

The New York City App-based Driver Pay Standard:

Revised Estimates for the New Pay Requirement



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Report for the New York City Taxi and Limousine Commission

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Issued January 2019

Prepared by James A. Parrott, Michael Reich, Jason Rochford, and Xingxing Yang

This brief report provides an update to the report that Parrott and Reich issued in July 2018, "An Earnings Standard for New York City's App-based Drivers: Economic Analysis and Policy Assessment," and informs the final pay standard as incorporated in the Driver Income and Transparency Rules, adopted by the New York City Taxi and Limousine Commission (TLC) on December 4, 2018.¹ The new pay standard takes effect February 1, 2019.

As described in the adopted rules: "TLC's rules establish a minimum per-trip payment formula to provide drivers a minimum take-home pay after covering their expenses and taking into account drivers' total working time, both time spent driving passengers as well as time waiting for a dispatch and then traveling to pick up passengers." On an hourly basis, the pay standard provides for driver earnings, after expenses, of \$17.22 an hour, the independent contractor equivalent of an employee's \$15 minimum wage with paid time off. The revised analysis presented in this update indicates that 96 percent of Uber, Lyft, Juno/Gett, and Via drivers (i.e. 76,800 drivers) will receive an annual average increase of nearly \$10,000 under the minimum pay standard, which equates to a net pay increase of about 45 percent.

Since the July report, we have revised the basis for our expense analysis and used new data to revise our estimate of the extent by which current driver earnings fall below the proposed minimum driver pay standard. With the adopted rules, New York City becomes the first city in the U.S. to establish a minimum pay standard for app-dispatched drivers, and the first city anywhere with an incentive for companies to increase the percent of time a driver has a passenger is in the car.

1. Expense revision

In the July 2018 report, we based our expense calculations on the most common car in use (Toyota Camry) and weighted survey results for app-based driver lease costs by weekly hours worked. Following testimony at the October 3rd TLC public hearing we improved our expense calculations by using expenses of a weighted average of the car models actually providing app-dispatch services. Our weights now reflect total trip shares. We believe this is a more measured approach than choosing a modal vehicle.

We used results from the online driver survey to estimate driver expenses for monthly lease, insurance, and maintenance costs, converting those to a weekly basis. Since the driver survey results did not indicate monthly financing payments for owners, we use TLC vehicle data and

¹ http://www.nyc.gov/html/tlc/downloads/pdf/driver_income_rules_12_04_2018.pdf

approximate manufacturer's suggested retail prices (MSRPs) by vehicle type. We then estimate monthly and weekly financing costs for owners.² See Exhibit 1.

Exhibit 1

Estimated monthly vehicle financing costs, NYC

	Avg. MSRP*	Avg. MSRP + Sales Tax**	Avg. monthly financing cost
Sedan	\$27,955	\$30,436	\$599
Luxury sedan	\$61,135	\$66,561	\$1,310
Regular SUV	\$35,297	\$38,430	\$759
Luxury SUV	\$46,690	\$50,833	\$1,001
Compact	\$21,719	\$23,647	\$466
Van	\$33,534	\$36,510	\$719

* Manufacturers' Suggested Retail Price

** NYC/NYS sales tax = 8.875%

*** Average monthly payment calculated from Bank of America online financing calculator using a 6.74% interest rate based on a fair credit rating, 60-month term, no money down and that the loan amount includes sales tax.

We use the average weekly owners' financing costs in conjunction with leasing costs from the driver survey for drivers leasing their vehicles. Exhibit 2 shows the distribution of vehicle trip counts by app-dispatched drivers for a seven-month period in the first part of 2018. Financing or leasing costs and insurance and maintenance costs for all app drivers were weighted by vehicle type based on the shares in Exhibit 2.

Exhibit 2

App-based Trip Counts by Vehicle Type

Trip counts by vehicle type, 02/01/2018 to 08/31/2018

	Trip count	Share
Sedan	72,405,711	68.7%
Luxury sedan	1,828,382	1.7%
Compact	4,026,406	3.8%
SUV	6,289,271	6.0%
Luxury SUV	14,992,540	14.2%
Van	5,917,804	5.6%
Total	105,460,114	100.0%

*Trip count parameter – at least 500 trips by vehicle type.

Source: TLC data.

² To estimate financing costs, we used Bank for America's auto loan calculator, assuming no money down, a 6.74% interest rate based on a fair credit rating, 60-month loan term, and that the purchaser would also borrow the 8.875% sales tax amount.

Exhibit 3 shows ownership detail from the drivers' survey. Incomplete administrative data on ownership type limit our calculation of the population by ownership type. However, the survey distribution by ownership type closely approximates TLC's best estimates of the actual population by ownership type using administrative data, so we are confident weighting by ownership would not improve or significantly change estimates.

Exhibit 3

Survey respondents by ownership type

	Count	Share
Own	1,240	43%
Lease to own	1,105	38%
Short term company lease	321	11%
Short term lease from another person	152	5%
Monthly lease	68	2%
Total	2,886	100%

Source: Driver survey, app respondents only.

Exhibit 4 shows the summary re-weighted survey results (re-weighted by vehicle type among the population of app-dispatched drivers) for lease/financing, insurance, and maintenance costs.³

Exhibit 4

Re-weighted Driver Survey Results

	Monthly	Weekly
Financing/lease cost	\$802.93	\$184.78
Insurance	\$396.56	\$91.26
Maintenance	\$138.67	\$31.91

Note: Financing costs estimated for owners (Exhibit 1).

Source: Driver survey, app respondents only.

³ Survey results were compiled for app drivers who worked 2-90 hours per week and drove a sedan, luxury sedan, compact, SUV, luxury SUV (N=2,886). Outliers were removed from each expense category – lease, insurance, and maintenance costs – using the interquartile range technique (IQR*1.5). We took into account the issue of high-cost short-term leases in revising the expense model, including a comparison of the survey results for short-term leases with data provided by Uber on Uber-Partners short-term leases. About 10 percent of Uber drivers had short-term leases, with that 10 percent share and average and median weekly lease expenses fairly consistent for the fourth week compared to the 52-week continuous data. The Uber lease data were consistent with the driver survey results. The mean weekly lease and insurance costs for drivers who identify as short-term lessees (or renters) in the survey data was about \$388, virtually identical with the insurance-inclusive weekly lease costs from the Uber-Partners payment data.

Reflecting the switch to an expense model based on vehicle types in use, we also modify how we estimate fuel costs in the revised expense model. Previously, we used the 25 city miles per gallon (mpg) rating for a 2018 Camry. Here we average the model year-specific city mileage rating trip weights by vehicle type. This method yielded an average mileage rating of 27.7 miles per gallon. This mpg is higher than for a non-hybrid Camry; 10 to 15 percent of vehicles introduced annually over recent years were hybrids with superior fuel economy.

We also update the per gallon fuel costs to reflect the average New York City regular gas price for the 26 weeks through October 8, 2018 (\$2.897). Previously, we used average New York City regular gas costs for the first 17 weeks of 2018. The combination of higher fuel economy and higher gas prices yields a 5.3 percent net reduction in weekly gas costs (see Exhibit 5 below).

Exhibit 5 summarizes the revisions made to the standard expense model compared to the values used in the July report (only the operating expense portion of total expenses is shown below—there were no changes to the other expense components). **The bottom line: the per-mile expense factor was updated to 63.1 cents compared to 58.0 cents in the July report. This amount is an increase of 8.8 percent. The weekly expense figure then increases from \$390.29 to \$424.76** [See Appendix A, Revision of Exhibit 10A FHV Expense Model].

Exhibit 5

Operating Portion of Revised FHV Expense Model

	Revised Annual	Revised Weekly	Revised Per Mile	July report-- weekly	change from July report
Gas	\$3,663.64	\$70.45	\$0.105	\$74.40	-5.3%
Vehicle payment	\$9,608.75	\$184.78	\$0.275	\$146.17	26.4%
Commercial insurance	\$4,745.74	\$91.26	\$0.136	\$92.49	-1.3%
Vehicle maintenance	\$1,659.51	\$31.91	\$0.047	\$30.89	3.3%
Vehicle cleaning	\$936.00	\$18.00	\$0.027	\$18.00	0.0%
SubTotal Vehicle costs	\$20,613.64	\$396.42	\$0.589	\$361.94	9.5%
TOTAL	\$22,087.61	\$424.76	\$0.631	\$390.29	8.8%

Source: Authors' revised analysis based on TLC and other data sources.

The major changes in this revision were to the vehicle payment line, where the weekly amount rose by 26.4 percent. The overall expense increased by 8.8 percent, with minor changes in the insurance and maintenance amounts, and the 5.3 percent reduction in gas costs. The improved 63.1 cents per mile expense amount remains within five cents of the IRS 2019 business mileage allowance of 58 cents.⁴

For wheelchair-accessible vehicles (WAVs), we changed only the fuel costs, using the more recent base period (the six months through October 8, 2018). This update raises the WAV

⁴ The IRS allowance for business use of a vehicle rose from 54.5 cents in 2018 to 58 cents in 2019.
<https://www.irs.gov/newsroom/irs-issues-standard-mileage-rates-for-2019>

expense from 80.4 cents per mile to 81.8 cents per mile, an increase of 1.7 percent [See Appendix B, Revision of Exhibit 10B WAV Expense Model].

2. Earnings analysis on per-trip basis using revised expense factor

We revised the earnings analysis using the expense revisions discussed above. We also revised the analysis to place it on a per-trip basis. In the July report, the TLC administrative earnings files included weekly earnings and aggregate trip distance and time for each driver. Subsequent to the release of the July report, the TLC requested company earnings files that included, for each trip, the distance and time as well as the amount the driver was paid for that trip. This augmented earnings information permits the analysis of driver pay on a per-trip basis.

We use the data from the new earnings files for all four companies for the fourth study week (mid-October 2017), to conduct a new earnings analysis on a per-trip basis. Exhibit 6 summarizes the results of this new earnings analysis.

Exhibit 6

Summary Per-Trip Earnings Analysis Results *

Expense factor: 63.1 cents per mile

	Uber	Lyft	Juno	Via	Combined
All trips					
# of trips	2,162,597	628,460	245,131	18,268	3,054,456
Mean gross hourly pay	\$ 23.10	\$ 23.54	\$ 25.27	\$ 31.64	\$ 23.42
Median gross hourly pay	\$ 21.85	\$ 22.58	\$ 23.34	\$ 31.12	\$ 22.18
Mean after-expense hourly pay	\$ 14.67	\$ 14.72	\$ 16.88	\$ 22.94	\$ 14.90
Median after-expense hourly pay	\$ 13.56	\$ 13.78	\$ 14.24	\$ 22.48	\$ 13.70
Trips below \$17.22 minimum					
# of trips below minimum	1,587,482	463,866	171,169	1,672	2,224,189
% of trips below minimum	73.4%	73.8%	69.8%	9.2%	72.8%
Mean gross hourly pay	\$ 19.85	\$ 20.48	\$ 21.84	\$ 19.37	\$ 20.14
Mean after-expense hourly pay	\$ 11.08	\$ 11.59	\$ 13.12	\$ 10.75	\$ 11.34
Utilization rate	58%	58%	50%	70%	

* Based on 4th study week, Oct. 16-22, 2017

Source: Authors' analysis.

With the higher expense figure and analyzing earnings on a per-trip basis, our revised analysis finds that 72.8 percent of trips during the fourth study week compensated drivers at an after-expense hourly rate below the proposed \$17.22 minimum earnings standard. On an hourly basis, all trips had a mean after-expense rate of \$14.90 for all four companies combined. But since nearly 73 percent of trips paid below the proposed minimum, the mean hourly rate for those trips was only \$11.34 across all four companies.

To raise all below-minimum trips up to the minimum standard level would entail a 20.7 percent increase in weekly aggregate gross pay.

In order to assess the impact of implementing the pay standard on a per-trip basis on the weekly pay of drivers, we aggregate their pay for all trips provided during the study week. This exercise reveals that 96 percent of all drivers had at least one trip during the week that paid below the minimum.

In the July report, with a 58 cent expense factor, we estimated that 85 percent of drivers had weekly earnings that fell short of the minimum pay standard. While the new analysis uses a higher expense factor (63.1 cents), we find that nearly 73 percent of trips provided sub-minimum earnings, but that nearly all (96 percent) drivers had at least one sub-minimum paying trip.

Exhibit 7 summarizes the key results from the driver-level earnings analysis.

Exhibit 7

Summary Key Hourly and Weekly Earnings Metrics *
before and after pay standard implemented on a per trip basis

Mean gross hourly pay--before pay standard	\$22.35
Mean gross hourly pay--after pay standard	\$27.86
% change due to pay standard	24.7%
Mean gross trip pay on a weekly basis--before pay standard	\$714.02
Mean gross trip pay on a weekly basis--after pay standard	\$898.60
% change due to pay standard	25.9%
Mean after expense pay on a weekly basis--before pay standard	\$413.18
Mean after expense pay on a weekly basis--after pay standard	\$597.76
% change due to pay standard	44.7%
Annual earnings impact for affected drivers	\$9,598
Aggregate increased annual earnings for affected NYC drivers **	\$626,600,000

* for affected drivers, i.e., those with one or more trips paying below the standard (96% of all drivers.)

** based on an average of 80,000 weekly drivers, 85 percent NYC residents

Source: Authors' analysis using revised expense model, updated Dec. 2018.

For the affected drivers who have at least one trip below the minimum pay standard, the pay standard entails an average 25.9 percent increase in gross weekly pay. This gross pay increase translates into a 44.7 percent net pay increase, or an average annual increase for affected drivers of nearly \$9,600. Since 96 percent of all drivers would be affected—all those with at least one sub-minimum trip—and 85 percent live in New York City, the aggregate annual earnings increase for New York City drivers totals about \$626 million.

3. Implications of the 20.7 percent aggregate pay increase for passenger fares and commission rates

With the same labor supply and consumer demand elasticity assumptions used in the report, a 20.7 percent increase in aggregate weekly pay for all drivers could be accommodated by a modest five percent fare increase, provided commission rates were lowered to an average of 4.1 percent. An 8 percent fare increase would yield a 6.8 percent commission rate (vs. 16.6 percent as estimated in the July report), and a 10 percent fare increase would be associated with an average 8.5 percent commission rate.

Appendix A

Revision of FHV Expense Model included in July 2, 2018 report

Exhibit 10A: FHV Expense Model, revised Nov. 15, 2018

Expense Category	Specific Expenditure Item	Annual	Weekly	Per Mile
One-Time--all amortized over 5 years				
	TLC 24-hour course--one time \$175	\$35.00	\$0.67	\$0.001
	TLC 24-hour course exam--one time \$50	\$10.00	\$0.19	\$0.000
	DMV E class license--one time \$113	\$22.60	\$0.43	\$0.001
	TLC fingerprinting--one time \$88.50	\$17.70	\$0.34	\$0.001
	WAV sensitivity training--one time \$60	\$12.00	\$0.23	\$0.000
	SubTotal	\$97.30	\$1.87	\$0.003
Recurring				
	TLC driver license--\$252 every 3 years	\$84.00	\$1.62	\$0.002
	TLC drug test	\$26.00	\$0.50	\$0.001
	Vehicle Registration	\$275.00	\$5.29	\$0.008
	TLC and DMV vehicle inspection	\$130.00	\$2.50	\$0.004
	DMV defensive driving course--\$50 every 3 years	\$16.67	\$0.32	\$0.000
	DMV new plates	\$5.00	\$0.10	\$0.000
	DMV vehicle license and plate renewal	\$400.00	\$7.69	\$0.011
	DMV vehicle use tax	\$40.00	\$0.77	\$0.001
	DMV commercial motor vehicle tax	\$400.00	\$7.69	\$0.011
	SubTotal	\$1,376.67	\$26.47	\$0.039
Operating				
	Gas	\$3,663.64	\$70.45	\$0.105
	Vehicle payment	\$9,608.75	\$184.78	\$0.275
	Commercial insurance	\$4,745.74	\$91.26	\$0.136
	Vehicle maintenance	\$1,659.51	\$31.91	\$0.047
	Vehicle cleaning	\$936.00	\$18.00	\$0.027
	SubTotal	\$20,613.64	\$396.42	\$0.589
	TOTAL	\$22,087.61	\$424.76	\$0.631

Source: Authors' analysis based on TLC and other data sources.

Appendix B

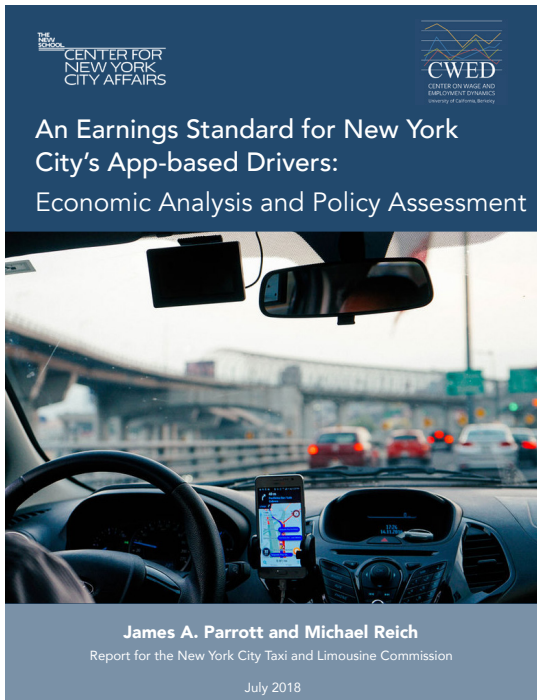
Revision of WAV Expense Model included in July 2, 2018 report

Exhibit 10B: Wheelchair-Accessible Vehicle (WAV) Expense Model, revised Nov. 15, 2018

2018 Chrysler Grand Caravan, 17 city mpg, 30,000 miles per year

Expense Category	Specific Expenditure Item	Annual	Weekly	Per Mile
One-Time--all amortized over 5 years				
	Vehicle downpayment--\$3,000	\$600.00	\$11.54	0.020
	TLC 24-hour course--one time \$175	\$35.00	\$0.67	0.001
	TLC 24-hour course exam--one time \$50	\$10.00	\$0.19	0.000
	DMV E class license--one time \$113	\$22.60	\$0.43	0.001
	TLC fingerprinting--one time \$88.50	\$17.70	\$0.34	0.001
	WAV sensitivity training--one time \$60	\$12.00	\$0.23	0.000
	SubTotal	\$697.30	\$13.41	0.023
Recurring				
	TLC driver license--\$252 every 3 years	\$84.00	\$1.62	0.003
	TLC drug test	\$26.00	\$0.50	0.001
	Vehicle registration	\$275.00	\$5.29	0.009
	TLC and DMV vehicle inspection	\$130.00	\$2.50	0.004
	DMV defensive driving course--\$50 every 3 years	\$16.67	\$0.32	0.001
	DMV new plates	\$5.00	\$0.10	0.000
	DMV vehicle license and plate renewal	\$400.00	\$7.69	0.013
	DMV vehicle use tax	\$40.00	\$0.77	0.001
	DMV commercial motor vehicle tax	\$400.00	\$7.69	0.013
	SubTotal	\$1,376.67	\$26.47	0.046
Operating				
	Gas	\$5,121.18	\$98.48	0.171
	Vehicle payment (includes \$11,000 modification costs)	\$9,334.36	\$179.51	0.311
	Commercial insurance	\$4,790.08	\$92.12	0.160
	Vehicle maintenance	\$2,270.04	\$43.65	0.076
	Vehicle cleaning	\$936.00	\$18.00	0.031
	SubTotal	\$22,451.66	\$431.76	0.748
	TOTAL	\$24,525.62	\$471.65	0.818

Source: Authors' analysis based on TLC and other data sources.



An Earnings Standard For New York City's App-Based Drivers: Economic Analysis And Policy Assessment

By James A. Parrott and Michael Reich

Uber, Lyft and other app-based companies have experienced stunning growth in New York City and the nation in the past five years. Yet the full-time drivers for these companies are not doing well at all. What should be done?

Dr. James A. Parrott of the Center for New York City Affairs, New School, and Dr. Michael Reich of the University of California, Berkeley have prepared a report on the need for and effects of a minimum driver pay standard that would apply to the app-

based drivers affiliated with Uber, Lyft, Via, and Juno. The New York City Taxi and Limousine Commission would enact and implement the pay standard. The TLC contracted with Drs. Parrott and Reich to prepare their report.

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