A Minimum Pay Rate for App-Based Restaurant Delivery Workers in NYC

NYC

Consumer and Worker Protection

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Acknowledgments

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Abstract

In this report, the Department discusses the findings of its study into the working conditions of restaurant delivery workers who are engaged by apps as independent contractors in NYC. This report includes an analysis of the pay and working conditions of this workforce, describes the Department's proposed rule to establish a minimum pay rate for this work, and examines the minimum pay rate's anticipated impacts on apps, consumers, restaurants, and workers.

The Department's analysis is based principally on data obtained from apps and an online survey distributed to 123,000 workers who performed deliveries in NYC in the fourth quarter of 2021. The Department supplemented these sources with an online survey distributed to all restaurants in NYC, an in-person field survey of more than 400 delivery workers, testimony from a public hearing, interviews with stakeholders and other experts, and analysis of publicly available data on pay, benefits, and safety conditions.

The Department's study finds that NYC's app-based restaurant delivery workers currently earn $14.18 per hour with tips and $7.09 per hour without tips. Delivery workers' hourly expenses are $3.06, reducing their take home pay to $11.12 per hour with tips and $4.03 per hour without tips. The Department also finds that app-based restaurant delivery workers experience high rates of occupational injury.

The rate set forth in the proposed rule, after a two-year phase-in, would require restaurant apps to pay delivery workers who are engaged as independent contractors an average hourly rate of $23.82 per hour excluding tips, which is comprised of a $19.86 base rate, $1.70 to compensate for the absence of workers' compensation insurance, and $2.26 to reflect workers' expenses. Pay at this rate will provide for parity with workers covered by NYC's existing minimum earnings standard for app for-hire service drivers and approximates the total compensation app-based restaurant delivery workers would receive if classified as employees.

The Department's study projects that the minimum pay rate will encourage apps to use workers' time more efficiently, increasing deliveries from 1.6 to 2.5 per hour. Apps may choose to pass their remaining increase in labor costs to consumers through higher fees, increasing consumers' cost of delivery by $5.18 per order, on average. Though higher fees will moderate growth, the Department projects that the number of app deliveries will still increase by 35% by 2025. The Department also projects that restaurants will be mostly unaffected by the minimum pay rate but may see a modest increase in profits if consumers respond to higher app fees by purchasing directly from restaurants.

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1 Introduction

Section 20-1522 of the NYC Administrative Code requires the Department of Consumer and Worker Protection (**the Department**) to study the pay and working conditions of app-based restaurant delivery workers and, no later than January 1, 2023, establish a minimum pay rate for their work by rule.[1] Referenced herein as **the Minimum Pay Law**, this section was enacted in fall 2021 as part of a broader package of protections for app-based restaurant delivery workers in NYC, known as the **Delivery Worker Laws**.[2] This report refers to the app-based restaurant delivery workers who are covered by the Delivery Worker Laws as "**app delivery workers**." A related package of laws, also enacted in fall 2021, requires most apps to obtain a license to operate in NYC and regulates their interactions with restaurants and consumers, including setting a limit on the fees that apps can charge restaurants.[3]

This report summarizes the results of the Department's study of the restaurant delivery app industry in NYC, discusses the Department's proposed minimum pay rate, and examines the minimum pay rate's prospective impact on apps, consumers, workers, and restaurants. Concurrently with release of this report, the Department is publishing the proposed rule establishing the minimum pay rate in the New York City Record.

Throughout this report, the Department refers to "**apps**," "**app delivery**," and "**restaurant apps**" as shorthand to describe the third-party food delivery services and third-party courier services covered by the Delivery Worker Laws. These phrases do not encompass delivery from apps that are not covered by the Delivery Worker Laws, such as supermarket or quick-delivery convenience store apps.[4]

The report is organized as follows. Section 2 briefly summarizes the Department's sources and methods. Section 3 describes the apps, consumers, and restaurants, providing essential context for the analysis presented in the following sections. Section 4 describes the present conditions of app delivery workers, including their pay, hours, modes of transportation, expenses, safety conditions, and demographics. Section 5 presents the Department's proposed minimum pay rate and discusses its key features. Section 6 models the minimum pay rate's impact on apps, consumers, restaurants, and workers. Section 7 concludes. Throughout this report, for ease of reference, key terms are introduced in **bold**.

[1] NYC Administrative Code § 20-1522.
[2] *Id*. §§ 20-1501–1524, 20-563.2, and 20-563.6.
[3] *Id*. §§ 20-563–20-563.13.
[4] *See id*. § 20-1501.

2 Sources and Methods

The Department's study draws principally on data that the Department obtained from apps in response to administrative subpoenas combined with a survey that was distributed to nearly all of the approximately 123,000 workers who performed app deliveries in NYC between October and December 2021. The study also draws on additional sources, including a separate in-person field survey of more than 400 delivery workers, a survey of restaurant owners and managers that was distributed to all of the approximately 23,000 restaurants in NYC, testimony from a public hearing on delivery worker pay and working conditions, expert and stakeholder interviews, and public information. This section provides a high-level summary of these sources and their use in the study.

Sources

Pursuant to its authority under the Minimum Pay Law,[5] the Department issued subpoenas requesting data and documents to all apps identified as potentially engaging independent contractors to perform restaurant deliveries in NYC. These subpoenas resulted in the production of information covering January 1, 2021 through June 30, 2022 from Uber Technologies, Inc., Grubhub, Inc., DoorDash Inc., and Relay Delivery, Inc. (hereinafter referred to as Uber Eats, Grubhub, DoorDash, and Relay respectively). The Department determined that these apps are collectively responsible for 99% of app deliveries in NYC. Through this process, the Department also obtained data and information from all other apps it identified as engaging independent contractors to perform deliveries in NYC. These apps are Chowbus Inc. (Chowbus), Club Feast Inc. (Club Feast), Just Order Enterprises Corp. (Fantuan), HungryPanda US Inc. (HungryPanda), Patio Delivery, Inc. (Patio), and GoHive Inc. (GoHive).

The information produced by Uber Eats, Grubhub, DoorDash, and Relay included four types of data. First, **record-level data** for all workers who accepted an offer to perform a delivery in NYC in the fourth quarter of 2021, including the phone and email from each account profile and information about each trip, payment, and login in the quarter. Second, **ZIP code summary data** on sales and payments to workers aggregated by consumer and worker ZIP code for the fourth quarter of 2021. Third, **merchant summary data** on sales aggregated by type of merchant for the fourth quarter of 2021. Fourth, **weekly summary data** for each week from January 1, 2021 through June 30, 2022, including, for each app, total deliveries, hours, and pay.

The Department entered into confidentiality agreements with the apps that govern the Department's use of data and other information that the apps consider to be trade secrets. Though the Department used such information in its study and deliberation to determine the minimum pay rate, the Department is not publishing any information that the apps designated confidential pursuant to these agreements.

To obtain information about workers' expenses, demographics, and safety conditions, the Department used the worker contact information obtained from the apps to conduct the **NYC Delivery Worker Survey**, a large-scale, representative survey of app delivery workers in NYC. The Department distributed an online survey form by text message and email to all workers who accepted an offer to perform a delivery in NYC between October 1 and December 31, 2021 for Uber Eats, Grubhub, DoorDash, Relay, Chowbus, or HungryPanda, except a small number of workers whose contact information was missing or suppressed. In total, between June 8 and July 26, 2022, the Department sent messages to 179,354 phone numbers and 192,546 email addresses, each including a custom link allowing the Department to match survey responses to the other record-level data obtained from the apps. The Department estimates that these phone numbers and emails belonged to 122,539 unique individuals, including 122,104 individuals who had worked for Uber Eats, Grubhub, DoorDash, and/or Relay. The text messages, emails, and survey forms were delivered in Arabic, Bengali, Chinese, English, French, Korean, Russian, Spanish, and Urdu. To limit the survey length, the Department divided its

[5] *Id.* § 1522(a)(2).

questionnaire into three modules, focusing on vehicle-related expenses (including e-bike, car, and moped expenses), non-vehicle expenses (e.g., phones), and safety and demographics. Each account was randomly assigned to receive one of the three modules. Within each module, survey length varied due to use of branching and skip logic. On average, respondents took four minutes and 23 seconds to complete the survey, answering 12 questions.

The Department received 7,956 responses from workers at Uber Eats, Grubhub, DoorDash, or Relay that satisfied its inclusion criteria,[6] consisting of 2,963 for the vehicle expense module, 2,843 for the non-vehicle expenses module, and 2,150 for the safety and demographics module. The combined 7,956 responses represent 6.5% of the estimated 122,104 unique individuals in the sample for these apps, after accounting for some workers' practice of maintaining multiple accounts. This response rate is several times the rate obtained by leading academic researchers conducting online surveys concerning low-wage work.[7]

The Department also conducted a separate in-person field survey of delivery workers, in partnership with Sam Schwartz Engineering, a leading transportation engineering firm, Worker's Justice Project, a NYC-based worker center and sponsor of the Los Deliveristas Unidos campaign, and the Columbia University Labor Lab, an applied research program of Columbia University (referenced herein as the "**Columbia-Sam Schwartz-Deliveristas Survey**"). The 58-item questionnaire asked workers about their work history, expenses, experiences with discipline and non-payment on the apps, and safety conditions. Respondents were recruited from delivery workers visiting Worker's Justice Project offices, at Los Deliveristas Unidos events held throughout the city, and through street canvassing at locations where delivery workers are known to congregate. Respondents completed the survey using an online form, mostly onsite at these locations. The survey was fielded between April 25 and July 15, 2022 in Bengali, Chinese, English, French, and Spanish, and generated 465 responses that met the Department's inclusion criteria.[8] Though covering similar material as the Department's NYC Delivery Worker Survey, the two questionnaires differed in their design and wording.

To adequately consider the impacts of a minimum pay rate on restaurants, the Department fielded a survey of restaurant owners and managers (the "**NYC Restaurant Delivery Survey**"). The self-administered online survey consisted of 15 questions about the volume of deliveries at respondents' restaurants and how these deliveries were fulfilled. The survey was distributed by the NYC Department of Small Business Services' (SBS) Food and Beverage Industry Partnership, the NYC Hospitality Alliance, and the New York State Restaurant Association to their respective contact lists of restaurant owners and managers. It was fielded between June 28 and July 22, 2022. The SBS contact list is continuously updated based on the contacts listed in restaurants' food service establishment permit applications and is comprehensive of the approximately 23,000 restaurants in NYC. The Department's NYC Restaurant Delivery Survey was fielded in Chinese, English, and Spanish. The Department received 371 responses that met the Department's inclusion criteria, [9] equal to approximately 1.61% of the restaurants in NYC. The distribution of respondents by cuisine, borough, number of employees, and level of service (i.e., full-service vs. limited service) was representative of all food service establishments in NYC.

To gather additional information on delivery worker pay, working conditions, and the delivery industry, the Department used its authority under the City Charter to hold a public hearing on June 15, 2022.[10] The

[6] The Department excluded responses if the respondent did not affirm that they were over 18 and freely participating in the survey, if the respondent reported that they had never worked for an app, if the respondent failed certain tests for reliability embedded into the questionnaires, if more than one response was associated with a worker's contact information, or if the record-level data obtained from apps showed no working hours for all accounts associated with the respondent's phone number. The Department also excluded some responses due to a technical failure in certain text messages.

[7] *See*, *e.g.*, Daniel Schneider & Kristen Harknett, *Schedule instability and unpredictability and worker and family health and wellbeing*, Washington Center for Equitable Growth (Sept. 2016) (discussing a survey response rate of 0.4% to Facebook advertisements targeting low-wage service-sector workers), http://cdn.equitablegrowth.org/wp-content/uploads/2016/09/12135618/091216-WP-Schedule-instability-and-unpredictability.pdf (last accessed Oct. 28, 2022).

[8] The Department excluded responses if the respondent did not affirm that they were over 18 and freely consenting to participate or if the respondent reported that they had never worked for an app.

[9] The Department excluded responses if the respondent did not affirm that they were over 18 and freely consenting to participate.

[10] *See* NYC Charter § 2203(h).

Department received written or oral testimony from 73 individuals and 45 organizations.[11] Members of several worker advocacy groups testified, including Worker's Justice Project, the NYC Food Delivery Movement, International Alliance of Delivery Workers, New Immigrant Community Empowerment, the National Employment Law Project, and Desis Rising Up and Moving. Representatives from DoorDash and Uber also testified.

The Department gathered further qualitative information for the study through frequent meetings, conversations, and interviews with delivery workers, worker advocates, app representatives, and restaurant association representatives. The Department also heard presentations from DoorDash, Uber Eats, and Grubhub in which they presented their views about the minimum pay rate. The Department also gathered information from officials at other City agencies with relevant subject matter expertise, including SBS, the Fire Department of the City of New York (FDNY), the NYC Department of Health and Mental Hygiene (DOHMH), the NYC Taxi and Limousine Commission (TLC), and the NYC Department of Transportation (NYC DOT).

Lastly, the Department used publicly available information in portions of its study, including prior studies, news articles, corporate financial reports, legal and regulatory documents, and public use data from government agencies.

Methods

This report presents results from descriptive analyses of apps, consumers, restaurants, and delivery workers (sections 3 and 4) and a structural model the Department developed to estimate the prospective effects of the proposed minimum pay rate (section 6). Except where noted, the report presents results only for Uber Eats, DoorDash, Grubhub, and Relay.

Though each section of the report notes the methods that produced the accompanying results, the Department presents a few general comments here.

First, some terminology. The Department uses "**delivery**" to refer to the pickup and drop-off of a single order and "**trip**" to refer to the unit of work offered to a delivery worker, consistent with the definition of this term in the Delivery Worker Laws.[12] A trip usually consists of a single delivery but may include multiple deliveries. The Department uses both terms in this report depending on context and the nature of the underlying data. When discussing workers' incomes, "**pay**" refers to the compensation paid by the app exclusive of tips, "**earnings**" is the sum of pay and tips, and "**net pay**" and "**net earnings**" are pay and earnings, respectively, less expenses. With respect to workers' time, "**hours worked**" or "**working time**," as used in this report, consists of all "**trip time**" (i.e., the time between acceptance of a trip offer and its completion) and all "**on-call time**" (i.e., time in which a worker is connected to the app in a status where they can receive or accept trip offers, excluding trip time). Trip time includes travel to a restaurant, any time waiting for an order to be prepared, pickup at the restaurant, travel to the destination, and drop-off with the consumer.

Second, except where noted, the Department takes care to only present statistics that reflect controls for the common practice of workers maintaining accounts with multiple apps ("**multi-apping**"), including the less frequent practice of logging into multiple apps concurrently. The Department assessed multi-apping by matching worker accounts across apps using their account phone numbers and analyzing their responses about the apps they work for from the Department's NYC Delivery Worker Survey. For example, the record-level data obtained from apps showed that 219,787 accounts were associated with a delivery in NYC at Uber Eats, Grubhub, DoorDash, or Relay in the fourth quarter of 2021 and that these accounts logged 20.21 million hours of working time. However, after adjustment for multi-apping, the Department estimates these accounts

[11] *See Delivery Worker Public Hearing Transcript*, NYC Department of Consumer and Worker Protection (June 15, 2022) and *Delivery Worker Public Hearing Written Testimony*, NYC Department of Consumer and Worker Protection (June 15, 2022), https: //www.nyc.gov/deliveryapps.
[12] *See* NYC Administrative Code § 20-1501 ("trip" is "the time spent, distance travelled, and route followed by a worker to provide delivery services to a consumer through a third-party food delivery service or third-party courier service, including travel to a business, picking up the food, beverage, or other goods for delivery, and taking and depositing such delivery at a different location as requested").

were held by 122,104 unique individuals who spent 17.16 million hours connected to at least one app. These adjustments reflect the Department's estimate of the percent of workers with multiple accounts (56.3%), which it calculated from the NYC Delivery Worker Survey, and the Department's estimate of the percent of working time workers logged concurrently. To estimate the latter, the Department used the record-level data it obtained from the apps to analyze the login and logoff times of workers who used the same phone number with multiple apps, then extrapolated to the 56.3% of the workers who maintain multiple accounts (as measured from NYC Delivery Worker Survey data). Using this method, the Department estimates that workers spend 17.7% of working time connected to more than one app. The Department performed this analysis separately for non-car workers, car workers, and all workers.

Third, in its measurement of delivery worker expenses, the Department generally adheres to Internal Revenue Service (IRS) guidelines for the deduction of business expenses on tax returns. For most cost categories, the Department identified the items purchased by workers through its NYC Delivery Worker Survey and separately gathered market prices from retailers or other independent sources. Using market prices rather than workers' recollections of dollar amounts they spent generally provides for more accurate expense estimation.

Fourth, in all its analyses of its NYC Delivery Worker Survey, the Department applied post-stratification weights to address possible non-response bias. To develop the weights, the Department defined 20 strata within the record-level data by the mix of apps (Uber Eats only, DoorDash only, Grubhub only, Relay only, and multiple) and quartile of hours worked. This allows the Department to control for differences in response rates between workers with more hours and workers with fewer hours, for differences in response rates between apps, and for differences in response rates between workers who work for multiple apps and workers who work for only one app. The Department developed separate post-stratification weights for each survey module and for analyses that pooled multiple modules. The Columbia-Sam Schwartz-Deliveristas Survey was drawn from a convenience sample, so results are presented without weighting. Because responses to the Department's NYC Restaurant Delivery Survey showed good representativeness on observables, the Department determined weighting was unnecessary.

Fifth, for convenience, the Department refers to the merchants on apps' platforms as "**restaurants**." Restaurant delivery is a requirement for an app to be covered under the Delivery Worker Laws, though some covered apps also engage workers to perform deliveries from convenience stores, grocery stores, or other retailers, in addition to restaurants. However, non-restaurant deliveries are not provided by covered apps in NYC on a scale sufficient to justify a differentiated analysis. Except where noted, restaurant and non-restaurant deliveries are treated as undifferentiated throughout this report. The Department interprets its findings aware of this limitation and determined that it does not materially impact the study results or the basis for the minimum pay rate.

Lastly, the model used by the Department to estimate potential impacts relies on assumptions about how apps, consumers, workers, and restaurants will respond to the minimum pay rate. It also relies on assumptions about how the delivery industry in NYC would evolve in the absence of a minimum pay rate. Though the results reported reflect the Department's best estimate of likely impacts, the Department also estimated results under alternative assumptions for key parameters and considered them in its deliberations.

3 Overview of the Apps, Consumers, and Restaurants

This section provides information the Department gathered for the study on apps, consumers, and restaurants.

Apps

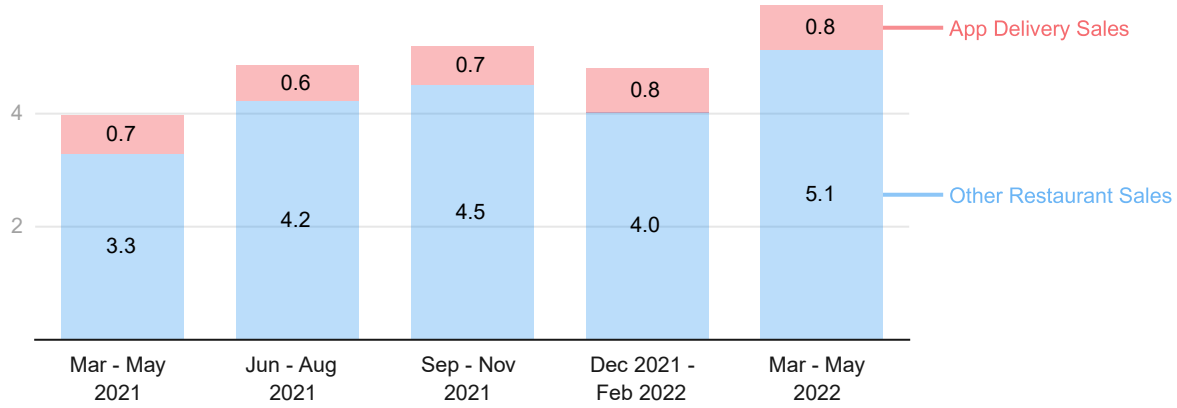
Apps provide either or both of two related services: a marketplace service that allows a consumer to search for restaurants and place orders online; and a courier service, in which the app dispatches a worker to a restaurant to pick up the food and deliver it to the consumer. If an app provides a marketplace service, NYC requires the app to obtain a license from the Department and limits the fees it can charge restaurants.[13] If an app provides a courier service, it is covered by the Minimum Pay Law, as well as most other provisions of the Delivery Worker Laws.[14] In the case of the three largest delivery apps, Uber Eats, Grubhub, and DoorDash, the two services are usually combined, so when a consumer orders through an app, a worker dispatched by that same app arrives at the consumer's door. A restaurant may also elect to receive orders through an app's marketplace but still send its own employee to do the delivery. Conversely, a restaurant might receive an order over the phone or through its own website but then use one of the delivery apps to dispatch a worker to come pick the food up and deliver it. A restaurant might also receive an order through one app's marketplace but use another to fulfill the delivery. Consumers also use apps' marketplace service to place orders that they pick up themselves.

When app delivery first developed in NYC, it was a marketplace-only service, with the deliveries still performed by restaurant employees. Over time, delivery by workers dispatched by apps, and engaged by the apps as independent contractors, became the more common arrangement. Growth was rapid throughout the 2010's and increased sharply with the onset of the pandemic, as orders increased by more than 50% in the NYC metro area[15] and doubled nationally.[16] Since then, the app delivery industry has not contracted to its pre-pandemic size. Growth has only continued.[17] In NYC, there were 17% more deliveries in the first six months of 2022 than the same period in 2021,[18] and app delivery in the United States is now more than four times larger than at the start of 2018.[19]

This fast growth has resulted in delivery apps quickly becoming an important part of the NYC restaurant market. Between March 2021 and May 2022, app deliveries accounted for $3.6 billion of the $24.7 billion in NYC restaurant sales (15%).[20] Meals ordered through an app, either for consumer pickup or delivery by a restaurant employee, account for an additional share of sales.

[13] *Id.* §§ 20-563 and 20-563.1. Apps that provide a marketplace service are also required to disclose to a delivery worker how much such worker earned in gratuities and to enter into an agreement with each restaurant on its platform that allows workers to use such restaurant's bathroom. *See id.* §§ 20-563.2 and 20-563.6.
[14] *Id.* §§ 20-1501–1524.
[15] *See U.S. Food Delivery Mid-Month update: Data through 6/21/22*, YipitData (June 23, 2022).
[16] *See* Kabir Ahuja et al., *Ordering in: The rapid evolution of food delivery*, McKinsey and Company (Sept. 22, 2021), https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/ordering-in-the-rapid-evolution-of-food-delivery (last accessed Oct. 28, 2022).
[17] *See* YipitData, *supra* note 15.
[18] Department analysis of weekly aggregate data obtained from apps.
[19] *See* Kabir Ahuja et al., *supra* note 16.
[20] Department analysis of weekly aggregate data obtained from apps, in combination with data on taxable sales in New York. *Taxable sales and purchases by geography and industry through May 2022*, NYS Department of Taxation and Finance (July 21, 2022), https://www.tax.ny.gov/research/stats/stat_excise/taxable_sales_and_purchases/taxable_sales_and_purchases_open_data.htm (last accessed Sept. 30, 2022).

Figure 1. Restaurant Sales in NYC ($, in billions)



Values for app delivery only include deliveries in which the app engaged the delivery worker to perform the delivery. Source: Department analysis of weekly aggregate data obtained from apps and quarterly data on taxable sales from the NYS Department of Taxation and Finance. [21]

The Department has identified 10 apps that engage independent contractors to perform restaurant deliveries in NYC. The four largest (Uber Eats, Grubhub, DoorDash, and Relay) are responsible for nearly all app deliveries in NYC (99%), performing 124 million deliveries in NYC between July 2021 and June 2022.[22] The remainder of the market consists of three smaller apps (Chowbus, HungryPanda, and Fantuan), one app catering business (Club Feast), and two recent entrants to the NYC market (Patio and GoHive). Additional businesses offer marketplace services to restaurants in NYC but do not hire, retain or engage delivery workers.

The three largest apps (Uber Eats, DoorDash, Grubhub) are all global, publicly-traded companies. According to a report by McKinsey & Company, Uber Eats, including Postmates Inc. (Postmates) which it acquired in 2020,[23] is the market leader locally, with approximately 40% of marketplace sales in NYC.[24] Grubhub, which merged with Seamless in 2013[25] and was purchased by the Netherlands-based Just Eat in 2021, has about 35%.[26] DoorDash, which is the largest and fastest-growing nationally,[27] holds only about a 25% share in NYC.[28] The Department estimates that the deliveries that Uber Eats, DoorDash, and Grubhub perform in NYC generate about 4.8% of their global delivery revenue[29] and 2.5% of their revenue across all lines of business.[30] Despite large losses, which are not uncommon for growing technology companies, the three apps had a combined $75 billion market capitalization as of October 2, 2022.[31]

Relay, the fourth largest delivery app, is an NYC-based startup, and the only one operating in NYC that does not have a consumer-facing mobile application or website. Instead of marketing to consumers, Relay serves restaurants as a lower-cost option to fulfill their deliveries.[32]

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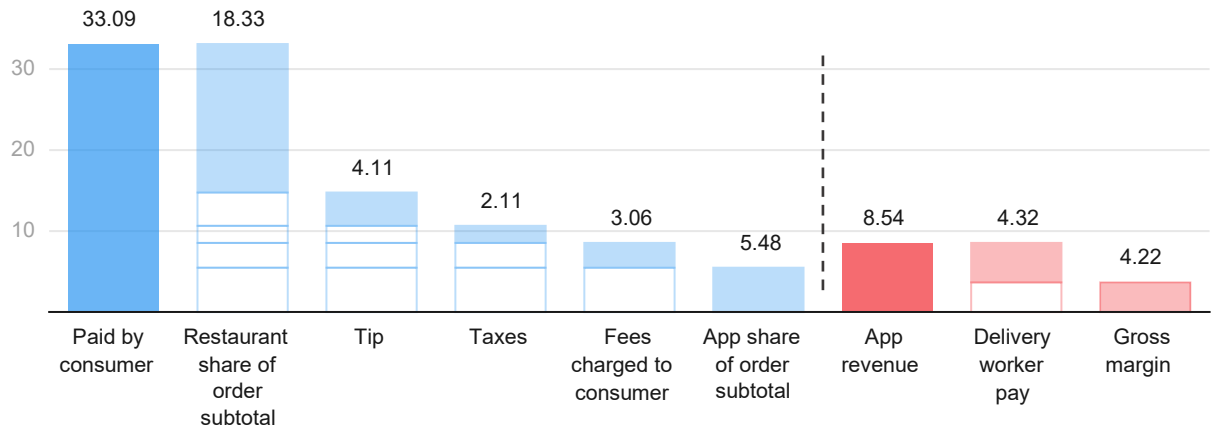
[21] *See* NYS Department of Taxation and Finance, *supra* note 20.
[22] Department analysis of weekly aggregate data obtained from apps.
[23] *See Uber Completes Acquisition of Postmates*, Uber Investor (Dec. 1, 2020), https://investor.uber.com/news-events/news/press-release-details/2020/Uber-Completes-Acquisition-of-Postmates/default.aspx (last accessed Sept. 30, 2022).
[24] *See* Kabir Ahuja et al., *supra* note 16.
[25] *See Seamless and Grubhub Announce Merger*, PR Newswire (May 20, 2013), https://www.prnewswire.com/news-releases/seamless-and-grubhub-announce-merger-208124841.html (last accessed Sept. 30, 2022).
[26] *See* Kabir Ahuja et al., *supra* note 16.
[27] *Id.*
[28] *Id.*
[29] *See* Uber Tech., Inc., Quarterly Report (Form 10-Q) (Aug. 4, 2022); *see* DoorDash, Inc., Quarterly Report (Form 10-Q) (Aug. 5, 2022); *see Half Year 2022 Results*, Just Eat Takeaway.com (Aug. 3, 2022), https://s3.eu-central-1.amazonaws.com/takeaway-corporatewebsite-dev/03-08-2022-Press-Release-Just-Eat-Takeaway.com-Half-Year-2022-Results.pdf.
[30] *See id.*
[31] *See Market capitalization of DoorDash from 2020-2022*, Companies Marketcap, https://companiesmarketcap.com/doordash/marketcap (last accessed Oct. 5, 2022); *see Market capitalization of Just Eat Takeaway from 2016 to 2022*, Companies Marketcap, https://companiesmarketcap.com/just-eat-takeaway/marketcap (last accessed Oct. 5, 2022); *see Market capitalization of Uber from 2019-2022*, Companies Marketcap, https://companiesmarketcap.com/uber/marketcap (last accessed Oct. 5, 2022).
[32] *See Grow your restaurant's margins by switching to Relay*, Relay, https://www.relay.delivery (last accessed Sept. 30, 2022).

Delivery apps generate revenue by charging fees to restaurants and consumers (except for Relay, which charges only restaurants). Delivery worker pay is the main cost they incur.

Figure 2. Unit Economics of App Delivery in NYC, July 2021 – June 2022 ($)

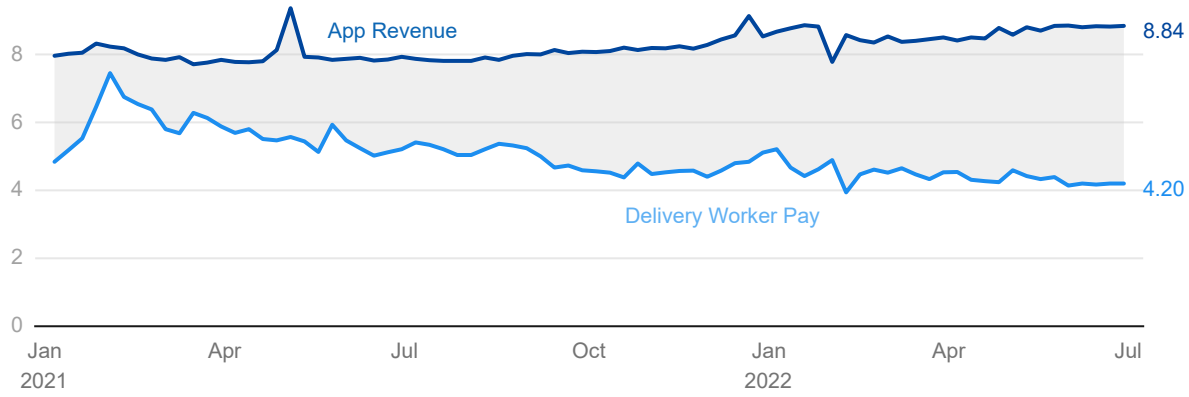


Source: Department analysis of weekly aggregate data obtained from apps. Visualization adapted from Kabir Ahuja et al.[33]

Figure 2 breaks down the amount paid by a consumer on an average order in NYC between July 2021 and June 2022. Moving left to right, the total cost to the consumer was $33.09, consisting of the $18.33 that went to the restaurant, $4.11 to the worker in tips, $2.11 in taxes, $3.06 in fees charged to the consumer by the app, and $5.48 that the app received as its share of the order subtotal (i.e., the app's commission, usually taken by the app as a percentage of the order subtotal). App revenue ($8.54) is the sum of the consumer fees and this commission. Out of this, apps paid an average of $4.32 to the delivery worker, leaving a remainder of $4.22 as the app's gross margin.

Several insights emerge from this analysis. At $33.09, the total cost to the consumer is 39% more than the $23.81 order subtotal (represented in Figure 2 as the sum of the restaurant share of order and the commission charged to the restaurant). Sixty-four percent of apps' revenue comes from the commissions they charge to restaurants ($5.48), with the remaining 36% from fees charged to the consumer ($3.06). Apps retain 49% ($4.22) of their revenue on each order, paying out the remaining 51% to the delivery worker ($4.32). Despite large losses at the corporate level, apps comfortably cover delivery worker pay on the average order.

Figure 3. App Revenue per Delivery and Delivery Worker Pay per Delivery in NYC ($)



Source: Department analysis of weekly aggregate data obtained from apps.

[33] *See* Kabir Ahuja et al., *supra* note 16.

As shown in Figure 3, the spread between revenue and delivery worker pay has grown over the period for which the Department obtained data (January 2021 – June 2022), driven by both increasing revenue and decreasing pay.

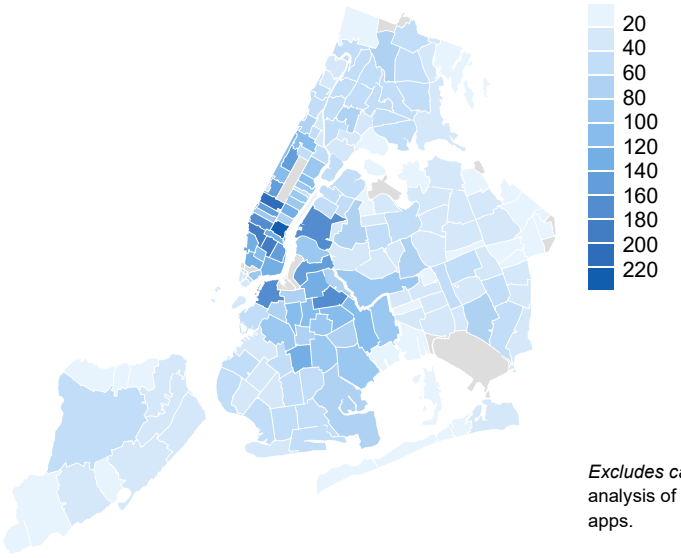
Consumers

For consumers, the apps have increased convenience and expanded the availability of delivery. Though restaurant delivery still represents only 0.7% of household expenditures,[34] delivery sales have been growing faster than the restaurant industry as a whole,[35] especially among younger consumers.[36]

In NYC, consumer expenditures on app delivery are greatest in the highest-income areas. In the top 20 ZIP codes with the highest income, residents spent $36.64 per person per month on app delivery in the fourth quarter of 2021, 73% more than the $21.15 spent by residents in the 20 ZIP codes with the lowest income. The difference is explained mostly by higher delivery volumes. The 20 ZIP codes with the highest income ordered 1.5 deliveries per person per month in the fourth quarter of 2021 (approximately one order per person every 20 days), with an average subtotal of $24.56 per delivery, while the 20 ZIP codes with the lowest income ordered 0.9 deliveries per person per month in the same period (approximately one order per person every 33 days), with an average subtotal of $23.35 per delivery.[37]

As shown in Figure 4, deliveries, including those to both home and work addresses, are concentrated in Manhattan below 110th Street and nearby areas of Brooklyn and Queens.

Figure 4. Monthly App Deliveries in NYC by ZIP Code, Fourth Quarter 2021 (in thousands)



Excludes cancelled orders. Source: Department analysis of ZIP code summary data obtained from apps.

[34] Department analysis of data from the U.S. Bureau of Labor Statistics Current Expenditure Survey and the Purdue University Consumer Food Insights survey. Food away from home, which includes dine-in, take-away, and delivery, comprises 3.9% of household expenditures. Restaurant delivery (including fast food delivery) comprises 17% of this category for urban consumers. *See* Jayson L. Lusk & Sam Polzin, *Consumer Food Insights*, Purdue University (April 2022), https://ag.purdue.edu/cfdas/wp-content/uploads/2022/05/Report_04-2022.pdf ; *see also Expenditure Surveys, 2020*, U.S. Bureau of Labor Statistics (Sept. 2021), https://www.bls.gov/cex/tables/calendar-year/mean-item-share-average-standard-error/cu-income-before-taxes-2020.pdf.

[35] *See* Kabir Ahuja et al., *supra* note 16.

[36] *Id.*

[37] Department analysis of ZIP code summary data obtained from apps and the U.S. Census Bureau 2016-2020 American Community Survey. *See 2020 American Community Survey: 5-Year Estimates – Table B19013: Median Household Income in the Past 12 Months*, U.S. Census Bureau, https://data.census.gov/cedsci/table?t=Income%20and%20Poverty&g=0400000US36%248600000&y=2020&tid=ACSDT5Y2020.B19013&moe=false (last accessed Oct. 25, 2022). To limit bias from deliveries to work addresses, the Department excludes ZIP codes with more than two jobs for every five residents from its analysis, comprising 39 of the 179 ZIP codes entirely within NYC that have ZIP-code-level U.S. Census Bureau data for income, jobs, and population. For the remaining 140 ZIP codes, the ratio of jobs to residents is 0.25 at the top 20 by income, and 0.18 in the bottom 20 by income.

Restaurants

For NYC restaurants, the growth of app delivery has had a mixed impact. During the early phases of the pandemic, app delivery provided a lifeline, especially to restaurants that did not previously offer delivery by allowing them to pivot quickly to delivery and stay in business.[38] For restaurants that previously offered delivery, the apps have allowed them to expand their service areas, increase delivery sales, and attract new consumers (although also at the cost of increased competition).[39]

However, the switch in consumer demand towards app delivery has left restaurants highly dependent on the apps, forcing them to accept high commissions (23% of the order subtotal is the maximum apps can charge to restaurants under NYC law).[40] A recent analysis found that margins on app deliveries were slightly negative for restaurants nationally, and that profitability tends to decline as the delivery share of sales increases.[41]

Based on responses to its NYC Restaurant Delivery Survey, the Department estimates that 92% of NYC restaurants prepare orders for delivery, and that on average, delivery represents 27% of sales.

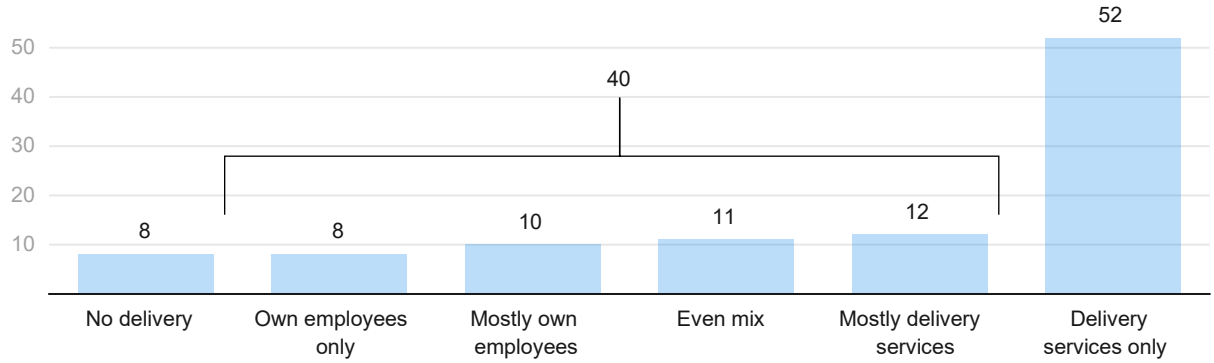
Table 1. Restaurant Delivery Sales in NYC

Delivery as a Percent of Sales (%)	Distribution of Restaurants (%)
0	8
1 – 10	22
10 – 20	16
20 – 30	18
30 – 40	12
40 – 50	6
50 – 60	6
60 – 70	5
70+	7

Interpretation: Delivery is between 1% and 10% of sales for 22% of restaurants in NYC. Source: Department analysis of data from the NYC Restaurant Delivery Survey.

While most restaurants use apps to fulfill deliveries, the industry has not abandoned dispatching their own employees. Fifty-two percent of restaurants only use workers dispatched by apps to make the delivery, compared to 40% that employ their own delivery workers, which they either rely on exclusively (8%) or more commonly in combination with workers dispatched by the apps (32%).

Figure 5. Distribution of Restaurants in NYC, by Delivery Arrangement (%)

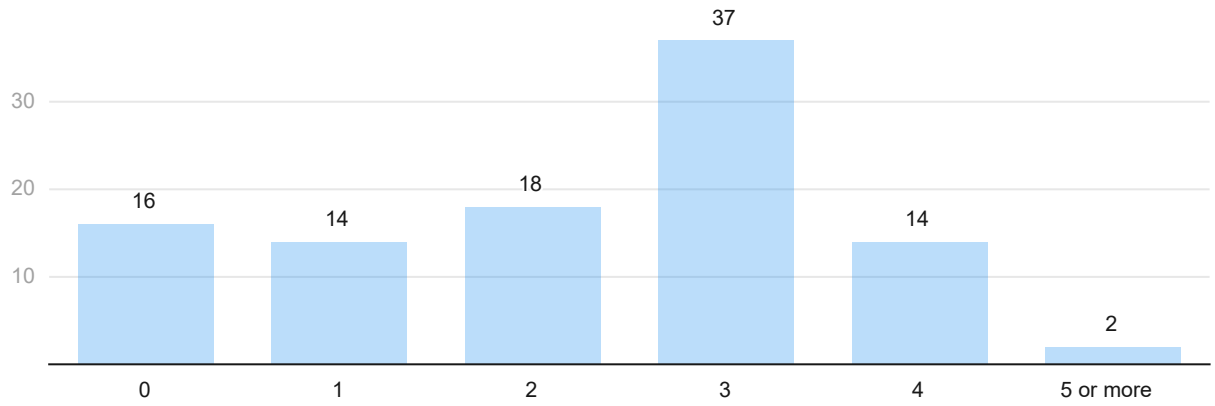


Percentages do not sum to due to rounding. Source: Department analysis of data from the NYC Restaurant Delivery Survey.

[38] *See* NYC Council, *Committee Report of the Governmental Affairs Division* (Aug. 26, 2021) at 13-14.
[39] *Id.* at 4-5.
[40] *See* NYC Administrative Code § 20-563.3.
[41] *See* Kabir Ahuja et al., *supra* note 16.

Restaurants tend to use multiple apps for delivery with 53% using three or more apps and only 14% relying on a single app for deliveries.

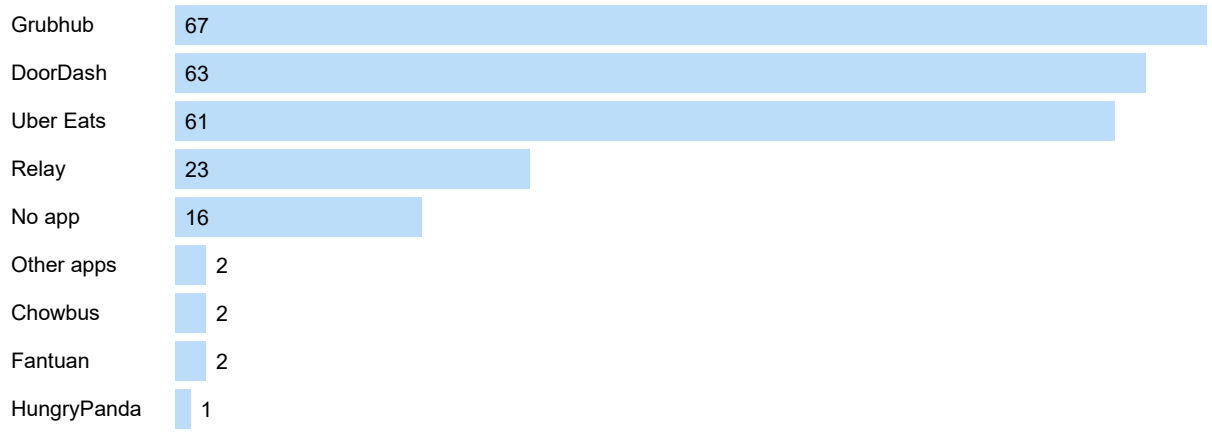
Figure 6. Distribution of Restaurants in NYC, by Number of Apps Used for Delivery (%)



Percentages do not sum to 100 due to rounding. "0" includes restaurants that do not prepare orders for delivery and restaurants that only use their own employees for delivery. Source: Department analysis of data from the NYC Restaurant Delivery Survey.

Uber, Grubhub, and DoorDash all deliver for between 61% and 67% of restaurants, while Relay delivers for 23%. No other app was used for deliveries by more than 2% of restaurants.

Figure 7. Distribution of Restaurants in NYC, by App Used for Delivery (%)



Grubhub includes Seamless. DoorDash includes Caviar. Uber Eats includes Postmates. "No app" includes restaurants that do not prepare orders for delivery and restaurants that only use their own employees for delivery. Source: Department analysis of data from the NYC Restaurant Delivery Survey.

Overall, among respondents that prepare orders for delivery, 96% use the apps as part of their operations, whether for online ordering, delivery, or both.[42]

[42] Department analysis of data from the NYC Restaurant Delivery Survey.

4 Delivery Workers' Pay and Working Conditions

In this section, the Department presents its estimates of the number of people who work for the restaurant delivery apps and describes their demographics, modes of transportation, delivery distances, hours of work, pay and tips, expenses, net pay and earnings, earnings and expense risks, and safety conditions.

Workforce Size

The Department estimates that as of the second quarter of 2022, 61,000 delivery workers were working for restaurant apps in NYC in any given week.[43] However, the total number of people working for the apps over longer time periods may be considerably higher. For instance, at the four largest apps, in the fourth quarter of 2021 there were 219,787 worker accounts associated with at least one delivery in NYC. After adjusting for multi-apping, the Department estimates that these accounts were held by 122,104 individuals, comprising 4% of all New Yorkers who had any paid employment or self-employment during these months.[44]

Though a large workforce, many workers appear to have only limited engagement with the apps. In the fourth quarter of 2021, 39% of the unique worker phone numbers in the Department's data were associated with deliveries in two or fewer weeks.

Demographics

App delivery workers are predominantly aged 18-34 (57%), male (75%), and non-white and/or Hispanic (91%).

Table 2. Demographics of App Delivery Workers in NYC and All Workers in NYC (%)

	App Delivery Workers	All Workers
Age		
18-34	57	37
35-54	38	41
55-64	4	15
65+	<1	7
Gender		
Male	75	52
Female	24	47
Other responses	1	1
Race/Ethnicity		
Hispanic, of any race	47	20
Black or African American, non-Hispanic	25	20
Asian or Pacific Islander, non-Hispanic	16	18
White, non-Hispanic	9	41
Other responses	3	1
English Proficiency		
Speaks English less than very well	39	19

Source: Demographics for app delivery workers are from the NYC Delivery Worker Survey. Demographics for all workers are from the July 2020 to June 2022 U.S. Census Bureau Current Population Survey (for all except English proficiency) and 2020 American Community Survey (for English proficiency).

[43] Department analysis of weekly aggregate data obtained from apps.
[44] Department analysis of record-level data obtained from apps and the NYC Delivery Worker Survey, in combination with data from the U.S. Census Bureau Current Population Survey for April to June 2022. *See* Sarah Flood et al., *Integrated Public Use Microdata Series, Current Population Survey: Version 10.0,* IPUMS CPS, https://doi.org/10.18128/D030.V10.0 (last accessed Oct. 25, 2022).

Modes of Transportation

Workers perform app deliveries using four main modes of transportation: mopeds, e-bikes, cars, and walking.

Mopeds, also known as limited use motorcycles, are subject to many of the same regulations as ordinary motorcycles. Among other requirements, this means they must have a vehicle identification number (VIN) and can only be driven if they are registered with the New York State Department of Motor Vehicles (DMV) and operated by a licensed driver.[45] Depending on the vehicle's maximum speed, the driver must also carry liability insurance.[46] Mopeds are generally required to follow the same driving rules as cars and ordinary motorcycles.[47] By contrast, the regulation of e-bikes, which became legal to operate in NYC in November 2020,[48] is similar to bicycles. This means that a license, registration, and insurance are not required.[49] E-bikes are generally required to follow the same driving rules as bicycles.[50]

Figure 8. E-bikes and Mopeds

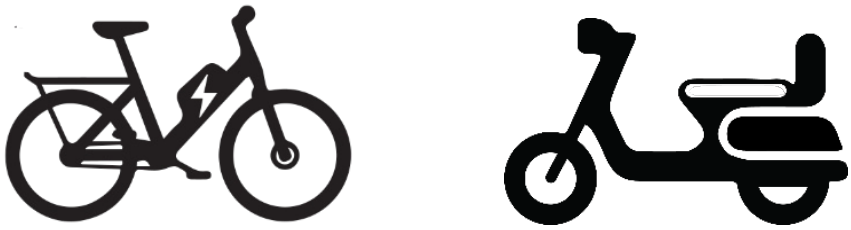


Image of Class 2 E-bike and Class C Moped. Source: NYC Department of Transportation.[51]

Mopeds do not have functional pedals and are operated from an upright seated position with feet placed on a center platform. They may be gas or electric. E-bikes have functional pedals paired with an electric motor. In some models, the motor is only engaged while pedaling, known as "pedal-assist." However, delivery workers typically use models where the motor is engaged from the handle, known as "throttle e-bikes."

Though apps maintain self-reported data concerning workers' modes of transportation, there is significant uncertainty about the actual modes in use. Some apps offer trips to a worker based on their self-reported mode of transportation, giving workers an incentive to be strategic in the mode that they report. Further, the mopeds typically used by delivery workers are commonly mis-labelled by sellers as "e-bikes." These mopeds often lack VINs, meaning they cannot be registered or insured and, as a result, are illegal to both drive and sell in New York State.[52] Apps are required to ensure their delivery workers do not use illegal mopeds,[53] though casual inspection on the street suggests workers commonly use these mopeds for app delivery, and NYC DOT reports their use is increasing.[54]

For these reasons, the Department believes that most moped users have misreported their vehicles as e-bikes both to the apps and in the Department's NYC Delivery Worker Survey. As a result, throughout this report, references to e-bikes in either the data the Department obtained from apps or the NYC Delivery Worker Survey should be assumed to include a significant number of illegal mopeds. Separately, apps did identify a small

[45] *See Electric Bicycles & More*, NYC Department of Transportation, https://www1.nyc.gov/html/dot/downloads/pdf/ebikes-more-english.pdf.
[46] *See Register a moped*, NYS Department of Motor Vehicles, https://dmv.ny.gov/registration/register-moped (last accessed Sept 30, 2022).
[47] *See* NYC Department of Transportation, *supra* note 45.
[48] *See* Rules of the NYC Department of Transportation (34 RCNY) § 4-01.
[49] *See* NYC Department of Transportation, *supra* note 45.
[50] *See id.*
[51] *Id.*
[52] *See* New York State Vehicle and Traffic Law §§ 401(1) and 2267.
[53] *See* NYC Administrative Code § 10-157.
[54] *Hearing Written Testimony* at 4 (letter of Benjamin Smith, NYC Department of Transportation).

number of motorcycle users in their data, which the Department believes consist mostly of workers using vehicles properly classed as motorcycles and possibly some users of legal mopeds.

Still, with these caveats, the Department finds that non-car modes of transportation predominate, especially e-bikes (including mopeds misreported as e-bikes). Based on the apps' data, non-car modes of transportation account for 56% of workers but 69% of hours worked and 78% of deliveries. The difference in these distributions is explained by higher hours per week, and deliveries per hour worked for workers using a non-car mode of transportation.

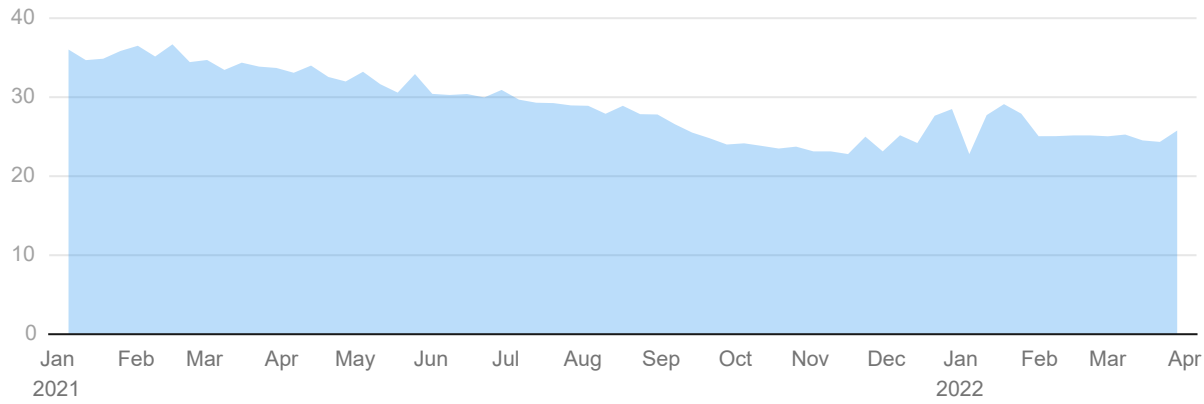
Table 3. App Delivery Workers, Hours, and Deliveries, by Mode of Transportation, NYC, Fourth Quarter 2021

	Workers (%)	Hours (%)	Deliveries (%)	Hours per Week	Deliveries per Hour
Non-Car	56.1	69.4	77.7	22.2	1.869
E-bike	46.1	54.1	65.8	21.3	2.030
Walking	8.7	13.5	10.2	25.7	1.266
Motorcycle	1.3	1.8	1.7	25.2	1.530
Other	<0.1	<0.1	<0.1	17.6	1.626
Car	43.9	30.6	22.4	17.5	1.128

Percentages may not sum due to rounding. Hours per week calculation excludes weeks in which a worker did not perform work for any delivery app.
Source: Department analysis of record-level data obtained from apps.

Examining trends over time, the Department finds a steady movement away from cars.

Figure 9. Percent of App Deliveries in NYC Performed by Cars (%)



Source: Department analysis of weekly aggregate data obtained from apps.

Delivery Distances

Workers travel 1.77 miles for an average delivery, including travel to the pickup location and between the pickup and drop-off locations. Workers using cars tend to perform longer deliveries.

Table 4. App Delivery Trip Distances in NYC, by Mode of Transportation, Fourth Quarter 2021

	E-bike	Car	All Modes
Miles per trip (mean)	1.45	3.12	1.77
Distribution of trips, by miles travelled (%)			
0.00 - 0.49	9	2	15
0.50 - 0.99	26	8	21
1.00 - 1.49	26	12	19
1.50 - 1.99	17	13	14
2.00 - 2.49	11	12	10
2.50 - 2.99	6	10	7
3.00 - 3.49	3	9	4
3.50 - 3.99	1	8	3
4.00+	1	26	7
Total	100	100	100

Distances are as estimated by apps based on offer, pickup, and drop-off locations. "All modes" includes e-bikes, cars, motorcycles, and walkers.
Source: Department analysis of record-level data obtained from apps.

Hours of Work

Delivery workers generally can connect to the app when they wish but, depending on demand, apps may block a worker from initiating a status in which they can receive trip offers or may offer trips only infrequently. Some apps permit workers to pre-schedule shifts, guaranteeing them access to the platform during specific hours (but limiting their future earnings opportunities if they miss or cancel their shift).[55] Some apps also provide incentives to hit production targets over specific periods.[56] Once connected to the app in an active status, workers receive trip offers, which they may accept or decline, though some apps condition future earnings opportunities on acceptance rates.[57]

Findings from the Department's NYC Delivery Worker Survey indicate that app delivery is the main or only job for most workers, especially among those using e-bikes.

Table 5. Percent of NYC App Delivery Workers who Perform App Delivery as their Only, Main, or Secondary Job, by Mode of Transportation (%)

	E-bike	Car
Main or only job	77	56
Only	70	51
Main	7	5
Secondary	23	44

Source: Department analysis of data from the NYC Delivery Worker Survey.

Responses also indicate that 46.6% of e-bike workers and 34.9% of car drivers perform deliveries on a full-time basis.

[55] *See Make money on your schedule*, Grubhub, Inc., https://driver.grubhub.com/scheduling (last accessed Oct. 5, 2022); *see How to schedule and/or edit a Dash,* DoorDash, Inc., https://help.doordash.com/dashers/s/article/How-to-schedule-a-dash?language=en_US (last accessed Oct. 5, 2022).
[56] *See How does Quest work?*, Uber Technologies, Inc., https://help.uber.com/driving-and-delivering/article/how-does-quest-work?nodeId=3a43fa72-4fc2-42d0-bc1d-63c4c0bddb9d (last accessed Oct. 5, 2022); *see Top Dasher*, DoorDash, Inc. https://help.doordash.com/dashers/s/article/Top-Dasher?language=en_US (last accessed Oct. 5, 2022).
[57] *See* Grubhub and DoorDash, *supra* note 55.

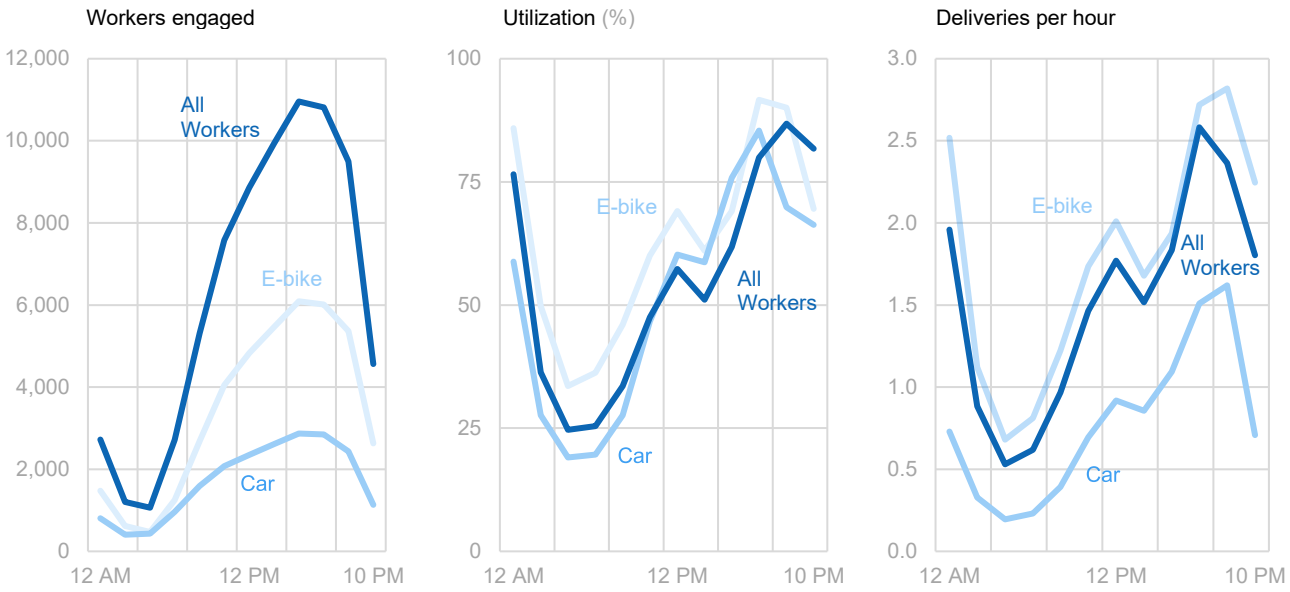
Table 6. Percent of NYC App Delivery Workers who Work Full-time and Part-time, by Mode of Transportation (%)

	E-bike	Car
Full-time	46.6	34.9
Part-time	53.4	65.1

Full-time is defined as 30 or more hours per week. Part-time is defined as fewer than 30 hours per week. Source: Department analysis of data from the NYC Delivery Worker Survey.

As shown in Figure 10, more delivery workers connect to the apps during peak dinner hours (left panel), during which they spend more of their time engaged in trips (middle panel) and perform more deliveries per hour (right panel). The right panel also shows that, throughout the day, car drivers perform substantially fewer deliveries per hour than e-bike workers.

Figure 10. Activity on Delivery Apps in NYC by Time of Day, Fourth Quarter 2021



"Workers engaged" is the daily average number of workers connected to an app. "Utilization" is the percent of working time spent engaged in a trip. "Deliveries per hour" is the average per worker for each category. "All workers" includes e-bikes, cars, motorcycles, and walkers. Source: Department analysis of record-level data obtained from apps.

Weekly hours average 21.3 for e-bike workers, 17.5 for car drivers, and 20.7 overall.[58]

Workers spend 61% of their working time engaged in a trip and 39% on-call. During on-call time, they receive a trip offer every 4 minutes and accept an offer every 11 minutes, on average. Time spent waiting at a restaurant for an order to be prepared is included within trip time and not separately identifiable in the data obtained from the apps.

Apps benefit from workers' on-call time in two ways. First, the high availability of workers helps the apps provide short delivery windows to consumers. Second, it helps apps minimize pay per trip because a larger pool of available workers is more likely to contain at least one worker willing to accept a low offer.

[58] Department analysis of record-level data obtained from apps. For each delivery worker, this analysis excludes weeks in which the worker did not perform any work for delivery apps.

Table 7. Trip Time and On-Call Time of App Delivery Workers in NYC, Fourth Quarter 2021

	Percent of Hours Worked (%)
Trip time	61
On-call time	39
Login to first trip	9
Between trips	6
Last trip to logoff	12
Login to logoff with no trip	12

Analysis performed at the worker account level, without adjustment for multi-apping. Source: Department analysis of record-level data obtained from apps.

To secure better availability of work, workers often maintain active accounts on more than one app and sometimes connect to more than one app concurrently. Analyzing the record-level data obtained from apps, together with the Department's NYC Delivery Worker Survey, the Department finds that 56.3% of delivery workers work for more than one app and that 17.7% of working time is logged concurrently.[59] Several worker advocates testified at the Department's public hearing that maintenance of multiple accounts was common.[60]

Pay and Tips

Apps pay workers using a variety of methods. Uber Eats, Grubhub, and DoorDash predominantly pay workers on a per-trip basis with proprietary algorithms determining the payment for each trip. These workers also receive 5.6% of their pay in the form of bonuses or incentives not tied to specific trips.[61] Relay pays workers a regular rate of $12.50 per hour worked, including on-call time.

Workers at Uber Eats, Grubhub, DoorDash, and Relay earn an average of $14.18 per hour worked, split evenly between pay and tips.[62] Hourly pay and tips are higher for e-bike workers due to the higher number of deliveries they perform per hour. Pay per trip is slightly higher for cars than for e-bikes, reflecting longer trip distances.

Table 8. Hourly Pay and Tips of NYC App Delivery Workers, by Mode of Transportation, Fourth Quarter 2021 ($)

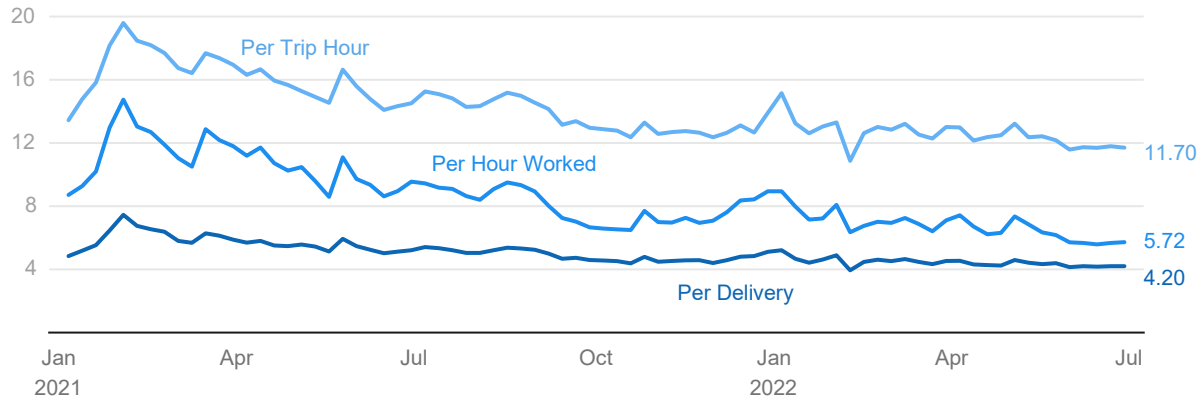
	E-bike	Car	All Modes
Per hour			
Earnings	14.69	13.46	14.18
Pay	7.14	7.12	7.09
Tips	7.55	6.34	7.09
Per trip			
Earnings	7.86	11.93	8.64
Pay	3.82	6.31	4.32
Tips	4.04	5.62	4.32

Values are earnings, pay, and tips divided by all hours and all trips, respectively, which may differ from the earnings, pay, and tips of the average worker. "All modes" includes e-bikes, cars, motorcycles, and walkers. Source: Department analysis of record-level data obtained from apps.

By several measures, pay is trending down. This may be because apps used higher pay to recruit more workers during the pandemic and then began reducing pay once labor supply expanded.

[59] Department analysis of record-level data obtained from apps and the NYC Delivery Worker Survey.
[60] *Hearing Transcript* at 19 (statement of Ligia Guallpa, Worker's Justice Project); *Hearing Written Testimony* at 12 (letter of NYC Comptroller Brad Lander), at 16, 21 (letter of Hildalyn Colón Hernández, Los Deliveristas Unidos/Worker's Justice Proect).
[61] Department analysis of weekly aggregate data obtained from apps.
[62] As explained in section 2, the term "pay" refers to the compensation paid by the app, excluding tips, and the term "earnings" refers to the sum of pay and tips.

Figure 11. App Delivery Worker Pay in NYC ($)



Analysis performed at the app level, without adjustment for multi-apping. Source: Department analysis of weekly aggregate data obtained from apps.

Comparing the first quarter of 2021 to the second quarter of 2022, pay per delivery declined from $6.38 to $4.29 (23%).

Expenses

As independent contractors, app delivery workers are responsible for selecting, acquiring, and maintaining the equipment and services needed to connect to the apps and perform deliveries.[63] Apps do not reimburse or separately compensate delivery workers for these costs.

The Department estimated average hourly expenses overall and for five groups of workers: e-bike users, car drivers, gas moped users, electric moped users, and walkers.

Table 9. Hourly Expenses of App Delivery Workers in NYC, by Mode of Transportation ($)

	E-bike	Car	All Modes
Vehicle	1.64	2.92	1.78
Depreciation	0.32	1.53	0.65
License, registration, and insurance	0.00*	1.03	0.28
Casualty & theft loss	0.05	0.00*	0.03
Batteries/gas	0.86	0.11	0.51
Maintenance	0.15	0.25	0.16
Accessories	0.26	0.00*	0.15
Phone	0.62	0.57	0.58
Phone purchases	0.35	0.28	0.31
Data plan	0.27	0.29	0.27
Vehicle and phone subtotal	2.26	3.49	2.36
Tickets	0.44	1.37	0.70
Total	2.70	4.86	3.06

"All Modes" includes e-bikes, cars, motorcycles, and walkers. For purposes of calculating expenses for "All Modes," motorcycles were assumed to have the same expenses as mopeds. "$0.00"" indicates expense categories treated as $0.00 by assumption. Source: Department analysis of the NYC Delivery Worker Survey, record-level data obtained from apps, testimony submitted by Uber Eats and DoorDash to the Department's June 2022 public hearing,[64] and price quotes from internet research, PriceDigests,[65] and visits to NYC retailers.

[63] An exception exists for delivery bags, which apps must provide to delivery workers, effective April 22, 2022. *See* NYC Administrative Code § 20-1524.
[64] *Hearing Written Testimony* at 60, 67-73 (letter of DoorDash, Inc.).
[65] *See Passenger Vehicles Auto Red Book*, Price Digests, https://app.pricedigests.com/?classification=Passenger%20Vehicles (last accessed Oct. 5, 2022).

For e-bike workers, batteries are the largest expense (32% of total expenses), followed by phone costs (including both the device and data plan) (23%). For car drivers, the largest expense is depreciation (31%), followed by traffic or parking tickets (28%).

The Department estimated the expenses of e-bike workers as follows. For depreciation, the Department obtained the purchase price of a new e-bike through visits to NYC retailers ($1,800), applied five-year straight-line depreciation consistent with IRS principles, and then reduced this amount to reflect the probability of loss due to casualty or theft (5.88% annually),[66] which the Department estimated from its NYC Delivery Worker Survey. For casualty and theft loss, the Department multiplied the probability of a loss incident by the expected depreciated value of the e-bike at the time of incident ($959.13), assuming constant probabilities of loss during the e-bike's useful life. For batteries, the Department obtained the purchase price of a new battery by visiting NYC retailers ($550) and multiplied the cost by workers' average replacement rate (1.74 per year), which the Department measured from its NYC Delivery Worker Survey. For maintenance costs, the Department used the estimate of e-bike maintenance costs per mile provided by Uber Eats and DoorDash ($0.067)[67] and the average trip distance per hour worked (2.17 miles), which the Department estimated from the record-level data obtained from apps. For accessories, the Department used its NYC Delivery Worker Survey to estimate the annual probabilities of purchasing handlebar gloves (63%), bike racks (37%), baskets (38%), helmets (67%), lights (58%), horns (32%), reflective vests (39%), locks (74%), alarms (32%), anti-theft cameras (13%), anti-theft GPS systems (32%), and clothes, shoes or rain gear for work (84%), and quoted prices for each accessory from NYC retailers and internet sellers. For phone purchases, the Department used its NYC Delivery Worker Survey to identify the mix of phone models used by delivery workers and quotes from internet sellers to estimate the average purchase price ($721) as well as the average discounts or proceeds on trade-ins and resales ($597). The Department then obtained the net expense by multiplying these amounts by the frequencies of purchase (1.74 per year) and trade-in or resale (0.45 per year), respectively, from its NYC Delivery Worker Survey. For data plans, the Department used the average cost of a single-line, unlimited data plan as quoted from major carriers ($63.33 per month).[68] For both phone purchases and data plans, the Department reduced estimated expenses to reflect percent use in app delivery, assuming 145.17 hours of personal phone use per month, which is the mean of four recent studies,[69] and 21.3 hours of app delivery use per week, consistent with the average for e-bike workers. For tickets, the Department used the frequencies of receiving a ticket and the costs per ticket reported in its NYC Delivery Worker Survey. The Department then converted all expenses into hourly rates based on e-bike workers' average of 21.3 hours per week, except for maintenance, for which an hourly rate was derived as described above (i.e., from data reflecting cost per mile and miles per hour of working time).

To estimate car drivers' expenses, the Department took the same approach as with e-bike workers for phone purchases, data plans, and tickets as described above and accounted for vehicle-related expenses as follows. For depreciation, the Department used its NYC Delivery Worker Survey to identify the model and year of cars used by delivery workers, together with a database on historical fair market values[70] to determine bases for depreciation. With this information, the Department then calculated depreciation using the five-year straight-line

[66] Casualty or theft losses can be claimed as business expenses under IRS guidelines. A casualty loss is a sudden, unexpected destruction of property. *See Topic No. 515 Casualty, Disaster, and Theft Losses*, IRS, https://www.irs.gov/taxtopics/tc515 (last accessed Oct. 28, 2022).
[67] *Hearing Written Testimony* at 67, 70-71 (letter of DoorDash, Inc. and Uber Technologies, Inc.).
[68] *See Get Our Best Unlimited Plans Ever*, Verizon, https://www.verizon.com/plans/unlimited/#plans (last accessed June 23, 2022); *Bring Your Own Device,* AT&T, https://www.att.com/buy/wireless/byod/deviceconfig (last accessed June 23, 2022); *Compare Our Best Unlimited Data Cell Phone Plans*, T-Mobile USA, Inc., https://www.t-mobile.com/cell-phone-plans?|NTNAV=tNav:Plans:Magenta (last accessed June 23, 2022). Department's calculation assumes workers enroll in Autopay to receive discounts of $5-$10 per month, depending on carrier.
[69] *See* Trevor Wheelwright, *2022 Cell Phone Usage Statistics: How Obsessed Are We?*, Reviews.org (Jan. 2022), https://www.reviews.org/mobile/cell-phone-addiction/ (last accessed Oct. 30, 2022); Laura Ceci, *How Much Time on Average Do You Spend on Your Phone on a Daily Basis?,* Statista (Feb. 2021), https://www.statista.com/statistics/1224510/time-spent-per-day-on-smartphone-us/ (last accessed Oct. 30, 2022); Sam Medley, *The Average iPhone User Spends a Full Work Week on Their Phone, a New Report Claims*, Notebookcheck (Sept. 2021), https://www.notebookcheck.net/The-average-iPhone-user-spends-a-full-work-week-on-their-phone-a-new-report-claims.562797.0.html (last accessed Oct. 30, 2022); Eileen Brown, *Americans Spend Far More Time on Their Smartphones than they Think*, ZDNET (Apr. 2019), https://www.zdnet.com/article/americans-spend-far-more-time-on-their-smartphones-than-they-think (last accessed Oct. 30, 2022).
[70] *See* Price Digests, *supra* note 65.

method. For license and registration, the Department obtained fee amounts from the DMV,[71] and for insurance, the Department used a published estimate of average insurance costs.[72] For depreciation, license, registration, and insurance, the Department reduced estimated expenses by the proportion of time delivery workers use their car for app delivery relative to other uses, which it obtained from its NYC Delivery Worker Survey. The Department then converted the depreciation, license, registration, and insurance expenses into hourly rates based on car drivers' average of 17.5 hours per week. For gas, the Department used a published estimate of average per-gallon costs in the NYC area[73] and estimated use based on average trip distance per hour of working time, as measured from the record-level data, and average gas mileage of 25 miles per gallon, which the Department derived from the gas mileages reported from manufacturers and the mix of vehicles identified in its NYC Delivery Worker Survey. For maintenance, the Department used the American Automobile Association's estimate of per-mile maintenance costs[74] and average trip distances per hour of working time, as measured from the record-level data.

Though the costs presented in Table 9 account for most delivery worker expenses, the Department omitted some work-related costs. This includes the cost of time spent maintaining equipment and for vehicle storage, for which the Department was unable to obtain reliable estimates, and out-of-pocket medical expenses for work-related injuries.

Because the Department's NYC Delivery Worker Survey includes many responses in which an illegal moped was misreported as an e-bike, the Department performed a supplemental analysis to address the possibility that this might bias its estimates of true e-bike expenses. To assess this possibility, the Department examined differences in responses to its NYC Delivery Worker Survey between the 229 self-identified moped users and the 2,316 self-identified e-bike users and determined that misreporting of illegal mopeds did not have a material impact.

The Department's expense analysis follows standard cost accounting principles, in which the total cost of an input is allocated to a function (in this case, app delivery) based on percent use. However, some workers may base their decision to enter and stay in app delivery on their marginal costs, which for car drivers may be meaningfully lower than their total allocated costs. This is especially true for car drivers who perform deliveries only part-time or intermittently.

[71] *See Passenger Vehicle Registration Fees, Use Taxes and Supplemental Fees*, NYS Department of Motor Vehicles, https://dmv.ny.gov/registration/registration-fees-use-taxes-and-supplemental-fees-passenger-vehicles (last accessed Oct. 7, 2022); *see Driver License Renewal Fees*, NYS Department of Motor Vehicles, https://dmv.ny.gov/driver-license/driver-license-renewal-fees (last accessed Oct. 7, 2022).
[72] *See* June Sham, *Average Cost of Car Insurance in New York for 2022* (Oct. 3, 2022), https://www.bankrate.com/insurance/car/average-cost-of-car-insurance-in-new-york.
[73] *See Average Energy Prices, New York-Newark-Jersey City – August 2022*, U.S. Bureau of Labor Statistics, https://www.bls.gov/regions/new-york-new-jersey/news-release/averageenergyprices_newyork area.htm (last accessed Oct. 7, 2022).
[74] *See Your Driving Costs 2022*, American Automobile Association, https://newsroom.aaa.com/wp-content/uploads/2022/08/2022-YourDrivingCosts-FactSheet-7-1.pdf.

Net Pay and Earnings

Table 10 reports hourly and weekly pay, tips, and expenses overall and by mode of transportation. On average, delivery workers' net pay is $4.03 per hour, and net earnings (which includes tips) is $11.12. E-bike workers have higher net earnings than car drivers, resulting from a higher number of deliveries per hour and lower expenses.

Table 10. Hourly and Weekly Pay, Tips, and Expenses of NYC App Delivery Workers, by Mode of Transportation ($)

	E-bike	Car	All Modes
Per hour			
Pay	7.14	7.12	7.09
Expenses (-)	2.70	4.86	3.06
Net pay	4.44	2.26	4.03
Tips	7.55	6.34	7.09
Net earnings	11.99	8.60	11.12
Per week			
Pay	152.08	124.60	146.76
Expenses (-)	57.51	85.05	63.34
Net pay	94.57	39.55	83.42
Tips	160.82	110.95	146.76
Net earnings	255.39	150.50	230.18

"All Modes" includes e-bikes, cars, motorcycles, and walkers. Per week values reflect average weekly hours of 21.3 for e-bike workers, 17.5 for car drivers, and 20.7 for all modes. Source: Department analysis of record-level data obtained from apps and the NYC Delivery Worker Survey, with other sources (see discussion).

To understand these net pay amounts within the context of the NYC labor market, the Department compared them to two relevant benchmarks: 1) the legal rights to minimum pay and benefits for independent contractors working for Uber and Lyft, who are covered by TLC's minimum payment standard for High-Volume For-Hire Services, and are referenced herein as "**app for-hire service drivers**"; and 2) the minimum pay and benefits that an app would be legally required to pay to a delivery worker if the app classified that worker as an employee rather than an independent contractor.

TLC's minimum pay standard for app for-hire service drivers, as proposed in its latest rulemaking, is designed to provide for average hourly pay, net of expenses, at or above $19.86 per hour worked.[75] The app for-hire service driver standard was originally characterized as the independent contractor equivalent of the $15 minimum wage when it was implemented on February 1, 2019.[76] When first implemented, the standard was $17.22, consisting of $15 per hour, plus $0.90 per hour for paid time off, and an additional $1.32 per hour to account for the 7.65% employer share of federal Medicare and Social Security contributions, which is required of independent contractors but not employees.[77] It has been updated for inflation several times since February 2, 2019.[78] As discussed above, app delivery workers' net pay is far lower than $19.86 per hour. Further, app for-hire service drivers have a right to workers' compensation coverage through the Black Car Fund,[79] a benefit unavailable to app delivery workers.

[75] *See* Proposed Rule of the NYC Taxi and Limousine Commission (35 RCNY) § 59D-22(a)(2) and (b)(1).
[76] *See* James A. Parrott & Michael Reich, *An Earnings Standard for New York City's App-based Drivers: Economic Analysis and policy Assessment*, Center for New York City Affairs (July 2018), http://www.centernyc.org/s/Parrott-Reich-NYC-App-Drivers-TLC-Jul-2018jul1.pdf (last accessed Oct. 30, 2022).
[77] *See id.*. Under the TLC's app for-hire service driver standard, expenses are compensated separately, and were not included in the $17.22 per hour calculation.
[78] *See* Rules of the NYC Taxi and Limousine Commission (35 RCNY) § 59D-22(a)(4).
[79] *See General Inquiries*, The Black Car Fund, https://www.nybcf.org/faqs (last accessed Oct. 7, 2022).

The Department obtains a similar result with respect to the minimum pay and benefits that an app would be legally required to pay to a delivery worker if the app classified that worker as an employee rather than an independent contractor. As employees, app delivery workers would be entitled to wages of $15 per hour under the New York State minimum wage,[80] up to 56 hours of paid leave per year under the NYC Paid Safe and Sick Leave Law, unemployment insurance, workers' compensation insurance, and employer coverage of half the mandatory 15.3% Medicare and Social Security contribution on their pay. The apps would also be liable for a shared responsibility payment to the IRS if they failed to offer health insurance meeting minimum value, affordability, and access standards.[81] Table 11 shows that these wage and benefit requirements result in total compensation to employees, inclusive of wages and benefits, of $21.09 per hour, which far exceeds current net pay for app delivery workers.

Table 11. Value of Wage and Benefit Requirements if NYC App Delivery Workers Were Classified as Employees ($)

Payroll	
Base Wage *Minimum wage applicable to employers in NYC*	15.00
Paid Safe and Sick Leave *1.49% x Base Wage*	0.22
Payroll Subtotal	15.22
Benefits	
Health Insurance *Health insurance cost per hour for private industry workers*	3.27
Workers' Compensation Insurance *7.84% x Payroll Subtotal*	1.19
Unemployment Insurance *1.61% x Payroll Subtotal*	0.25
Medicare and Social Security Contributions *7.65% x Payroll Subtotal*	1.16
Benefits Subtotal	5.87
Total	21.09

Paid Safe and Sick Leave reflects average use among full-time workers in the U.S. with access to paid sick leave, which the Department calculated from the U.S. Centers for Disease Control and Prevention National Health Interview Survey.[82] Health insurance cost per hour for private industry workers is for the Middle Atlantic Census Region from the U.S. Bureau of Labor Statistics Employer Costs for Employee Compensation.[83] Workers' compensation reflects the published loss cost for employed delivery workers in the New York State workers' compensation system.[84] Unemployment insurance reflects average contributions in the second quarter of 2021 to the first quarter of 2022 for the local messengers and local delivery industry in NYC from the U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages.[85]

The Department also compared these net pay and earnings amounts to the income required in order to afford basic necessities in NYC. For instance, a delivery worker with average hourly earnings, working hours, and

[80] *See* New York State Labor Law § 652(1)(a).
[81] *Employer Shared Responsibility Provisions*, IRS, https://www.irs.gov/affordable-care-act/employers/employer-shared-responsibility-provisions (last accessed Sept. 30, 2022). In its analysis, the Department assumes the apps would provide health insurance rather than pay the shared responsibility tax penalty.
[82] *See National Health Interview Survey, 2020*, U.S. Centers for Disease Control and Prevention, https://www.cdc.gov/nchs/nhis/2020nhis.htm (last accessed Oct. 7, 2022).
[83] *See Employer Costs for Employee Compensation,* U.S. Bureau of Labor Statistics (Sept. 20, 2022), https://www.bls.gov/web/ecec/ecec-private-dataset.xlsx (retrieved from private industry worker dataset for June 2022) (last accessed Oct. 30, 2022).
[84] *See New York State Workers' Compensation Loss Cost Filing and Loss Costs by Classification; Effective October 1, 2022*, New York Compensation Insurance Rating Board (July 2022), https://www.nycirb.org/bulletins/rc2564.pdf (showing the loss cost for employed delivery workers, who belong to rate class 7380, which includes commercial drivers, chauffeurs, and their helpers).
[85] *See Quarterly Census of Employment and Wages,* U.S. Bureau of Labor Statistics, https://www.bls.gov/cew/downloadable-data-files.htm (last accessed Oct. 7, 2022).

expenses (i.e., $14.18 in hourly earnings, 20.7 hours of working time per week, and expenses of $3.06 per hour), has annual net earnings of $11,970 after 52 weeks of work. For comparison, the NYC poverty threshold for a single adult is $19,088 and the near poverty threshold is $28,632.[86] NYC poverty and near-poverty thresholds for a two-adult, two-child family are $41,185 and $61,778, respectively.[87]

Earnings and Expense Risk

App delivery workers' net earnings are also unstable with earnings and expenses both subject to considerable risk.

Earnings risk arises from the absence of a set schedule, pay rates that vary according to an app's proprietary algorithms, varying and unpredictable volumes of trip offers, dependence on tips that are determined both by the value of the order and the consumer's tipping behavior, and lost income due to on-the-job injuries and absence of paid leave.

Tip misappropriation, non-payment, and deactivations also contribute to earnings risk, and delivery workers report that these occur frequently. Twenty-six percent of respondents to the Columbia-Sam Schwartz-Deliveristas Survey reported at least one instance of tip misappropriation, 30% reported at least one instance of non-payment by the apps, and 16% reported having their account deactivated.[88]

Expense risk arises principally from app delivery workers' responsibility for their own equipment. For e-bike workers, the annual risk of vehicle loss due to casualty or theft is 2.6% and 3.3%, respectively.[89] Short of loss, vehicle damage may also result in unexpected repair costs. Insurance provides a partial solution for car drivers' expense risk. However, few e-bike workers obtain insurance covering their vehicles, and most mopeds used by app delivery workers are uninsurable because the vehicles themselves cannot be legally sold or operated in New York State. Batteries and phones can also be lost, damaged, or fail unexpectedly. Additional unexpected expenses include parking and traffic tickets and medical costs due to work-related injuries.

Safety Conditions

Through a review of news articles, social media, information provided by advocates, a joint report by the Worker's Justice Project and The Worker Institute of Cornell University's Industrial Labor Relations School,[90] and information provided by the NYC DOT, the Department gathered reports of 33 restaurant delivery worker fatalities in NYC since 2020. This includes 11 workers identified as app delivery workers, five identified as restaurant employees, and 17 for whom the work arrangement was unclear. Because many workers' work arrangement could not be identified, the Department's analysis of fatalities encompasses both app workers and restaurant employees.

[86] Department analysis of the official NYC poverty measure for 2019, adjusted for inflation to September 2022 using the Consumer Price Index for Urban Wage Earners and Clerical Workers for the New York-Newark-Jersey City, NY-NJ-PA area. *See New York City Government Poverty Measure 2019 Annual Report*, NYC Office of the Mayor (2021), https://www1.nyc.gov/assets/opportunity/pdf/21_poverty_measure_report.pdf; *see Consumer Price Index (CPI) Databases*, U.S. Bureau of Labor Statistics, https://www.bls.gov/cpi/data.htm (last accessed Oct. 25, 2022).
[87] *Id.*
[88] Department analysis of data from the Columbia-Sam Schwartz-Deliveristas Survey. "Tip misappropriation" refers to an app not paying a worker tips the worker should have received. "Nonpayment" refers to an app not paying a worker for a delivery, paying the wrong amount for a delivery, not paying a worker pay owed for a cancelled delivery, or not paying a worker at all. "Account deactivated" refers to an app closing a worker's account, such that the worker can no longer perform deliveries for the app.
[89] Department analysis of data from the NYC Delivery Worker Survey.
[90] *See* Maria Figueroa et al., *Essential but Unprotected: App-based Food Couriers in New York City*, Cornell University Worker Institute (Sept. 2021).

Table 12. Delivery Worker Fatalities in NYC

Year	Fatalities
2020	8
2021	16
2022	9
Total	**33**

Fatalities for 2022 are through October 14. Source: Department analysis.

Thirty of these fatalities were workers who use a non-car mode of transportation and, for three, the mode of transportation was unclear. Five of these fatalities, all of whom were non-car workers, were killed during robberies. For 26, the cause of death was a vehicle crash and, for two, the cause of death was not specified.

To assess delivery workers' fatality risk compared to other occupations, the Department calculated fatalities per 100,000 full-time equivalent workers for the period January 1, 2021 through June 30, 2022. Fatalities per 100,000 full-time equivalent workers is the standard measure of occupational fatality published by the U.S. Bureau of Labor Statistics. January 1, 2021 through June 30, 2022 is the period for which the Department had sufficient data to calculate the number of full-time equivalent restaurant delivery workers in NYC, including both app workers and restaurant employees. Over this period, there were 19 fatalities, including 18 workers who used non-car vehicles and one whose mode of transportation was not identified. Over this same period, the Department estimates 64,416 full-time equivalent restaurant delivery workers in NYC, including 49,956 using a non-car vehicle for delivery.[91] These figures imply a rate of 30 fatalities per 100,000 full-time equivalent restaurant delivery workers overall, and at least 36 per 100,000 among workers using a non-car mode of transportation.[92]

By comparison, in 2020, the most recent year for which data is available, there were 13 construction fatalities in NYC[93] and seven per 100,000 full-time equivalent construction workers.[94] Construction is historically the industry with the highest fatality rates in NYC.[95]

To measure non-fatal occupational injuries, the Department's NYC Delivery Worker Survey asked workers if, while working for a delivery app, they have been injured seriously enough that they missed work, lost consciousness, or received medical care. This approximates the standard for a reportable case for employees under the Occupational Safety and Health Administration's regulations.[96] The Department finds that 28.7% of e-bike or moped app delivery workers and 10% of car app delivery workers experienced an injury meeting this standard.[97] Several workers testified at the Department's June 2022 public hearing that they or someone they know was injured while performing deliveries.[98]

[91] Department analysis of record-level obtained from apps (for full-time equivalent app delivery workers) and the U.S. Census Bureau 2016-2020 American Community Survey (for full-time equivalent restaurant delivery employees).For purposes of this analysis, Department estimated the number of restaurant delivery full-time equivalent employees based on average annual hours from 2016-2020, multiplied by 1.5, and treated all restaurant employees as using a non-car mode of transportation. On an annualized basis, there were 42,944 full-time equivalent restaurant delivery workers over this period, including both app delivery workers and restaurant employees. Of these, 33,304 used a non-car vehicle for delivery. Following the U.S. Bureau of Labor Statistics, the Department defines a full-time equivalent worker using a 2,000 hours per year standard.

[92] If the one worker with an unidentified mode of transportation did not use a car for delivery, the rate for workers using a non-car mode transportation is 38 per 100,000. The Department calculates the fatality rates as follows: *(fatalities between January 1, 2021 and June 30, 2022 divided by hours worked between January 1, 2021 and June 30, 2022) times 100,000 times 2,000.*

[93] *See State Occupational Injuries, Illnesses, and Fatalities*, U.S. Bureau of Labor Statistics, https://www.bls.gov/iif/state-data/fatal-occupational-injuries-in-new-york-city-2020.htm (last accessed Oct. 14, 2022).

[94] *Id.*

[95] Department analysis of data obtained from the U.S. Bureau of Labor Statistics Census of Fatal Occupational Injuries. *Id*.

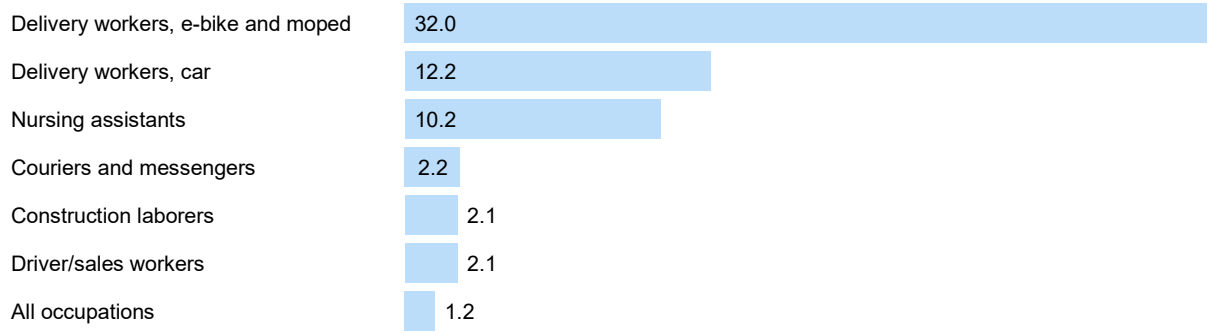
[96] *See Forms for Recording Work-Related Injuries and Illnesses*, U.S. Department of Labor, Occupational Safety and Health Administration (April 2004), https://www.osha.gov/sites/default/files/OSHA-RK-Forms-Package.pdf (last accessed Oct. 14, 2022).

[97] Department analysis of data from the NYC Delivery Worker Survey. Excludes workers that started working for delivery apps in 2018 or earlier.

[98] *Hearing Transcript* at 36-38 (statement of William Medina), at 41 (statement of Antonio Solis), at 45 (statement of José Ramírez aka Manny Ramírez, Los Deliveristas Unidos/Worker's Justice Project), at 48 (statement of Kazi Fousia), at 108 (statement of Orlando Bispo); *Hearing Written Testimony* at 49 (letter of José Ramírez aka Manny Ramírez, Los Deliveristas Unidos/Worker's Justice Project).

Figure 12 compares injury rates for NYC app delivery workers to employee injury rates in the U.S. for select occupations. For comparability with U.S. Bureau of Labor Statistics data, in this analysis the Department restricted injuries to cases with days away from work, which represent most, but not all, delivery worker injuries.

Figure 12. Injuries Involving Days Away from Work per 100 Full-Time Equivalent Workers for NYC App Delivery Workers and Selected Occupations in the U.S.



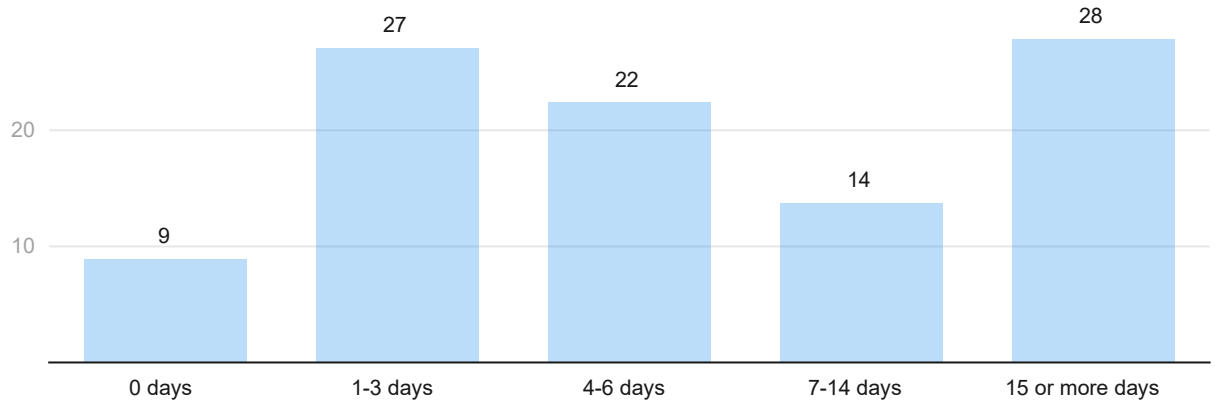
All series except for delivery workers are for private employees in the U.S. in 2020. Delivery worker injuries are per 200,000 hours worked since a respondent's first day of work on the apps, which the Department derived from workers' self-reported first and most recent months of work, self-reported usual weekly hours, and an assumed 4.35 weeks of work in every month. Workers reporting 40 or more hours of work per week in the NYC Delivery Worker Survey were treated as working 45 hours per week. Workers reporting four or more cases with days way from work were treated as having four cases with days away from work. Analysis excludes workers who started working for delivery apps in 2018 or earlier. Source: Department analysis of data from the NYC Delivery Worker Survey and the U.S. Bureau of Labor Statistics' Survey of Occupational Injuries and Illnesses.[99]

Figure 12 includes nursing assistants because they have the highest rate of occupational injury in the U.S. of any major occupation,[100] driver/sales workers because this is the category encompassing delivery workers classified as employees within the U.S. Bureau of Labor Statistics data,[101] couriers and messengers because they are a related occupational group, and construction laborers as an illustrative occupation involving well-known physical risks. Since the injury rates for comparison occupations are derived from employer records,[102] not worker surveys, these figures are not directly comparable. Prior research suggests that worker-reported rates of injury are 50% to 100% higher than standard measures based on employer records.[103] However, even taking the high end of that range, the Department still obtains an injury rate for e-bike and moped workers more than double that of nursing assistants.

As presented in Figure 13, e-bike and moped workers' injuries often result in significant amounts of missed work. More than a quarter of injuries lead to a loss of 2 weeks of work or more.

[99] *See Table R98. Incidence rates for nonfatal occupational injuries and illnesses involving days away from work per 10,000 full-time workers by occupation and selected nature of injury or illness, private industry, 2020*, U.S. Bureau of Labor and Statistics, https://www.bls.gov/web/osh/cd_r98.htm (last accessed Oct. 5, 2022).
[100] Department analysis of data from the U.S. Bureau of Labor Statistics' Survey of Occupational Injuries and Illnesses for 2020. *See id*.
[101] *See Survey of Occupational Injuries and Illnesses: Concepts*, U.S. Bureau of Labor Statistics, https://www.bls.gov/opub/hom/soii/concepts.htm (last accessed Oct. 7, 2022); *see also Standard Occupational Classification,* U.S. Bureau of Labor Statistics, https://www.bls.gov/soc (last accessed Oct. 7, 2022).
[102] *See Survey of Occupational Injuries and Illnesses: Data Sources*, U.S. Bureau of Labor Statistics, https://www.bls.gov/opub/hom/soii/data.htm (last accessed Oct. 7, 2022).
[103] *See* Jennifer L. Marcum et al., *Self-Reported Work-Related Injury of Illness – Washington, 2011-2014*, 66(11) MMWR Morb. Mortal Wkly. Rep., 302-306 (2017); *see also* Naomi J. Anderson et al., *Work-related injury burden, workers' compensation claim filing, and barriers: Results from a statewide survey of janitors*, 65(3) American Journal of Industrial Medicine, 173-195 (2022).

Figure 13. E-Bike and Moped App Delivery Worker Injuries in NYC, by Days Away from Work (%)



Due to question wording, the analysis is restricted to respondents reporting only a single injury in which they were injured seriously enough that they missed work, lost consciousness, or received medical care. Excludes workers who were no longer working for delivery apps at the time of the survey or who first worked for delivery apps in 2018 or earlier. Source: Department analysis of data from the NYC Delivery Worker Survey.

Delivery workers working as independent contractors do not receive workers' compensation coverage and often do not have health insurance.[104] As a result, on-the-job injuries often lead to out-of-pocket medical expenses.[105] In the Columbia-Sam Schwartz-Deliveristas Survey, workers who had experienced an injury related to their work for the apps reported averaging $1,717 in medical care expenses.[106] Some apps voluntarily provide insurance coverage to delivery workers, but workers and the media report that the coverage is limited and that workers have difficulty getting claims paid.[107]

The Department also finds high incidences of assault, with 33.2% of e-bike or moped delivery workers having been physically assaulted while working for a delivery app and 14.8% having been injured in an assault.[108] Delivery workers using cars experienced lower rates, with 11.7% having been physically assaulted and 3.6% having been injured in an assault.[109] Several workers and advocates testified that assaults against delivery workers are common.[110]

[104] *Hearing Written Testimony* at 9 (letter of AJ Yusuf, Mayor's Office of Immigrant Affairs), at 25 (letter of Hildalyn Colón Hernández, Los Deliveristas Unidos/Worker's Justice Project); *Hearing Transcript* at 100 (statement of Juan Restrepo).
[105] *Hearing Written Testimony* at 86 (letter of Brian Chen and Laura Padin, National Employment Law Project) ("Forty-nine percent [of delivery workers] reported having been in an accident or crash while making a delivery. Of those, 75 percent said they paid for their medical care with their own personal funds because they lack health insurance"), at 26 (letter of Hildalyn Colón Hernández, Los Deliveristas Unidos/Worker's Justice Project); *Hearing Transcript* at 45 (statement of José Ramírez aka Manny Ramírez, Los Deliveristas Unidos/Worker's Justice Project).
[106] Department analysis of data from the Columbia-Sam Schwartz-Deliveristas Survey.
[107] *Hearing Written Testimony* at 59 (letter of DoorDash), at 50 (letter of José Ramírez aka Manny Ramírez, Los Deliveristas Unidos/Worker's Justice Project); *see* Claudia Aponte, *Delivery Cyclists Injured on NYC's Mean Streets Face Uphill Compensation Battle*, The City (Sept. 21, 2022), https://www.thecity.nyc/work/2022/9/21/23364136/delivery-cyclists-injured-doordash-compensation-insurance (last accessed Oct. 30, 2022).
[108] Department analysis of data from the NYC Delivery Worker Survey. Excludes workers who were no longer working for delivery apps at the time of the survey or who first worked for delivery apps in 2018 or earlier.
[109] *Id.* Because the Department's questions about assault do not specify a severity, whereas the questions about injuries from any cause ask only about those resulting in missed work, lost consciousness, or medical care, the assault and all-cause injury rates are not directly comparable.
[110] *Hearing Written Testimony* at 9 (letter of AJ Yusuf, Mayor's Office of Immigrant Affairs), at 12 (letter of NYC Comptroller Brad Lander), at 19, 26, 36, 50 (letter of Hildalyn Colón Hernández, Los Deliveristas Unidos/Worker's Justice Project), at 86 (letter of Brian Chen and Laura Padin, National Employment Law Project), at 88 (letter of Wilneida Negrón, PhD, Coworker.org); *Hearing Transcript* at 22 (statement of Hildalyn Colón Hernández, Los Deliveristas Unidos/Worker's Justice Project), at 36-38 (statement of William Medina), at 45 (statement of José Ramírez aka Manny Ramírez, Los Deliveristas Unidos/Worker's Justice Project), at 95 (statement of AJ Yusuf, Mayor's Office of Immigrant Affairs), at 121 (statement of Jing Wang, Biking Public Project).

5 Design of the Minimum Payment Standard

This section summarizes the statutory framework for the Department's proposed rule and outlines key provisions of the proposed minimum pay rate, followed by a discussion of their rationale.

Statutory Framework

Under Section 20-1522 of the Minimum Pay Law, the Department is charged with establishing by rule a method for determining the minimum payments that apps must make to delivery workers whom they classify as independent contractors. The Minimum Pay Law gives the Department broad discretion in designing the method but specifies certain factors that the Department must consider in its deliberations. These factors include "the duration and distance of trips, the expenses of operation associated with the typical modes of transportation such workers use, the types of trips, including the number of deliveries made during a trip, the on-call and work hours of food delivery workers, the adequacy of food delivery worker income considered in relation to trip-related expenses" as well as "any other relevant factors, as determined by the department."[111] The Department determined that such "other relevant factors" include the existing pay and benefit standards that apply to other workers in NYC, ease of implementation for apps, workers, and the Department, and the impact of the rule on apps, workers, consumers, and restaurants.

The method for determining minimum payments must be based on the results of the Department's study of the working conditions of delivery workers.[112] By law, the study must cover certain identified topics, including delivery worker pay, expenses, hours, and safety, as well as "such other topics as the department deems appropriate."[113] The "other topics" the Department deemed appropriate and covered in its study include the existing pay and benefit standards that apply to other workers in NYC, the practical challenges of minimum pay implementation for apps, workers, and the Department, the prospective impact of the minimum pay rate on apps, workers, consumers, and restaurants, and the income required to afford basic necessities.

Summary of the Proposed Minimum Pay Rate

The proposed rule will establish an average minimum pay rate of at least $23.82 per hour that apps must pay to delivery workers for the sum of their trip and on-call hours each week.[114] The rate will be phased in over two years, from 2023 to 2025, will be adjusted annually for inflation, and represents the sum of three parts:

1) A **base pay component** ($19.86). The base pay component matches the per-minute rate under TLC's minimum earnings standard for app for-hire service drivers as proposed in its most recent rulemaking;[115]

2) A **workers' compensation component** ($1.70). The workers' compensation component reflects the actuarial value, as a percentage of payroll, of the workers' compensation benefits that must be provided to comparable delivery workers who—unlike the apps' delivery workers—are classified as W-2 employees; and

[111] NYC Administrative Code § 20-1522(a)(3).
[112] *Id.*
[113] *Id.* § 20-1522(a)(1).
[114] *See* Proposed Rule of the NYC Department of Consumer and Worker Protection (6 RCNY) § 7-810.
[115] *See* Proposed Rule of the NYC Taxi and Limousine Commission (35 RCNY) § 59D-22(a)(2) and (b)(1).

3) An **expense component** ($2.26). The expense component reflects average expenses that e-bike workers incur.

Table 13 summarizes these components.

Table 13. Components of the Minimum Pay Rate for App Delivery Workers in NYC

Rate Component	Amount ($)
Base pay	19.86
Workers' compensation	1.70
Expenses	2.26
Total	**23.82**

Amounts shown are for 2025 and subject to inflation adjustment, as described below. Source: Department calculations.

Under the proposed phase-in, the rates in 2023 and 2024 represent 75% and 85% of the full rate, respectively, before reaching the full rate on April 1, 2025. Beginning April 1, 2023, the Department will update the rates for inflation annually using the Consumer Price Index for Urban Wage Earners and Clerical Workers for the NY-NJ-PA metro area. Table 14 summarizes the phase-in through 2025.

Table 14. Phase-In of the Minimum Pay Rate for App Delivery Workers in NYC

Effective Date	Minimum Pay Rate ($)
Jan 1, 2023	17.87
Apr 1, 2023	17.87*
Apr 1, 2024	20.25*
Apr 1, 2025	23.82*

**Rates beginning 4/1/2023 will be adjusted for inflation.*

The proposed minimum pay rate requires an app to satisfy two requirements each week: an individual pay requirement and an aggregate pay requirement.[116]

1) **Individual Pay Requirement**: The app's required payment to each delivery worker, individually, would have to meet or exceed the minimum pay rate multiplied by the sum of each individual worker's own *trip time* during the week; and

2) **Aggregate Pay Requirement**: The app's total required payments to all its delivery workers, together, would have to meet or exceed the minimum pay rate multiplied by the sum of all workers' total *trip time* and *on-call time* during the week.

Under the rule, the definitions of the terms "trip time" and "on-call time" are consistent with their use in this report. As stated in section 2, trip time is the time between acceptance of a trip offer and its completion, and on-call time is the time in which a worker is connected to the app in a status where they can receive or accept trip offers, excluding trip time.

The aggregate pay requirement is not an obligation to pay $23.82 per hour to each individual worker for the hours she works, but rather a requirement that an app's total payments to all its NYC delivery workers, divided by the total hours worked by all its NYC delivery workers, must meet or exceed $23.82 per hour.

While the aggregate pay requirement will be the main driver of higher pay under the rule, the individual pay requirement will provide a minimum level of protection for each worker's hourly pay in any given week.

[116] *See* Proposed Rule of the NYC Department of Consumer and Worker Protection (6 RCNY) § 7-810.

Consistent with the requirements of Section 20-1522(b) of the Minimum Pay Law, apps may not credit tips towards their satisfaction of either requirement.[117]

The discussion below covers each component of the minimum pay rate in more detail.

Base Pay Component

The base pay component of $19.86 per hour is similar to the compensation that app delivery workers would receive if they were classified as employees under state and City law (excluding workers' compensation, which is addressed separately in the minimum pay rate). The Department adopted this amount from the TLC's minimum payment standard for app for-hire service drivers, as proposed in TLC's latest rulemaking.[118] For purposes of the base pay component of the minimum pay rate, there are no meaningful distinctions between app delivery workers and app for-hire service drivers. Like all low-wage workers in NYC, app delivery workers and app for-hire service drivers must cover the costs of housing, food, and other basic necessities. Adopting the same base pay rate for app delivery workers builds on the City's existing determination of appropriate compensation for low-wage independent contractors and sets a clear and consistent standard for independent contractors working for apps in related industries in NYC.

The $19.86 base pay rate reflects the $15 per hour minimum wage that has been in effect for most employees in NYC since December 31, 2018[119] plus adjustments for differences in tax treatment between employees and independent contractors and increases in the cost of living since the TLC minimum payment standard was first implemented in early 2019. Additionally, the $19.86 minimum payment standard for app for-hire service drivers includes compensation in lieu of paid time off derived from the U.S. Bureau of Labor Statistics' published estimate of average paid leave received by production, transportation and material moving employees.[120] This occupational category includes both app delivery workers and app for-hire service drivers.[121] Incorporating an amount in lieu of paid time off within the rate enables app delivery workers to take unpaid time off to rest, recuperate, and address healthcare needs without an undue reduction in annual pay.

The $19.86 base pay rate is also very close to the total compensation that apps would be required to provide if they classified their delivery workers as employees. The Department calculated total compensation using a base wage of $15 per hour plus the value of paid safe and sick leave benefits, unemployment insurance, health insurance, and federal Medicare and Social Security contributions, which sums to $19.90 (see Table 11, excluding workers' compensation).[122] Testimony submitted to the Department at its June 2022 public hearing urged consideration of delivery workers' lack of access to benefits in determining the minimum pay rate and the importance of establishing parity with workers who are classified as employees.[123]

Some apps encouraged the Department to consider delivery workers' tips in setting the minimum pay rate, pointing to the $12.50 tipped minimum wage for delivery workers employed by some types of restaurants as a

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[117] *See* NYC Administrative Code § 20-1522(b) ("Any minimum payment determined by the department pursuant to this section shall not include gratuities. A third-party food delivery service or third-party courier service shall not retain any portion of any gratuity or use gratuities to offset or cover any portion of minimum payments required by this section").

[118] *See* Proposed Rule of the NYC Department of Consumer and Worker Protection (6 RCNY) § 7-810.

[119] *See* Parrott & Reich, *supra* note 76; *see also* New York State Labor Law § 652(1)(a).

[120] *See* Parrott & Reich, *supra* note 76.

[121] *See 2018 Standard Occupational Classification System*, U.S. Bureau of Labor Statistics, https://www.bls.gov/soc/2018/major_groups.htm#53-0000 (last accessed Oct. 25, 2022). Restaurant delivery workers are part of occupation 53-3031 ("Driver/Sales Workers") and app for-hire service drivers are part of occupation 53-3054 ("Taxi Drivers"). Both are part of occupation 53-0000 ("Transportation and Material Moving Occupations"). The U.S. Bureau of Labor Statistics does not publish estimates of paid time off that distinguish between restaurant delivery and app for-hire service drivers. *See Employer Costs for Employee Compensation,* U.S. Bureau of Labor Statistics (Sept. 20, 2022), https://www.bls.gov/ncs/ect/ (last accessed Oct. 28, 2022).

[122] As noted in section 4, employers are not required to provide health insurance to employees but may face a tax penalty if they do not. For purposes of this analysis, the Department assumes that if apps classified delivery workers as employees, they would choose to provide compliant health insurance options to their delivery workers rather than incur the tax penalty, and so it treats health insurance as equivalent to a required benefit.

[123] *Hearing Written Testimony* at 2-3 (letter of NYC Department of Health and Mental Hygiene), at 26 (letter of Hildalyn Colón Hernández, Los Deliveristas Unidos/Worker's Justice Project), at 49-50 (letter of José Ramírez aka Manny Ramírez, Los Deliveristas Unidos/Worker's Justice Project), at 75 (letter of Eman Faris, CUNY Urban Food Policy Institute), at 78 (letter of Charlene Obernauer, New York Committee for Occupational Safety and Health).

relevant comparison group (under New York State law, a restaurant may apply up to $2.50 an hour of a delivery worker's tips towards compliance with the minimum wage).[124] The Department determined that it is not appropriate to adopt this $12.50 tip credit rate as the base rate, for several reasons. First, Section 20-1522(b) of the Minimum Pay Law states that "any minimum payment rate determined by the department pursuant to this section shall not include gratuities." Adopting the tip credit rate as a base rate would conflict with the letter and spirit of that legal requirement. Second, under New York State law, the tip credit is a special permission afforded to a subset of restaurants, not a general exception for delivery as an occupation.[125] Currently, the tip credit under New York State law does not apply to delivery workers employed by fast food restaurants[126] or to delivery services in the convenience and grocery sectors that use an employee model, and would not apply if the restaurant apps were to classify their workers as employees.[127]

Workers' Compensation Component

The purpose of the workers' compensation component is to compensate for expected income loss and medical expenses associated with on-the-job injuries that app delivery workers experience. Unlike workers who are classified as employees in New York City, app delivery workers do not have access to traditional workers' compensation insurance. Unlike app for-hire service drivers in New York City, who have the Black Car Fund, app delivery workers also do not have access to an alternative system for medical care and wage replacement for on-the-job injuries. Therefore, an addition to the base pay component is necessary.

The Department calculated the workers' compensation component of $1.70 to provide for comparability to the actuarial value of the workers' compensation coverage received by employed restaurant delivery workers in New York State (7.84% of payroll).[128] The $1.70 also includes an adjustment to reflect differences in how federal Medicare and Social Security contributions apply to independent contractor income and employee benefits (i.e., independent contractors pay 15.3% in contributions to Medicare and Social Security on their income, while an employee does not make any contributions to Medicare and Social Security on the value of benefits like workers' compensation). This ensures that app delivery workers receive the same value, despite less advantageous tax treatment.

Table 15 presents the Department's calculation of the workers' compensation component along with the base pay and expense components that comprise the minimum payment rate.

Expense Component

The purpose of the expense component is to compensate app delivery workers for necessary expenses they incur to perform delivery work. The expense component ($2.26) is the Department's estimate of average hourly expenses for e-bike workers, less the cost of traffic or parking tickets, which are not deductible under IRS rules (see Table 9).[129]

As discussed in section 4, e-bike worker expenses fall into two main categories: vehicle expenses and phone expenses. Vehicle expenses include the cost of purchasing an e-bike, batteries, safety equipment, and other accessories. Phone expenses include the phone itself and a data plan.

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[124] *See, e.g., Hearing Written Testimony* at 62 (letter of Uber Technologies, Inc.).
[125] *See* Hospitality Industry Wage Order, Part 146 of Title 12 of the NYS Codes, Rules, and regulations, 12 NYCRR §§ 146-1.1(a) and 146-3.1(a).
[126] *See Minimum Wage for Fast Food Workers Frequently Asked Questions*, NYS Department of Labor, https://dol.ny.gov/minimum-wage-fast-food-workers-frequently-asked-questions (last accessed Oct. 25, 2022) (specifying that delivery workers working for fast food restaurants are fast food employees and that no tip credit is available for fast food employees).
[127] *See* Minimum Wage Order for Miscellaneous Industries and Occupations, Part 142 of Title 12 of the NYS Codes, Rules, and regulations, 12 NYCRR §§ 142-1.1(a), 142-2.1(a), and 142-2.5(b)(2)(*). Though the Department is not aware of a restaurant delivery app using an employee model, such services do exist in the grocery and convenience sectors, in which the restaurant apps also compete.
[128] *See* New York Compensation Insurance Rating Board, *supra* note 84.
[129] *Publication 463 (2021), Travel, Gift, and Car Expenses*, IRS (March 24, 2022), https://www.irs.gov/pub/irs-pdf/p463.pdf ("You can't deduct fines you pay . . . for traffic violations").

Among other reasons, the Department determined that it is appropriate to base the expense component of the rate on the expenses of e-bike workers because e-bike delivery is the most cost-effective and efficient form of app-based restaurant delivery, and because the proportion of deliveries performed using e-bikes is increasing.

Table 15. Calculation of the Minimum Pay Rate ($)

Base Pay	
Pay for Wages and Time Off *Base Pay Subtotal ($19.86), less Adjustment for Medicare and Social Security Contributions ($1.52)*	18.34
Adjustment for Medicare and Social Security Contributions *Base Pay Subtotal ($19.86) x employer share of Medicare and Social Security contributions (7.65%)*	1.52
Base Pay Subtotal	19.86
Workers' Compensation	
Workers' Compensation if App Delivery Workers were Employees *Pay for Wages and Time Off ($18.34) x expected costs (7.84%)*	1.44
Adjustment for Medicare and Social Security Contributions *Workers' Compensation Subtotal ($1.70), less the employer and employee shares of Medicare and Social Security contributions ($1.70 x 15.3%)*	0.26
Workers' Compensation Subtotal *Pay such that after adjustment for Medicare and Social Security contributions (15.3%), app delivery workers receive the same value as the coverage they would receive if they were employees ($1.44)*	1.70
Expense Component	
Average Hourly Expenses of E-Bike Workers *See discussion*	2.26
Total	23.82

"Expected costs" are insurers' costs of covering claims by employed restaurant delivery workers, as published by the New York Compensation Insurance Rating Board.[130] Source: Department analysis. Base pay per hour worked reflects the TLC minimum payment rate for app for-hire service drivers.[131]

The Department considered issuing separate rates for different vehicle types but decided against it for the poor incentives it would create. For instance, if cars were compensated at higher rates than e-bikes, reflecting their higher expenses, apps might cease offering trips to car drivers. Further, apps generally do not have sufficiently reliable systems in place for verifying the vehicle in use for any span of trip time or on-call time.[132]

Basis of Pay

The proposed minimum pay rate's aggregate pay requirement combines two key features: 1) A requirement that apps assume liability for all time that workers spend working, including on-call time and trip time, and 2) Flexibility for apps to determine how they pay each worker.

The Department views this combination as desirable for several reasons. First, the rule will incentivize apps to make operational changes to use workers' time on the apps more efficiently, increasing deliveries per hour. For apps, this will partially offset the increase in unit labor costs associated with higher pay, reducing the costs they

[130] *See* New York Compensation Insurance Rating Board, *supra* note 84.
[131] *See Rules of the NYC Taxi and Limousine Commission* (35 RCNY) § 59D-22(a)(4).
[132] Interviews with apps.

pass to consumers (see section 6). For workers, more deliveries per hour will increase opportunities to earn tips per hour worked.

Second, the Department's approach accommodates the variety of pay arrangements already present in the industry, which includes per-trip rates and hourly pay. It will ensure that apps have flexibility in their compensation structures. It will also ensure that apps that use an hourly pay structure, which compensates on-call time, are not at a competitive disadvantage to apps that pay per trip.

Third, the Department's approach guarantees that each app will pay at or above the intended average hourly pay each week, regardless of what variations occur in the mix of trip time and on-call time. This would not be true of a rate paid only on trip time.

Lastly, it is a relatively simple design, and feasible to implement for both apps and the Department.

Some apps suggested that workers should not be compensated for on-call time that does not result in a trip or that precedes a trip offer that a worker declines or allows to expire. Apps are well positioned to address this concern by making operational changes that limit on-call time. Some apps also suggested that the Department reduce the minimum pay rate to avoid compensating workers for time they spend connected to more than one app. Workers do this to reduce the time between trip offers and to maximize the number of trips.[133] However, the Department anticipates that the time spent connected to multiple platforms will be sharply reduced when apps respond to the minimum pay rule by minimizing workers' on-call time while connected.

The Department's requirement that apps pay their workforces for on-call time is consistent with other legal frameworks. TLC's minimum pay standard for app for-hire service drivers uses a formula to indirectly compensate drivers for on-call time.[134] Moreover, under the Fair Labor Standards Act, an employee must be compensated when "engaged to wait."[135] The proposed minimum pay rule accomplishes the same policy objective.

The rule's provision for averaging payments across a group of workers also has precedent. For example, under New York State Law, construction employers on certain tax-exempt residential projects in NYC must comply with a minimum average hourly wage requirement. Under this requirement, the total compensation (including benefits) provided to all construction workers on a project divided by the total hours they all worked must exceed specific minimums.[136]

Inflation Adjustment

To ensure that the rate keeps pace with the cost of living, under the rule, the Department will adjust the minimum pay rate for inflation on April 1 of every year.[137] The Department chose the Consumer Price Index for Urban Wage Earners and Clerical Workers for the New York-New Jersey-Pennsylvania metropolitan area as the most appropriate index to capture changes in NYC delivery workers' cost of living.

Though inflation in delivery workers' expenses and workers' compensation coverage may differ from inflation in workers' general cost of living, the proposed rule does not separately adjust each component but rather applies the chosen index to the entire rate. Since expenses and workers' compensation are a relatively small part of the rate, and inflation in these items is correlated with the general cost of living, a separate treatment is unlikely

[133] *Hearing Written Testimony* at 12 (letter of NYC Comptroller Brad Lander), at 21 (letter of Hildalyn Colón Hernández, Los Deliveristas Unidos/Worker's Justice Project), at 76 (letter of Eman Faris, CUNY Urban Food Policy Institute); *Hearing Transcript* at 19 (statement of Ligia Guallpa, Worker's Justice Project).
[134] *See* Parrott & Reich, *supra* note 76.
[135] *See Fact Sheet #22: Hours Worked Under the Fair Labor Standards Act (FLSA)*, U.S. Department of Labor, https://www.dol.gov/agencies/whd/fact-sheets/22-flsa-hours-worked (last accessed Oct. 7, 2022).
[136] *See* New York State Real Property Law § 421-a(16)(c); *see NYC Wage Standards*, NYC Comptroller, https://comptroller.nyc.gov/services/for-the-public/nyc-wage-standards/wage-schedules (last accessed Sept. 30, 2022).
[137] *See* Proposed Rule of the NYC Department of Consumer and Worker Protection (6 RCNY) § 7-810.

to make a material difference but could introduce unnecessary complexity and variability into the annual adjustment process.

Phase-in

The proposed phase-in of the rate over two years, with the rates in 2023 and 2024 representing 75% and 85% of the full rate, respectively, is modelled on the phase-in of the $15 minimum wage in NYC for large employers between 2016 and 2018.[138] This phase-in will provide apps with more time to improve their productivity before bearing the full cost of the minimum pay rate.

[138] *See* New York State Labor Law § 652.

6 Effects of the Minimum Payment Standard

To assess the prospective impacts of the Department's proposed minimum pay rate, the Department developed a structural model of app delivery in NYC that allows the Department to project relevant outcomes for apps, consumers, delivery workers, and restaurants. The model works by identifying the key relationships between these actors and making reasonable assumptions about their reactions both to the new minimum pay rate and to each other.

This section presents a summary of this model and its results, followed by discussion of their implications.

Model

The model starts from the assumption that absent the minimum pay rate, the volume of deliveries in NYC would continue to grow at its current annual pace of 17%, but that all other features of the market would stay the same. This means that average order size, tips per dollar ordered, fees charged to consumers and restaurants, and pay and deliveries per hour worked, along with other parameters, would all remain as at present.

The model then makes reasonable assumptions regarding how the minimum pay rate will lead to deviations from this baseline through 2025 when the phase-in of the minimum pay rate is scheduled to be complete. First, the model assumes that, from 2023 to 2025, apps will respond to the minimum pay rate by increasing deliveries per hour worked from the current 1.63 to 2.50. This assumption is based on the Department's identification, using the record-level data obtained from apps, of large differences between apps in the number of deliveries per hour. The Department expects that, in response to the rule, the less efficient apps will increase their deliveries per hour, but not fully match the highest rate of deliveries per hour the Department has observed for an app in the record-level data. The projected increase in deliveries per hour will partially offset the costs of higher app delivery worker pay but still result in apps paying workers $5.18 more per delivery, on average. Second, the model assumes that the apps will choose to pass this increase on to consumers dollar-for-dollar in the form of higher delivery fees, increasing consumers' costs of delivery by 15.6% after accounting for the order subtotal, taxes, and tips, which are assumed to be unaffected. This is a conservative assumption, as competitive pressures may lead apps to raise fees less. Still, the Department chose to take a cautious approach so that it could assess outcomes even under a relatively pessimistic scenario with respect to consumer impacts. Restaurants will not see a material increase in the fees that apps charge them because most restaurants already pay at or close to the maximum allowed under NYC law. Third, the model assumes that in response to their 15.6% cost increase per delivery, consumers will make 15.6% fewer orders than they otherwise would. If consumers perceive app delivery as a luxury service or one that has close substitutes, demand may decline more. Conversely, consumers may be relatively insensitive to an increase of this size and, if so, their demand for app delivery will be less affected. Absent specific information about consumers' response, the Department follows the standard assumption that demand will decrease proportionally to the increase in price. Fourth, the model assumes that the increased productivity that apps achieve in response to the minimum pay rate will also be associated with a modest reduction in delivery workers' average expenses per hour, from the current $3.06 to $2.82. This is due to a projected shift away from car delivery, which is less efficient and more costly. Together, these dynamics determine the Department's projections for apps, consumers, workers, and restaurants.

Results

The Department projects that between 2022 and 2025 delivery workers' hourly pay will increase by $16.73 (236%) from $7.09 to $23.82 and hourly tips will increase by $3.19 (45%) from $7.09 to $10.28. Since order subtotals and tipping practices are assumed to remain as at present, the increase in tips results solely from the increase in deliveries per hour. After accounting for expenses, the Department expects app delivery workers' net hourly earnings, which includes pay and tips, to increase by $20.16 (181%) from $11.12 to $31.28. For an app delivery worker with average working hours (i.e., 20.7 hours of working time per week) over 52 weeks, the minimum pay rate will increase net earnings from $11,970 to $33,670, on average. As stated in section 4, the NYC poverty threshold and near-poverty thresholds for a single adult are $19,088 and $28,632, respectively, [139] and for a two-adult, two-child family the thresholds are $41,185 and $61,778, respectively.[140]

The Department also projects that delivery workers' total hours will decrease by 12%, and that workers' aggregate net earnings will increase by $1.4 billion (156%) from $0.9 billion in 2022 to $2.3 billion in 2025. This large increase projected for workers' aggregate net earnings results, in part, from the Department's projection of continued strong growth in demand for app delivery. Though higher delivery fees are expected to moderate the pace of growth somewhat, the Department still expects app deliveries to increase from 132 million in 2022 to 178 million in 2025 (35%). Consumer spending on app delivery, in turn, is also projected continue to grow, from $4.369 billion in 2022 to $6.827 billion in 2025 (56%).

With respect to apps' gross margins (i.e., app revenue, less payments to delivery workers), the Department projects that they will remain unchanged per delivery (which reflects the assumed 100% cost pass-through).[141] This implies growth of aggregate gross margins proportionate to the 35% growth in deliveries, from $553 million in 2022 to $747 million in 2025.

The Department expects restaurant profitability to be mostly unaffected, though to the extent that higher app fees lead consumers to purchase restaurant meals through higher margin channels, such as direct delivery orders, dine-in, or takeout, restaurant profits will increase.

Discussion

The Department's modeling reveals how, under any reasonable set of assumptions, workers' pay rates are only one of several factors driving apps' expenses and consumers' costs. For instance, since delivery fees comprise only 10% of the total cost to consumers on an order (see Figure 2), even if apps opt for a large increase in fees, this produces only a modest percentage change in consumers' total cost. Similarly, the model shows how the number of deliveries workers perform per hour is critical in shaping the industry's unit economics. The Department's projected 51% increase in deliveries per hour translates to a 26% reduction in apps' labor cost per delivery. Together, these dynamics explain how the industry can absorb large increases in delivery worker pay without prohibitive cost increases to consumers.

The projected increase in productivity is large, but based on the Department's review of the apps' data, readily achievable in response to the new incentives the minimum pay rate creates. The increase in deliveries per hour may occur through several channels. First, with more lucrative trip offers, workers may become less selective, reducing on-call time. Second, apps can tighten limits on access to their platforms, better matching supply to demand. Grubhub, DoorDash, and Relay already limit access during certain periods (the industry term is "gating"), and they may make greater use of it in response to the minimum pay rate. Uber does not limit access in this way but may choose to start. Third, apps may directly incentivize productivity. For instance, some apps provide preferential access to their platforms based, in part, on acceptance rates (i.e., how frequently a worker

[139] *See* NYC Office of the Mayor, *supra* note 86.
[140] *See* NYC Office of the Mayor, *supra* note 86.
[141] The Department's model reflects a gross margin of $4.16 per delivery, which it calculated for the fourth quarter of 2021 using the record-level data obtained from apps. This differs slightly from the gross margin of $4.22 reported in Figure 2, which the Department calculated for July 2021 – June 2022 from the weekly aggregate data obtained from apps.

accepts a trip offer), and may make greater use of these practices in response to the rule. Fourth, apps can make more efficient use of workers' time through changes in how they match workers to deliveries. One example is increased use of trips where a worker may pick up two orders from the same restaurant and deliver them sequentially. Apps are already attempting to make efficiency gains on this margin, but the minimum pay rate may encourage more progress. Fifth, apps may choose to increase consumer fees, especially on the orders that require the most labor. These include deliveries that require travel over long distances, or that occur during times of day or areas of the city where long waits between trips are unavoidable due to traffic or other factors. Through its impact on consumer demand, this fee strategy would raise average productivity by disproportionately limiting growth in the orders that require the most working time to fulfill. Similarly, apps may strategically restrict delivery distances or limit service to the times and places where delivery can be provided affordably. Lastly, apps may tighten existing protections against inattentive or unintended use of the apps, such as by automatically disconnecting workers after a span of inactivity.

Beyond productivity, there also exist several other margins for adjustment to higher delivery worker pay. For instance, apps could choose to reduce consumers' costs through changes to the user interface that discourage or eliminate tipping (or, equivalently, consumers could choose to tip less in light of workers' higher pay, independent of any changes engineered by apps). The Department finds that if tipping were eliminated at all apps, costs to consumers would increase by $1.06 per delivery (3%) with workers still receiving sizable pay increases.

The Department also considered scenarios where consumers are less sensitive to fee increases than assumed above, the apps pass-through less than 100% of their cost increases, and productivity improves more or less than under the Department's main specification. Each set of assumptions presents a different mix of costs and benefits for different actors in the industry, though under no specification did the Department identify a set of outcomes suggesting the market would be unable to support the proposed minimum pay rate.

The Department anticipates that the greatest adverse impacts from the rule for workers are likely to be the actions apps take to reduce platform access for workers whose time generates relatively little revenue or to alter requirements in ways some workers find undesirable. These impacts will be disproportionately felt by workers whose engagement on the apps is the most casual.

7 Conclusion

The Department's proposed minimum pay rate will substantially increase delivery workers' earnings by providing for average hourly net pay comparable to NYC's existing standard for app for-hire service drivers, plus an addition to compensate for the absence of workers' compensation insurance. This rate also approximates the value of the minimum pay and benefits app delivery workers would have a right to receive if classified as employees.

Though the large increase in app delivery worker pay will have indirect effects on apps, consumers, and restaurants, the minimum pay rate has been constructed to minimize any adverse consequences. By providing apps with flexibility in how they meet the required minimum average hourly pay while still assuming responsibility for workers' on-call time, the rule creates both the incentive and opportunity for the apps to achieve substantial productivity improvements, which the Department expects will offset a large portion of cost increases that might otherwise be passed on to consumers. The Department projects that the growth of app delivery will moderate but remain strong.

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