



The New York City Taxicab Fact Book

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Introduction

New York City's 12,779 yellow medallion taxicabs comprise a \$1.8 billion industry serving about 240 million passengers a year. Taxis are a vital part of New York City's transportation network, transporting 25% of all fare-paying bus, subway, taxi and for-hire vehicle passengers traveling within Manhattan and collecting 45% of fares paid for these trips. Cabs are also the primary ground carrier between Manhattan and LaGuardia Airport and provide a substantial number of trips to and from John F. Kennedy International Airport.

Because of their central transportation role, their prominence in Manhattan traffic, and the fact that taxicabs are privately operated as well as closely regulated, information on New York's cabs attracts a broad audience. This *New York City Taxicab Fact Book* traces the history of the industry and profiles the taxi industry's three constituent elements: passengers, drivers and owners.

The *Fact Book* was prepared by Bruce Schaller, Principal of Schaller Consulting, which serves government, business and non-profit organizations seeking to meet customer needs in all forms of urban transportation including taxi, bus, subway and auto. Schaller Consulting specializes in taxicab regulatory and operational issues. Mr. Schaller has worked extensively on taxi issues in New York City and other cities across the U.S., including Chicago, San Francisco, Los Angeles, San Diego and the Washington DC and Dallas-Fort Worth areas.

Three versions of the *Fact Book* were published by the Taxi and Limousine Commission in the early 1990s while Bruce Schaller was Director of Policy Development and Evaluation. Schaller Consulting released a new, extensively expanded and updated *Fact Book* in September 2003. This is the second update to the *Fact Book* since 2003. This edition contains new and updated information on taxi ridership and revenues, cab availability, driver nationalities and driver incomes. Fare information is also updated to reflect the November 2006 increase in wait time.



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New to the 2006 Fact Book

Ridership, revenue and fares

- Taxi ridership increased to 241 million in 2005, up from 233 million in 2001 but below the 1999 peak of 246 million. *(Details on page 3)*
- Industry revenue totaled a record \$1.82 billion in 2005. Revenue increased 29% from 2003 to 2005. Revenue growth was primarily due to the May 2004 fare increase, with economic growth and issuance of additional medallion licenses also contributing to revenue growth. *(Details on page 34)*
- Cabs transport 11% of fare-paying passengers traveling by taxi, bus, subway, car service or black car in New York City, and 25% of those traveling within Manhattan.
- Taxi fares now account for an estimated 30% of all fares paid by passengers for taxi, bus, subway, and car service and black car trips in New York City, and 45% of fares paid for trips within Manhattan.
- The average fare is \$9.61 for a 2.8 mile trip, or \$11.44 when surcharges and tips are included (taking into account the November 2006 increase in wait time).
- New York's fare is eleventh highest among the 14 U.S. cities with 1,300 or more metered taxicabs. *(Details on page 17)*

Driver incomes

- As a result of the 2004 fare increase, driver incomes increased to \$158 per shift in 2005 – a 37% increase since 2003 in nominal dollars and a 27% increase in inflation-adjusted dollars. *(Details on page 36)*
- As a result of the fare increase, drivers' inflation-adjusted cash incomes now exceed the cash incomes of cab drivers in 1929 – for the first time since the Stock Market Crash of that year. *(Details on page 37)*

Driver licensing, experience and national origin

- 3,800 new drivers were issued licenses in fiscal year 2005, up from a low of 2,127 in fiscal year 2000 but well below the 3,800 to 4,700 licenses issued annually in the mid 1990s. *(Details on page 51)*
- Driver experience levels have grown dramatically. In 2005, 42% of drivers had been licensed for at least 11 years, compared with only 29% in 1998 and 10% in 1993. *(Details on page 52)*
- Annual driver attrition has fallen from 8.8% in the mid-1990s to 6.2% in 2005. The attrition rate among newly licensed drivers has declined by 50%.

- 91% of drivers are immigrants and 9% were born in the United States. The most common countries of origin are Pakistan (14.4%), Bangladesh (13.6%) and India (10.2%). *(Details on pages 53-57)*

Quality of service

- New Yorkers give cab service a rating of 6.2 on a 0-10 scale for overall quality of service. The satisfaction level for taxi service is below the satisfaction level for private autos, subways, car services and buses. *(Details on pages 11-12)*
- Taxi riders give the highest ratings for personal security in cabs, comfort, vehicle cleanliness, being a fast mode of travel and being charged the correct fare. *(Details on page 11)*
- Taxis receive relatively low ratings for being able to get a cab when you want one, value for the money, safety from accidents, driver understanding of directions and driver courtesies.
- Passengers filed 17,350 complaints with TLC in fiscal year 2005. Traffic violations, service refusals and rudeness head the list of complaints. *(Details on pages 13-14)*
- 72% of the taxicabs are model year 2003 or later cars (as of April 2005). *(Details on page 42)*

Medallion prices

- Medallion prices reached record-high levels in 2005: \$336,000 for individual medallions and \$379,000 for corporate medallions. *(Details on pages 38-41)*
- While previous auctions had set record prices, the average sales price for medallions auctioned in October 2005 – \$339,000 for individual licenses and \$393,000 for corporate licenses – were in line with the market prices. Medallion licenses for accessible and alternative fuel cabs were auctioned at below-market prices as part of the October 2005 auctions. *(Details on pages 28)*

Other highlights of the Fact Book

- Manhattan residents frequently rely on cabs for work and personal trips. Manhattan adults hail a cab an average of 100 times a year. Two-thirds of Manhattan residents use cabs for at least some work and/or personal trips.
- 45% of taxicabs are leased to drivers on a long-term basis, primarily by large leasing agents or taxi fleets, up from 19% in 1992.
- 29% of taxicabs are owner-driven, an all-time low and down from 37% in 1992.
- 26% of cabs are leased on a shift basis, down from 40% in 1992. *(Details on pages 31-33)*

Part I. Taxis as a Mode of Transportation

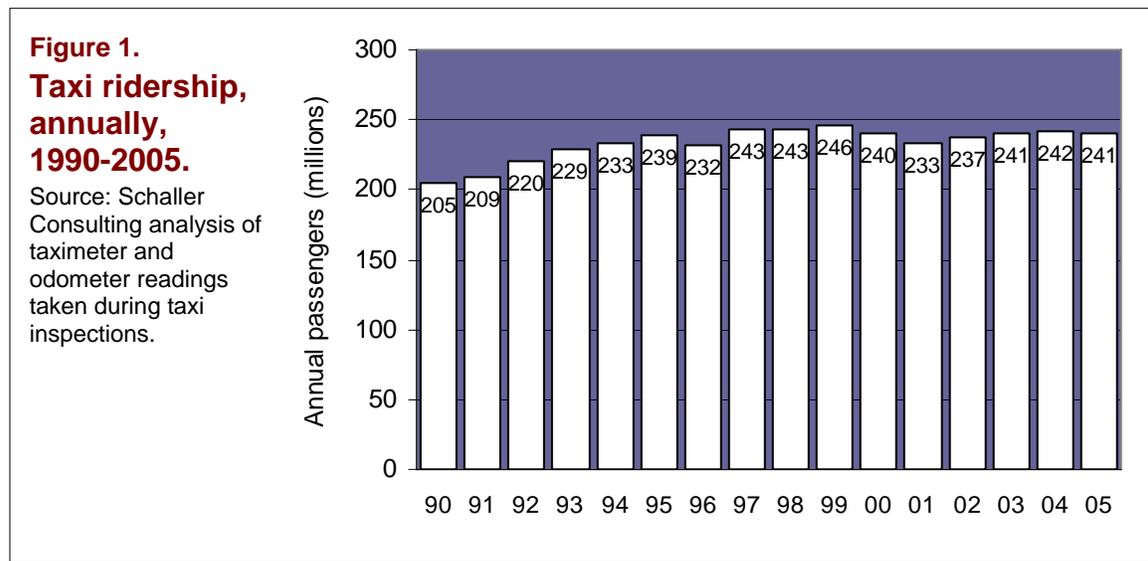
A Critical Link

Taxis provide ready mobility for millions of New Yorkers . . .

- 241 million people rode in New York City yellow medallion taxicabs in 2005.
- With an average of 1.4 passengers per trip, there were 172 million taxi trips in 2005, or about 470,000 taxi trips per day.
- After falling by 3% in 2001 due to the recession and the Sept. 11 terrorist attacks, ridership in 2005 matched the 2000 level. (See Figure 1.)

. . . and play a major transportation role . . .

- Taxis carried 11% of fare-paying riders using taxis, for-hire vehicles, subways or buses in New York City in 2005. Taxi trips accounted for 30% of all fares paid on these transport modes.
- Taxis play a particularly prominent role in travel within Manhattan. Cabs transported 25% of all paying passengers traveling by taxi, bus, subway or for-hire vehicle within Manhattan in 2005. Taxis accounted for 45% of all fares paid on these modes.
- Cabs are the number-one means of travel from Manhattan to New York airports, carrying 39% of all airport-bound passengers from Manhattan. *[TLC 1993b]¹*



¹ See Appendix for source references.

... far larger than in most U.S. cities

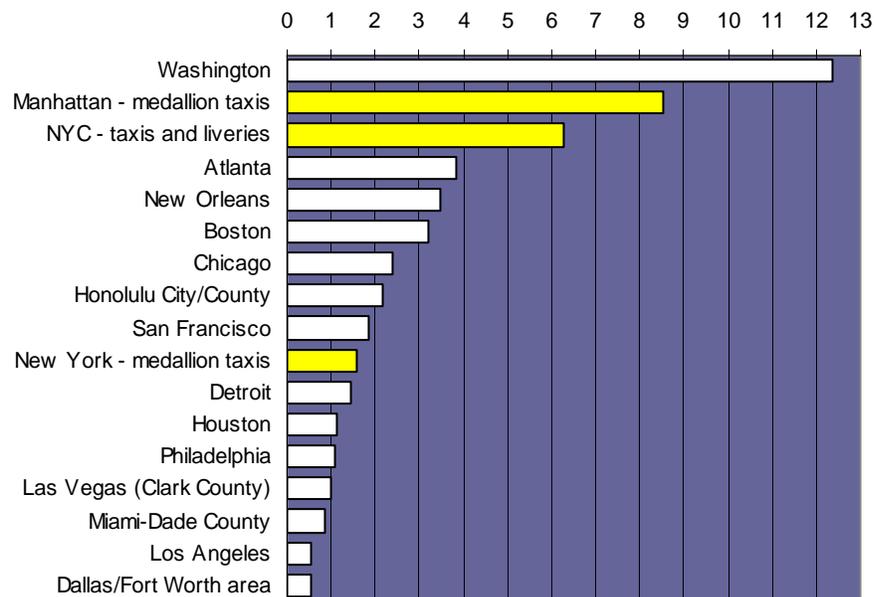
- Combining taxis, black cars and car services, there were 6.3 taxis/liveries per 1,000 New York City residents in 2005. This figure is greater in New York City than in any other major U.S. city except Washington DC, which does not limit the number of taxicabs. (See Figure 2.)
- Focusing on Manhattan, which accounts for over 90% of taxi trip origins, there were 8.5 yellow medallion taxis per 1,000 Manhattan residents in 2005.
- Other cities with at least 2.4 taxis per 1,000 residents are Chicago, New Orleans and Boston. These cities have high-density downtowns and many visitors.
- Auto-oriented cities such as Los Angeles, Dallas and Houston, have fewer than 1.2 taxis per 1,000 population.
- These ratios are highly affected by the land area of the regulatory jurisdiction. For example, cabs in downtown Miami and Las Vegas are highly visible, but the large size of the regulating jurisdictions (Miami-Dade County and Clark County, respectively) produce relatively low population ratios.
- A statistical model of 118 cities and counties found that the number of taxicabs in U.S. cities is related to the number of zero-vehicle households in the city, subway ridership and airport taxi passenger volumes. These factors better explain the number of taxicabs than does population. [Schaller 2005]

Figure 2.

Ratio of taxicabs to population in cities with 1,300 or more cabs.

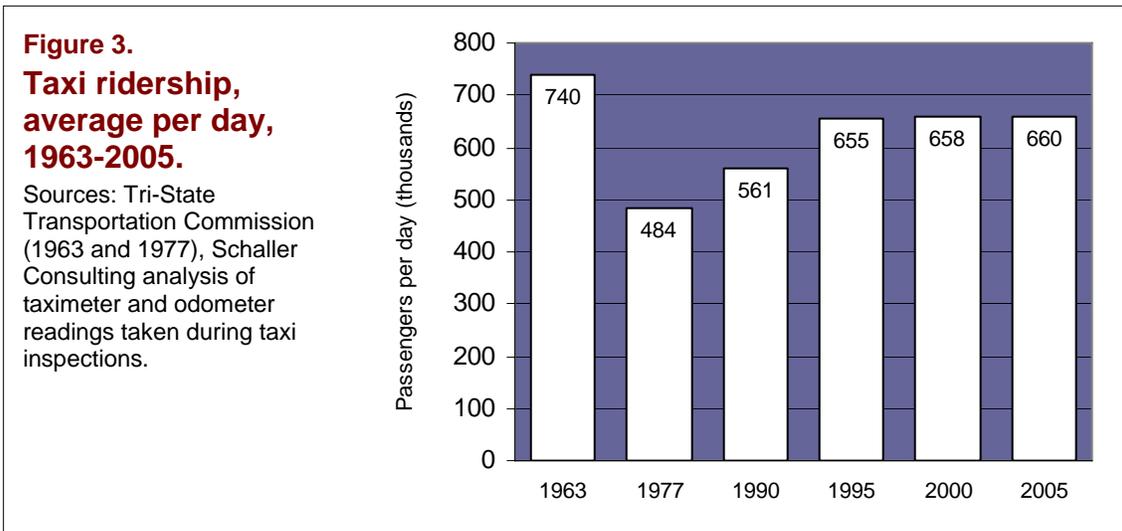
Taxis per 1,000 residents, 2005.

Source: U.S. Census 2004 population estimates



Taxi ridership has followed changes in the economy

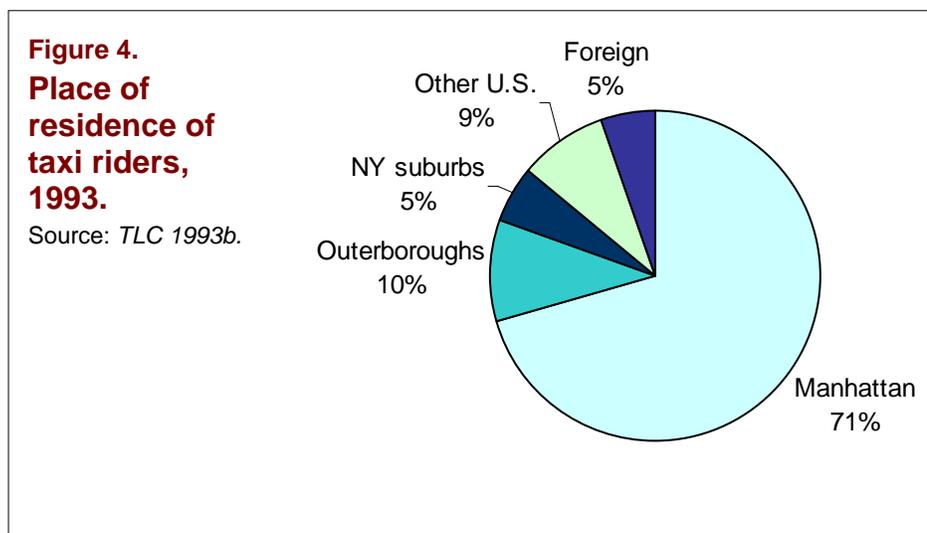
- Taxicab ridership has been fairly stable since 1995 at about 660,000 passengers per day.
- Ridership increased by 35% from the mid-1970s to 1995, spurred by rising demand and increases in cab mileage as single-shifted cabs were moved to double-shift operation.
- Taxicab ridership fell sharply between 1963 and 1977 as New York City went through a deep economic contraction in the 1970s and many fleet cabs were sold to minifleet owners who operated one shift instead of two shifts per day. (See Figure 3.)



Who Takes Cabs and Why

The primary riders are Manhattan residents who are frequent riders . . . ¹

- 71% of all taxi trips transport Manhattan residents. (See Figure 4.)
- Outer-borough residents, suburbanites, U.S. residents from outside the New York area, and foreign visitors each account for between 5% and 10% of all trips.
- 6% of Manhattan residents “always” or “usually” use taxicabs for work trips and 20% “always” or “usually” take cabs for personal trips. [*Schaller Consulting 2002b*]
- An additional 38% of Manhattan residents “sometimes” use taxicabs for work trips and 48% “sometimes” take cabs for personal trips. Thus, two-thirds of Manhattan residents use cabs for work and/or personal trips at least some of the time. [*Schaller Consulting 2002b*]
- Manhattan adults hail a cab an average of 100 times a year.
- 66% of Manhattanites’ taxi trips are between home, work and/or recreational pursuits (i.e., restaurants, entertainment and shopping). Providing quick, convenient, door-to-door service, taxis function as the equivalent of the suburban family car – not surprising given that 77% of Manhattan households do not own a car. [*TLC 1993b and 2000 U.S. Census*]



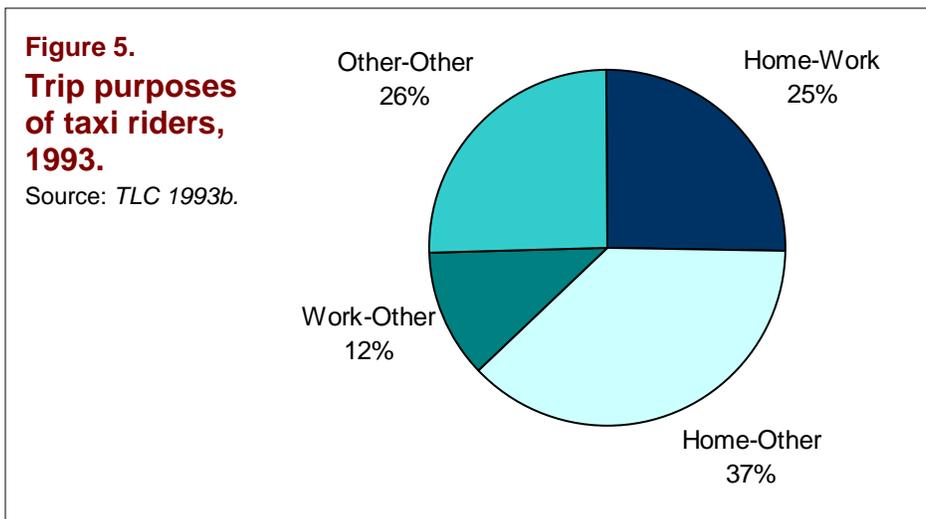
¹ Except as otherwise noted, data in this chapter are from *TLC 1993b*.

... though cabs are equally important to visitors

- There are about 38 million passenger-trips by visitors annually, representing an average of 2.5 passenger trips per overnight visitor.
- Hotel guests average one taxi trip to or from the hotel each day.
- Visitors use cabs primarily to go between hotels, business appointments, entertainment spots, restaurants, bus and train stations and the airports. Trips that are both to and from these places account for 50% of all visitor taxi trips, compared with 15% of all taxi trips.
- The majority of U.S. visitors who ride cabs are in New York on business, while most foreign visitors are tourists.

Trips involving home or work place predominate

- 32% of all taxi trips are destined for the passenger’s home while 19% are going to the passenger’s place of work. Other destinations are entertainment (13%), business appointments (10%), train and bus terminals (5%), shopping (4%), hotels (4%) and medical appointments (2%).
- 25% of trips are between home and work and 37% are between home and non-work locations. (See Figure 5.)
- After 8 p.m., over 50% of all trips are bound for the passenger’s home, generally originating at entertainment attractions or work places.
- 15% of all fares are reimbursed by the passenger’s employer.

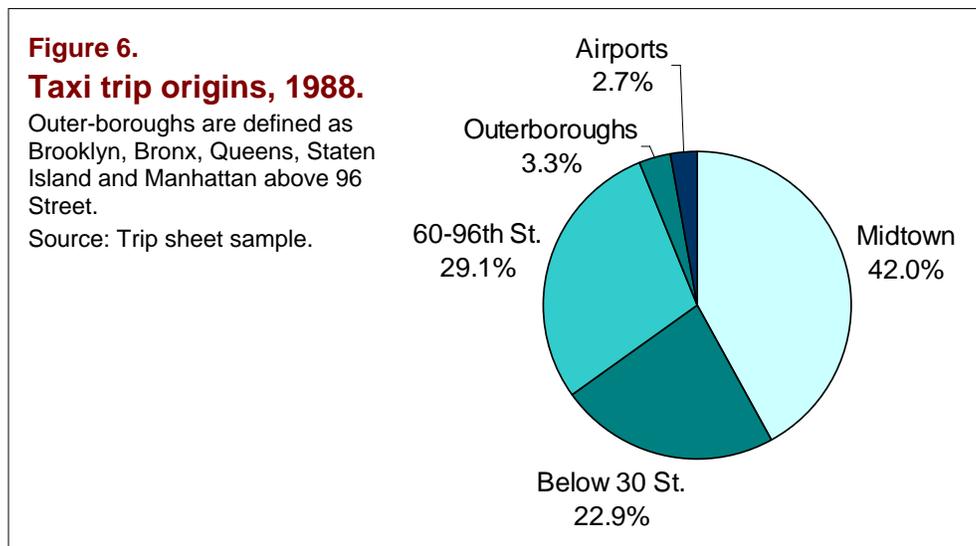


Speed and access are primary reasons to use cabs instead of the subway

- Among New York City residents, the main reasons to take a cab instead of the subway are “how long the trip will take,” cited by 38% of respondents to a survey, and “not being able to get there by subway,” cited by 29%. [Schaller 2000]
- The main reasons to take the subway instead of a cab are cost, cited by 53%, and how long the trip will take, cited by 32%. [Schaller 2000]

Trips center on Manhattan, especially Midtown

- 80% of all taxi trips began and/or ended in the Manhattan business district (60th Street to the Battery, river to river) in 1988. (See Figure 6.)
- 42% of all trips started in Midtown Manhattan (30th to 60th Streets, river to river) in 1988.
- This trip profile was essentially unchanged morning, midday, afternoon and evening in 1988.
- 8% of all taxi trips served the “outer-boroughs” (Brooklyn, the Bronx, Queens, Staten Island or northern Manhattan) in 1988. More than one-half of the outer-borough trips began in Manhattan south of 96th Street. Only 1% of all trips both began and ended in the outer-boroughs.
- 4% of all trips began and/or ended at LaGuardia or Kennedy airports in 1990. (The number of trips to Newark airport was negligible.) [TLC 1991]
- Airport taxi trips have grown significantly since 1990. Although comprehensive data are not available, the number of taxis dispatched from JFK increased 68% from 1996 to 2005. [Unpublished Port Authority of New York and New Jersey data]

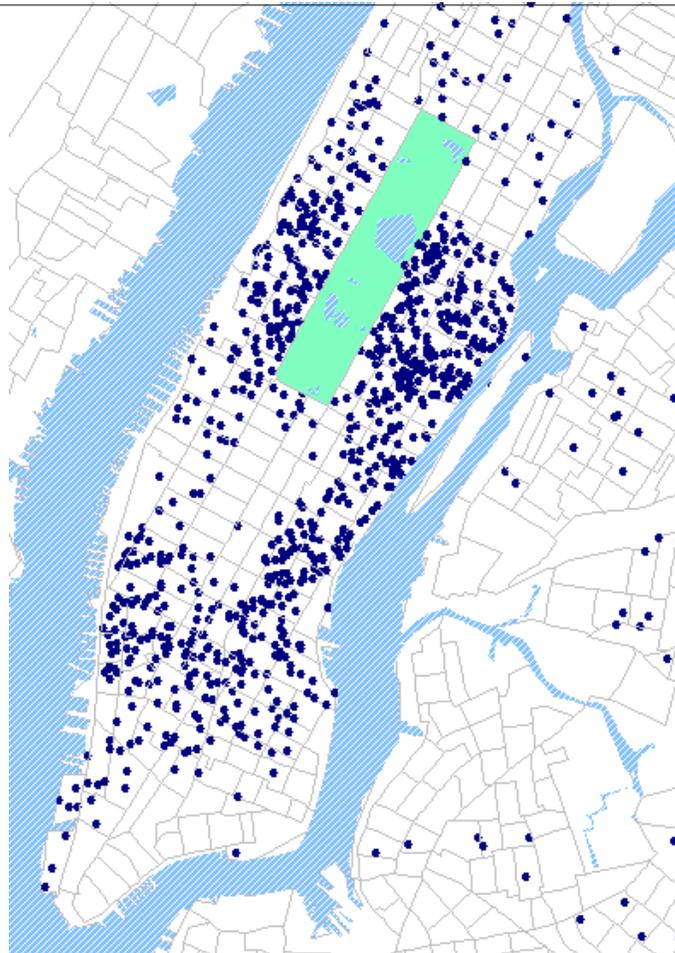


Journey to work by taxicab, 2000

- Commuting to work is the predominant taxi trip purpose during the morning rush hour, accounting for 61% of trip destinations from 7-9 a.m. [TLC 1993b]
- Taxi commuters were concentrated among residents of the Upper East Side and Upper West Side in 2000. (See Figure 7.)
- A substantial number of taxi commuters also live in East Midtown and the Valley (between Midtown and Downtown business districts) as well.

Figure 7.
Place of residence of
workers using taxis
for journey to work,
2000.

One dot = 40 commuters.
 Note that the Census does not include (a) non-work trips, (b) commute trips for workers who only sometimes use cabs to get to work, or (c) trips where main mode to work is other than taxi, e.g., rail or ferry.
 Source: 2000 U.S. Census.



Taxis are a primary way to go to the airports

- 35% of air passengers traveling to LaGuardia Airport came by cab in 2002, as did 23% traveling to John F. Kennedy International Airport. *[Port Authority of New York and New Jersey 2002 Terminal by Terminal Survey]*
- By contrast, 24% of air passengers traveling to LaGuardia used a “limo, executive car or town car” and 22% came by private vehicle. Figures for JFK were 21% by limo, executive car or town car and 27% by private vehicle.
- Taxi ridership departing the airports is much higher – by 50% – than ridership to the airports. Presumably, many people who use other modes to the airport such as for-hire vehicle or private car, take advantage of the convenience of the taxi dispatch lines when leaving the airport. *[The 50% figure is based on a sample of 1990 taxicab trip sheets.]*

Taxi Service Quality

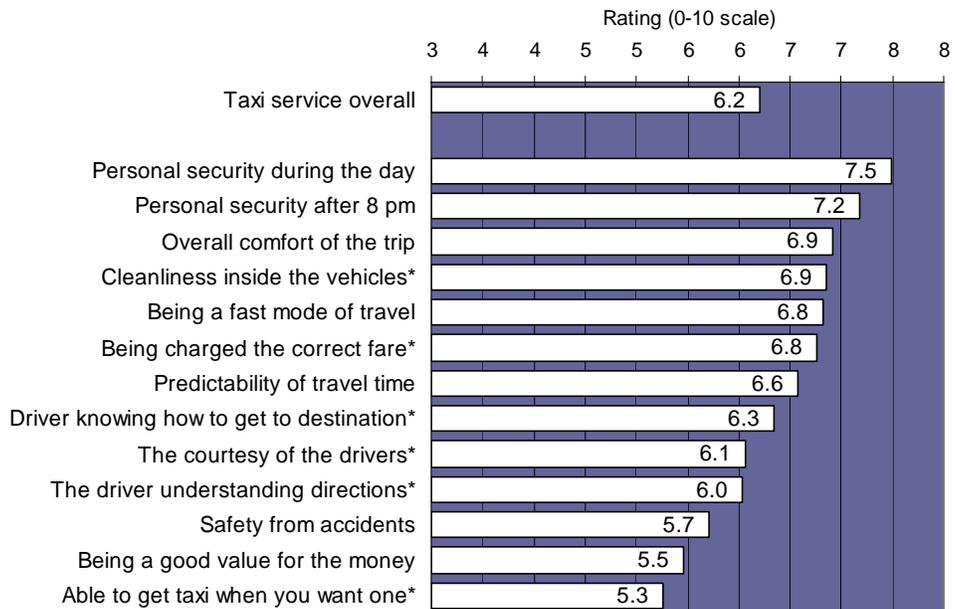
How satisfactory is taxicab service? This chapter reports on service quality based on customer opinion surveys and customer complaints. Results show that taxi service is viewed somewhat less favorably than subway and bus service and much less favorably than the private auto. The data also identify specific service problems with cab availability, safety from accidents, driver courtesy and geographic knowledge and value for the money.

Best aspect of cab service is personal security; worst is cab availability

- New Yorkers gave cab service a 6.2 rating for overall quality of service in 2004, on a scale of 0 (worst possible service) to 10 (best possible service).
- Asked about different aspects of taxi service, taxi riders give the highest ratings to personal security, comfort, vehicle cleanliness, being a fast mode of travel, and being charged the correct fare. (See Figure 8.)
- Taxis receive relatively low ratings for being able to get a cab when you want one, value for the money, safety from accidents, driver understanding of directions and driver courtesy.
- Mid-range ratings are given for predictability of travel time.

Figure 8.
Customer Satisfaction Ratings, 2004.

Overall rating by all respondents; attribute ratings by respondents who had used cabs in past 3 months. Source: New York City Transit Transportation Panel Survey, July-Sept. 2004.



* Rating is from Oct.-Dec. 2000 (these attributes were not asked after early 2001).

Satisfaction with taxi service trails other modes

- Taxis (6.2 rating) were rated below private autos (8.5), subway (7.0), car service (6.9) and local buses (6.7).

Cabs rank fourth or fifth in all major service attributes

- Taxis receive lower ratings than autos on each of seven service attributes and lower than subway, car service and bus on most of the seven attributes. (See Table 1.)
- Taxis are perceived as being a faster mode of travel, with more predictable travel times, than the bus.
- Taxis receive a higher rating than the subway for personal security at night.
- Ratings are much lower for taxis than for other modes for safety from accidents and being a good value for the money.

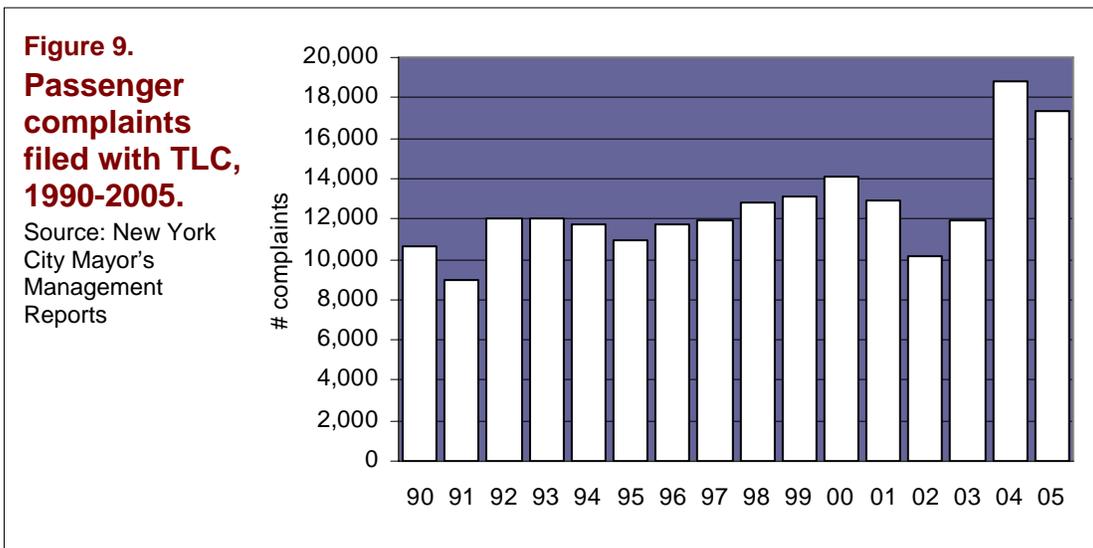
Table 1.
Customer satisfaction ratings, 2004.

Source: New York City Transit Transportation Panel Survey, July-Sept. 2004.

	Over all	Being fast mode of travel	Predictability of travel time	Overall comfort of trip	Safety from accidents	Good value for the money	Personal security during the day	Personal security after 8 p.m.
Private cars	8.5	8.1	7.7	8.9	7.6	7.8	8.8	8.4
Subway	7.0	7.9	7.0	6.9	7.7	7.1	7.6	6.5
Car service	6.9	7.5	7.2	7.7	6.7	6.5	7.9	7.4
Local bus	6.7	6.4	6.4	7.2	7.6	7.1	8.1	7.4
Taxi	6.2	6.8	6.6	6.9	5.7	5.5	7.5	7.2

Over 17,000 passenger complaints to TLC in 2005

- Passengers filed 17,350 complaints with TLC in fiscal year 2005.
- The total number of complaints declined by 8% from fiscal year 2004 to 2005.
- Complaint trends should be interpreted with caution because the number of complaints is subject to changes in the ease of contacting TLC to file complaints as well as changes in the quality of service. Most notably, the number of complaints increased 58% from fiscal year 2003 to 2004 as the city’s 311 system began processing taxi passenger complaints.



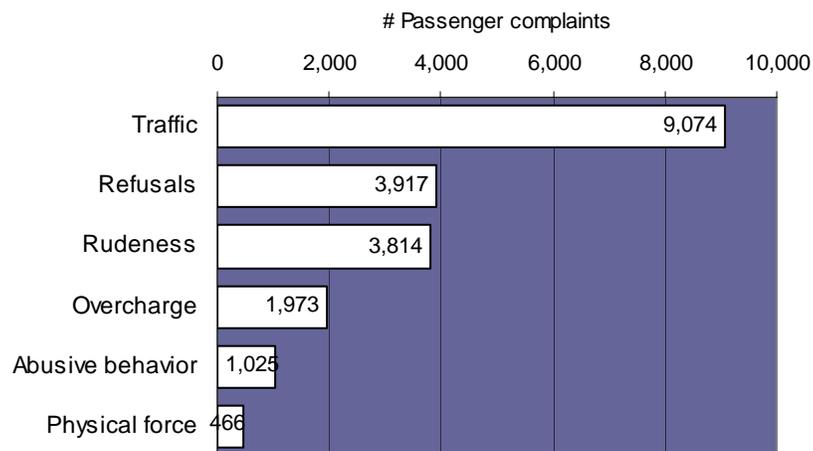
Driver rudeness and traffic violations lead the list of passenger complaints

- In fiscal year 2005, of the 17,350 customer complaints filed, 9,074 complaints were for traffic violations, up 35% from fiscal year 2004. (Note that many complaints involve more than one rule violation.)
- 3,917 complaints were for service refusals, a 23% decline from the previous year.
- 3,814 complaints were for driver rudeness, a 26% decline from the previous year.
- 1,025 complaints were for abusive behavior by the driver.

Figure 10.
Passenger
complaints filed
with TLC, fiscal
year 2005.

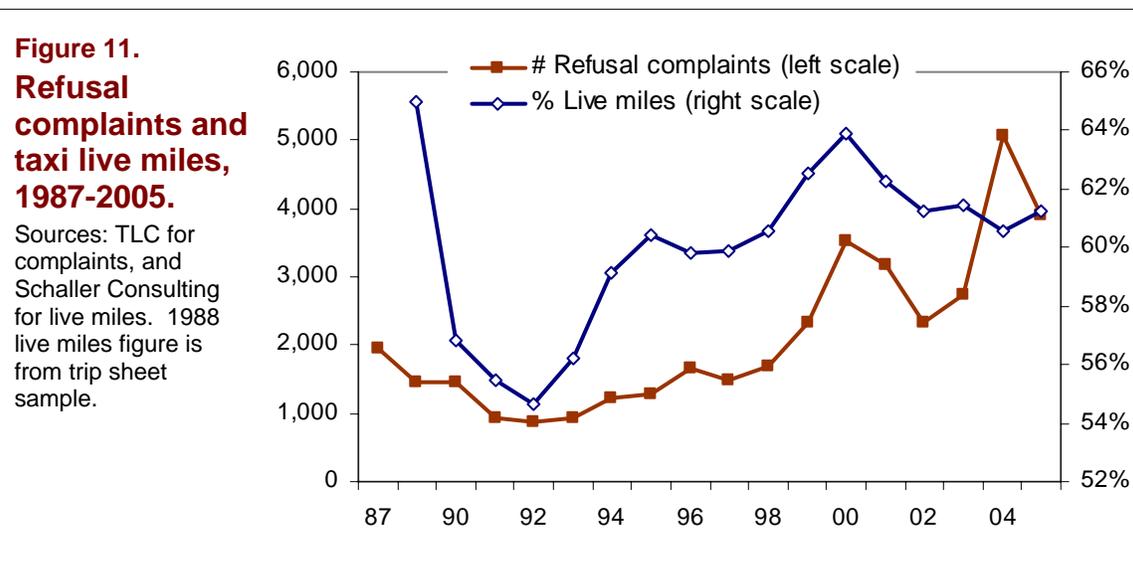
Source: TLC.

*Overcharge figure is for 2002; the 2003 figure is not yet published



Service refusal complaints rise and fall with cab availability

- Both service refusal complaints and live miles (miles with a passenger) declined during the recession in the early 1990s and from 2000 to 2003, also recession years. (See Figure 11.)
- Conversely, during the 1990s economic expansion, service refusal complaints and live miles increased.
- While live time remained stable, refusal complaints increased sharply in 2004; this is in part likely due to the advent of the 311 City information system.
- In a 1993 survey of passengers who had filed a refusal complaint with TLC, complainants thought that financial motivations were the most common reason that they had been refused. Passengers said that drivers do not want to dead-head back from an outer-borough destination, they want to avoid becoming stuck in rush hour bridge or tunnel traffic, or they believe that a trip uptown will be more profitable than a passenger’s desired trip downtown. Although race is often seen as the major cause of service refusals of non-whites, nonwhite complainants pointed to these financial motivations as the reason for drivers’ refusal more often than they cited racial bias.
- The implication of this information is that the ease (or difficulty) of finding passengers is a main reason that some drivers choose to refuse or accept fares. When times are tough, drivers will transport virtually anyone they see hailing a cab. When passengers are plentiful, drivers (or at least some drivers) decide to be more choosy about which trips to take, and as a result, a larger number of passengers are refused service.



Fares

This section has been updated to reflect the increase in the wait time that took effect on November 30, 2006.

How the fare is calculated: The cab fare is \$2.50 for the first 1/5 of a mile and 40 cents per additional unit. A unit is composed of distance (one unit equals 1/5 mile) and/or wait time (one unit equals 60 seconds). As a cab moves at more than 12 mph, the meter clocks distance. When a cab is stopped or is moving at less than 12 mph, the meter clocks time. This method of calculating fares is uniform throughout the U.S. and conforms to federal standards for taximeters.

TAXI FARE	
\$2.50	INITIAL CHARGE
40¢	Per 1/5 Mile
40¢	Per 1 Minutes Stopped/Slow Traffic
\$1.00	Weekday Surcharge 4pm - 8pm
50¢	Night Surcharge 8pm - 6am

There is also a \$1 surcharge for trips beginning from 4 p.m. to 8 p.m. and a 50-cent surcharge for trips starting between 8 p.m. and 6 a.m. Trips between John F. Kennedy International Airport and Manhattan are charged at a flat rate of \$45 plus any tolls. There is a \$15 surcharge for trips to Newark Liberty International Airport.

Short, quick trips are most common

- The average fare (without any surcharges) increased from \$6.85 to \$8.65 as a result of the May 2004 fare increase and to \$9.61 with the increase in wait time in November 2006. Including surcharges and a 15% tip, the average fare is \$11.44 for a 2.8 mile trip with 4.77 minutes wait time.
- The average trip traveled 2.47 miles and took 11 minutes, including 4.6 minutes charged as wait time, in 1993. Trip length increased to 2.8 miles in 2001.
- A typical short trip that stays within Midtown Manhattan averages 1.13 miles with 6.1 minutes waiting time and costs \$6.80.
- A medium length trip, for example from Grand Central Station to Union Square or Greenwich Village, averages 2.19 miles with 5.9 minutes of waiting time, and costs \$8.84.
- A longer trip in medium to light traffic, for example from Tribeca to the Upper East Side, costs \$11.20 for 3.75 miles and 4 minutes of waiting time.
- Airport fares are sensitive to the amount of congestion, which varies widely for different airport trips, and the route chosen (i.e., taking the Triboro Bridge versus the Midtown Tunnel from LaGuardia to Manhattan). Using geographically direct routes, in moderate traffic, fares from Midtown Manhattan to LaGuardia average \$26. Including different traffic conditions and routes, fares between Midtown and LaGuardia are \$23 to \$34. (A flat fare applies for trips between Manhattan and Kennedy Airport.)

Taxi fare has fluctuated in a \$2 range since 1980, adjusted for inflation

- The fare for today’s average trip grew from 83 cents in the early 1950s to \$2.30 in the early 1970s to \$9.61 in 2006. (See Table 2 and Figure 13 on the next page.)
- Adjusted for inflation, the fare has varied between \$7.40 and \$11.63 over the past half century.
- The fare has fluctuated between \$7.65 and \$9.61 over the past 20 years, using today’s dollars.
- Compared with the public transit fare, the taxi fare is at a 25-year high, at 5.8 times the transit fare. (See Figure 12. The 5.2 multiple is based on the \$9.61 average taxi fare and the widely used six-for-five MetroCard bonus. Note that since the two fares are charged on different bases, the ratio varies for actual trips depending on the length of the trip, number of passengers, surcharges and traffic conditions.)

New York’s taxi fare is inexpensive relative to most major U.S. cities

- New York City’s taxi fare for a 2.8 mile trip was eleventh among the 14 U.S. cities with 1,300 or more metered taxicabs, as of early 2006.
- Honolulu (\$12.89 average fare for a 2.8 mile trip), San Francisco (\$10.85), and Miami (\$10.73) led this list. Average fares were \$10.07 in Los Angeles, \$8.66 in Chicago and \$8.07 in Detroit, which had the lowest taxi fare among cities with 1,300 or more metered cabs, as of early 2006.

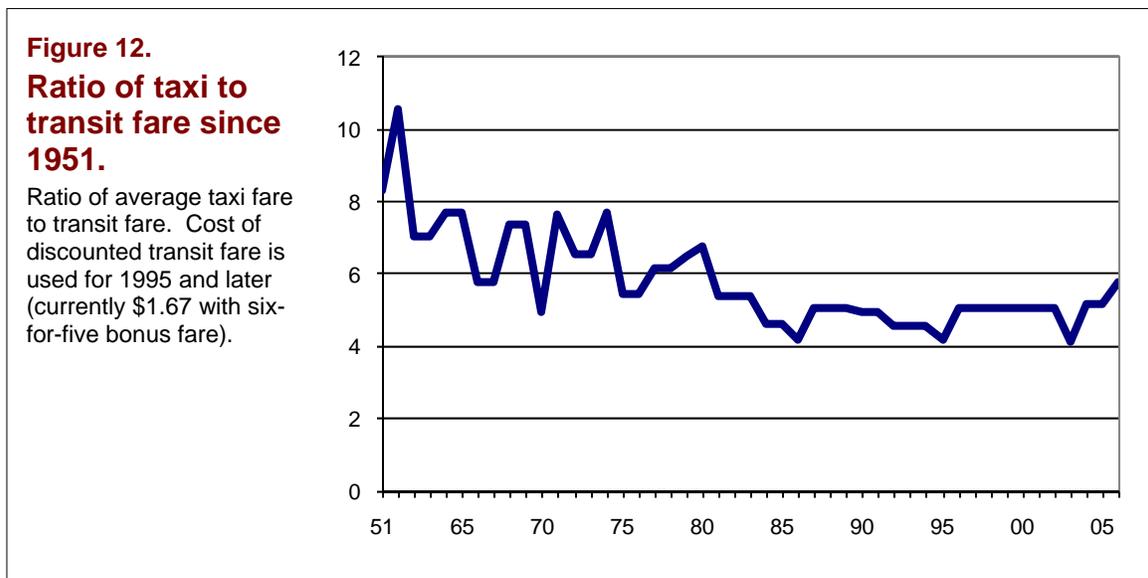


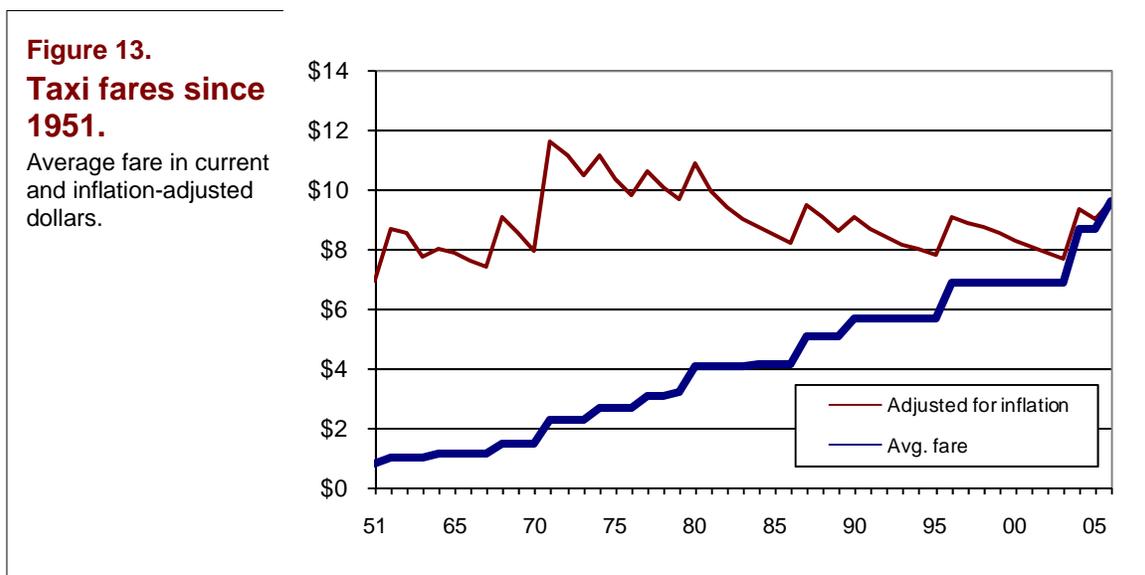
Table 2. Taxi fares since 1952.

	Initial Charge	Mileage Charge	Wait Time	Charge per		Avg. fare
				Mile	Minute	
Before 1952	\$0.20 first 1/4 mi.	\$0.05 per 1/4 mi.	\$0.05 per 2 min.	\$0.20	\$0.03	\$0.83
July 1952	\$0.25 first 1/5 mi.	\$0.05 per 1/5 mi.	\$0.05 per 90 sec.	\$0.25	\$0.03	\$1.06
Dec. 1964	\$0.35 first 1/5 mi.	\$0.05 per 1/5 mi.	\$0.05 per 90 sec.	\$0.25	\$0.03	\$1.16
Jan. 1968	\$0.45 first 1/6 mi.	\$0.10 per 1/3 mi.	\$0.10 per 2 min.	\$0.30	\$0.05	\$1.48
March 1971	\$0.60 first 1/5 mi.	\$0.10 per 1/5 mi.	\$0.10 per 72 sec.	\$0.50	\$0.08	\$2.30
Nov. 1974	\$0.65 first 1/6 mi.	\$0.10 per 1/6 mi.	\$0.10 per 60 sec.	\$0.60	\$0.10	\$2.71
March 1977	\$0.75 first 1/7 mi.	\$0.10 per 1/7 mi.	\$0.10 per 60 sec.	\$0.70	\$0.10	\$3.09
July 1979	\$0.90 first 1/7 mi.	\$0.10 per 1/7 mi.	\$0.10 per 60 sec.	\$0.70	\$0.10	\$3.24
April 1980	\$1.00 first 1/9 mi.	\$0.10 per 1/9 mi.	\$0.10 per 45 sec.	\$0.90	\$0.13	\$4.06
July 1984	\$1.10 first 1/9 mi.	\$0.10 per 1/9 mi.	\$0.10 per 45 sec.	\$0.90	\$0.13	\$4.16
May 1987	\$1.15 first 1/8 mi.	\$0.15 per 1/8 mi.	\$0.15 per 60 sec.	\$1.20	\$0.15	\$5.08
Jan. 1990	\$1.50 first 1/5 mi.	\$0.25 per 1/5 mi.	\$0.25 per 75 sec.	\$1.25	\$0.20	\$5.70
March 1996	\$2.00 first 1/5 mi.	\$0.30 per 1/5 mi.	\$0.30 per 90 sec.	\$1.50	\$0.20	\$6.85
May 2004	\$2.50 first 1/5 mi.	\$0.40 per 1/5 mi.	\$0.40 per 120 sec.	\$2.00	\$0.20	\$8.65
Nov. 2006	\$2.50 first 1/5 mi.	\$0.40 per 1/5 mi.	\$0.40 per 60 sec.	\$2.00	\$0.40	\$9.61

Surcharges and flat fares:

- A night surcharge, applying to trips beginning between 8 p.m. and 6 a.m., was added in May 1981. The surcharge was rescinded in January 1982 for all but the 2,300 fleet cabs. The 50-cent night surcharge was extended to the entire industry in May 1987.
- \$1 surcharge for trips beginning between 4 p.m. and 8 p.m. was added in May 2004.
- A \$30 flat fare from JFK airport to Manhattan was adopted in January 1996 and increased to \$35 in 2001 and \$45 in 2004. The flat fare was extended to trips from Manhattan to JFK airport in 2006.
- Surcharge for trips to Newark Airport was increased from \$10 to \$15 in 2004.

Average fare based on 2.8 mile trip with 4.77 minutes of wait time.

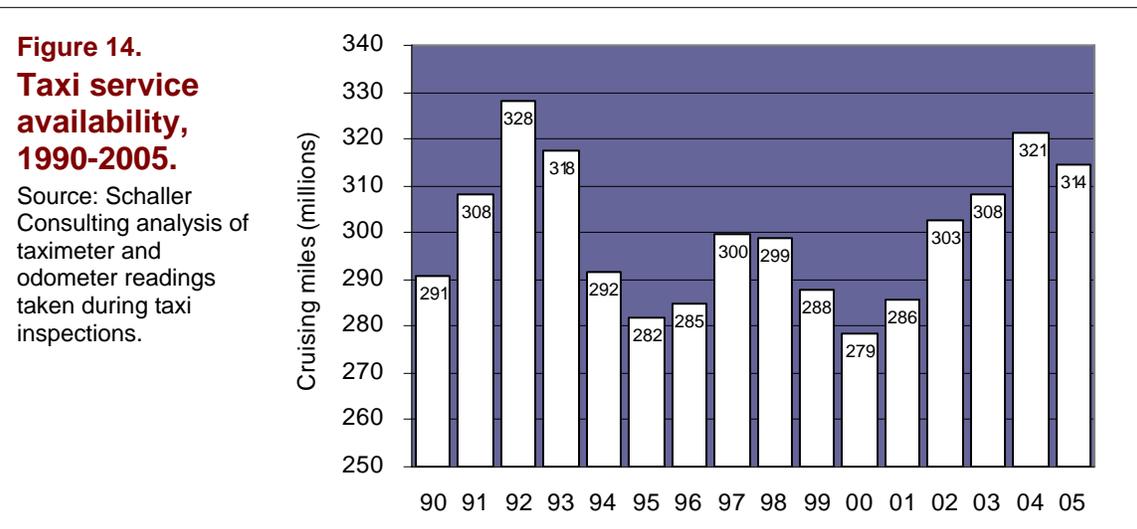


Taxi Service Availability

Cab availability has fluctuated with the economic cycle

One measure of taxi service availability is “cruising miles,” or mileage operated without passengers. An increase in cruising miles means that a person standing on a street corner is more likely to encounter an available cab. Similarly, a decrease in cruising miles signals a decrease in service availability.

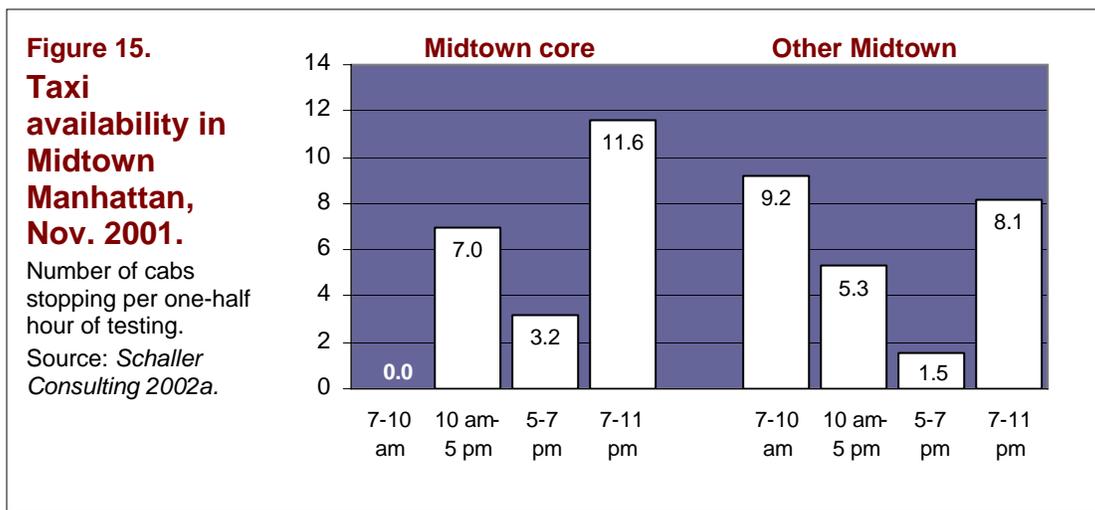
- 39% of total cab mileage, a total of 314 million miles, was spent cruising for passengers in 2005. (See Figure 14.)
- Cruising miles increased 15% from 2000 to 2004, due to lesser demand for taxi service during the recession as well as after the 2004 fare increase, and increases in the number of cabs and in mileage per cab.
- Cruising miles declined in 2005 primarily because of increased demand for service and slightly lower mileage per cab after the May 2004 fare increase.
- Taxi service availability, measured by taxi cruising mileage, fell by 15% from 1992 to 2000 as an expanding economy fueled greater demand for taxi service, leaving fewer cabs available for street hail.
- Cruising miles increased 13% in the recession from 1990 to 1992.



Cabs were scarce even in November 2001

A second method of measuring taxi availability is to try hailing a cab at a representative sample of locations. The following data are based on how many cabs stopped for testers attempting to hail a cab at randomly selected locations in Midtown Manhattan in November 2001. Results are expressed as the number of cabs stopping for each one-half hour of testing.

- 5.6 cabs stopped per one-half hour of testing, or one cab every 5.4 minutes, in Midtown Manhattan.
- In the Midtown core (40 St. to 60 St., Park Ave. to Sixth Ave.), no cabs stopped during the morning rush hour and only 3.2 cabs stopped per one-half hour during the evening rush hour. (See Figure 15.)
- Cabs were more readily found during midday hours (7.0 cabs stopped per half hour) and in the evening (11.6 cabs stopped per half hour of testing).
- In other parts of Midtown, cabs were scarce in the evening rush hour and relatively easy to hail the rest of the day.
- 4.7 cabs stopped for hailers on the Upper East and Upper West Sides during the morning rush hour (7-10 a.m.)
- 3.3 cabs stopped per half hour on Saturday nights in the Theatre District.



Availability is product of demand and supply changes

- Service availability changes at virtually the same rate as industry-wide mileage, meaning that a 10% increase in mileage produces a 10% increase in available miles. *[Schaller 1999]*
- Economic activity also strongly affects availability; a 10% increase in economic activity, measured by employment at Manhattan eating and drinking places, produces a 10% decline in available miles. (Changes in eating and drinking place employment reflect changes in social, recreational and business activity in Manhattan.)
- Availability increases when the taxi fare increases; a 10% increase in the fare (in real dollars) produces a 2.7% increase in available miles.

Part II. Development of the NYC Taxi Industry

Early years¹

- New York City's gasoline-powered taxi industry originated in 1907 when Harry N. Allen fielded 65 French-imported automobiles. Providing faster service and using mechanical meters to more accurately compute the fare, the new service quickly replaced horse-drawn hansom cabs. With cab stands at major hotels, Allen quickly expanded to 700 cabs.
- Allen left the taxi business in 1908 in the wake of a bloody seven-week drivers strike. His innovations caught on, however, as did a new word he coined – *taxicab*. Allen derived this word from the French “taxi-mètre,” which referred to mechanical devices for measuring a fare or tax.
- Even without Harry Allen, the taxi industry grew quickly to 15,000 vehicles in 1923, led by several large fleets such as Checker (3,750 taxis), Yellow (3,000 taxis) and the National Transportation Company (1,500 cabs).
- Many of the companies operating taxi fleets in New York City also operated fleets in other cities, often as a way for vehicle manufacturers to sell their automobiles in a highly competitive market. Morris Markin's Checker Cab Manufacturing Company, for example, established fleets in New York, Chicago, Pittsburgh and Minneapolis. John D. Hertz, who started out as a car salesman and is best remembered for his auto rental agency, formed Yellow Cab Company to manufacture cabs and operate fleets in Chicago, Kansas City and Philadelphia as well as New York. Hertz painted his cabs yellow after he read a University of Chicago study that found yellow to be the most visible color at greater distances.
- During the 1920s and 1930s, easy entry into this all-cash business led to an oversupply of taxis, resulting in traffic congestion, fare-cutting wars, low driver wages, inadequately insured vehicles, and other unsafe and sometimes illegal activities. The Great Depression created an influx of unemployed workers which worsened these problems, with the number of cabs spiraling to 21,000 in 1931.
- To deal with illegal activities such as cheating, hustling, false advertising, stealing and extortion, the taxi industry was placed under police control in 1925.
- To address problems of oversupply, in 1937 the City Board of Aldermen enacted an ordinance sponsored by Alderman Lew Haas that froze the number of taxi licenses at 13,595, the number then outstanding. New York thus joined Chicago, Boston, Philadelphia, Baltimore and other cities in placing a cap on the number of taxicabs. Most of these cities did not issue new taxi licenses for 50 years or more.

¹ Source for this section is *Gilbert and Samuels 1982*.

- Also in 1937, the Transport Workers Union won recognition and negotiated contracts with 28 fleets. TWU representation only lasted two years, however, and attempts by others, including John L. Lewis' United Mine Workers, also collapsed. *[Gilbert and Samuels 1982; Rogoff 1980]*
- Initially, the Haas Act had no impact on the industry's size. Taxi companies continued to let permits lapse until, by the late 1940s, there were fewer than 12,000 active licenses. The outstanding licenses included 6,800 fleet-operated cabs and about 5,000 individually owned and driven cabs.

Post-World War II boom and controversy

- The Haas Act cap remained in place throughout the post-World War II era with one exception. In 1945, following provisions of an ordinance adopted by the City Council, 183 additional medallion licenses were issued to returning veterans who had given up their medallions during the war. These licenses were nontransferable and reverted to the City when the driver retired. As late as 1962, 141 of these veteran's medallions were still in use. *[New York Times, May 16, 1962]*
- Until 1954, New York City required that taxicabs seat five passengers behind the driver and have a trunk-mounted luggage rack. Also required was a grill in the trunk to prevent carriage of dead bodies. Only Checker, Desoto and Packard had models that fulfilled the "jumbo" vehicle requirements. New York City allowed smaller vehicles in 1954, eventually leading to the demise of large vehicles. *[Gilbert and Samuels 1982]*
- Throughout the 1950s and 1960s, demand for taxicab service grew even though the number of cabs was still below its Depression-era level. As demand grew, "live time" on a 10-hour shift, which had fallen from 3.2 hours in 1930 to 1.7 hours during the 1930s, rose to 4.8 hours in 1949, 5.7 hours in 1961 and 5.9 hours in 1967. *[Rogoff 1980]*
- The cap on licenses became an impediment to the taxi industry's ability to meet New York's growing transportation needs. With the post-war boom, taxi drivers increasingly serviced Manhattan's growing demand, with Manhattan-originating trips accounting for 77.7% of all trips in 1963. *[Tri-State Transportation Commission, 1963 Taxi Trip Survey]* In Brooklyn, Queens and the Bronx, cab service became scarce.
- The Haas Act authorized the City to issue additional licenses based on an evaluation of the need for more cabs. Through the 1960s, the Police Department's Hack Bureau periodically conducted these evaluations. Each time, however, the police concluded that no additional cabs were needed. The provision for issuing additional licenses was removed from City law in 1971.

Concentration of taxis in Manhattan led to creation of neighborhood car services

- To fill the need for cab service in the boroughs outside Manhattan, neighborhood car services, or liveries, began to operate in New York City's lower-income neighborhoods. Though not regulated by the City government, these operations were legal provided they operated only by prearrangement.
- Liveries were a source of contention from their birth. While many elected officials defended them as community businesses providing needed transportation, the taxi industry attacked them as unregulated, unsafe, and encroaching on taxis' rights.
- Despite controversy, the new car service industry grew rapidly. The number of car service vehicles increased from 2,500 in 1964 to 9,300 in 1971. Thus, in 1971 the number of taxis and liveries combined (21,000) matched the previous high tide of the industry exactly four decades earlier. (See Table 3 at the end of this chapter.)
- In part to address livery issues, the City Council in 1971 created the Taxi and Limousine Commission, although the TLC did not finally gain clear jurisdiction over "for-hire vehicles" until 1987.

The Taxi and Limousine Commission

The Taxi and Limousine Commission was created in 1971 by City Council legislation to regulate and improve taxi and livery service in New York City and establish overall transportation policy governing these services.

As a city agency regulating a private industry, TLC licenses 42,900 taxicab drivers and the owners of the 12,779 taxicabs. TLC also licenses 37,000 for-hire vehicles and the 750 base stations from which they operate and smaller numbers of paratransit (wheelchair-accessible) vehicles and commuter vans, as well as the drivers of these other classes of vehicles. (For additional information about the livery industry see www.schallerconsult.com/taxi/taxifb.htm)

TLC has four basic duties: to enact regulations (including setting the taxi fare), issue licenses, inspect vehicles used as taxicabs and enforce local laws and regulations. TLC establishes licensing standards for drivers and owners and driver training requirements, inspects each taxicab three times a year; investigates passenger complaints; adjudicates summonses for rule violations; and imposes fines, suspensions and revocations where appropriate. The agency has 450 employees to carry out these duties.

Taxicab rules and other regulatory information can be found on TLC's web site: www.nyc.gov/taxi.

Street enforcement of taxicab rules and laws is assigned to the NYC Police Department's Taxi Unit.

TLC regulations are set by nine commissioners: a salaried chairman and eight unsalaried members. Five members are appointed at the recommendation of the City Council and represent the boroughs of the city, thus maintaining a role for the City Council in taxi regulation. The other four members are appointed by the Mayor, who also designates the Chairman. The Chairman is the full-time executive head of the agency.

Economic forces and the rise of leasing shaped fragmentation and reconsolidation of taxi operations

- Economic recession in the 1970s led to sharp declines in demand for taxi service. About 75% of the taxi fleets, which overall owned 6,800 of the city's taxis, sold their medallion licenses to individual, non-unionized drivers. The number of fleets declined from more than 75 in the mid-1960s to 19 fleets in the 1980s that operated only 1,900 cabs.
- Liquidation of the fleets drove medallion prices to bargain-basement levels. In the midst of the sell-off and a sagging local economy, fleet medallion prices hit a low of \$10,000 in 1971 compared with a peak of more than \$30,000 in the mid-1960s.
- The fleet medallion licenses were sold to small operators, dubbed "minifleets." Minifleets consisted of two taxicabs and two partners, each of whom drove one of the cabs. Operationally, minifleets looked and acted like individual owner-drivers. This meant that by the late 1970s medallion licensees drove close to 9,400 cabs. The surviving fleets operated the remaining 2,400 of the 11,787 cabs in 1979. *[Rogoff 1980]*
- In 1979, TLC rescinded the prohibition on "horse-hire" and permitted taxi owners to lease cabs to drivers. Under leasing, drivers pay a flat per-shift fee and keep fares and tips above the lease fee and cost of gasoline. Leasing was phased in, applying only to newly hired fleet drivers. But by the mid-1980s, nearly all drivers (except owner-drivers) were lessees.
- Minifleet as well as fleet owners began to lease their cabs to drivers in the early to mid-1980s. Leasing offered minifleet owners the opportunity to realize income not only from their own driving but from the labor of other drivers. Some minifleet owners plowed their profits back into the industry, steadily buying up minifleet medallions. Eventually, some of these original minifleet owners formed fleets. Others, seeing the financial opportunities afforded by long-term leasing, steadily increased the size of their operations and became today's leasing agents. The minifleet as it was known in the 1970s and early 1980s had significantly shrunk by the late 1980s. Today, the original minifleet form of operation is virtually extinct.
- In the early 1980s, individual owner-drivers also began to lease out their cabs. Owner-driving of individual cabs declined from 100% in the 1970s to 76% in 1992 and 63% in 1998. This figure rebounded to 66% in 2005 as a growing number of cabs came under the TLC rule that the owner must drive individually owned medallions transferred since January 1990. Even with this rule, however, leasing has grown among individually owned medallions; 39% of individual owner-driven cabs were also leased for a second shift in 2005, up from about 10% in 1992.

Taxi radio services lead to creation of the black car industry

- Starting in the mid-1960s, some taxi owners (mostly owner-drivers) formed radio associations and began serving customers by telephone prearrangement as well as by traditional street hail. The number of radio cabs grew steadily, reaching 1,700 cabs in 1973 and 3,200 cabs in 13 radio associations in 1982. [*New York Times*, June 17, 1973; *Mayor's Committee 1982*]
- Radio service was provided to passengers who simply telephoned in a service request and paid the meter fare in cash and to businesses who had accounts with the radio group. Business-account trips were concentrated in the evening, as businesses provided workers with free transportation home. [*Hale Russell 1979*] As of 1979, 25% of radio cabs' overall time was devoted to serving business accounts and 12% to cash-paid radio calls. [*Cambridge Systematics 1979*] Radio work proved popular with drivers because it provided a regular flow of business and, in the drivers' view, prearranged trips posed less of a safety risk than street hails.
- The growth in radio work created a problem for passengers trying to hail cabs from the curb. Since the number of taxis was capped, hailers grew increasingly frustrated at lines of cabs passing by with their roof lights indicating "on radio call." To address this problem, TLC first allowed and then mandated that radios be moved from medallion to nonmedallion cars. The first radios were transferred in March 1982 in two companies, Intaboro and Dial. The transition of radios out of yellow cabs was completed by March 1987.
- In converting to nonmedallion radio cars, taxi owner-drivers generally bought and drove luxury black cars. They either leased their medallion cabs to other drivers or sold the taxicab license.
- To serve the booming business community in the 1980s, the original black car companies grew and additional companies were formed as offshoots of existing companies or from scratch. By the early 1990s, about 8,000 cars were licensed to 45 black car companies. In 2005, there were 10,400 black cars operated out of 72 bases.

Figure 16. Changes in taxi operations.



For drivers, first unionization, then greater independence and responsibility but lower earnings

- In the 1950s and 1960s taxi drivers sought to benefit from the industry's rising profitability. They were aided by City officials who tied each fare increase during these decades to increases in driver commissions. In the early 1950s, fleets increased the commission percentages paid to drivers from 42.5% to 44% and then to 45% to gain support for a fare increase finally adopted in 1952. *[Rogoff 1980]*
- In the 1960s, further increases in commissions and driver benefits were linked to fare increases. Between 1965 and 1976, labor costs rose from about 45% to nearly 58% of bookings. *[Rogoff 1980]*
- With Mayor Robert F. Wagner's support, Electrical Workers Union and Central Labor Council head Harry Van Arsdale led a unionization drive, and in 1965, won the right to organize 82 fleet garages. *[Rogoff 1980]*
- The sell-off of fleet medallions to non-unionized minifleet drivers combined with the later advent of leasing among fleets to dramatically weaken the union in the 1970s and 1980s. The union held on as a remnant of its former self until 1997.
- Leasing assured fleets of a pre-determined income for each shift worked. Leasing also allowed fleets to drop employee benefits which drivers had previously enjoyed, including health and pension benefits, employer contributions to Social Security, scholarships, legal services, unemployment insurance and disability insurance. (Under State law, drivers must be covered by workers compensation.)
- Accounting for both cash income and the value of these benefits, lease drivers earned less in 1986 than did commission drivers in 1981, after adjusting for inflation.
- With incomes falling and then stagnant, taxi driving became a transient job filled by an ever-changing mix of immigrants from over 80 countries.
- Many drivers are attracted to the industry by the greater independence of leasing versus the old commission system. But their incomes also vary more as passenger demand changes from day to day.

New licenses issued in the 1990s

- In 1987, at the urging of Mayor Edward I. Koch, the City Council approved legislation permitting the Taxi and Limousine Commission to issue up to 1,800 additional taxi medallion licenses. The Council required that TLC first study the effects of issuing more medallions through an environmental impact statement (EIS). The EIS, completed in 1989, concluded that only 400 additional cabs could be put on the road without violating clean air rules. The Taxi and Limousine Commission, however, voted down a proposed regulation to issue 400 medallion licenses, which would have been nontransferable and issued by lottery to drivers with good records.

- The issue was revived during the City’s fiscal crunch in the early 1990s. Drawing on the 1989 EIS, the City gained State Legislative approval to auction 400 new medallions as a money-raising measure.
- The 400 new medallions were issued through three sets of auctions in 1996 and 1997. The auctions set record-high prices and raised about \$85 million for City coffers. Bidders were attracted to the “clean” medallions – there being no chance that a claim from past accidents would come forward after the sale.
- A second set of auctions were authorized in early 2004 after the TLC completed a new EIS. A total of 900 new medallions will be issued from 2004 to 2006. Auctions in April 2004 set record prices. In October 2005 the average price was \$392,900 for corporate and \$339,200 for individual medallions – in line with the market price of existing licenses. Separate groups of medallions for use on accessible vehicles and alternative fuel vehicles were also auctioned. Both groups fetched lower prices: \$275,300 for accessible medallions and \$222,700 for alternative fuel medallions.

Regulatory changes aimed to upgrade service

- Under a succession of TLC chairmen (and one chairwoman) since the mid-1980s, TLC adopted regulatory initiatives and reforms to address numerous problems in the industry.
- Initiatives raised the level of insurance coverage; required that only new cars be placed into service as cabs; set a vehicle replacement cycle of three to five years; implemented strict thrice-annual inspections on each vehicle at a centralized inspection facility in Queens; expanded driver training and added an English as a Second Language component; adopted rules to suspend or revoke licenses of drivers who persistently violate TLC rules or traffic laws; required that newly transferred individually owned cabs be driven by the owner; capped lease fees charged by owners; and required safety partitions or cameras inside cabs and trouble (alert) lights on the exterior to enhance driver safety.
- Some initiatives were later retracted. “Talking taxi” announcements, in which various celebrity voices reminded passengers to buckle up at the start of the trip and take their luggage and a receipt at end of the trip, were removed in 2002 after analysis showed no change in seat belt usage, and many customers and drivers objected to the grating voices. A one-year pilot program for in-taxi TVs featuring programming and advertising was ended in August 2003.

Taxicabs in the early 21st Century

- Taxicabs and liveries continue to be a vital source of transportation for New Yorkers. Together, the taxi and livery industries operated 46,000 vehicles in New York City in 2006, up from 39,000 in 1992 and 21,000 in 1971. (See Figure 17 and Table 3 on following pages.)

- Newer vehicles, increased driver experience and higher driver earnings form a foundation for providing taxi customers with a high quality riding experience. Yet satisfaction with taxicab service lags behind satisfaction with other forms of transportation, providing a continuing challenge for both the industry and its regulators.
- An emerging issue concerns use of technology in cabs. TLC has mandated that all taxis accept credit and debit cards, install monitors that will show passengers their current location and install location tracking devices that will aid in recovery of lost property. While promising new service features for passengers, these initiatives pose considerable implementation challenges. [See Schaller Consulting, 2005]
- Addressing both vehicle issues and the “taxi system,” a non-profit group, Design Trust for Public Space, is convening auto designers, auto manufacturers and taxi industry representatives to redesign the New York City taxicab. Prototypes will be shown at the 2007 New York Auto Show as part of a celebration of the 100th anniversary of the first gasoline-powered taxicabs in New York City.

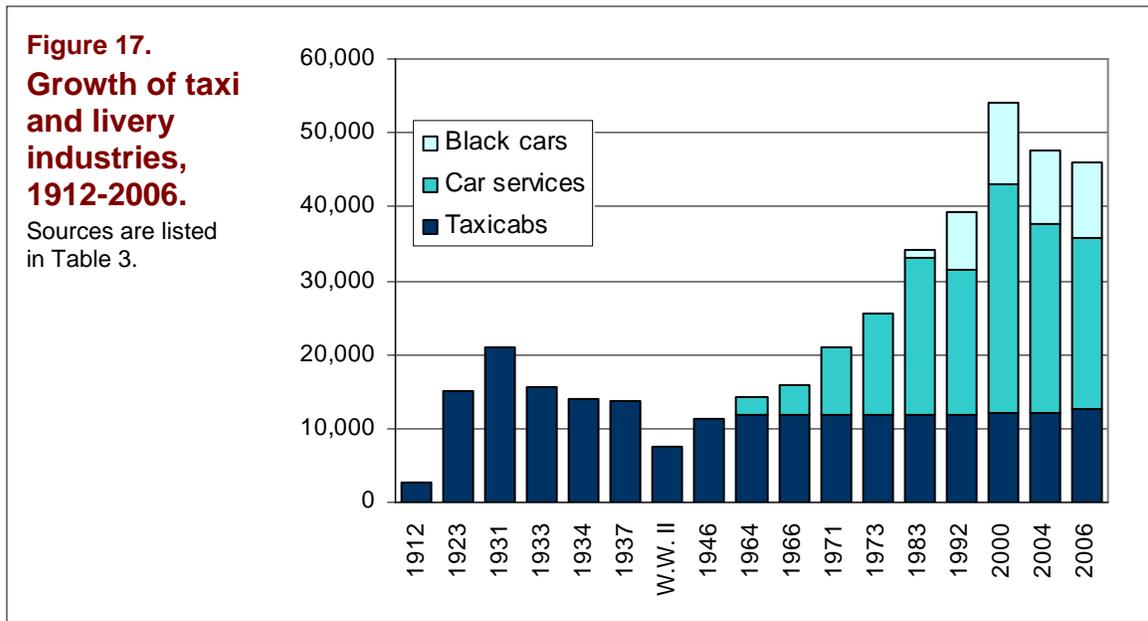


Table 3. Growth of taxi and livery industries, 1907-2006

	Total Taxi and Livery*	Taxicabs	Car services	Black cars	Limousines	"Gypsy cabs"
1907	65	65				
1912	2,800	2,800				
1923	15,000	15,000				
1931	21,000	21,000				
1933	15,500	15,500				
1934	14,000	14,000				
1937	13,595	13,595				
During WW II	7,500	7,500				
1947	11,414	11,414				
1964	14,300	11,787	2,500			
1966	15,800	11,787	4,000			
1971	21,100	11,787	9,300			4,400
1973	25,500	11,787	13,700			
1983	34,200	11,787	21,300	1,080		14,000
1992	39,400	11,787	19,600	8,000	1,600	
May 1996		11,920				
Oct. 1996		12,053				
Sept. 1997		12,187				
2000	54,000	12,187	30,800	11,000	3,100	
2002	50,900	12,187	27,400	11,300	4,500	
2004	47,900	12,487	25,500	9,900	3,600	
2006	46,000	12,779	22,900	10,400	4,200	

*Includes medallion taxicab, car services and black cars. Does not include "gypsy cabs" or limousines.

Car services refers to for-hire vehicles serving neighborhoods around the city, primarily on a cash basis. Black cars refers to executive sedans primarily charging corporate accounts. Limousines charge by the hour and seat up to nine passengers. "Gypsy cabs" refers to vehicles not licensed to work for-hire and picking up street hails.

Car service and "gypsy cab" figures are estimates for 1964-83.

Car service, black car and limousine figures in 1992 and since 2000 reflect the number of licensed vehicles. The shift to biannual licensing has somewhat inflated the number of licensed FHV's since 2000 as compared with earlier years, as a larger number of licenses are no longer used but had not yet officially expired.

Sources: *Gilbert 1980, Rogoff 1982; Mayor's Study Panel 1966; Urbitran Associates 1984; New York Times, March 20, 1949; TLC licensing records.*

Part III. The Taxi Industry

Who Owns and Runs Cabs

Diversity in operations developed over 30 years

While all 12,487 taxis serve passengers in basically the same way, cabs are operated in a wide variety of ways. The diversity of operations has grown and evolved over the past three decades.

Prior to the early 1970s, cabs were operated in one of two ways. Taxis with individually owned licenses were driven by the medallion owner. Fleet cabs were dispatched each shift out of central garages that operated anywhere from 25 to several hundred cabs.

Today, taxis are operated in three basic ways:

- **Owner-operators**, where the taxi license holder (medallion owner) also drives the taxicab. Four in ten owner-drivers lease their cabs to other driver(s) for a second shift.
- **Fleet-type operators** that dispatch cabs from a central garage, leasing to drivers by the shift. Drivers pay a lease fee for each shift they work and return the cab to the garage at the end of the shift. Some of these operators are officially recognized by TLC as fleets, others are recognized as “agents” and operate in essentially the same way.
- **Long-term leasing**, run by companies that lease cabs to drivers for periods of months. Drivers pay a weekly lease fee and retain day-to-day control of the car. Typically, the cab is leased to two drivers who arrange to pass the vehicle back and forth at the end of each 12-hour shift.

In practice, many fleet and fleet-type operators lease cabs both by the shift and long-term. It is also notable that many long-term lessors and even fleets are not actually the medallion owner. In these cases, the medallion owner contracts with a leasing company or fleet to operate the cab on the owner’s behalf.

TLC requires that individually owned cabs be driven 210 shifts per year by the medallion owner, for licenses transferred since 1990.

TLC requires that owners (or agents) who lease long-term submit drivers’ names to TLC. These drivers are called “named drivers.” Generally speaking, lower insurance rates apply to these drivers since the insurance company can check the drivers’ accident records. (Named drivers had been listed on the rate card, or vehicle license, in the cab for enforcement purposes, but this practice was recently discontinued.)

Fleets and agents who dispatch on a shift basis operate with “unspecified drivers.” Any licensed driver may drive the cab, affording the fleet latitude in dispatching drivers.

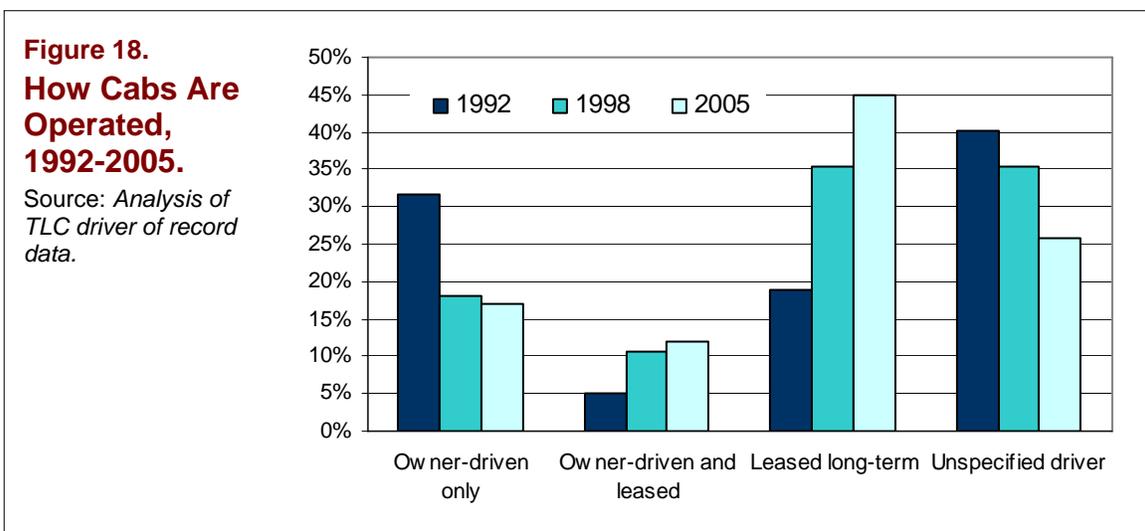
Owners or agents may and sometimes do elect “unspecified driver” status but lease the cab on a long-term basis.

Two-thirds of cabs are exclusively leased; one-third are owner-driven

- In 2005, 3,730 taxicabs (29%) were driven by the medallion owner. Forty-one percent of these cabs were also leased for a second shift to other driver(s).
- 2,116 cabs (17%) were operated by 15 TLC-recognized fleets; 70% of these cabs were operated on an “unspecified driver” basis, meaning they could be leased by the shift or long-term.
- 5,740 cabs (45%) were operated by 46 TLC-registered “agents.” Of these, 25% were operated on an “unspecified driver” basis and 75% through long-term leases.
- 1,210 cabs (9%) were leased by owners who were not registered as agents.

As taxi operations are consolidated, large agents/fleets now operate 6,400 cabs

- 25 agents or fleets operate 100 or more taxicabs and together operate a total of 6,400 cabs. By contrast, large agents and fleets operated 5,730 cabs in 2003.
- The largest fleets are Team Systems Corp., which operates 391 taxicabs, and Ronart Leasing Corp., which operates 325 cabs.
- The largest agents are All Taxi Management Inc. (which operates 812 cabs), S&R Medallion Corp. (397 cabs), Transit Systems Ltd. (390 cabs), Woodside Management Inc. (353 cabs), Queens Medallion Leasing Inc. (343 cabs), Mystic Leasing Service Corp. (267 cabs), Green Apple Management (231 cabs) and Yellow Cab SLS Jet Management (231 cabs).
- Most fleets and agents are located in Queens (primarily Long Island City), with some in Manhattan and Brooklyn and a few in the Bronx.



Most leased cabs are leased long-term, not by the shift

- A total of 5,760 cabs (45%) were leased long-term and 3,290 cabs (26%) were operated on an “unspecified driver” basis in 2005.
- Long-term leasing doubled from 19% of all cabs in 1992 to 45% in 2005.
- Cabs using “unspecified drivers” shrank from 40% in 1992 to 26% in 2005.
- The shift from fleet-type “unspecified driver” operations to long-term leasing was predictable based on financial analyses of the industry in the early 1990s. These financial analyses showed that the expenses of long-term lessors was significantly less than expenses of the fleet operators. Long-term lessors avoid the administrative and oversight costs borne by fleet operators that lease by the shift. With a lower cost structure, owners who leased on a long-term basis earned substantially higher profits than owners leasing by the shift – about \$21,000 annually for long-term lessors versus \$16,000 for shift lessors in 1993. *[TLC 1994b]*
- The number of owner-driven cabs has shrunk over the past decade from 37% of all taxicabs in 1992 to 29% in 2005. Most of this decline is accounted for by reduced owner-driving of corporate medallions; only 186 corporately owned cabs were driven by a stockholder of the corporation in 2005, down from 565 in 1992.
- Owner-driving among individually owned cabs declined steadily until the late 1990s but has increased since about 1998 as a growing number of cabs have come under the TLC rule that the owner must drive individually owned medallions transferred since January 1990. In 2005, just over 3,500 individually owned cabs were driven by the owner as compared with 3,250 in 1998 and 3,750 in 1992.
- Even among individually owned cabs, the financial attractiveness of leasing is evident. Of the 5,377 individually owned cabs, about 1,850 were leased to drivers (not owner-driven at all) in 2005, 1,400 were driven by both the owner and lessee, and 2,150 were owner-driven only.
- Another factor in the decline in owner-driving is that TLC has allowed over 175 of the post-1990 individual medallions to be operated by leasing agents or fleets; these cabs are unlikely to be owner-driven.

Finances

\$1.8 billion a year in revenues

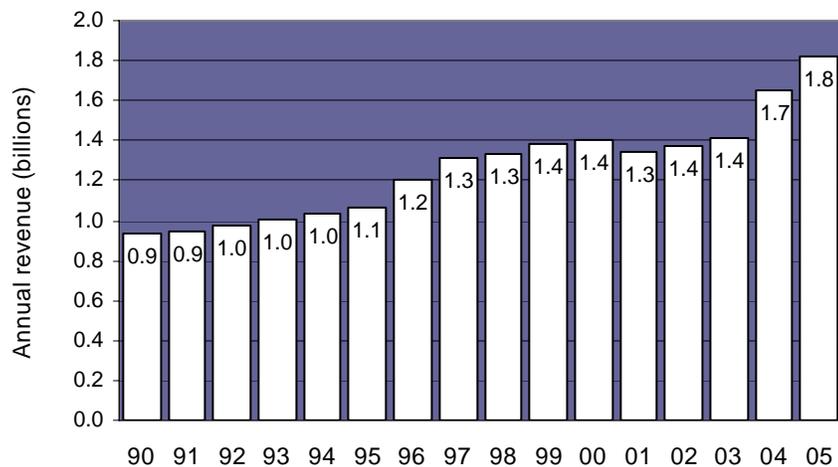
- Taxicabs generated \$1.82 billion in fare revenue in 2005. (Revenue figures include the rush hour and night surcharges and tips, which are assumed to be 15% of the fare.)
- Revenues averaged \$2.25 per operating mile in 2005, generating \$317 for an average shift that covers 141 miles and \$145,200 per taxicab annually.
- Total industry revenue increased by 29% between 2003 and 2005 (years before and after the 2004 fare increase). This increase was primarily due to the fare increase though the recovering economy and issuance of new cab licenses also played a role. (See Figure 19.)
- Total fare revenue increased by 45% in the 1990s, spurred by the 20% fare increase in 1996, increased demand for cabs and the industry's shift toward predominantly double-shift operations.

Fare revenue fluctuates with fares and demand for service

- Fare revenue fluctuates with changes in the Manhattan economy. Taxi fare revenue per mile increases 6.4% for every 10% increase in employment at Manhattan eating and drinking places, which reflect changes in social, recreational and business activity in Manhattan. [Schaller 1999]
- Absent changes in economic conditions, fare revenue per mile increases by 7% to 7.5% for every 10% increase in the fare (in real dollars), as higher fares reduce demand for service by 2.5% to 3%.
- Conversely, as inflation erodes the fare in real dollars, a 10% decline in the inflation-adjusted fare, representing about three years worth of inflation, produces about a 2.5% to 3% increase in revenue per mile.

Figure 19.
Taxi industry revenue, 1990-2005.

Includes surcharges and estimated 15% tips
Source: Schaller Consulting analysis of taximeter and odometer readings taken during taxi inspections.



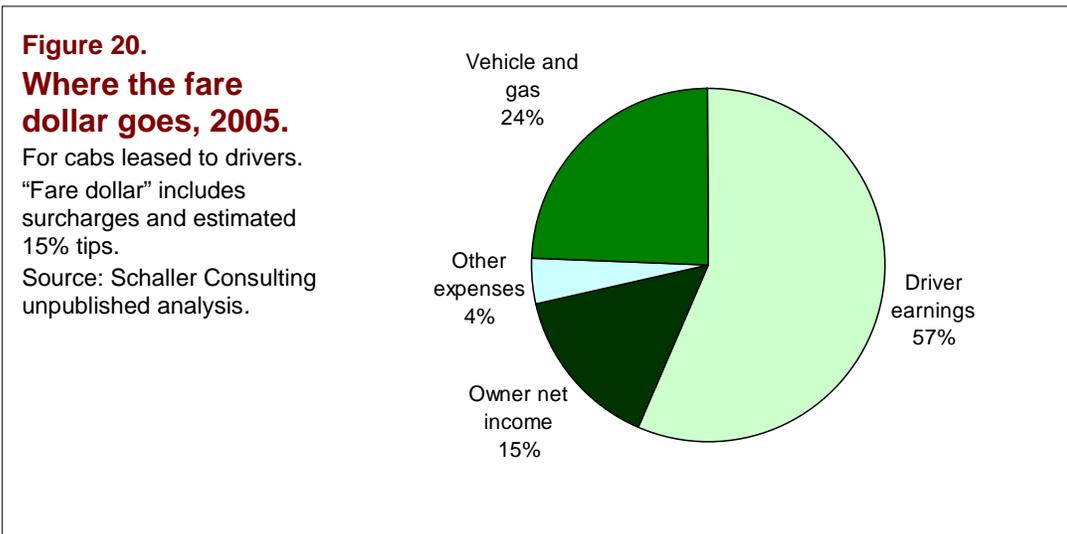
- Fare revenue per mile falls by about 3% in the summer (July and August) over and above the falloff accounted for by changes in employment.
- Cab revenue growth was slowed in 1998 by transit fare incentives which attracted local travelers from taxis to buses and subways. The transit fare incentives introduced from mid-'97 to mid-'98 reduced taxi industry revenue by 2% from what it would have been otherwise. Thus, without the fare incentives, cab revenues would have grown by about 3% in 1998 instead of 1%. (The fare incentives were free transfers between bus and subway; a 10% bonus on fare purchases of \$15 or more; and 30-day and 7-day unlimited ride passes.)

61% of cab mileage is with passengers

- Paid mileage – the percentage of odometer miles with a passenger – is a key indicator of both the taxi industry’s financial health and demand for taxi service. Over the last four decades, paid mileage has ranged from a low of 55-57% during recessions in 1977 and 1991-92, to a high of 64% in the boom year of 2000. Paid mileage comprised 61% of total mileage in each year 2002 to 2005.

Where the fare dollar goes

- Each dollar of revenue generated by fares and tips was divided for cabs leased to drivers as follows in 2005: 57 cents to drivers’ earnings, 24 cents to vehicle costs (car purchase, maintenance, gasoline and auto insurance), 4 cents to other expenses and 15 cents to owners’ net income. (See Figure 20.)



Driver incomes dropped with adoption of leasing

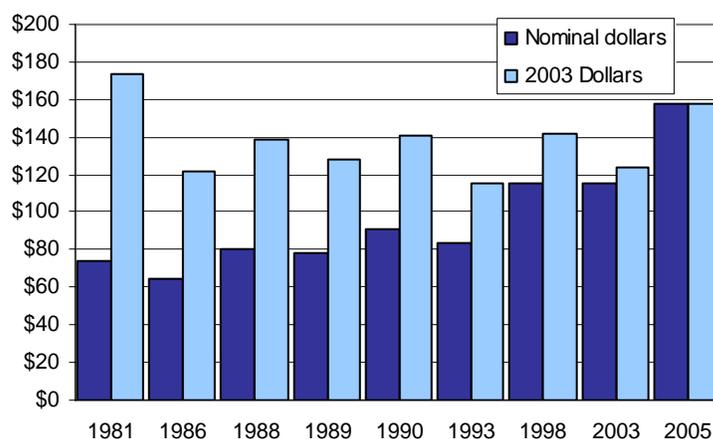
- Fleet drivers in New York City averaged \$158 in take-home income per shift in 2005, after paying lease fee and gasoline costs. (Based on shifts of 130 miles for fleet drivers. Take-home income includes tips.)
- The \$158 in average 2005 take-home income represents a 37% increase since 2003, primarily due to the 2004 fare increase. In inflation-adjusted dollars, driver incomes have increased 27% since 2003 and 12% since 1998. (See Figure 21.)
- Despite recent gains, drivers' total compensation has declined 9% since 1981, after accounting for inflation.
- Drivers' total compensation declined in the early 1980s as taxicab fleets converted from paying drivers on a commission basis to leasing. Although drivers' cash incomes stayed about the same after leasing was introduced, their total compensation dropped due to the loss of benefits such as health and pension benefits, employer contributions to Social Security, scholarships, legal services, unemployment insurance and disability insurance. (As mandated by New York State law, both commission and lease drivers are covered by workers compensation.)
- Because lease drivers work about 15 percent more hours than did commission drivers in the early 1980s, the decline in hourly driver earnings since 1981 is greater than the decline in per-shift earnings.
- Since 1996, TLC has set caps on lease fees. The caps were increased by 8% with the May 2004 fare increase. Current caps are \$105 for day shifts, \$115 for Sunday to Tuesday night shifts, \$120 for Wednesday night shifts and \$129 for Thursday to Saturday night shifts. The cap for weekly leases to two drivers is \$666 per driver. The cap for medallion-only leases (driver supplies the vehicle) is \$800.

Figure 21.
Taxi driver
incomes, 1981-
2005.

Take-home income per shift.

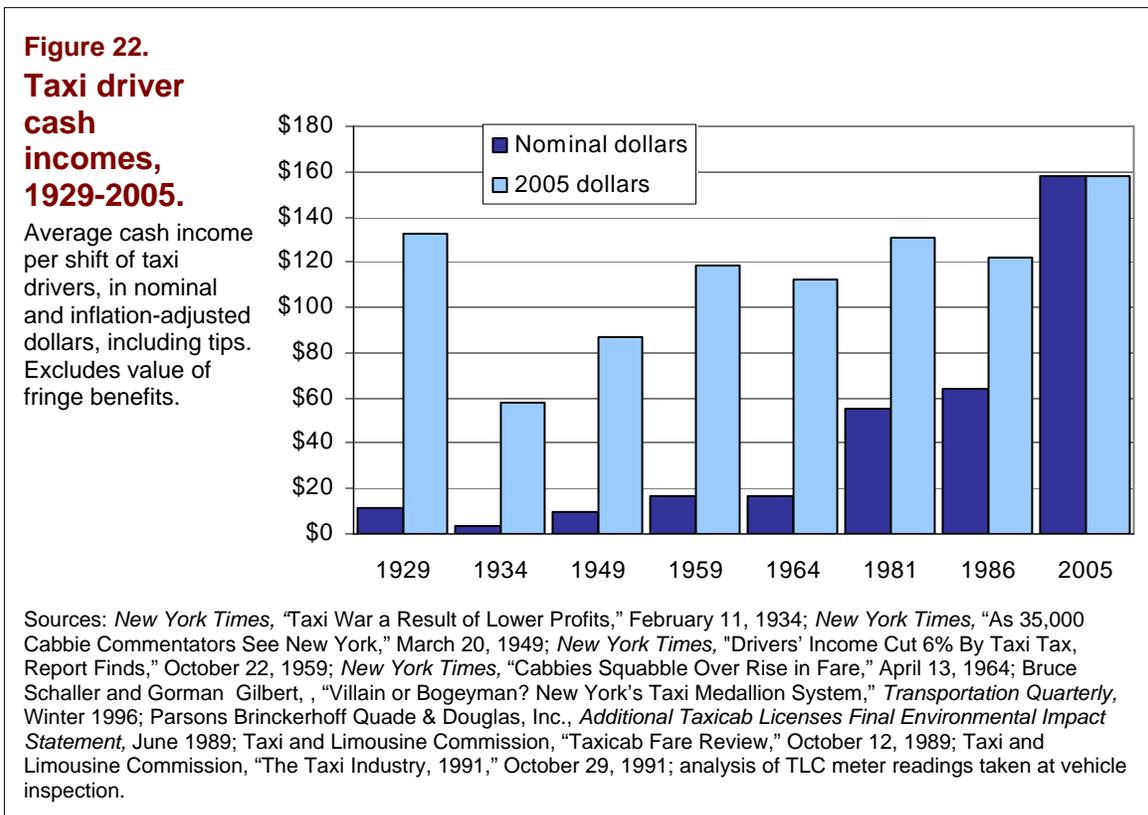
1981 figures are for commission drivers and include the value of fringe benefits.

Sources: Schaller and Gilbert 1996 and analysis of taxi income and lease fee data.



After the 2004 fare increase, driver cash incomes exceed incomes in 1929

- According to newspaper reports, in 1929 drivers averaged about \$8.40 per day in net income from commissions and \$2.75 in tips, for a take-home income of just over \$11 a shift. Adjusting for inflation, that income is equivalent to \$132 in inflation-adjusted 2005 dollars. (See Figure 22.)
- At \$158 per shift in 2005, driver cash incomes now exceed driver incomes in 1929 for the first time since the Crash.
- With the Great Depression reducing demand for cab service but increasing the number of cabs on the street, driver income plummeted to under \$4 a shift in 1934 (\$58 a shift in inflation-adjusted dollars).
- The combination of a booming post-war economy, the limit on the number of medallion licenses, and unionization of fleet drivers produced gains in driver incomes, reaching \$130 cash income per shift for commission drivers in 1981, using inflation-adjusted dollars. (As shown on the previous page, the value of fringe benefits brought driver incomes to \$173 in 1981, using inflation-adjusted dollars.)



Medallion Prices

Why a value to a license?

Taxicab licenses first gained value after World War II as demand for taxi service grew while the number of cabs was capped. The continuing limit has produced values of over \$350,000, paid by a buyer when the license is transferred from one owner to another. These license transfers are often called “medallion” transfers, referring to the painted aluminum medallion, signifying a taxi license, which is affixed to the hood of every yellow medallion cab. (See photo at right.)



Medallion systems in other cities have also generated large medallion values in the range of \$50,000 to over \$200,000 in Boston, Chicago and Philadelphia.

Medallion values are established on the open market between buyers and sellers, although the Taxi and Limousine Commission must approve the new owner’s qualifications. In economic terms, the value of medallion licenses is the “monopoly profit” produced by the limitation on the number of taxicabs, or in other words, the profit that owners can earn in the taxi industry that is greater than profits in comparable industries.

Medallion prices thus reflect net revenues derived from taxi operations. Changes in prices reflect, fundamentally, changes in the demand for taxicab service relative to supply. But medallion prices are also affected by a variety of other factors. For example, falling interest rates and longer amortization schedules for loans used to finance buyers’ purchases have contributed to the escalation of medallion values because purchasers are more sensitive to their monthly “nut” or loan payments than to the size of the loan. Fares can also affect medallion values, as can the availability of drivers. Driver shortages were one reason for the decline in medallion prices in 1998-2001. Other factors affecting medallion prices include the number of potential buyers, expectations of future revenue and lease fee caps.

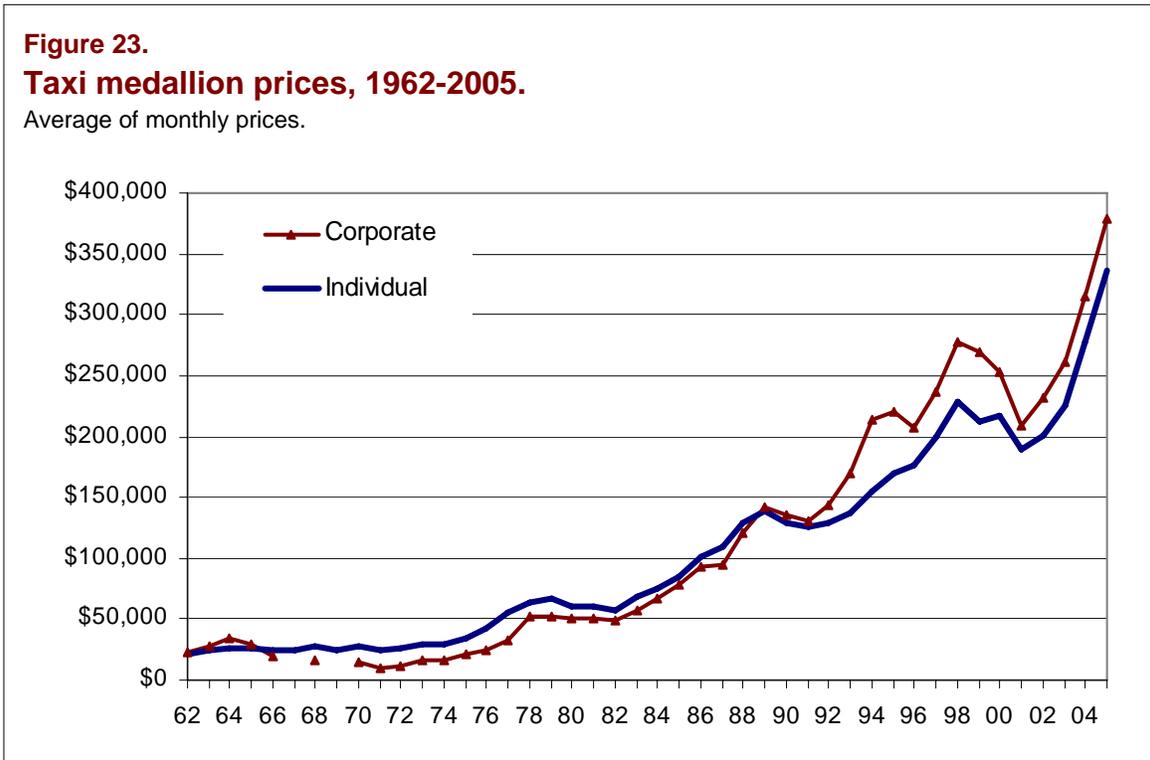
Medallion values are computed separately for individually owned and fleet-owned (or “corporate”) cabs. Licenses are permanently assigned to one of these categories.

Trends in medallion prices

- Medallion values show a very strong upward trend over the past half-century, fueled by growing demand for taxicab services and other factors such as longer loan terms and the introduction of leasing. Medallion values reached \$25,000 in 1963, \$50,000 in 1977, \$100,000 in 1986 and \$200,000 in 1994 and \$300,000 in 2004. (See Figure 23.)
- Medallion prices increased to \$379,000 for corporate and \$336,000 for individual licenses in 2005.

- Values have also experienced significant declines. Taxicab ridership fell sharply in the early 1970s as New York City went through a deep economic contraction. Medallion prices fell again during recessions in the early 1980s and early 1990s.
- Medallion prices also declined between the spring of 1998 and mid-2001. This decline, which preceded the economic slowdown in New York City, appeared to stem from factors internal to the taxi industry such as shortages of drivers. As unemployment rose during the recession that began a few months before the Sept. 2001 terrorist attacks, the number of drivers coming into the taxi industry increased. This was one factor in the increase in medallion values that began in the fall of 2001.
- Another factor was lower interest rates, which much like a home mortgage increases the price that buyers can afford to pay for medallion licenses. Interest rates on typical loans dropped to 5-6% in mid-2003, amortized over 15 years or more (albeit with a balloon payment due after 3-5 years).
- Declining interest rates and longer loan terms have meant that monthly loan payments stayed constant despite large increases in medallion prices. Since the early 1990s, interest rates declined from 10% or more to about 5% and loan amortization schedules stretched from 10 years to 15 years. As a result, monthly payments on medallion loans were the same or slightly less in mid-2003 as in 1993 despite a 50% increase in the price of individual medallions and 43% increase in the corporate price. (Monthly payments were typically about \$1,500 for individual medallions and \$3,500 for two corporate medallions as of mid-2003, for buyers who borrow 80% of the combined medallion price and transaction fees, including the 5% City transfer tax.)

Figure 23.
Taxi medallion prices, 1962-2005.
 Average of monthly prices.



- The volume of medallion sales has fallen sharply. In the 1980s transfer volumes exceeded 600 annually for both individual and corporate medallions. Transfers dropped to an average of 250 for both individual and corporate medallions in the 1990s, and declined to 199 individual sales and 64 corporate sales in 2005 (not including stock transfers).

Corporate versus individual prices

- In the 1970s and early 1980s, individual owner-driving was a more attractive method of taxi operation, dominating the industry and reflected in higher medallion prices for individual licenses.
- Since the late 1980s, however, an increasing number of taxicabs have been leased out of large fleets, and the fleet or “corporate” price overtook the individual price.
- The substantial difference in price between corporate and individual narrowed sharply in 2001 as the industry experienced a driver shortage, the effects of the Sept. 2001 terrorist attacks and the city’s overall economic downturn. The gap has widened somewhat since 2001, however.

(See *Schaller and Gilbert 1996* for further discussion of the medallion system and its effects on the taxi industry. See 1994 Taxicab Fact Book, also online at www.schallerconsult.com/taxi/taxifb.htm, for a description of the finances of typical medallion buyers in 1993.)

Figure 24.

Monthly taxi medallion prices since January 2001.

Average of monthly prices. Average price not available for some months due to lack of transfers.

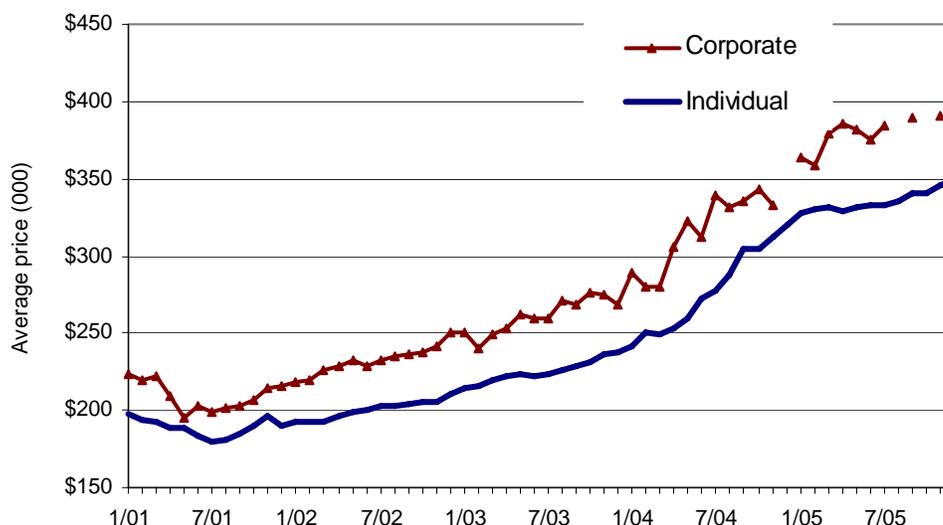


Table 4. Medallion prices and transfer volumes, 1947-2005

Year	Average Price		# Transfers	
	Individual	Corporate	Individual	Corporate
1947	\$ 2,500	\$ 2,500		
1950	5,000	5,000		
1952	7,500	7,500		
1959	19,500	20,000		
1960	20,825	19,450		
1962	22,000	23,400		
1964	26,000	34,145	290	
1965	26,000	30,000	610	
1966	25,000	19,000	390	
1968	27,000	16,000	490	
1969	24,500	n/a	650	
1970	28,000	14,000	670	
1971	25,000	10,000	430	
1972	26,000	12,000	580	
1973	30,000	17,000	600	
1974	30,000	17,000	590	
1975	35,000	22,000	570	
1976	42,000	24,000	800	
1977	55,000	33,000	680	
1978	63,000	52,000	810	
1979	67,000	53,000	830	
1980	60,000	50,000	700	
1981	60,000	50,000	n/a	
1982	57,500	49,300	697	637
1983	68,600	57,900	723	648
1984	75,900	66,200	795	796
1985	84,900	79,000	641	703
1986	101,600	92,900	660	778
1987	108,700	94,600	527	567
1988	129,700	121,500	532	646
1989	139,100	141,400	418	408
1990	128,400	135,700	374	272
1991	126,067	130,360	357	443
1992	128,577	143,199	281	407
1993	137,196	170,200	256	248
1994	155,633	214,221	232	164
1995	169,750	219,958	194	187
1996	176,333	207,292	264	267
1997	199,875	236,500	205	203
1998	229,000	277,318	155	215
1999	212,917	269,500	178	111
2000	217,125	253,864	208	119
2001	188,958	209,458	210	158
2002	200,333	232,250	262	267
2003	224,958	260,917	266	345
2004	277,583	315,636	191	249
2005	335,583	378,556	199	64

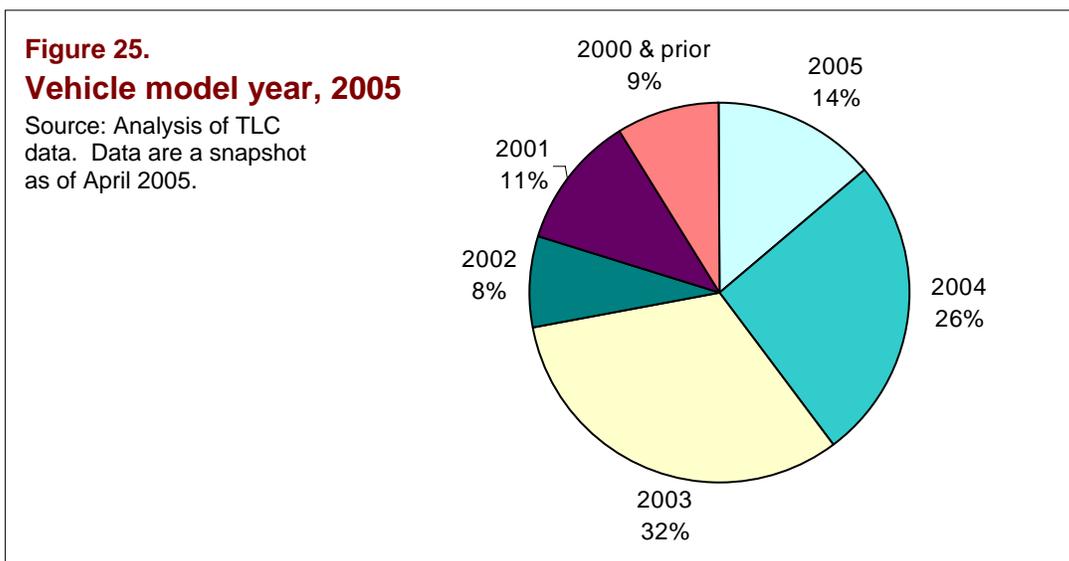
Cars

Why cabs are the definition of high-mileage cars

- New York City taxicabs traveled a total of 811 million miles in 2005, or an average of 64,600 miles per cab.
- Total industry mileage grew by 14% from 1995 to 2005. The growth resulted from increases in the number of double-shifted cabs and issuance of additional medallion licenses.
- Mileage varies considerably among operators. Cabs run by fleets and other shift lessors, in service two shifts per day and 7 days per week, average 72,000 miles. Cabs leased long-term (usually to two drivers) average 68,000 miles. Owner-drivers, generally driving one shift a day, 5 or 6 days a week, averaged 42,000 miles.

Rules for new cabs have made the vehicles relatively new

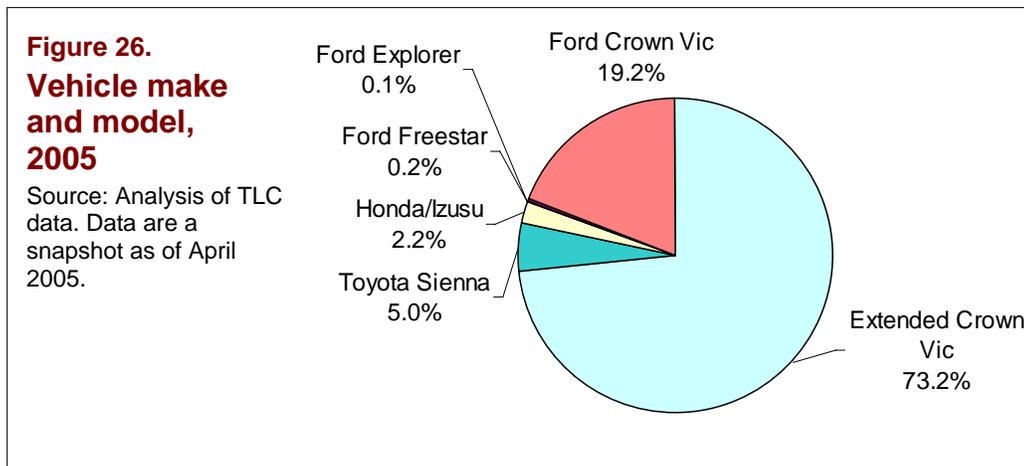
- As of April 2005, 72% of cabs were model year 2003 or later vehicles; 19% were model year 2001 or 2002 vehicles and 9% were model year 2000 or earlier cars. (See Figure 25.)
- Cars brought into service as taxicabs must be brand new vehicles and generally must be replaced five years after being placed into service. This is one of the strictest vehicle policies in the U.S.; most major cities allow vehicles to be used for 5 to 9 years and allow used vehicles to be put into service.
- Taxis driven exclusively by “unspecified drivers” who change day to day, must be retired after three years.



- Exceptions for minivans and financial hardship have meant that, in practice, some cabs exceed the five-year retirement age.
- Adoption of the vehicle retirement regulations by TLC in 1996 came on the heels of cabs becoming older and on increased reliance on used cars. A 1993 survey of owners replacing their vehicles found that the two main dispositions for old cars were “use for parts” and “junked.”

Taxi owners rely on the Ford Crown Victoria

- Taxi owners use cars with body-on-frame construction to endure the city’s streets. Heavy duty suspensions and brakes and larger radiators further fortify the cars for taxi duty. Unibody cars have not been durable when tested by taxi fleets, although some owner-drivers have had success with minivans.
- As a result of the industry’s need for body-on-frame vehicles, when Chevrolet discontinued the Caprice in the mid-1990s, most owners switched to the Ford Crown Victoria.
- The Ford Crown Victoria accounted for 92% of all taxicabs in 2005. The extended Crown Vic, featuring an additional 6 inches of leg room for rear seat passengers, accounted for 73% of all taxis and the older models for 19% of all cabs. (See Figure 26.)
- Other vehicles in use as taxicabs include minivans manufactured by Toyota, Honda and Ford, and the Ford Explorer SUV.
- The last Checker Cab, a vintage 1978 model, was retired in 1999 by co-owner/driver Earl Johnson. Checker Motors ceased production of the Checker Cab in 1982.



Most cabs now pass their thrice-annual inspection

- Cabs undergo an exacting safety and emissions inspection every four months at TLC's centralized inspection center in Woodside, Queens. The center opened in August 1989 and represented a major commitment by the City for vehicle safety and low emissions. (Previously, cabs were inspected at decentralized service stations using much less sophisticated equipment.) Two hundred items are checked at each inspection.
- 52% passed the initial inspection in fiscal year 2005.
- Older cars fail much more frequently than newer models. During inspections in Sept. to Dec. 2005, 75% of model year 2005 cars passed the initial inspection compared with 51% of model year 2004 cars and 27% of model year 2002 and prior year cars. *[Analysis of TLC inspection data]*

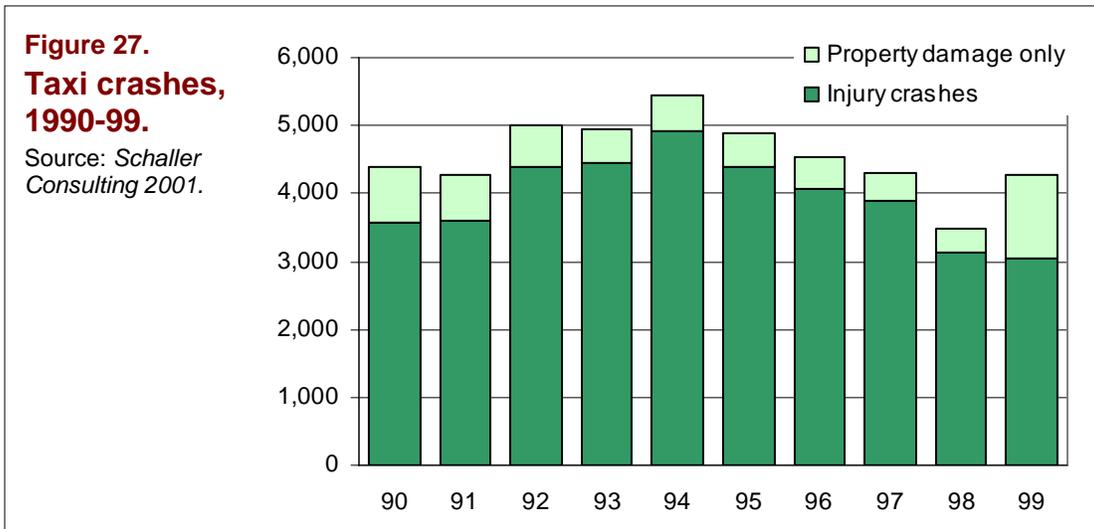
Innovations in color and license plates

- The ubiquitous yellow cabs were once many colors. In 1968 the City Council mandated that all cabs be painted yellow by January 1, 1970, thus standardizing their appearance and differentiating them from the rising number of illegal "gypsy" cabs. Before 1968 each taxi fleet adopted its own color scheme, as did individual owners. Only one fleet was painted yellow.
- The format for cabs' license plates changed in 1990. To ease identification, the plate is now the same as the medallion number, e.g, 8Y19. A small A, B, etc. is placed after the medallion number when new plates are issued. Previously, the plate number began and ended with the letter T, with numerals in between. Some "TT" plates continue to be used when license plates need to be replaced.



Accidents

- Medallion taxicabs were involved in 4,270 crashes (accidents) reported to the New York State Department of Motor Vehicles in 1999.
- 3,041 of these crashes involved personal injury and 10 involved a fatality.
- A 37% increase in personal injury taxi crashes from 1990 to 1994 was followed by a 38% decline from 1994 to 1999. (See Figure 27.)
- The increase in total crashes (injury and non-injury) from 1998 to 1999, shown below, was due to the increase in reported non-injury (property damage only) crashes. This increase is the product of a change in Department of Motor Vehicle (DMV) reporting requirements. DMV now requires crash reports when “apparent” property damage is over \$1,000 rather than where the damage is known to be over \$1,000.
- 538 pedestrians were injured and four were killed in crashes involving taxicabs in 1999. This was the lowest number of pedestrian injuries in over a decade.
- 282 bicyclists were injured (none were killed) in crashes involving taxicabs in 1999. This was the lowest figure since 1991.
- Liveries were involved in 13,134 crashes in 1999, for a total of 17,127 taxi/livery crashes in New York City in 1999. Livery crashes involving injury increased from 8,179 in 1994 to 10,290 in 1999.

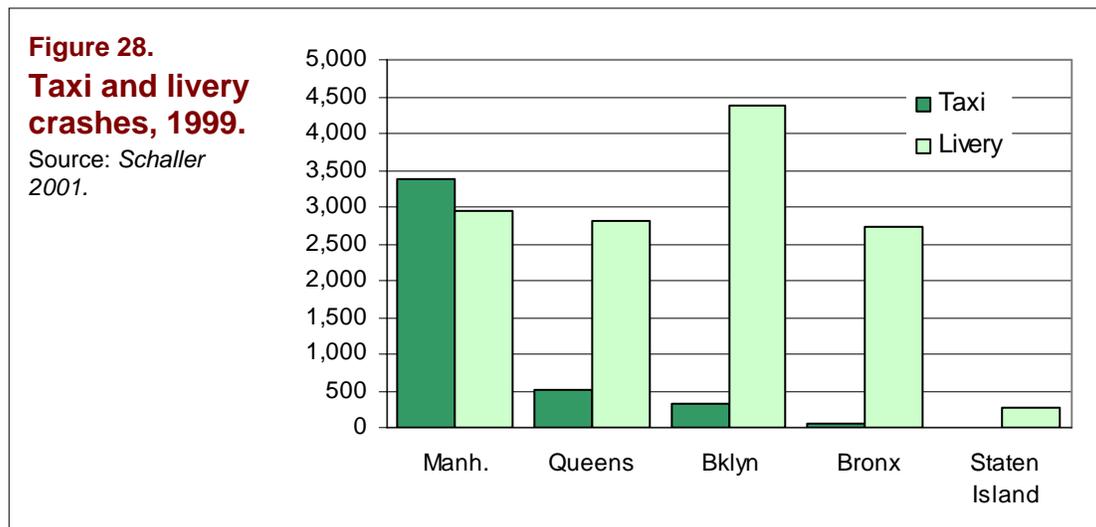


Taxi crashes are concentrated in Manhattan

- The large majority of taxi crashes occurred in Manhattan in 1999 – 3,368 in Manhattan versus 902 in the other four boroughs combined. (See Figure 28.)
- 17% of all injury crashes in Manhattan in 1999 involved taxis. (An additional 13% involved liveries.)
- The number of livery crashes in Manhattan (2,951) is approaching the number of taxi crashes in Manhattan.

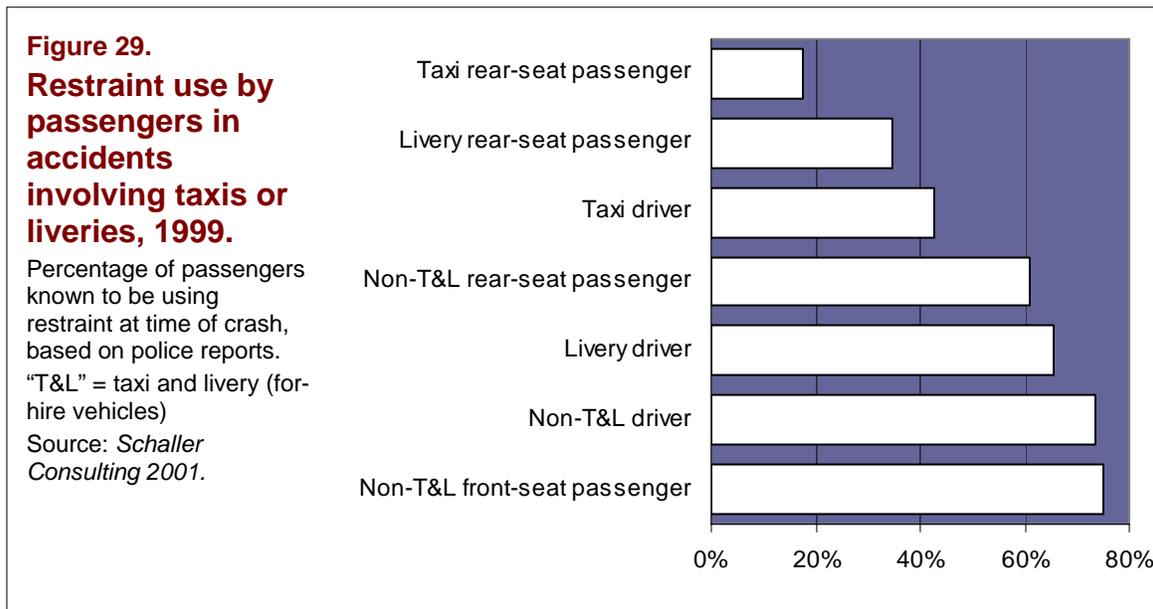
Better-paid drivers tend to be safer drivers

- There appears to be a strong relationship between taxicab crash rates and driver incomes. Higher driver incomes are associated with lower crash rates. When driver incomes declined between 1990 and 1993, crash rates increased. Conversely, when driver incomes increased from 1993 to 1998, crash rates decreased. [Schaller Consulting 2004a]



Few taxi passengers wear seat belts, increasing injury rates

- 11.5% of rear-seat taxi passengers involved in crashes sustained Class A or B injuries such as fractures, concussions, internal injuries, bleeding, burns, contusions and abrasions in 1999. [Schaller Consulting 2001]
- This figure is three times higher than for passengers in other vehicles. The injury rate (Class A or B injuries) is 3.0% for rear-seat livery passengers and 3.1% for rear-seat passengers in other vehicles involved in taxi/livery crashes.
- 17% of rear-seat taxi passengers involved in crashes in 1999 were wearing seat belts. This is a far lower rate of restraint use than for other occupants of taxis and other vehicles involved in these same crashes. (See Figure 29.) Taxi passengers’ reluctance to wear seat belts clearly contributes to their elevated rate of serious injury.
- Taxi passengers not wearing a restraint are nearly twice as likely to sustain relatively severe injuries as those wearing a restraint (15.6% vs. 8.6% for the years 1997-99).
- Seat belt usage is only one facet of this story, however. Even when wearing restraints, taxi passengers experience high injury rates. Looking just at seat belt users, 8.6% of taxi passengers are relatively seriously injured, a substantially higher rate than for livery passengers (3.3%) or passengers in other vehicles involved in taxi/livery crashes (3.9%).
- The higher incidence of injury to taxi passengers may also be linked to the presence of partitions in most medallion cabs, which introduce a very hard surface in an otherwise cushioned environment. This is the one clear difference in the passenger environment in taxis versus other vehicles.



Drivers' Work Days

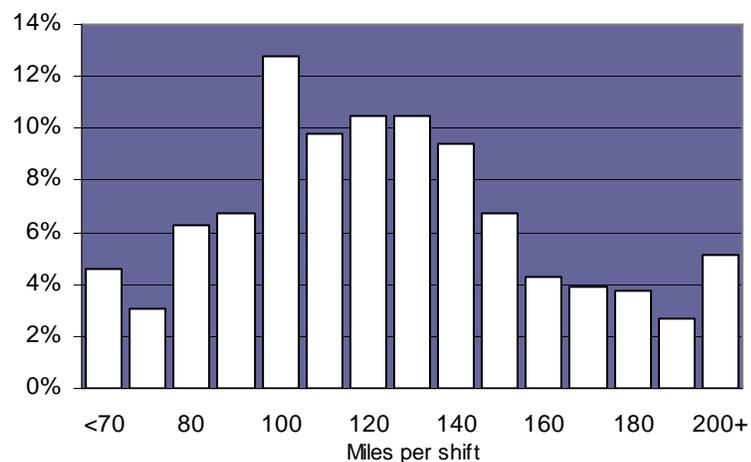
10 hours, 30 trips, 141 miles a day . . .

- Shifts averaged 10 hours in 1990. Most drivers worked between 8 and 12 hours a day, counting from when they pick up their first fare until they drop off their last fare of the day. *[TLC 1991]*
- The average driver spent 50 minutes a day on one or two breaks.
- Drivers averaged 30 trips per shift, serving a total of 42 passengers each shift, in 1990.
- The average cab traveled 141 miles per shift in 1990.
- Live miles increased from 55% of total mileage in 1991 to 64% in 2000, then fell to 61% in 2002 through 2005. (See Figure 11 earlier in the report.)
- In 1990, live time was well over 80% during times of peak demand for taxicabs. *[TLC 1991]*
- Between 80 and 150 miles are traveled on most shifts, though some shifts cover over 200 miles. (See Figure 30.)

Figure 30.
Mileage driven per shift, 1990.

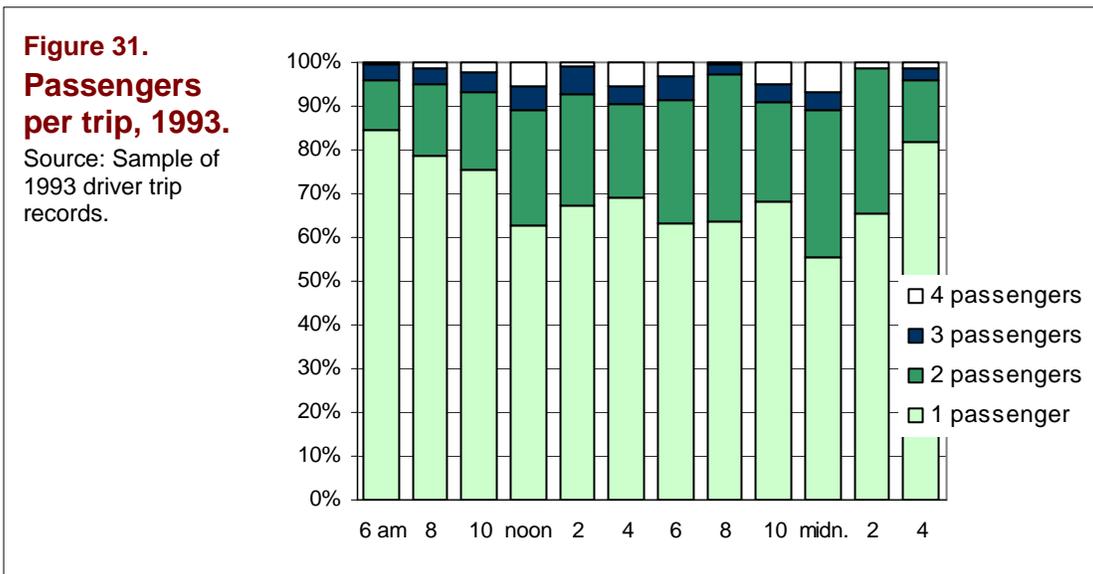
Total mileage traveled includes going to and from fleet garages, home, etc.

Source: *TLC 1991*.
Based on trip sheet sample.



... and usually just one passenger.

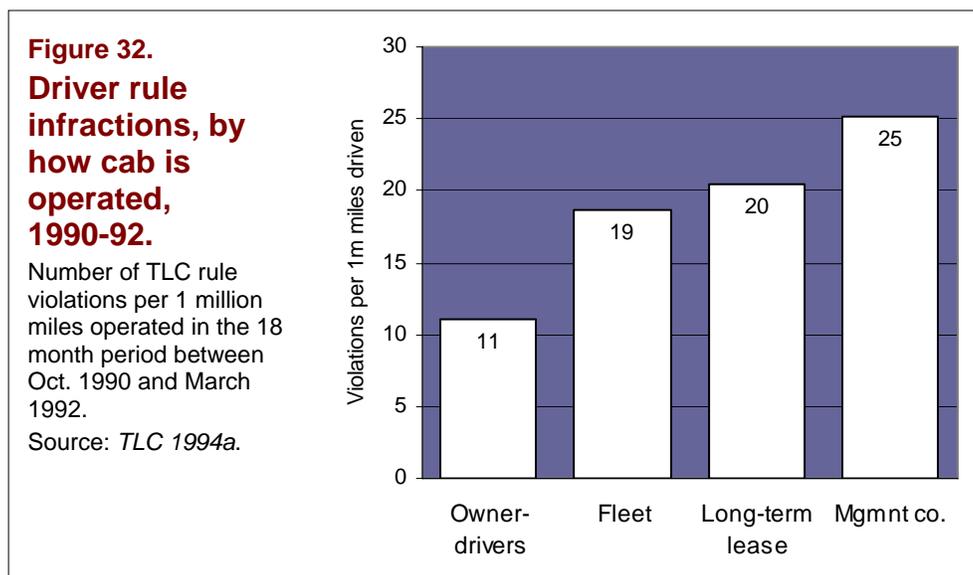
- 69% of all trips carried only one passenger, compared to 24% with 2 passengers, 4% with three passengers and 3% with four passengers. This works out to an average of 1.4 passengers per trip. *[Sample of 1993 trip sheets.]*
- Multi-passenger trips nearly doubled in the evening compared to the morning – 20% of all weekday trips between 7 a.m. and 11 a.m. compared with 36% between 10 p.m. and 1 a.m. (See Figure 31.)



Driver Quality

Experience makes for good drivers

- A 1988 study found that “good” drivers generally worked full-time and had several years of experience driving a cab. These experienced, full-time drivers were the subject of far fewer complaints for service problems such as refusing passengers, overcharging, treating passengers rudely or abusively or driving unsafely. Part-time, relatively novice drivers had the worst records, with violation rates 5½ times greater than full-time, experienced drivers. [*TLC 1988*]
- A 1993 study found that the most experienced drivers violated TLC rules 4 to 5 times less often than drivers in their first year. [*Summons records for October 1990-March 1992*]
- Drivers with better-than-average complaint records have driven 5 or more years.
- Owner-drivers, who drive full-time and are generally more experienced than lessees, violated TLC rules less than half as often as drivers leasing from taxi management companies. (See Figure 32.)
- Yet high turnover among drivers means that most taxi service is provided by drivers with less experience, many of whom work part-time. Figures compiled in the early 1990s showed that 53% of all taxi service is provided by drivers with fewer than 5 years of experience, and only 34% of all taxi service is provided by full-time drivers with at least 5 years experience.



Who Drives Cabs

Drivers greatly outnumber cabs . . .

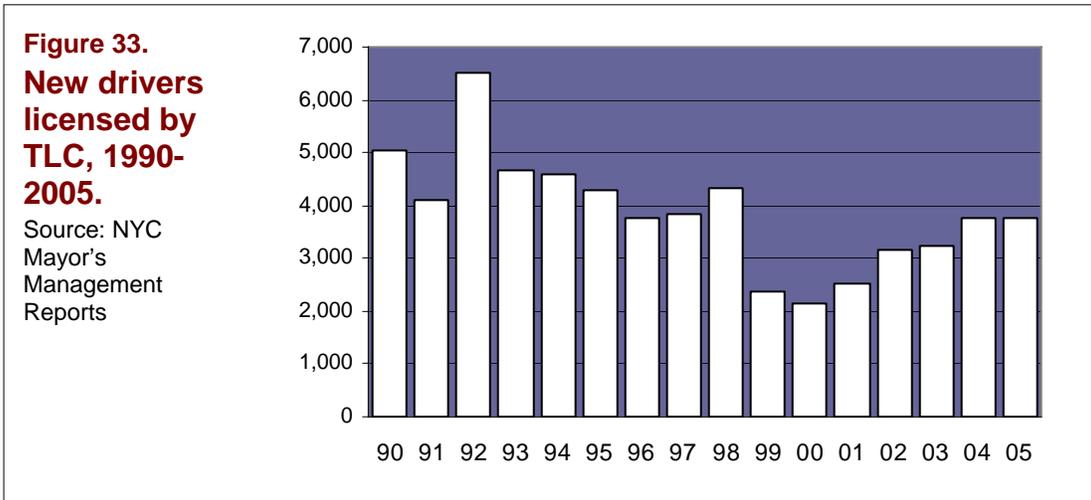
- There were 42,900 licensed taxi drivers eligible to drive the 12,779 licensed taxicabs in 2005.
- The number of licensed taxi drivers declined from about 40,000 in the late 1990s to 35,200 in 2000 before climbing to 42,900 in 2005. [*NYC Mayor’s Management Reports*]

. . . but only a fraction work full-time

- 40% of all licensed drivers report having driven a cab 5 or more days in the preceding week. [*Survey of drivers renewing their license in December 1993*]
- 29% of all drivers report not having driven at all in the previous week.

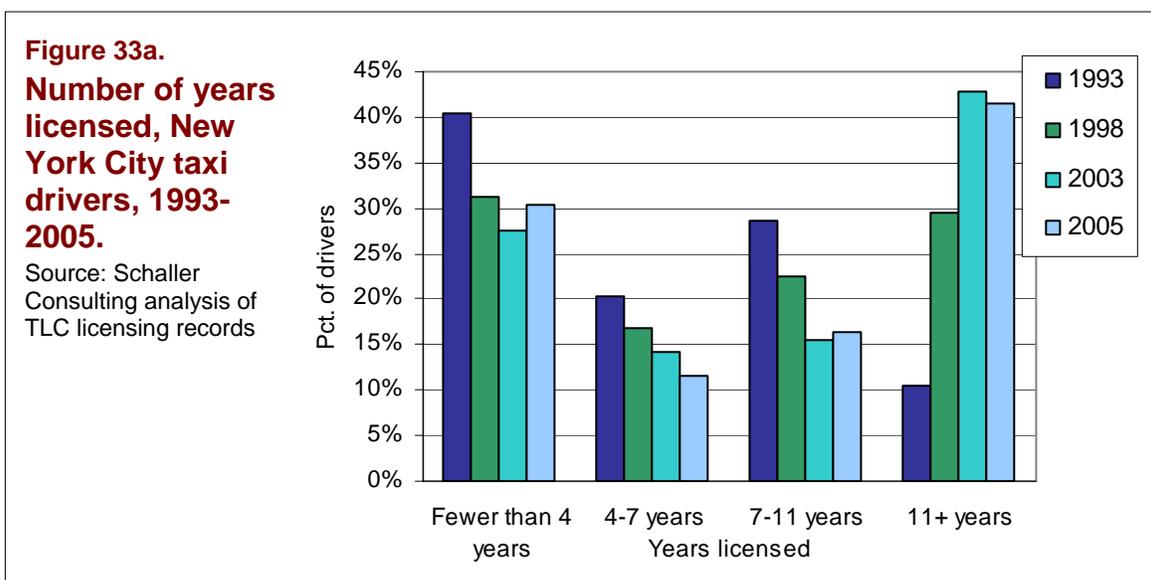
Flow of new drivers tends to be counter-cyclical to the economic cycle

- 3,800 new drivers were issued licenses in both fiscal year 2004 and fiscal year 2005.
- The flow of incoming drivers tends to be counter-cyclical to the economy, with more drivers applying for a taxi driver license when other jobs are scarce. The inflow of new drivers reached a low of 2,100 in fiscal year 2000 during the peak of the economic cycle but then rebounded to 2,500 in fiscal year 2001 and 3,200 in fiscal year 2002.



Driver experience levels increased sharply from the early 1990s to 2003

- In 2005, drivers were licensed an average (median) of 9.2 years, up from 5.7 years in 1993 and 7.8 years in 1998.
- Both owner-drivers and lease drivers have gained in years of experience. Owner-drivers were licensed an average of 17 years in 2005 compared with 10 years in 1994. Drivers with long-term leases were licensed an average of 8 years in 2005 compared with 4.5 years in 1994. (Data for shift or fleet drivers is not available.)
- Drivers have gained in years of experience because driver attrition has slowed. Attrition rates (percentage of drivers not renewing their licenses upon expiration) declined from 8.8% per year in the mid-1990s to 6.2% in 2005.
- Attrition has slowed particularly for drivers coming up for renewal for the first time. In 2005, 18% of drivers who were initially licensed in 2003 failed to renew when their licenses expired two years later, compared with 37% of drivers in 1995 who were initially licensed two years earlier.
- Among the most dramatic change is the increase in the number of drivers who have been in the industry for over a decade. In 2005, 42% of drivers had been licensed for at least 11 years compared with 10% in 1993. (See Figure 33a.)
- Concurrently, the number of relatively new drivers has declined. The proportion of drivers with fewer than 4 years in the industry dropped from 40% in 1993 to 31% in 1998 and has remained at about that level.

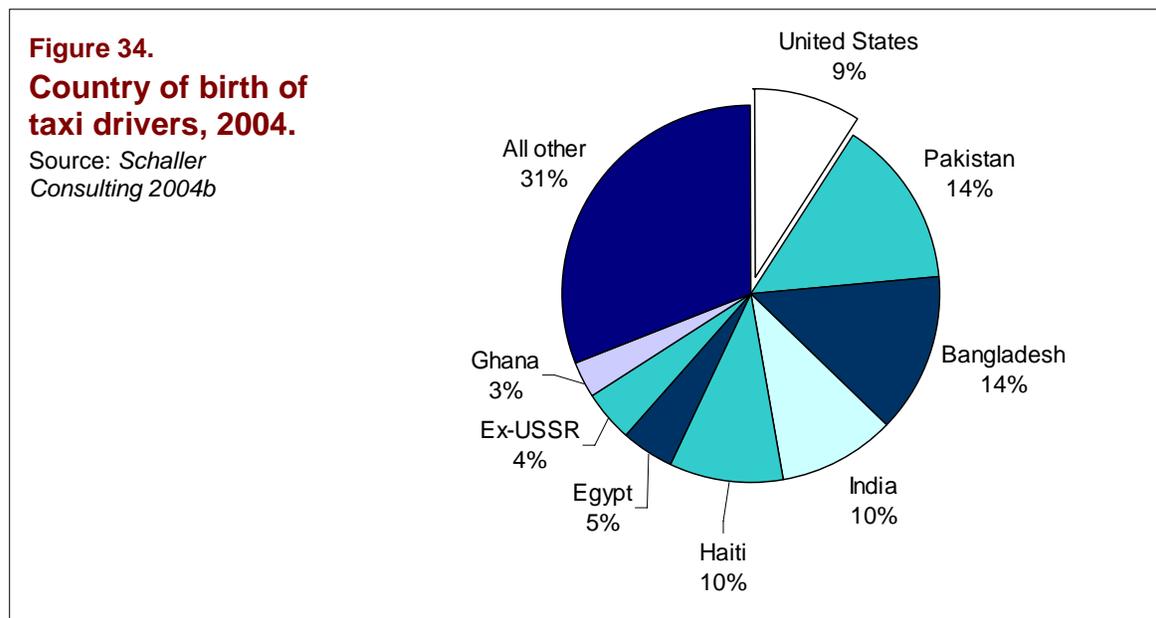


It’s an immigrant industry coming from all over the world

- 9% of taxi drivers were born in the United States while 91% are immigrants.
- 39% of taxi drivers emigrated from South Asia: 14% from Pakistan, 14% from Bangladesh, 10% from India and 1% from Afghanistan. (See Figure 34 below and Table 5 at end of this chapter.)
- 4% or more of drivers are from each of the following countries: Haiti, Egypt and former Soviet republics.

The countries of origin of new drivers shifted in the 1980s and has been fairly stable since the early 1990s

- Among drivers who were newly licensed between mid-2002 and mid-2004, 18% were born in Bangladesh, up from 10% in 1991 and 1% in 1984. This growth reflects increases in Bangladeshi emigration to New York City from 400 per year in the 1980s to 3,900 per year in the mid-1990s.
- 15% of new drivers are from Pakistan and 10% from India.
- Increased African immigration to New York City is evident in the increase in medallion cab drivers from Egypt, Morocco, Ghana and Nigeria. Eleven percent of new drivers are from one of these four countries.
- The national origins of driver applicants has shifted dramatically since the mid-1980s. The proportion from the Indian subcontinent rose from 10% in 1984 to 43% in 1991.
- The proportion of applicants born in the U.S. dropped sharply from 26% in 1984 to 10.5% in 1991. The fraction from the Caribbean fell from 27% to 8%.

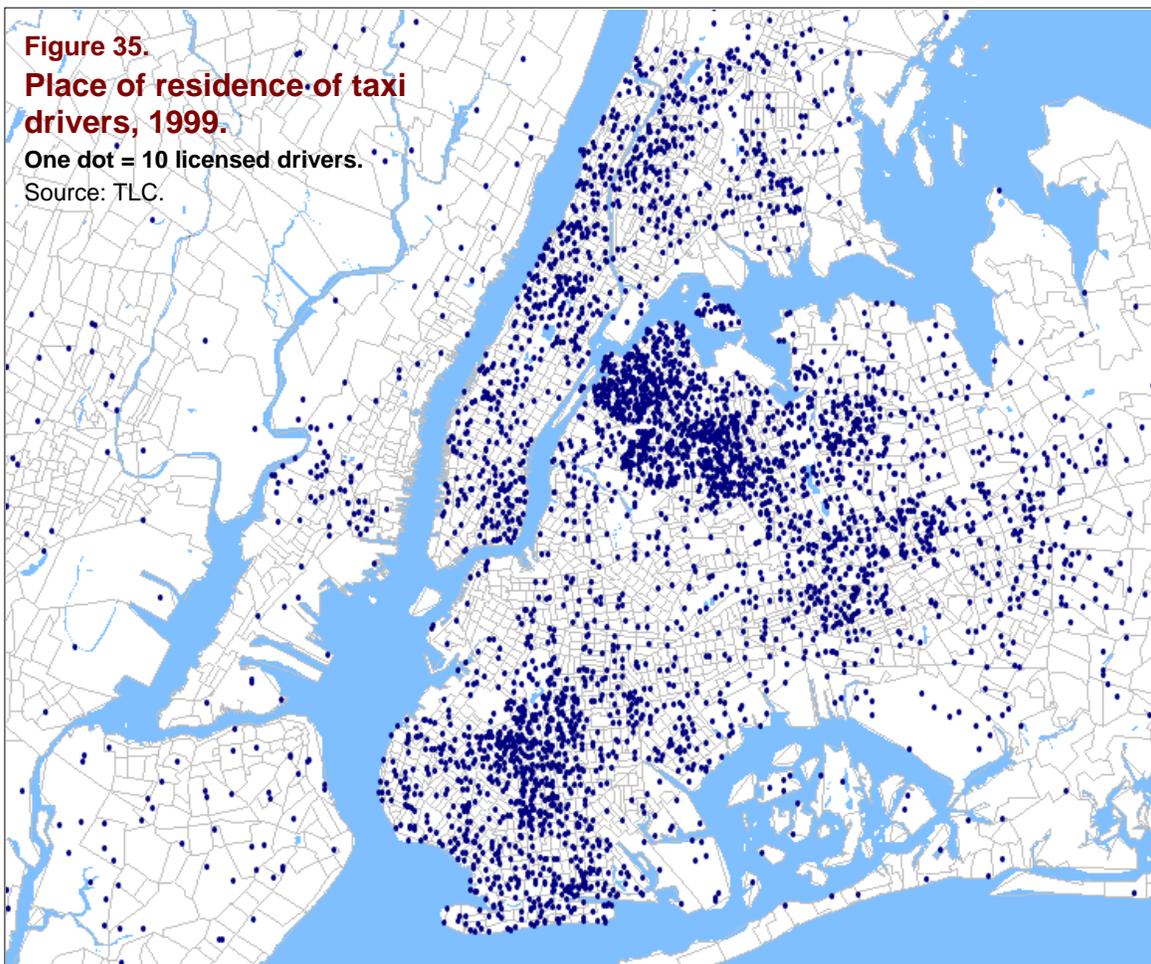


Languages spoken reflect the diversity

- 60 languages were spoken among driver applicants in 1991. (See Table 7.)
- 24% of all applicants reported having learned English as a child. Of immigrant applicants, 16.1% reported learning English as a child, closely followed by languages from the Indian subcontinent and Africa: Urdu (15.7%), Punjabi (12.7%), Arabic (11.1%) and Bengali (10.6%).
- Though most immigrant applicants learned English before or soon after arriving in the U.S., less than half (43%) said they speak English at home (even in addition to their native language), in 1991.

Most drivers live in Queens or Brooklyn

- Drivers' homes are concentrated in northwest Queens neighborhoods of Astoria, Elmhurst, Woodside and Jackson Hts. and central Brooklyn neighborhoods of Borough Park, Bensonhurst and Flatbush. (See Figure 35.)



Diverse in race and age, but not by sex

- The taxi industry continues to be nearly all male. Only 1.0% of drivers were female in 2005.
- The proportion of new drivers who are female increased to 2.1% in 2005, up from 1.2% in 2001 and 0.4% in 1994.
- The median age of all drivers was 44 in 2005, compared with 42 in 1999 and 38 in 1994.
- The average age of newly licensed drivers was 34 in 2005, about the same as in 1999 (average age 35) and slightly older than in 1994 (average age 31 for new drivers).
- 48% of drivers classified themselves as Asian (including Indian), 25% as black, 18% as white and 7% as Hispanic in 2005.

Most applicants drove before or had retail jobs

- 44% of those applying for driver licenses in 1991 had driven passengers for-hire before, mainly car services in New York City and/or taxis in another country. Eleven percent said they were returning to drive a NYC taxi again, having let their original license lapse.
- The previous job of driver applicants was most often driving professionally (19.6%); restaurant cooks, cashiers, waiters or other jobs in food-related businesses (15.1%); store clerks, cashiers, bank tellers and other retail jobs (6.1%), or jobless (6.9%).

Why and how drivers come into the industry

- Word of mouth is critical; 73% knew someone who drove a cab and 58% found the owner of the cab they would drive through a friend, relative or neighbor.
- 58% of all applicants in 1991 wanted to drive a cab for two simple and basic reasons: to make money or because they needed a job. One in three named attractive aspects of the job – liking to drive or the flexibility, independence or excitement of driving.
- Most applicants saw driving a cab as an opportunity to make money and advance financially. They expected to earn more driving a cab than in their previous job.
- Most applicants also planned to drive “for many years” and hoped to buy a medallion license eventually. But these plans were not fulfilled for most applicants. Despite their plans, 40% were out of the industry by the end of 1993 and 64% by 1998.
- One in 10 of all prospective drivers in 1991 sought to drive a cab for short-term financial reasons, often reflecting setbacks in their working lives during the

early-90s recession. These applicants held professional, supervisory or managerial jobs requiring high educational achievement or held skilled crafts jobs (e.g., mechanics) or used creative skills (e.g., artists, musicians and photographers). Many of these applicants expected to earn less driving a taxi than in their previous job, and planned to drive a cab for only a short while.

Driver retention

Why do some drivers stay and become long-term drivers while others leave? What factors influence drivers' decisions? This is a complex question with perhaps as many answers as there are drivers. But some insight can be gleaned from looking at the background of drivers who stay in the industry versus those who move on.

- Drivers who came into the industry in 1991 saying they expected to earn more driving a cab than in their last job were more likely to still be licensed in 1998, as compared with drivers who expected to earn the same or less. (See Table 8.)
- Drivers who came into the industry saying they “like to drive” were somewhat more likely to still be licensed in 1998, as compared with drivers who came just for the money.
- Drivers from Bangladesh, the former Soviet Union, African countries, Pakistan and India showed higher retention rates than drivers from the Caribbean, central America and – especially – Europe and the U.S.

Table 5. Country of birth of taxi drivers, 2005

U.S. and Possessions	9.1%
Foreign-born	90.9%
Pakistan	14.4%
Bangladesh	13.6%
India	10.2%
Haiti	9.6%
Egypt	4.6%
Ex-USSR	4.4%
Ghana	3.0%
Dominican Republic	2.0%
Morocco	1.8%
China	1.6%
Ecuador	1.5%
Columbia	1.4%
Romania	1.4%
Nigeria	1.2%
Afghanistan	0.8%
Jamaica	0.7%
All other	18.7%
Total	100.0%
<hr/>	
Total drivers with country of birth	30,240
Country of birth missing	11,384
Total licensed drivers	41,624

Source: *Schaller Consulting 2004b*

Table 6. Country of birth of taxi driver applicants, 1984 and 1991 and new drivers, 2002-04

	1984	1991	2002-04*	Change 1991 to 2002-04
United States	25.8%	10.5%	9.0%	-1.5%
Bangladesh	1.1%	10.2%	18.3%	8.1%
Pakistan	3.0%	21.3%	14.8%	-6.5%
India	3.0%	10.0%	9.5%	-0.5%
Egypt	3.8%	4.8%	6.1%	1.3%
Haiti	18.5%	4.1%	3.9%	-0.2%
Morocco	0.1%	1.7%	3.8%	2.1%
Ghana	2.1%	1.6%	2.9%	1.4%
Ex-Soviet Republics	3.1%	6.8%	2.8%	-4.0%
Nigeria	0.5%	1.1%	1.7%	0.7%
Romania	2.8%	1.6%	1.1%	-0.5%
Dominican Republic	4.5%	1.9%	0.9%	-1.0%
China	1.2%	0.7%	0.9%	0.2%
Ecuador	1.7%	0.8%	0.7%	-0.1%
Afghanistan	2.9%	1.2%	0.6%	-0.6%
Colombia	2.7%	1.0%	0.4%	-0.6%
Jamaica	1.8%	0.9%	0.4%	-0.5%

* Licensed from mid-2002 to mid-2004. Licenses are issued for two-year terms; these drivers had first-time licenses as of June 2004.

Data for 1984 and 1991 are for applicants for a taxi driver license. Data for 2002-04 are for newly licensed drivers (does not include drivers who applied for but did not obtain a driver license).

Sources: *Morris 1985; TLC 1992, Schaller Consulting 2004b*

Table 7. Native languages of driver applicants born outside the U.S., 1991

Language	Pct.	Where spoken
English	16.08%	Pakistan, India, Bangladesh
Urdu	15.72%	Pakistan
Punjabi	12.71%	Pakistan, India
Arabic	11.06%	Egypt, Morocco, Sudan
Bengali	10.57%	Bangladesh
Russian	7.44%	former Soviet republics
French	5.63%	Haiti, Ivory Coast, Senegal
Spanish	5.59%	Dominican Republic, Colombia
Creole	3.70%	Haiti
Hindi	3.38%	India
Akan	1.77%	Ghana
Romanian	1.73%	Romania
Pushtu	1.33%	Pakistan, Afghanistan
Amharic	1.09%	Ethiopia
Polish	1.05%	Poland
Chinese	1.05%	China
Korean	.97%	Korea
Turkish	.88%	Turkey
Bambara	.84%	Ivory Coast, Mali
Portuguese	.80%	Brazil
Farsi	.76%	Afghanistan, Iran
Wolof	.72%	Senegal
Mandingo	.60%	Ivory Coast
Greek	.56%	Greece
Hebrew	.52%	Israel
Dari	.48%	Afghanistan
Yoruba	.40%	Nigeria
Malayalam	.36%	India
Serbo-Croatian	.36%	Yugoslavia
Cantonese	.28%	Hong Kong, China
Armenian	.28%	scattered
Ga	.28%	Ghana
Fulani	.28%	Guinea
Tamil	.28%	India

Languages spoken by fewer than 0.25% of all applicants are Kwa (Ibo), Hungarian, Italian, Gujarati, Bulgarian, Berber, Tagalog, Thai, Albanian, Vietnamese, Japanese, Indonesian, Telugu, Hausa, Fante, German, Czech, Uzbek, Estonian, Twi, Bihari, Khmer, Ibibio, Mende, Marathi, Tigrinya

Source: TLC 1992.

Table 8. Taxi driver retention rates

Retention rates as of December 1998 for drivers who went through the TLC new driver training process in the summer and fall of 1991.

The figures below are the percentage of drivers licensed in 1991 who were still licensed seven years later, at the end of 1998. Note that these figures refer to licensing only and that many licensed drivers are actually behind the wheel only occasionally or not at all.

	Retention rate	# drivers surveyed
Whether expect to earn more driving a cab than in last job		
Earn more	39%	1,595
About the same	33%	772
Earn less	24%	285
Why do you want to drive a taxicab?		
Like to drive	42%	495
Need work	37%	465
Independence/flexibility	36%	223
Study	35%	98
Make money	34%	859
For extra money	33%	249
Other/no reason	3%	131
Previous job		
Food business	43%	442
Drove for-hire vehicle	41%	251
Retail	39%	180
Construction	38%	143
Jobless	36%	201
Salesperson	35%	133
Country/region of birth		
Bangladesh	45%	295
USSR	43%	196
Africa	43%	324
Pakistan	42%	615
India	41%	286
Caribbean/central America	29%	158
Europe	22%	161
U.S.	16%	301

Data Sources and Bibliography

Sources referenced in the text, tables and figures are listed below. Published reports often contain more information than is summarized here as well as a fuller description of data sources.

* indicates that publication is available at www.schallerconsult.com/taxi

Schaller Consulting reports

Schaller Consulting 2005*	<i>Passenger and Driver Focus Group Reports on TLC Technology Enhancements</i> , report prepared under subcontract to CTG Inc. for the NYC Taxi and Limousine Commission, January 2005.
Schaller Consulting 2004a*	<i>Higher Pay, Safer Cabbies</i> , report prepared for Transportation Alternatives, January 2004.
Schaller Consulting 2004b*	<i>The Changing Face of Taxi and Limousine Drivers</i> , July 2004.
Schaller Consulting 2002a*	<i>Illegal Livery Street Hail Study</i> , report prepared for Taxi Policy Institute, January 2002.
Schaller Consulting 2002b*	<i>New Fare Discounts for Transit Riders in New York City</i> , report prepared for NYPIRG Straphangers Campaign and Transportation Alternatives, November 2002.
Schaller Consulting 2001*	<i>Taxi and Livery Crashes, 1990-99</i> , February 2001.
Schaller Consulting 2000*	<i>Cab Availability and Ridership in New York City, 1990-99</i> , March 2000.

Other publications cited in the text:

Cambridge Systematics 1979	Cambridge Systematics, Inc., "Report to the New York City Taxi and Limousine Commission, An Economic Analysis of Two-Way Radio Operations," New York City, November 1979.
Gilbert and Samuels 1982	Gilbert, Gorman and Robert E. Samuels, <i>The Taxicab, An Urban Transportation Survivor</i> , Chapel Hill, North Carolina: University of North Carolina Press, 1982.
Hale Russell 1979	Hale Russell Gray Seaman & Birkett. "Report of the Two-Way Radio Taxicab Groups," report to the New York City Taxi and Limousine Commission, 1979.
Lazar 1971	Lazar, Michael J. "The Non-Medallion Industry: A Transportation Phenomenon," Taxi and Limousine Commission, City of New York, November 1971.
Mayor's Committee 1982	Mayor's Committee on Taxi Regulatory Issues, "Consultant and Staff Studies" and "Recommendations," City of New York, March 1982.

Mayor's Taxi Study Panel 1966	Mayor's Taxi Study Panel, "Recommendations to Mayor John V. Lindsay," City of New York, December 1966.
Morris 1985	Anne G. Morris, "The Impact of a Mandated Training Program on New Taxicab Drivers in New York City," prepared for U.S. Department of Transportation, Urban Mass Transit Administration, Center for Logistics and Transportation, CUNY Graduate School and University Center, December 1985.
MTBOT 2001	Metropolitan Taxicab Board of Trade, "Petition [for taxi fare increase]," submitted to the Taxi and Limousine Commission, November 13, 2001.
PANYNJ 2003	Port Authority of New York and New Jersey, "2003 Summary of Airport Activities."
Parsons Brinckerhoff 1989	Parsons Brinckerhoff Quade & Douglas, Inc., <i>Final Environmental Impact Statement on Additional Taxicab Licenses</i> , prepared for the NYC Taxi and Limousine Commission, June 1989.
Rogoff 1980	"Regulation of the New York City Taxicab Industry," <i>City Almanac</i> , August 1980.
Roistacher 1982	Elizabeth A. Roistacher and Lawrence J. White, "The Pricing of Taxicab Medallions in New York City," published in consultant and staff studies volume for Mayor's Committee on Taxi Regulatory Issues, March 1982.
Schaller 1999*	Schaller, Bruce. "Elasticities for Taxicab Fares and Service Availability," <i>Transportation</i> , August 1999, pp. 283-97.
Schaller 2000*	Bruce Schaller, "Enhancing Transit's Competitiveness: A Survey Approach to Identifying Priorities," <i>Transportation Research Record 1669</i> , 2000.
Schaller 2005*	Bruce Schaller, "A Regression Model Of The Number Of Taxicabs In U.S. Cities," <i>Journal of Public Transportation</i> , Vol. 8, No. 5, 2005.
Schaller and Gilbert 1996*	Schaller, Bruce and Gorman Gilbert. "Villain or Bogeyman? New York's Taxi Medallion System," <i>Transportation Quarterly</i> , Winter 1996.
TLC 1994a*	<i>New York City Taxicab Fact Book</i> , May 1994.
TLC 1994b	<i>Should the Taxi Fare Go Up?</i> March 1994
TLC 1993a*	<i>New York City For-Hire Vehicle Fact Book</i> , February 1993.
TLC 1993b	<i>Hailing From New York</i> , November 1993.
TLC 1992	<i>Who's Driving New York</i> , April 1992.

- TLC 1991 *Taxi Trip and Fare Data: A Compendium*, October 1991.
- Urbitran Assc. 1984 Urbitran Associates, Inc. "Proposed Changes to New York City Taxi Regulations, Draft Environmental Impact Statement," prepared for the New York City Taxi and Limousine Commission in association with AKRF, Inc. and The AM&M Group, July 1984.

Other Reports, Books and Articles

Grava, Sigurd, Elliott Sclar and Charles Downs, *The Potentials and Problems of Private Sector Transportation Services: Activities in the New York Region*, prepared under contract to U.S. Department of Transportation, Urban Mass Transit Administration by Division of Urban Planning, Graduate School of Architecture, Planning and Preservation, Columbia University, January 1987.

Hazard, Robert. *Hacking New York*, New York: Charles Scribner's Son, 1930.

Husock, Howard. "New York's Unsung Taxi Triumph," *City Journal*, Autumn 1999.

Konheim & Ketcham, "Reduction of Taxi VMT in Manhattan CBD," prepared for New York City Department of Transportation, June 1986.

Lusk, Jack and Tad Smith, "Keeping Tabs on Taxis," *Portfolio: A Quarterly Review of Trade and Transportation*, published by the Port Authority of New York and New Jersey, Winter 1989, pp. 45-53.

Mayor's Committee on Taxicab Survey, "Report to Fiorello H. LaGuardia," City of New York, June 1934.

Mayor's Committee on Taxicabs, "Report of the Mayor's Committee on Taxicabs," City of New York, September 1930.

Nash, Abraham. "The Making of the New York City Taxi Drivers' Union," M.A. thesis, Columbia University, 1967?

Rogoff, Edward G. "Theories of Economic Regulation Tested on the Case of the New York City Taxicab Industry," Ph.D. diss., Columbia University, 1980.

Roistacher, Elizabeth A., "The New York City Taxi Industry: What Price Medallions?" *City Almanac*, Summer 1988.

Savas, E.S., Sigurd Grava and Roy Sparrow, *The Private Sector in Public Transportation in New York City: A Policy Perspective*, prepared for the U.S. Department of Transportation, Urban Mass Transit Administration by Institute for Transportation Systems, City University of New York, January 1991.

*Schaller, Bruce and Gorman Gilbert. "Fixing New York City Taxi Service," *Transportation Quarterly*, Spring 1996.

*Schaller, Bruce and Gorman Gilbert. "Improving the Proficiency of New York City Taxicab Drivers," *Transportation Quarterly*, Fall 1995.

*Schaller, Bruce. "The Taxi Vehicle in the Ideal Taxi System," in Design Trust for Public Space, *Designing the Taxi*, Nov. 2005.

*Schaller, Bruce. "Issues in Fare Policy: The Case of the New York Taxi Industry," *Transportation Research Record 1618*; National Research Council, Transportation Research Board, 1998.

*Schaller, Bruce. "Taxis and Transportation Policy in New York," *New York Transportation Journal*, published by the Rudin Center for Transportation Policy and Management, New York University, Summer/Fall 2000.

Vidich, Charles. *The New York Cab Driver and His Fare*, Cambridge, Mass.: Schenkman, 1976.