auto commuting and in public transportation commuting (Table 6). However, public transportation commuting increased faster, by 17.8 percent from a relatively small base of 272,000 workers in 2000. Among New York City residents, public transportation commuting to the suburbs grew even faster, by 15,800 workers or 26.5 percent. However, auto commuting by New York City residents to the suburbs also grew, by 25,800 workers or 14.6 percent.

Table 6 (continued on next page): New York-New Jersey-Connecticut Metropolitan Region Residents at Work in the NY-NJ-CT Metropolitan Region
Total Workers 16 Years and Over at Work During the Week Prior to Enumeration
Total Workers Residing in NY-NJ-CT Metropolitan Region
Total Workers Residing in New York City

Residence Workplace	2000						2007					
	Total		Drive or carpool		Public transportation		Total		Drive or carpool		Public transportation	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Residence Anywhere in Region	5,596,661	100.00%	4,880,723	87.21%	272,264	4.86%	5,902,422	100.00%	5,010,495	84.89%	320,656	5.43%
Metro North Railroad Area	1,354,922	100.00%	1,180,620	87.14%	61,026	4.50%	1,435,995	100.00%	1,208,826	84.18%	73,868	5.14%
Long Island Railroad Area	1,121,077	100.00%	990,672	88.37%	51,208	4.57%	1,151,466	100.00%	1,016,773	88.30%	50,716	4.40%
New Jersey Transit Area	3,120,662	100.00%	2,709,431	86.82%	160,030	5.13%	3,314,961	100.00%	2,784,896	84.01%	196,072	5.91%
Residence in New York City	245,466	100.00%	177,083	72.14%	59,618	24.29%	284,336	100.00%	202,912	71.36%	75,437	26.53%
Metro North Railroad Area	54,927	100.00%	39,014	71.03%	13,754	25.04%	76,696	100.00%	54,113	70.56%	19,960	26.02%
Long Island Railroad Area	106,985	100.00%	81,064	75.77%	22,286	20.83%	115,922	100.00%	93,856	80.96%	19,620	16.93%
New Jersey Transit Area	83,554	100.00%	57,005	68.23%	23,578	28.22%	91,718	100.00%	54,943	59.90%	35,857	39.09%

NY-NJ-CT Metropolitan Region:

Metro North Railroad Area: New York State Counties - Dutchess, Putnam and Westchester; Connecticut Counties - Fairfield, Litchfield and New Haven

Long Island Railroad Area: New York State Counties - Nassau and Suffolk

New Jersey Transit Area: New Jersey Counties - Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Warren and Union; New York State Counties - Orange, Rockland, Sullivan and Ulster

Note: Combined percent commuters who Drove/Carpooled and used Public Transportation < 100%. Other workers include those using other means of transportation to commute, or who worked at home.

Table 6 (continued): Total New York-New Jersey-Connecticut Metropolitan Region Resident Workers 16 Years and Over at Work During the Week Prior to Enumeration

Residence Workplace	Change, 2000-2007					
	Total		Drive or carpool		Public transportation	
	Number	Percent	Number	Percent	Number	Percent
Workplace in Metropolitan Region, Except New York City						
Residence Anywhere in Region	305,761	5.5*	129,772	2.7*	48,392	17.8*
Metro North Railroad Area	81,073	6.0*	28,206	2.4	12,842	21.0*
Long Island Railroad Area	30,389	2.7	26,101	2.6	-492	-1.0
New Jersey Transit Area	194,299	6.2*	75,465	2.8*	36,042	22.5*
Residence in New York City						
Metro North Railroad Area	21,769	39.6*	15,099	38.7*	6,206	45.1*
Long Island Railroad Area	8,937	8.4	12,792	15.8*	-2,666	-12.0
New Jersey Transit Area	8,164	9.8	-2,062	-3.6	12,279	52.1*
*Statistically significant change						
Source: U.S. Census Bureau, 2007 American Community Survey 1% PUMS File and 2000 5% PUMS Files						

Comparison with Historical Trends

Comparing recent commute mode shifts against historical trends highlights the significance of what occurred between 2000 and 2007. Between 1980 and 2000, the percentage of New York City resident workers that used public transportation to commute to work decreased, from 58 percent to less than 54 percent. The percentage commuting by automobile rose slightly. For residents of the rest of the region working in New York City, there was almost no commute mode change. The share of regional residents who drove and used mass transit remained nearly constant at 47 percent and 51 percent, respectively (Figures 7 and 8).

Figure 7: Commute Mode Share: Drove Alone/Carpooled

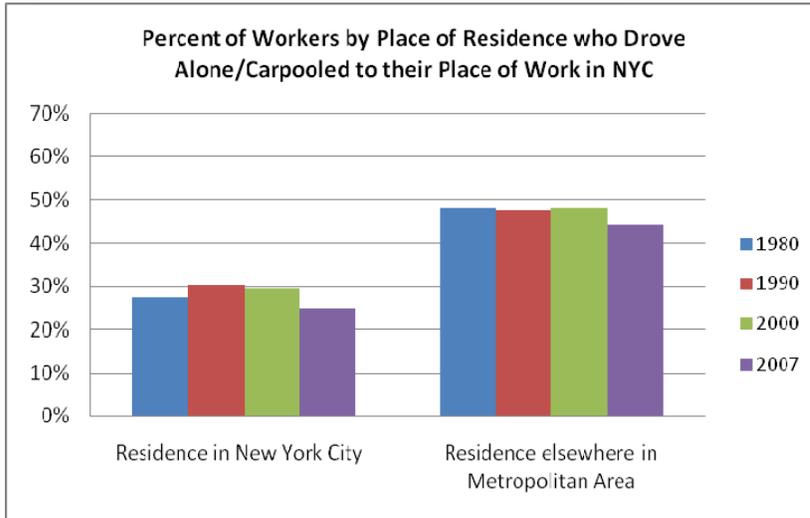
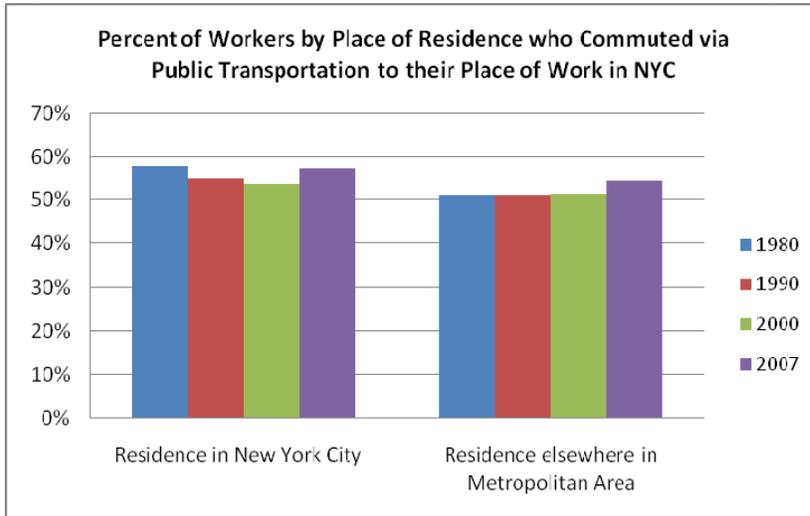


Figure 8: Commute Mode Share: Commuted via Public Transportation

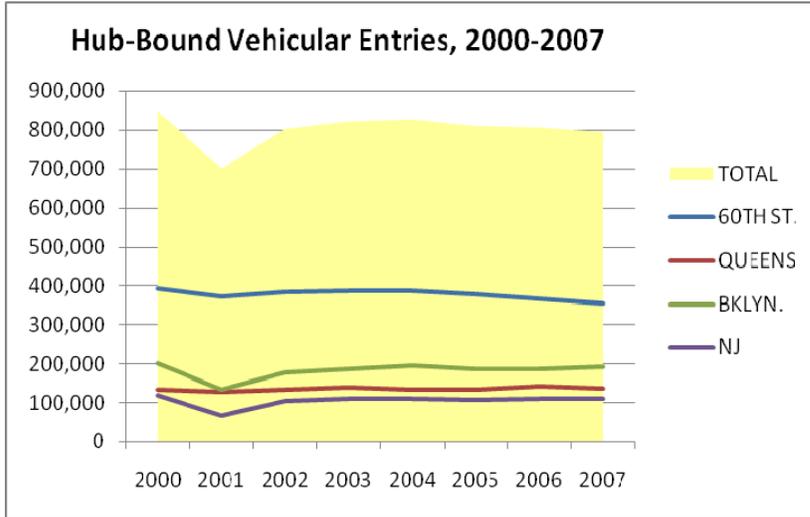


Source: New York Metropolitan Transportation Council Journey-to-Work 1980-1990; Census 2000; ACS 2007

Comparison of Census with Administrative Data

Vehicular entries into Manhattan via the Queensboro Bridge, the Queens-Midtown Tunnel, from Brooklyn and from New Jersey show modest declines between 2000 and 2007, as do total vehicular hub-bound entries (Figure 8). These data are consistent with the ACS data indicating that the number of auto commuters into Manhattan has decreased.

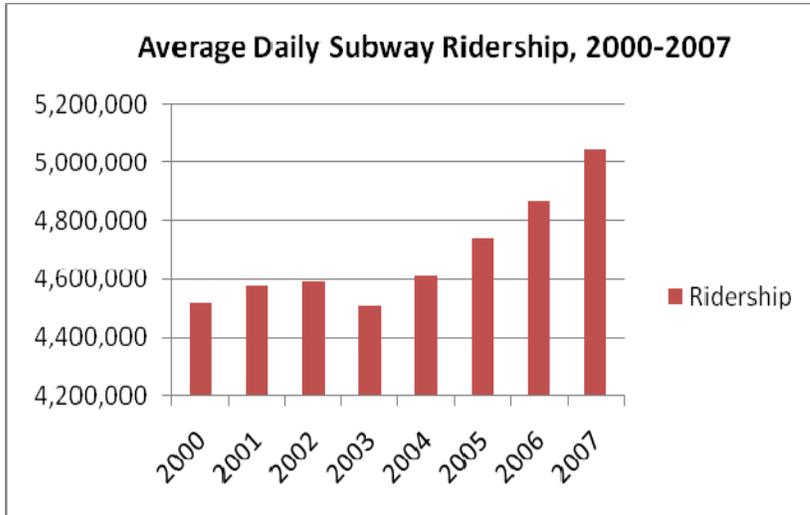
Figure 8: Vehicular Hub-Bound Entries



Source: New York Metropolitan Transportation Council annual Hub-Bound At-A-Glance fact sheets

In the same period, subway ridership increased steadily between 2000 and 2007, with an 11% increase in average daily ridership system-wide (Figure 9). Again, this is consistent with the pattern reported for commuters in the ACS.

Figure 9: Average Daily Subway Ridership, 2000-2007



Source: New York City Transit

Ridership trends into NJ PATH stations appear more sensitive to economic trends, and commute volumes have varied according to current events. Following the attack on the World Trade Center and the subsequent closing of the WTC PATH station, ridership ceased until the station's reopening in 2003. Ridership into that station has increased steadily every year since then, indicating a continued shift to mass transit. The 33rd street PATH station experienced a spike in ridership in 2002, followed by two years of a decline to previous rates (Figures 10 and 11). However, since 2004, both the WTC and 33rd street PATH stations have had annual increases in passenger ridership.

Figure 10: Average Daily PATH Ridership, WTC Station

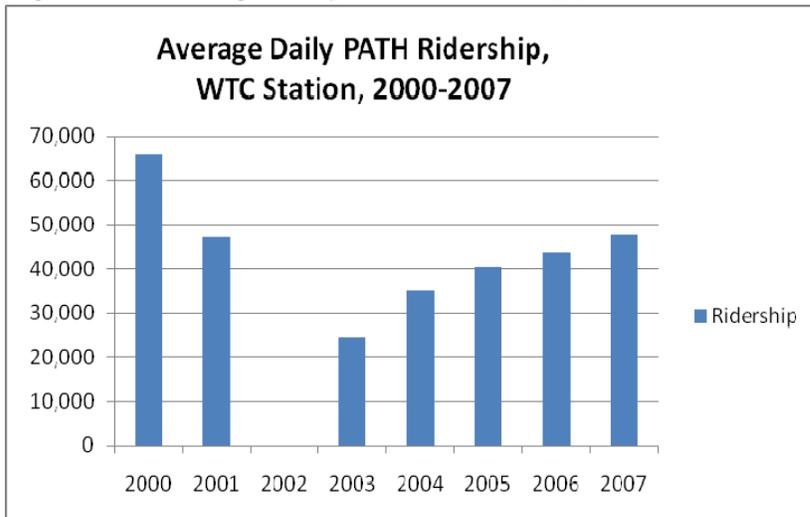
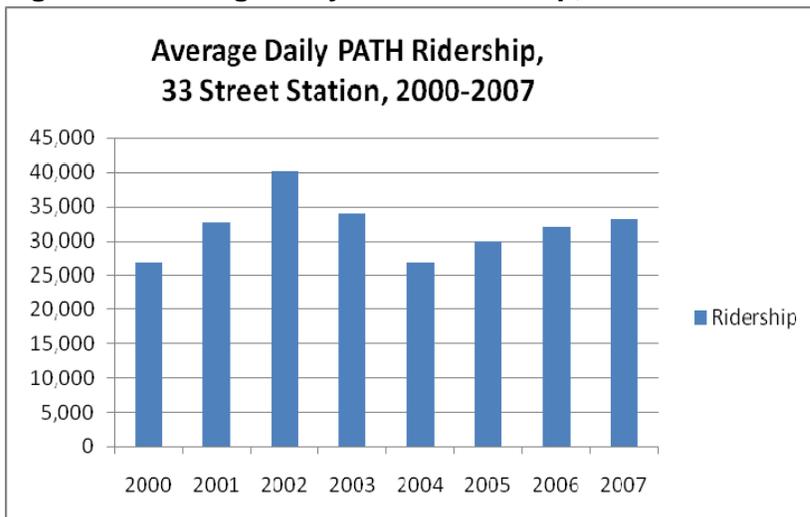


Figure 11: Average Daily PATH Ridership, 33rd Street Station



Source: PATH Station Turnstile Entry Counts

Penn Station, serving the New Jersey and Long Island suburbs, also appears to have accommodated some of the WTC-diverted commuters, as a spike in ridership in 2002 indicates. Ridership figures have been variable since then, likely reflecting economic trends and the reopening of the WTC PATH station. Ridership into Grand Central Station also fell between 2000 and 2004, but has been increasing steadily and in high quantity every year since 2004, with a 4% increase in ridership between 2006 and 2007 alone (Figures 12 and 13).

Figure 12: Average Daily Inbound Commuter Rail Ridership, Penn Station

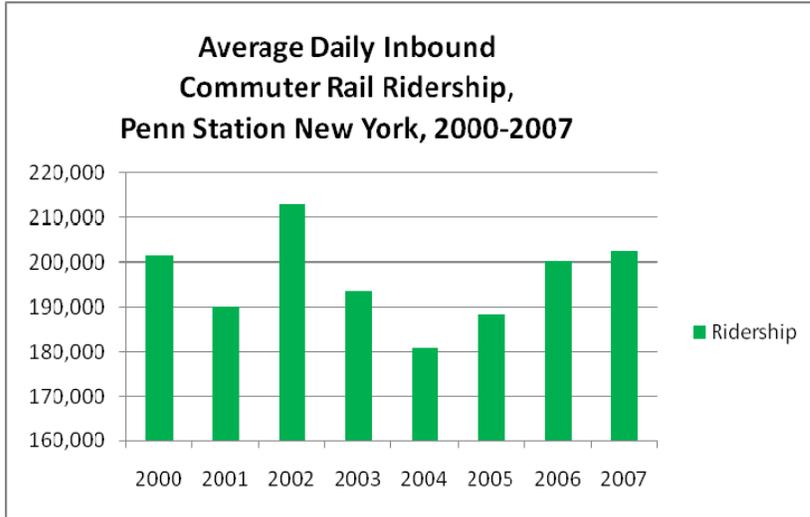
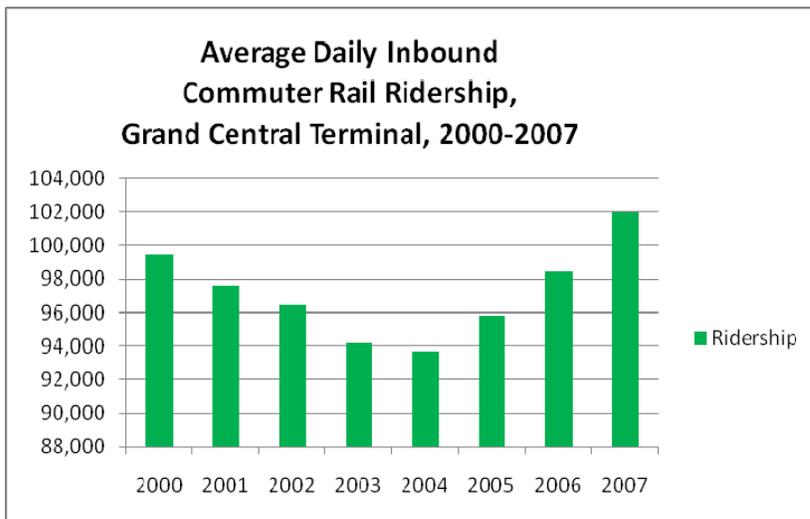


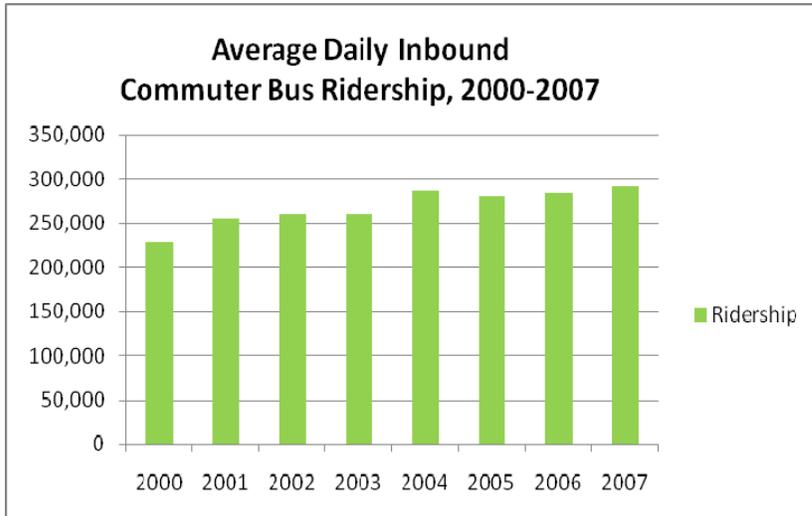
Figure 13: Average Daily Inbound Commuter Rail Ridership, Grand Central Terminal



Source: NYMTC's Hub-Bound Travel at A Glance: 2007

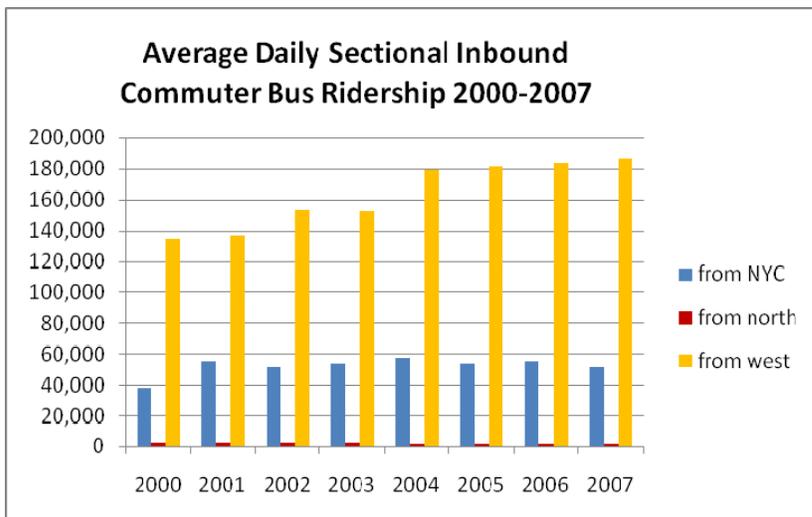
Other modes of commute into the Manhattan core include buses, ferries, bikes, and the Roosevelt Island Tram. Average daily inbound commuter bus ridership (including both local and express buses) increased 27 percent between 2000 and 2007, by a total of over 60,000 riders. (Figure 14) Among express commuter buses, the biggest increase in ridership occurred among commuters entering from the NJ suburbs to the west; these workers represent 78 percent of all express bus commuters into the core, and their ridership increased by over 50,000 people, or nearly 40 percent between 2000 and 2007 (Figure 15).

Figure 14: Average Daily Inbound Commuter Bus Ridership, 2000-2007



Source: NYMTC Hub-Bound Travel Report 2007

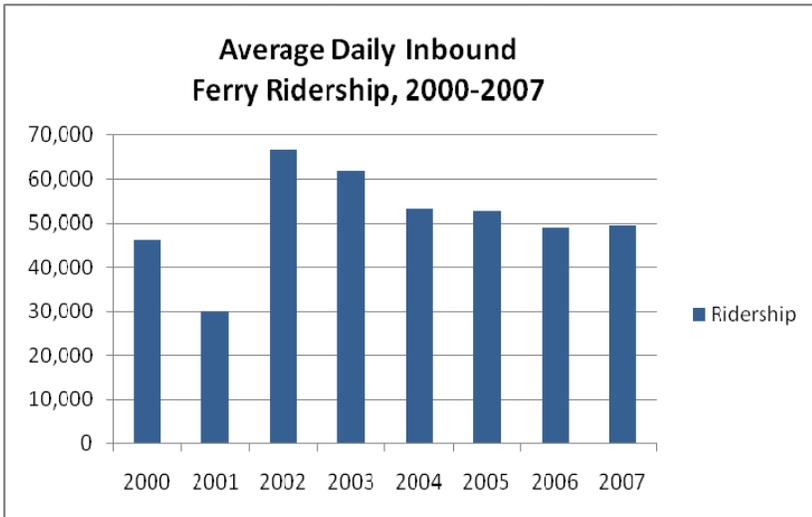
Figure 15: Average Daily Inbound Express Commuter Bus Ridership by Sector, 2000-2007



Source: NYMTC Hub-Bound Travel Report 2007

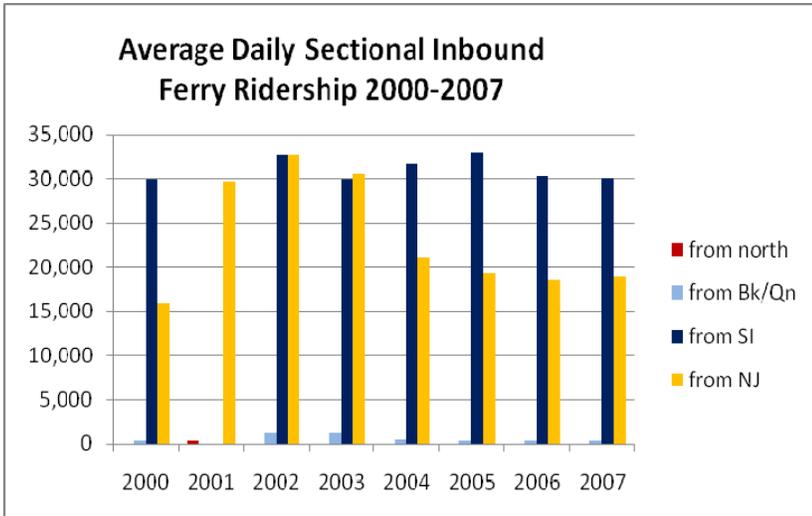
Ferry ridership also increased during this period, but by a smaller margin. Ridership was up by over 3,000, or 7 percent, in 2007 from 2000 (Figure 16), with the greatest gain coming from New Jersey, where ridership increased 19 percent (Figure 17).

Figure 16: Average Daily Inbound Ferry Ridership, 2000-2007



Source: NYMTC Hub-Bound Travel Report 2007

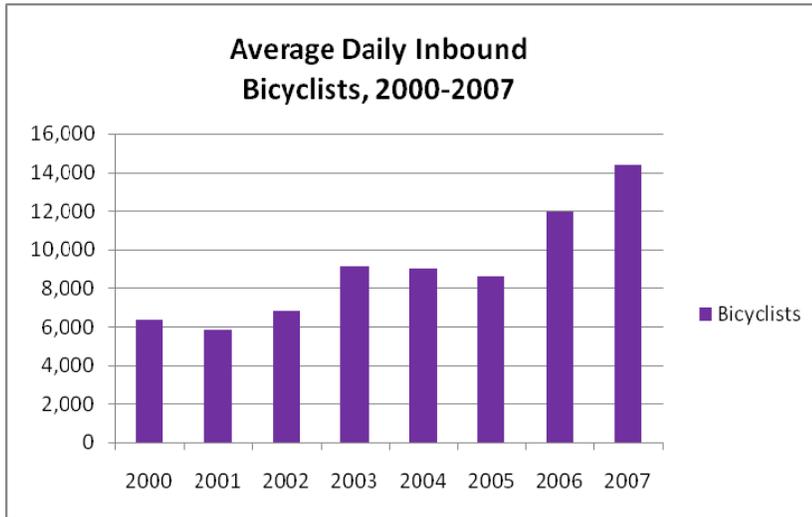
Figure 17: Average Daily Inbound Ferry Ridership by Sector, 2000-2007



Source: NYMTC Hub-Bound Travel Report 2007

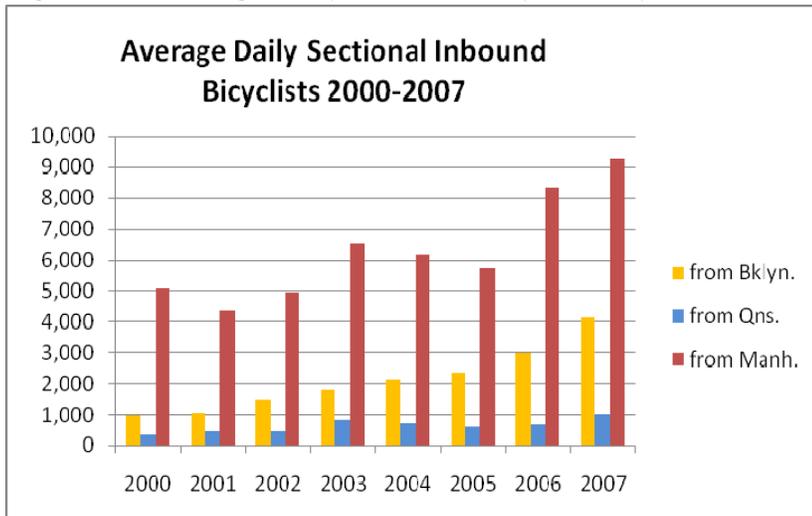
The number and share of bicyclists entering the Manhattan CBD increased significantly between 2000 and 2007. A total of over 8,000 more bicyclists entered in 2007 than in 2000, representing an increase of over 125 percent (Figure 18). By sector, the greatest percent increase occurred among bikers entering from Brooklyn, where over 3,000 more bikers originated, representing an increase of 332 percent. The largest numerical gain in bikers occurred in Manhattan, with an increase of over 4000, or 83 percent (Figure 19).

Figure 18: Average Daily Inbound Bicyclists, 2000-2007



Source: NYMTC Hub-Bound Travel Report 2007

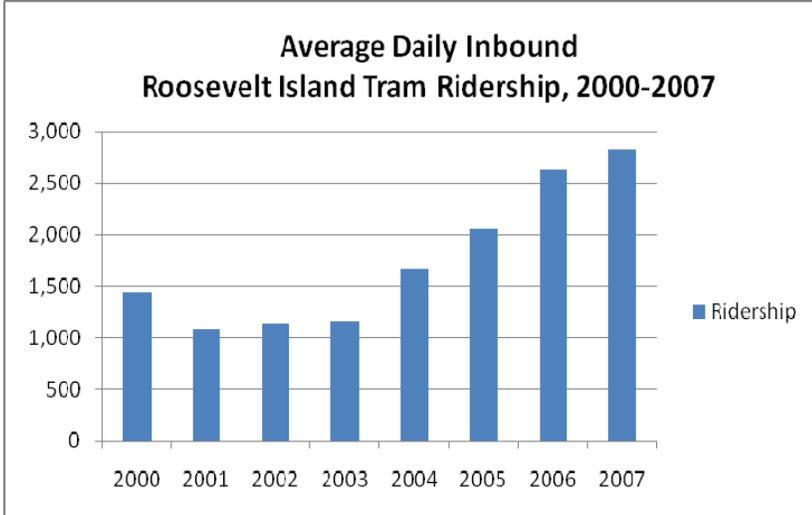
Figure 19: Average Daily Inbound Bicyclists by Sector, 2000-2007



Source: NYMTC Hub-Bound Travel Report 2007

Finally, though it continued to capture only a small share of total inbound hub commuters, the Roosevelt Island Tram, ridership nearly doubled to over 2,800 daily inbound riders (Figure 20). Much of this increase can be attributed to the island's population growth during this period.

Figure 20: Average Daily Inbound Ferry Ridership by Sector, 2000-2007



Source: NYMTC Hub-Bound Travel Report 2007

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